



NORTH BRANCH

—Minnesota—

Kevin Schieber
Mayor

Robert Canada
Councilmember/Acting Mayor

Travis Miles
Councilmember

Kelly Neider
Councilmember

Peter Schaps
Councilmember

**CITY COUNCIL
REGULAR AGENDA
TUESDAY, JANUARY 23, 2024
CITY HALL, 6408 ELM STREET, NORTH
BRANCH, MN 55056**

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

4. AGENDA APPROVAL

a. Approve Agenda

ACTION

5. PRESENTATION & PROCLAMATION

6. PUBLIC COMMENT

Provides an opportunity for the public to address the Council on items that are not on the Agenda. Please raise your hand to be recognized. Please state your name and address for the record. This section is for the express purpose of addressing concerns of City services and operations. It shall not be used to clarify individual's views for political purposes.

7. CONSENT AGENDA

All matters listed under Consent Agenda are considered routine and/or non-controversial and will be approved by one motion. There will be no separate discussion of these items unless a Councilmember or citizen so requests, in which case the item will be removed from the Consent Agenda and considered in its normal sequence on the Agenda.

a. Claims

ACTION

b. Resolution - Flink Ave Trail Phase II - MNDOT Active Transportation Grant
Application Authorization

ACTION

c. Resolution - Northwood Park Pickleball Court and Site Improvement - Request Bid
Authorization

ACTION

d. Approve Revisions to Section 23, Paid Time Off (PTO), of the North Branch Personnel
Policy.

ACTION

- e. Approve Gambling LG220 Exempt Permit - Wild River Chapter MN Deer Hunter Association ACTION
- f. Approve the LG240B Application to Conduct Excluded Bingo - St. Gregory Knights of Columbus Council 10016 ACTION

8. PUBLIC HEARINGS

- a. Approve a Resolution Vacating Certain Drainage & Utility Easements as Dedicated with Old Little Sweden Plat 2 ACTION

9. STAFF REPORTS

- a. 2023 Police Activity Report INFO
- b. PTOS Commission Meeting Update - January 8, 2024 INFO
- c. Consider a Resolution, Approving a Map Amendment to the 2018 Comprehensive Plan ACTION
- d. Consider an Ordinance, Amending the Official Zoning Map of the City of North Branch ACTION

10. MAYOR/CITY COUNCIL

11. ADJOURNMENT

Since we do not have time to discuss every point presented, it may seem that decisions are preconceived. However, background information is provided to the City Council on each Agenda item in advance from Staff and appointed Commissions; and decisions are based on this information and past experiences. In addition some items may also have been discussed preliminarily at Council Work Sessions. If you are aware of information that has not been discussed, please raise your hand to be recognized. Comments that are pertinent are appreciated. Items requiring excessive time may be continued to another meeting.



Prepared By:
Ragini Varma, City Clerk / IT Director
Presenter: Ragini Varma, City Clerk / IT Director
Date: 01/12/2024

Board & Commission: City Council

Subject: Approve Agenda

Voting Requirements:

Voting Options Simple Majority



Prepared By:
Ragini Varma, City Clerk / IT Director
Presenter: Ragini Varma, City Clerk / IT Director
Date: 01/12/2024

Board & Commission: City Council

Subject: Claims

Council to approve the monthly claims

Voting Requirements:

Voting Options Simple Majority

City of North Branch

ACH Checks

5315 to 5339 - \$212,453.76

Checks

88693 to 88780 - \$702,997.87

Payroll

1/19/2024 \$120,346.73

Accounts Payable

Check Detail

User: TiffaniFolstad
Printed: 01/23/2024 - 8:23AM



Check Number	Check Date	Amount
1029 - Artisan Beer Company		
88720	01/22/2024	
Inv 3651779		40.00
Inv 3651780		55.40
88720 Total:		95.40
1029 - Artisan Beer Company Total:		95.40
1036 - AT & T Mobility		
88693	01/11/2024	
Inv 287294265529X01		1,302.84
88693 Total:		1,302.84
1036 - AT & T Mobility Total:		1,302.84
1038 - Automatic Systems Co.		
88694	01/11/2024	
Inv 41007		372.50
Inv 41040		1,043.40
88694 Total:		1,415.90
1038 - Automatic Systems Co. Total:		1,415.90
1049 - Bellboy Corporation		
88721	01/22/2024	
Inv 10783430		61.78
Inv 202143700		1,420.49
Inv 212143800		908.30
88721 Total:		2,390.57
1049 - Bellboy Corporation Total:		2,390.57
1052 - Bernicks		
88722	01/22/2024	
Inv 10168459		3,738.40
Inv 10168460		-22.80
Inv 10171225		2,327.40
Inv 10171226		-322.86

Check Number	Check Date	Amount
88722 Total:		5,720.14
1052 - Bernicks Total:		5,720.14
1066 - Breakthru Beverage MN		
88723	01/22/2024	
Inv 113818082		4,982.31
Inv 113818083		1,099.50
Inv 113818226		9,033.12
Inv 113818227		3.32
Inv 113818228		1,927.89
88723 Total:		17,046.14
1066 - Breakthru Beverage MN Total:		17,046.14
1082 - Capitol Beverage Sales LP		
88724	01/22/2024	
Inv 2932696		1,534.20
88724 Total:		1,534.20
1082 - Capitol Beverage Sales LP Total:		1,534.20
1103 - Chisago County Recorder		
88695	01/11/2024	
Inv 202300000405		46.00
Inv 202400000001		56.00
88695 Total:		102.00
1103 - Chisago County Recorder Total:		102.00
1129 - Dahlheimer Distributing		
88726	01/22/2024	
Inv 2085429		117.60
Inv 2085430		5,445.92
Inv 2085672		25.00
Inv 2085673		1,466.25
Inv 2090944		10,143.85
Inv 2090945		135.70
88726 Total:		17,334.32
1129 - Dahlheimer Distributing Total:		17,334.32
1152 - Ehlers		
88728	01/22/2024	
Inv 96040		350.00
Inv 96317		2,543.75

Check Number	Check Date	Amount
Inv AUG2023INV		30.65
Inv DEC2023INV		55.75
Inv NOV2023INV		53.72
88728 Total:		3,033.87
1152 - Ehlers Total:		3,033.87
1166 - Enterprise FM Trust		
88714	01/16/2024	
Inv 508722-010524		455.36
88714 Total:		455.36
1166 - Enterprise FM Trust Total:		455.36
1176 - M Health Fairview		
88700	01/11/2024	
Inv 15006425280		502.00
88700 Total:		502.00
1176 - M Health Fairview Total:		502.00
1180 - Ferguson Waterworks		
88729	01/22/2024	
Inv 524626		207.81
Inv 524626-1		88.01
Inv 524689		331.92
Inv 524689-1		165.96
Inv 524690		169.56
Inv 525047		4,800.00
88729 Total:		5,763.26
1180 - Ferguson Waterworks Total:		5,763.26
1192 - Flying Star Products		
88730	01/22/2024	
Inv 23006		19.65
88730 Total:		19.65
1192 - Flying Star Products Total:		19.65
1195 - Forest Lake Printing		
88731	01/22/2024	
Inv 19783		105.00
88731 Total:		105.00

Check Number	Check Date	Amount
1195 - Forest Lake Printing Total:		105.00
1202 - Galls		
88696	01/11/2024	
Inv 5287790		312.16
88696 Total:		312.16
1202 - Galls Total:		312.16
1206 - Genesis Technology Communications, LLC		
88715	01/16/2024	
Inv 137924		179.95
88715 Total:		179.95
1206 - Genesis Technology Communications, LLC Total:		179.95
1216 - Gopher State One-Call, Inc.		
88733	01/22/2024	
Inv 3120640		71.55
88733 Total:		71.55
1216 - Gopher State One-Call, Inc. Total:		71.55
1221 - Granicus, LLC		
88716	01/16/2024	
Inv 177259		434.24
88716 Total:		434.24
1221 - Granicus, LLC Total:		434.24
1224 - Gratitude Farms		
88734	01/22/2024	
Inv FOR DEC 2023		350.00
88734 Total:		350.00
1224 - Gratitude Farms Total:		350.00
1237 - Hasser Garage Doors		
88736	01/22/2024	
Inv 26194		175.00
88736 Total:		175.00
1237 - Hasser Garage Doors Total:		175.00

Check Number	Check Date	Amount
1244 - Hischer, Lane		
88737	01/22/2024	
Inv 214031		31.35
88737 Total:		31.35
1244 - Hischer, Lane Total:		31.35
1246 - Hohensteins, Inc.		
88738	01/22/2024	
Inv 678466		291.00
Inv 678467		121.50
88738 Total:		412.50
1246 - Hohensteins, Inc. Total:		412.50
1265 - Isanti-Chisago County Star		
88739	01/22/2024	
Inv 1798083		15.75
88739 Total:		15.75
1265 - Isanti-Chisago County Star Total:		15.75
1268 - IUOE Local #49		
88740	01/22/2024	
Inv FOR FEB 2024		420.00
88740 Total:		420.00
1268 - IUOE Local #49 Total:		420.00
1279 - Johnson Brothers Liquor Co.		
88741	01/22/2024	
Inv 2458571		55.82
Inv 2458572		49.82
Inv 2458573		157.21
Inv 2458574		121.64
Inv 2458575		1,415.33
Inv 2458576		338.36
Inv 2458577		993.16
Inv 2458578		282.92
Inv 2458579		129.82
Inv 2458580		149.46
88741 Total:		3,693.54
1279 - Johnson Brothers Liquor Co. Total:		3,693.54

Check Number	Check Date	Amount
1296 - Lamar Companies		
88743	01/22/2024	
Inv 115499231		425.00
88743 Total:		425.00
1296 - Lamar Companies Total:		425.00
1304 - League Of Minnesota Cities		
88745	01/22/2024	
Inv 396842		350.00
88745 Total:		350.00
1304 - League Of Minnesota Cities Total:		350.00
1305 - League Of MN Cities Ins. Trust-WC, c/o Berkley Risk Administrators Company		
88699	01/11/2024	
Inv WC1005016-8		177,143.00
88699 Total:		177,143.00
1305 - League Of MN Cities Ins. Trust-WC, c/o Berkley Risk Administrators Company Total:		177,143.00
1348 - Metro Sales Inc.		
88701	01/11/2024	
Inv 2436734		259.00
88701 Total:		259.00
1348 - Metro Sales Inc. Total:		259.00
1353 - Midcontinent		
88702	01/11/2024	
Inv 16640100113774		864.39
88702 Total:		864.39
1353 - Midcontinent Total:		864.39
1364 - Minnesota Elevator, Inc.		
88703	01/11/2024	
Inv 1053767		142.00
88703 Total:		142.00
1364 - Minnesota Elevator, Inc. Total:		142.00
1376 - MMUA		
88749	01/22/2024	

Check Number	Check Date	Amount
Inv 63309		547.00
88749 Total:		547.00
1376 - MMUA Total:		547.00
1379 - MN Chiefs Of Police Assn.		
88750	01/22/2024	
Inv 15410		137.00
88750 Total:		137.00
1379 - MN Chiefs Of Police Assn. Total:		137.00
1384 - MN Dept Of Health		
88751	01/22/2024	
Inv BS EXAM 3/7/24		32.00
Inv Q4 ST H20 TEST		5,725.08
88751 Total:		5,757.08
1384 - MN Dept Of Health Total:		5,757.08
1391 - MN Dept Of Public Safety-DVS-Renewal		
88752	01/22/2024	
Inv 2/29/21-2/28/26		810.00
88752 Total:		810.00
1391 - MN Dept Of Public Safety-DVS-Renewal Total:		810.00
1396 - MN Peip - C/O MMB Fiscal Srvs		
88753	01/22/2024	
Inv 1352850 Feb		42,822.69
88753 Total:		42,822.69
1396 - MN Peip - C/O MMB Fiscal Srvs Total:		42,822.69
1419 - My Alarm Center		
88754	01/22/2024	
Inv 18486656		56.16
Inv 18486789		70.45
88754 Total:		126.61
1419 - My Alarm Center Total:		126.61
1423 - N.B. Area Public Schools-Fuel		
88704	01/11/2024	

Check Number	Check Date	Amount
Inv 2024-048		2,441.01
Inv 2024-049		4,211.63
88704 Total:		6,652.64
1423 - N.B. Area Public Schools-Fuel Total:		6,652.64
1432 - NCPERS Group Life Ins.		
88755	01/22/2024	
Inv FOR FEB 2024		64.00
88755 Total:		64.00
1432 - NCPERS Group Life Ins. Total:		64.00
1441 - North Folk Winery		
88758	01/22/2024	
Inv 23-62		216.00
88758 Total:		216.00
1441 - North Folk Winery Total:		216.00
1460 - Pace Analytical Services, Inc.		
88705	01/11/2024	
Inv 23100438343		276.10
88705 Total:		276.10
88760	01/22/2024	
Inv 24100439174		250.00
Inv 24100439371		275.00
Inv 24100439849		275.00
88760 Total:		800.00
1460 - Pace Analytical Services, Inc. Total:		1,076.10
1465 - Paustis Wine Company		
88761	01/22/2024	
Inv 224270		430.00
Inv 224272		1,388.00
88761 Total:		1,818.00
1465 - Paustis Wine Company Total:		1,818.00
1474 - Phillips Wine & Spirits, Inc.		
88762	01/22/2024	
Inv 6718615		697.22
Inv 6718616		1,792.31

Check Number	Check Date	Amount
88762 Total:		2,489.53
1474 - Phillips Wine & Spirits, Inc. Total:		2,489.53
1475 - Pitney Bowes Bank Inc Purchase Power		
88764	01/22/2024	
Inv 48379523		500.00
88764 Total:		500.00
1475 - Pitney Bowes Bank Inc Purchase Power Total:		500.00
1483 - Prefer Paving & Ready Mix Inc.		
88707	01/11/2024	
Inv 5367		1,800.00
Inv 5394		6,000.00
88707 Total:		7,800.00
1483 - Prefer Paving & Ready Mix Inc. Total:		7,800.00
1534 - Southern Glazers Wine & Spirits of Minnesota		
88767	01/22/2024	
Inv 2430190		673.88
Inv 2430576		2,207.47
88767 Total:		2,881.35
1534 - Southern Glazers Wine & Spirits of Minnesota Total:		2,881.35
1542 - Staples		
88709	01/11/2024	
Inv 8072408468		249.47
88709 Total:		249.47
88768	01/22/2024	
Inv 8072486040		13.30
88768 Total:		13.30
1542 - Staples Total:		262.77
1550 - Streichers		
88769	01/22/2024	
Inv 1673604		33.99
Inv 1674174		380.98
Inv 1675186		2,959.80
Inv 1675898		81.98
Inv 1676529		8,340.00

Check Number	Check Date	Amount
88769 Total:		11,796.75
1550 - Streichers Total:		11,796.75
1552 - Sun Life Assurance Company		
88770	01/22/2024	
Inv FOR FEB 2024		2,528.38
88770 Total:		2,528.38
1552 - Sun Life Assurance Company Total:		2,528.38
1580 - Tri-State Pump		
88772	01/22/2024	
Inv 444775		1,730.58
Inv 444776		-625.46
88772 Total:		1,105.12
1580 - Tri-State Pump Total:		1,105.12
1584 - U.S. Bank Equipment Finance		
88712	01/11/2024	
Inv 517838942		958.08
88712 Total:		958.08
88773	01/22/2024	
Inv 519939433		185.00
Inv 520111626		958.08
88773 Total:		1,143.08
1584 - U.S. Bank Equipment Finance Total:		2,101.16
1598 - Viking Coca-Cola Bottling Co.		
88774	01/22/2024	
Inv 3354215		75.75
88774 Total:		75.75
1598 - Viking Coca-Cola Bottling Co. Total:		75.75
1611 - Watson Company		
88775	01/22/2024	
Inv 139359		1,108.56
88775 Total:		1,108.56

Check Number	Check Date	Amount
1611 - Watson Company Total:		1,108.56
1621 - Windstream		
88713	01/11/2024	
Inv JAN PHONE		272.14
Inv JAN PHONE 0639		44.96
88713 Total:		317.10
1621 - Windstream Total:		317.10
1628 - WSB & Associates, Inc.		
88778	01/22/2024	
Inv R-022305-000-9		36,074.75
Inv R-022542-000-8		9,174.00
Inv R-02305-000-10		3,372.00
88778 Total:		48,620.75
1628 - WSB & Associates, Inc. Total:		48,620.75
1630 - XCEL Energy		
88779	01/22/2024	
Inv 860417030		134.76
Inv 860432529		1,245.88
88779 Total:		1,380.64
1630 - XCEL Energy Total:		1,380.64
1643 - McDonald Distributing		
88747	01/22/2024	
Inv 726028		157.68
Inv 726030		140.30
Inv 726031		7,361.54
Inv 726032		-45.81
Inv 72609530		-36.00
Inv 727167		6,161.40
Inv 727240		-390.65
88747 Total:		13,348.46
1643 - McDonald Distributing Total:		13,348.46
1644 - Mega Beer		
88748	01/22/2024	
Inv 7061		418.00
88748 Total:		418.00

Check Number	Check Date	Amount
1644 - Mega Beer Total:		418.00
1646 - Ameritas		
88719	01/22/2024	
Inv 01192024		90.00
88719 Total:		90.00
1646 - Ameritas Total:		90.00
1658 - Kramer Mechanical Plumbing & Heating, Inc.		
88698	01/11/2024	
Inv 29463		500.50
88698 Total:		500.50
1658 - Kramer Mechanical Plumbing & Heating, Inc. Total:		500.50
1662 - Amazon Capital Services		
88718	01/22/2024	
Inv 17WM-M441-FMKQ		324.90
88718 Total:		324.90
1662 - Amazon Capital Services Total:		324.90
1708 - DW Companies, LLC		
88727	01/22/2024	
Inv 1255		162,755.00
88727 Total:		162,755.00
1708 - DW Companies, LLC Total:		162,755.00
1751 - The Whitesidewalls		
88771	01/22/2024	
Inv 01162024		1,250.00
88771 Total:		1,250.00
1751 - The Whitesidewalls Total:		1,250.00
1761 - WEX BANK		
88776	01/22/2024	
Inv 206106		15.02
88776 Total:		15.02
1761 - WEX BANK Total:		15.02

Check Number	Check Date	Amount
1763 - Office of MNIT Services-Accounts Receivable		
88759	01/22/2024	
Inv DV23120432		1,150.00
88759 Total:		1,150.00
1763 - Office of MNIT Services-Accounts Receivable Total:		1,150.00
1804 - LGI Homes, Inc.		
88746	01/22/2024	
Inv 01082024		20,000.00
88746 Total:		20,000.00
1804 - LGI Homes, Inc. Total:		20,000.00
1868 - Zajac, Jesse		
88780	01/22/2024	
Inv JZ-NREMT		243.75
88780 Total:		243.75
1868 - Zajac, Jesse Total:		243.75
1878 - Larkin Hoffman Attorneys		
88744	01/22/2024	
Inv 832239		2,500.00
88744 Total:		2,500.00
1878 - Larkin Hoffman Attorneys Total:		2,500.00
1884 - Pine Tree Commercial Realty, SUSO 4 North Branch, LP		
88763	01/22/2024	
Inv FOR FEB 2024		7,842.37
88763 Total:		7,842.37
1884 - Pine Tree Commercial Realty, SUSO 4 North Branch, LP Total:		7,842.37
1908 - GTG Properties, LLC		
88735	01/22/2024	
Inv For Feb		100.00
88735 Total:		100.00
1908 - GTG Properties, LLC Total:		100.00
1967 - Pitney Bowes Inc.		

Check Number	Check Date	Amount
88765	01/22/2024	
Inv 1024555164		29.04
88765 Total:		29.04
1967 - Pitney Bowes Inc. Total:		29.04
1987 - POMP'S TIRE SERVICE INC		
88766	01/22/2024	
Inv 2390009998		710.00
88766 Total:		710.00
1987 - POMP'S TIRE SERVICE INC Total:		710.00
1998 - HEWLETT-PACKARD FINANCIAL SERVICES COMPANY		
88697	01/11/2024	
Inv 600995525		1,849.78
88697 Total:		1,849.78
1998 - HEWLETT-PACKARD FINANCIAL SERVICES COMPANY Total:		1,849.78
1999 - CENTURY FENCE COMPANY		
88725	01/22/2024	
Inv 228098302		51,594.00
88725 Total:		51,594.00
1999 - CENTURY FENCE COMPANY Total:		51,594.00
2006 - Goose Creek Electric		
88732	01/22/2024	
Inv 118		1,300.00
88732 Total:		1,300.00
2006 - Goose Creek Electric Total:		1,300.00
2031 - Keith Edward Hiller		
88742	01/22/2024	
Inv 20231130		5,572.04
88742 Total:		5,572.04
2031 - Keith Edward Hiller Total:		5,572.04
2042 - Thompson's Sewer Service & Soil Testing Inc		
88711	01/11/2024	
Inv 23910		850.00

Check Number	Check Date	Amount
88711 Total:		850.00
2042 - Thompson's Sewer Service & Soil Testing Inc Total:		850.00
2046 - WRS Co. LLC		
88777	01/22/2024	
Inv 3919		225.00
88777 Total:		225.00
2046 - WRS Co. LLC Total:		225.00
2047 - NEONLINK LLC		
88756	01/22/2024	
Inv 2723		772.20
88756 Total:		772.20
2047 - NEONLINK LLC Total:		772.20
2051 - Niven, Tyler Shawn		
88757	01/22/2024	
Inv 01032024		120.00
88757 Total:		120.00
2051 - Niven, Tyler Shawn Total:		120.00
2052 - Sunrise River Crossing, LLC		
88710	01/11/2024	
Inv 12122023		26,375.00
88710 Total:		26,375.00
2052 - Sunrise River Crossing, LLC Total:		26,375.00
2053 - PEC Solutions LLC		
88706	01/11/2024	
Inv 139662		13,302.00
88706 Total:		13,302.00
2053 - PEC Solutions LLC Total:		13,302.00
2054 - Sioux Valley Environmental, Inc		
88708	01/11/2024	
Inv 11859		267.00
88708 Total:		267.00

Check Number	Check Date	Amount
2054 - Sioux Valley Environmental, Inc Total:		267.00
2059 - Abdo LLP		
88717	01/22/2024	
Inv 482279		4,398.75
88717 Total:		4,398.75
2059 - Abdo LLP Total:		4,398.75
Total:		702,997.87

Accounts Payable

Check Detail

User: TiffaniFolstad
Printed: 01/23/2024 - 8:21AM



Check Number	Check Date	Amount
1033 - Associated Bank		
5327	12/18/2023	
Inv NSF 12/18/23		24.00
5327 Total:		24.00
1033 - Associated Bank Total:		24.00
1044 - Bank Charges, Miscellaneous		
5315	12/04/2023	
Inv Bankcard12/4/23		34.71
5315 Total:		34.71
5316	12/01/2023	
Inv LS CC 12/1/23		3,715.99
Inv LS2 CC 12/1/23		1,524.86
5316 Total:		5,240.85
5317	12/21/2023	
Inv LS JPN 12/21/23		166.74
5317 Total:		166.74
5318	12/07/2023	
Inv RT 12/7/23		217.33
5318 Total:		217.33
5328	12/18/2023	
Inv NSF Check 12/23		88.74
5328 Total:		88.74
1044 - Bank Charges, Miscellaneous Total:		5,748.37
1118 - Commissioner Of Revenue (W/H)		
5329	01/19/2024	
Inv 0119 STATE		8,229.43
5329 Total:		8,229.43
5336	01/05/2024	

Check Number	Check Date	Amount
Inv 0105STATE		5,328.55
5336 Total:		5,328.55
1118 - Commissioner Of Revenue (W/H) Total:		13,557.98
1362 - Minnesota Dept of Revenue		
5326	12/19/2023	
Inv LS#1 Nov 2023		21,860.00
Inv LS#2 Nov 2023		8,592.00
5326 Total:		30,452.00
1362 - Minnesota Dept of Revenue Total:		30,452.00
1372 - Minnesota State Retirement		
5332	01/19/2024	
Inv 0119 MSRS		850.00
5332 Total:		850.00
5337	01/05/2024	
Inv 0105 MSRS		750.00
5337 Total:		750.00
1372 - Minnesota State Retirement Total:		1,600.00
1380 - MN Child Support Pymt Center		
5339	01/05/2024	
Inv 0105 MNCS		185.00
5339 Total:		185.00
1380 - MN Child Support Pymt Center Total:		185.00
1431 - Nationwide Retirement Solution		
5333	01/22/2024	
Inv 0119 NAT		5.00
5333 Total:		5.00
5334	01/05/2024	
Inv 0105NAT		5.00
5334 Total:		5.00
1431 - Nationwide Retirement Solution Total:		10.00
1468 - PERA (Payroll W/H)		
5331	01/19/2024	

Check Number	Check Date	Amount
Inv 0119 PERA		36,400.49
5331 Total:		36,400.49
5338	01/05/2024	
Inv 0105 PERA		34,470.25
5338 Total:		34,470.25
1468 - PERA (Payroll W/H) Total:		70,870.74
1585 - United States Treasury		
5330	01/19/2024	
Inv FED WH 1119		19,274.65
Inv MEDI 1119		5,197.54
Inv SS WH 1119		14,442.46
5330 Total:		38,914.65
5335	01/05/2024	
Inv 0105FED		16,992.02
Inv 0105MED		5,023.68
Inv 0105SS		13,963.64
5335 Total:		35,979.34
1585 - United States Treasury Total:		74,893.99
1592 - US Postal Service		
5325	12/29/2023	
Inv USPS 12/29/23		898.82
5325 Total:		898.82
1592 - US Postal Service Total:		898.82
1941 - WEX, Inc.		
5319	12/11/2023	
Inv VEBA 12-11-23		199.24
5319 Total:		199.24
5320	12/31/2023	
Inv FSA 12/31/23		4,961.70
5320 Total:		4,961.70
5321	12/11/2023	
Inv HSA 12/11/2023		4,929.97
5321 Total:		4,929.97
5322	12/11/2023	

Check Number	Check Date	Amount
Inv ER HSA 12/11/23		113.68
5322 Total:		113.68
5323	12/26/2023	
Inv EE HSA 12/26/23		3,893.27
5323 Total:		3,893.27
5324	12/26/2023	
Inv WEX 12/26/23		115.00
5324 Total:		115.00
1941 - WEX, Inc. Total:		14,212.86
Total:		212,453.76



Prepared By:
Nathan Sondrol, GIS Specialist/Parks Director
Presenter: Nathan Sondrol, GIS Specialist/Parks Director
Date: 01/16/2024

Board & Commission: City Council

Subject: Resolution - Flink Ave Trail Phase II - MNDOT Active Transportation Grant Application Authorization

Project Overview

MnDOT is soliciting applications for the Active Transportation (AT) Infrastructure Program solicitation beginning on Oct 9, 2023 with an application deadline of February 2, 2024.

The Minnesota AT Infrastructure Program provides grant funding for the construction of pedestrian and bicycle infrastructure projects. Currently, the legislature has appropriated a total of \$17.7 million for infrastructure projects across the state.

Program Purpose

1. Connecting communities and key destinations
2. Boosting public health by creating safer environments for people to walk, bike, or roll to their destinations.
3. Mitigating safety hazards relating to interacting with vehicular traffic.

Program Details, Funding

Min Award - \$50,000

Max Award - \$1M

- No match required, paid on a reimbursable basis
- Capital construction costs only (does not include engineering, ROW, or other non-construction related costs)
- 10 year useful life
- Constructed in 2024 or 2025

The City Council authorized city staff to submit a letter of intent (LOI) application for the project and received positive feedback from MnDOT to move forward with a formal application.

Voting Requirements:

Voting Options **Simple Majority**

STATE OF MINNESOTA

COUNTY OF CHISAGO

CITY OF NORTH BRANCH

CITY COUNCIL RESOLUTION NO. R-5-2024

**MNDOT ACTIVE TRANSPORTATION PROGRAM GRANT - FLINK AVE TRAIL
PHASE II**

WHEREAS, the Minnesota Active Transportation (AT) Infrastructure Program provides grant funding for the construction of pedestrian and bicycle infrastructure projects, and

WHEREAS, The City of North Branch has adopted subdivision regulations that require complete streets, and

WHEREAS, the City of North Branch acknowledges that AT funds can be used to reimburse construction costs on AT eligible items, and that construction costs above the AT award will need to have alternate funding sources, and

WHEREAS, The City of North Branch supports the Flink Ave Phase II (392nd St - North Branch Marketplace) improvement project to safety hazards to walking or biking, and

WHEREAS, the proposed Flink Ave Phase II AT improvement project improvements will address the installation of off-street bicycle and pedestrian facilities, pedestrian and bicycle crossing improvements and traffic control devices, and

WHEREAS, there is an AADT of 5,800 along Flink Ave, and

WHEREAS, preliminary engineering plans and specifications have been completed for the project, and

WHEREAS, the City's Comprehensive Plan and 10 year Capital Improvement Plan have identified the need for the project, and

WHEREAS, the project will benefit students, pedestrians, and cyclists across multiple agencies, and,

WHEREAS, the construction cost estimate for the project is \$574,332 and a planned year of construction is 2023-2024, and

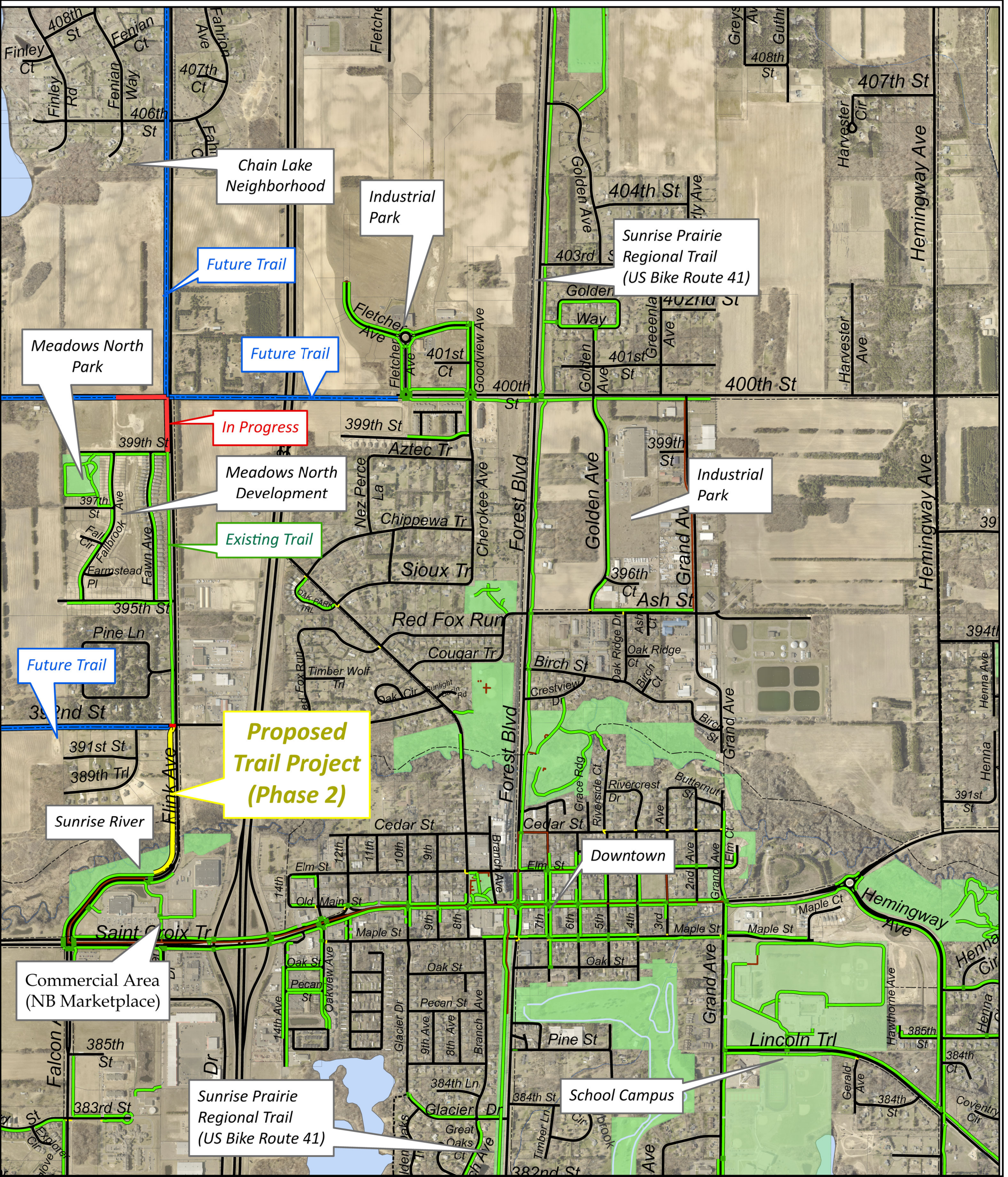
WHEREAS, the final and construction inspection engineering cost estimate for the project is \$160,812.96 and,

WHEREAS, the City of North Branch has funding sources (park dedication fund) have been that have been secured to cover the construction costs on AT eligible items prior to reimbursement, and that engineering and construction costs above the AT award have been secured, and

WHEREAS, the City of North Branch has funding sources have been that have been secured to cover the construction costs on AT eligible items prior to reimbursement, and that construction costs above the AT award have been secured, and

NOW, THEREFORE, BE IT RESOLVED THAT:

- 1) The Flink Ave Phase II improvement project will improve safety and ability of people to walk, bike or roll throughout the community.
- 2) The project will have a useful life of at least 10 years.
- 3) The project will be constructed in the calendar year 2024 or 2025.
- 4) The City of North Branch supports submittal of the AT application.
- 5) The City of North Branch assures that it will pay all costs associated with the project beyond the AT grant award.
- 6) The City of North Branch will act as project sponsor for the Flink Ave AT Improvement project should the City be awarded AT funds, and that such sponsorship shall include the following responsibilities:
 - Be the fiscal agent on behalf of the applicant and have funds flow from MnDOT to the state aid city or county to the contractor
 - Request SAP/SP number for the project
 - Ensure the project meets milestones and dates
 - Assist local agency in execution of a grant agreement
 - Develop, review and/or approve the plan
 - Submit plan, engineers estimate, and proposal to the District State Aid Engineer (DSAE)
 - Advertise, let, and award the project
 - Submit pay requests to State Aid
 - Communicate progress and updates with the DSAEs and State Aid State Programs Engineer or Active Transportation Engineer
 - Ensure that the project receives adequate supervision and inspection
 - Assist with project close out



Proposed Trail In Progress Existing Facilities Future Trail	Flink Ave Trail Project Phase II 392nd St - NB Marketplace North Branch - Chisago County, MN	Project Location Map Date: Nov 30, 2023 Scale: 1":1,500'
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Prepared By:
Nathan Sondrol, GIS Specialist/Parks Director
Presenter: Nathan Sondrol, GIS Specialist/Parks Director
Date: 01/16/2024

Board & Commission: City Council

Subject: Resolution - Northwood Park Pickleball Court and Site Improvement - Request Bid Authorization

Background Information:

The City of North Branch submitted an application to the MnDNR Outdoor Recreation Grant program for 4 pickleball courts, accessible paths, site amenities and associated landscaping in Northwood Park in March 2023. The City was notified that it received a \$140,000 grant with a 50% match requirement. The City approved WSB to provide engineering services for the final design and to provide plans and specifications for the pickleball courts and additional site improvements on 11/14/23. The plans and specs and cost estimates have been completed and provided to the city.

The cost estimate includes the base bid for the pickleball courts with alternate items for consideration.

Item	Estimated Amounts
Pickleball Court Base Bid	\$178,190.00
Alt 1: Pickleball Noise Reduction	\$17,712.00
Alt 2: Bituminous Trails	\$62,300.00
Alt 3: Concrete & Parking Lot	\$43,166.25

Below is an overview of the proposed schedule:

- Jan 8th: Parks Commission to review and recommendation to council
- Jan 23rd: Council approval to proceed with bidding
- Jan 26th: submit advertisement to press

- Feb 1: first advertisement published
- Feb 8th: second advertisement published
- Feb 22nd: Bid opening
- Mar 4th: PTOS Commission to review bids and recommend to council
- Mar 12th: Council approval of bids for Contractor agreement

Recommendations:

The PTOS Commission recommended approval of the plans and authorizing city staff to obtain bids for the Northwood Park Pickelball and Site Improvements project with the funds coming from the park dedication fund at the January 8, 2024 meeting.

City Staff recommends approval of the plans and authorizing city staff to obtain bids for the Northwood Park Pickelball and Site Improvements project with the funds coming from the park dedication fund.

Requested Action:

To recommend approval of the plans and authorizing obtaining bids to complete the Northwood Park Pickelball and Site Improvements project with the funds coming from the park dedication fund.

Voting Requirements:

Voting Options **Simple Majority**

STATE OF MINNESOTA

COUNTY OF CHISAGO

CITY OF NORTH BRANCH

CITY COUNCIL RESOLUTION NO. R-6-2024

RESOLUTION TO APPROVE THE PLANS AND SPECS FOR THE NORTHWOOD PARK PICKLEBALL COURTS AND SITE IMPROVEMENTS AND AUTHORIZE BIDS

WHEREAS, the City of North Branch received a \$140,000 grant from the MnDNR Outdoor Recreation Grant for the Northwood Park Pickleball Court and Site Improvement Project, and

WHEREAS, The City of North Branch entered into a grant contract agreement OR24-008 with the State of Minnesota to accept the funds and to provide a \$140,000 cash match and complete the Northwood Park Pickleball Courts and Site Improvements , and

WHEREAS, engineering plans and specifications have been completed for the project, and

WHEREAS, the base bid cost estimate for the pickleball court project is \$178,190 and has a planned year of construction in 2024-2025, and

WHEREAS, the City of North Branch has funding sources (park dedication fund) have been that have been secured to cover the costs, and

NOW, THEREFORE, BE IT RESOLVED THAT:

The North Branch City Council approves the plans and specs for the Northwood Park Pickleball Court and Site Improvement project and authorizes City staff to obtain bids for the project.

NORTHWOOD PARK

North Branch, Minnesota

Client Project No.OR24-008

WSB LLC Project No.024103-000

Issue Date.....December 15, 2023

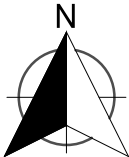


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PROJECT LOCATION MAP

SCALE: NOT TO SCALE



THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF PRIVATE UTILITIES HAS BEEN DESIGNATED UTILITY QUALITY LEVEL D. THESE QUALITY LEVELS WERE DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE DATA". THE CONTRACTOR IS TO DETERMINE THE TYPE AND LOCATION OF PRIVATE UTILITIES AS MAY BE DEEMED NECESSARY TO AVOID DAMAGE THERETO.

Sheet List Table	
SHEET NUMBER	SHEET TITLE
L1.0	COVER
L2.0	DEMO PLAN
L3.0	LAYOUT PLAN
L3.1	LAYOUT ENLARGEMENT
L4.0	GRADING PLAN
L5.0	RESTORATION PLAN
L6.0	DETAILS
L6.1	DETAILS

SCALE:DESIGN BY:

AS SHOWNXXX

PLAN BY:CHECK BY:

XXXXXX

REVISIONS

NO.	DATE	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Candace C. Amborg, PLA

DATE: 12-15-2023LIC. NO: 40646

COVER

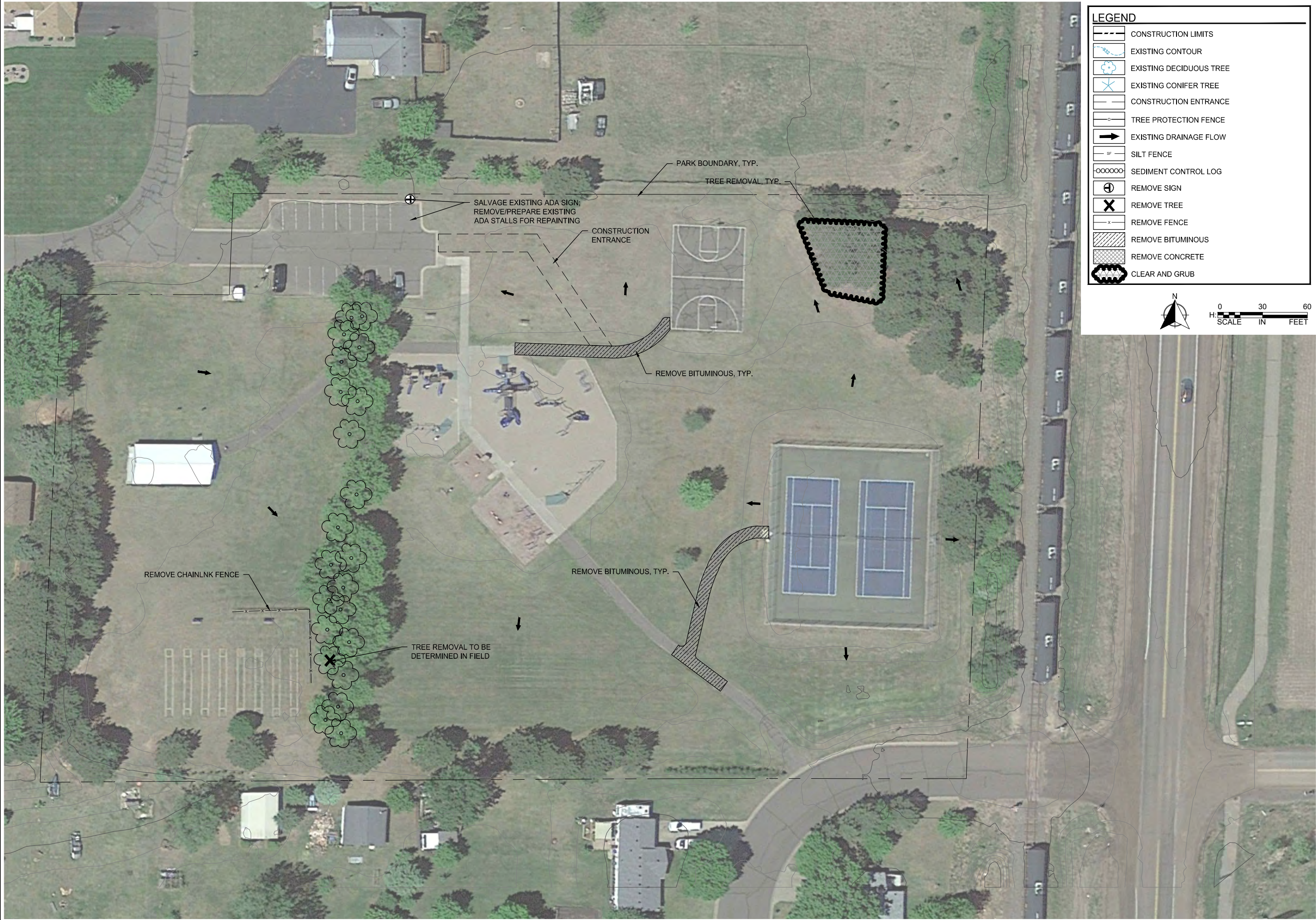
NORTHWOOD PARK
CITY OF NORTH BRANCH

CLIENT PROJECT NO.
OR24-008

WSB PROJECT NO.
024103-000

SHEET

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LEGEND

- CONSTRUCTION LIMITS
- EXISTING CONTOUR
- EXISTING DECIDUOUS TREE
- EXISTING CONIFER TREE
- CONSTRUCTION ENTRANCE
- TREE PROTECTION FENCE
- EXISTING DRAINAGE FLOW
- SILT FENCE
- SEDIMENT CONTROL LOG
- REMOVE SIGN
- REMOVE TREE
- REMOVE FENCE
- REMOVE BITUMINOUS
- REMOVE CONCRETE
- CLEAR AND GRUB

N

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SCALE: AS SHOWN
PLAN BY: XXX

DESIGN BY: XXX
CHECK BY: XXX

REVISIONS

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DATE: 12-15-2023 LIC. NO: 40646

DEMO PLAN

NORTHWOOD PARK
CITY OF NORTH BRANCH

CLIENT PROJECT NO.
OR24-008

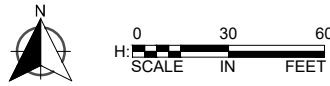
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LEGEND	
	CONSTRUCTION LIMITS
	EXISTING DECIDUOUS TREE
	EXISTING CONIFER TREE
	LAYOUT CONTROL POINT
	CENTERLINE
	BITUMINOUS TRAIL PAVEMENT
	BITUMINOUS COURT PAVEMENT
	CONCRETE PAVEMENT



wsb	
SCALE: AS SHOWN	DESIGN BY: XXX
PLAN BY: XXX	CHECK BY: XXX
REVISIONS	
NO.	DATE
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	
Candace C. Ambberg, PLA	
DATE: 12-15-2023	LIC. NO: 40646

LAYOUT PLAN

NORTHWOOD PARK
CITY OF NORTH BRANCH

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REVISIONS		
NO.	DATE	DESCRIPTION

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Candace C. Amberg, PLA
DATE: 12-15-2023 LIC. NO. 40646

LAYOUT
ENLARGEMENT

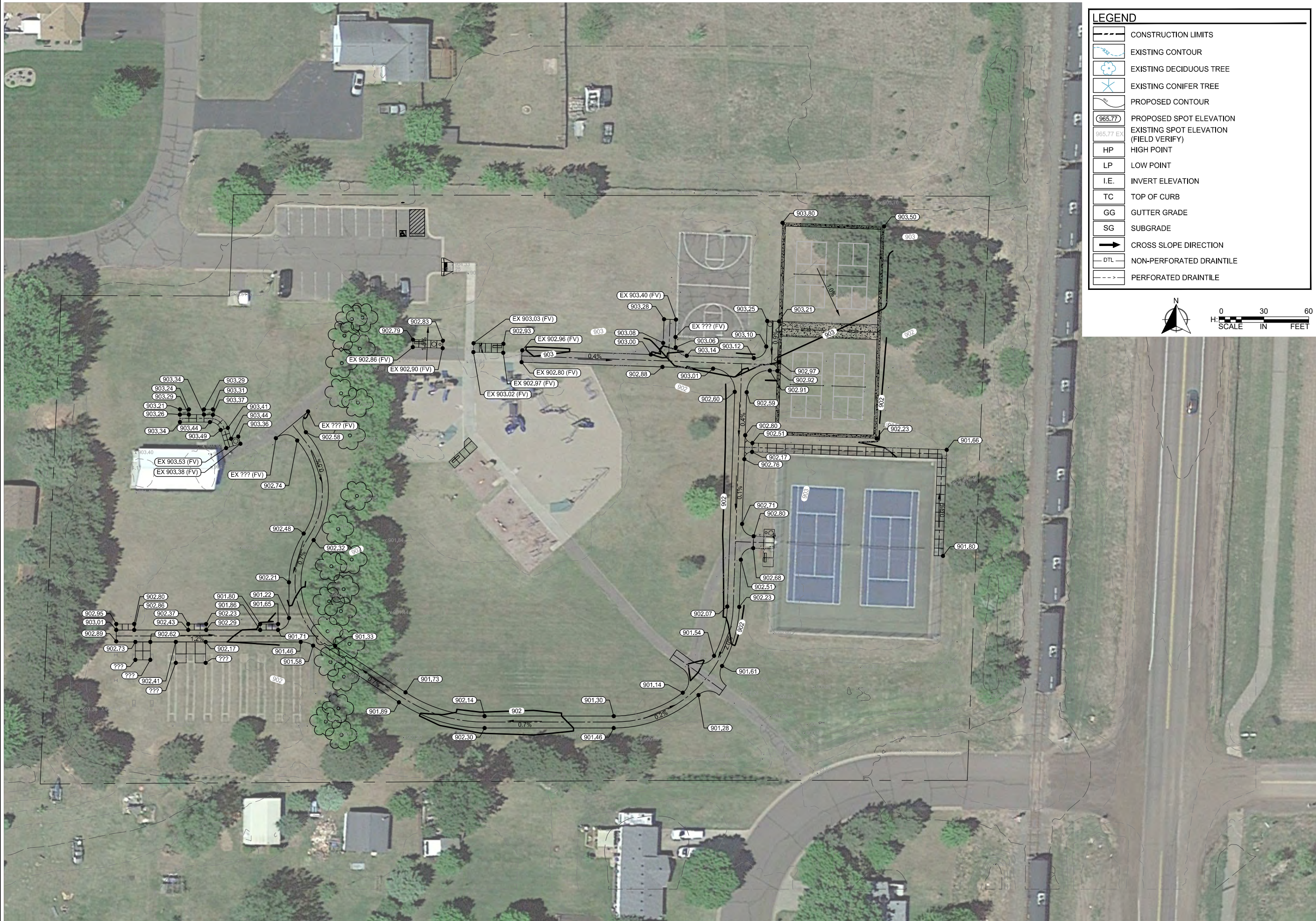
NORTHWOOD PARK
CITY OF NORTH BRANCH

CLIENT PROJECT NO.
OR24-008

WSB PROJECT NO.
024103-000

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LEGEND	
	CONSTRUCTION LIMITS
	EXISTING CONTOUR
	EXISTING DECIDUOUS TREE
	EXISTING CONIFER TREE
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION (FIELD VERIFY)
	HIGH POINT
	LOW POINT
	INVERT ELEVATION
	TOP OF CURB
	GUTTER GRADE
	SUBGRADE
	CROSS SLOPE DIRECTION
	NON-PERFORATED DRAINTILE
	PERFORATED DRAINTILE



SCALE: AS SHOWN

DESIGN BY: XXX

PLAN BY: XXX

CHECK BY: XXX

REVISIONS	
NO.	DATE

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Candace C. Ambarg, PLA

DATE: 12-15-2023

LIC. NO. 40646

GRADING PLAN

NORTHWOOD PARK
CITY OF NORTH BRANCH

CLIENT PROJECT NO.
OR24-008

WSB PROJECT NO.
024103-000

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PLAN BY: XXX
DESIGN BY: XXX
CHECK BY: XXX

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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Candace C. Ambberg, PLA
DATE: 12-15-2023 LIC. NO.: 40646

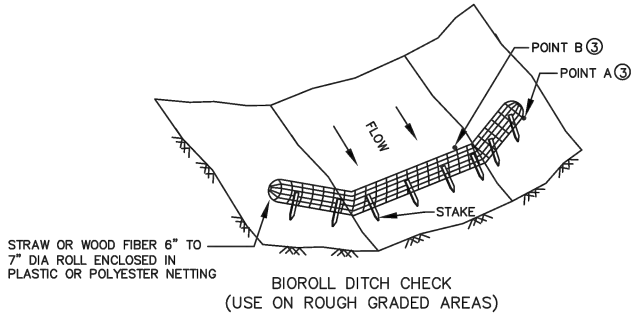
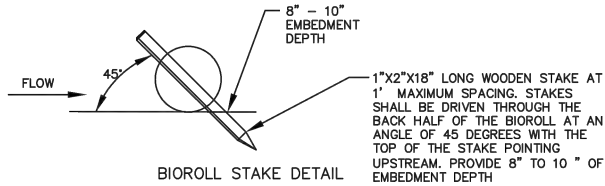
RESTORATION PLAN

NORTHWOOD PARK
CITY OF NORTH BRANCH

CLIENT PROJECT NO.
OR24-008

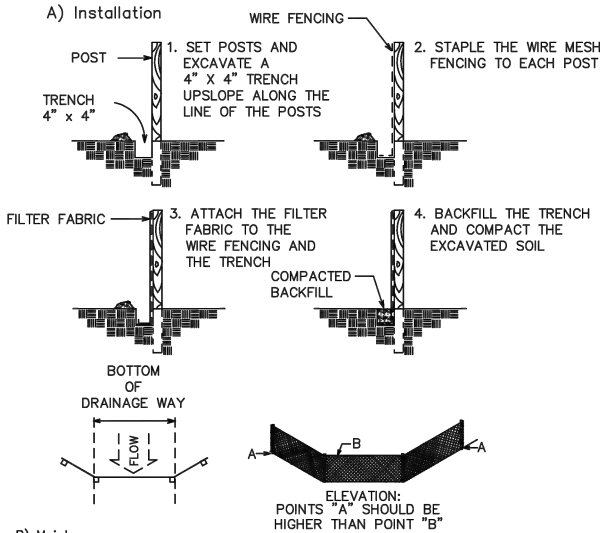
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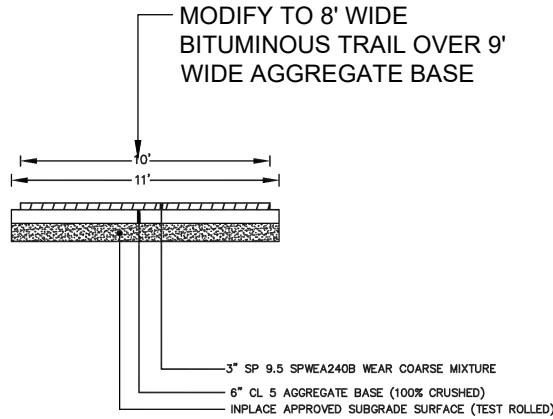
- NOTES:
- SEE MNDOT SPECS 2573, & 3889
 - APPROXIMATE SPACING OF DITCH CHECK (FT) = $\frac{\text{DITCH CHECK HEIGHT (FT)}}{\% \text{ CHANNEL SLOPE}} \times 100$
 - POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

	CITY OF NORTH BRANCH	2021 - STANDARD DETAIL
	BIOROLL DITCH CHECK TEMPORARY SEDIMENT CONTROL	DETAIL NO. ERO-007
	NO SCALE	



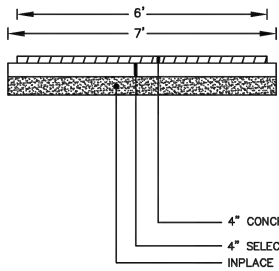
- A) Installation
- SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF THE POSTS
 - STAPLE THE WIRE MESH FENCING TO EACH POST
 - ATTACH THE FILTER FABRIC TO THE WIRE FENCING AND THE TRENCH
 - BACKFILL THE TRENCH AND COMPACT THE EXCAVATED SOIL
- B) Maintenance
- FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USEABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
 - SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
 - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED, OR REMOVED

	CITY OF NORTH BRANCH	2021 - STANDARD DETAIL
	PLACEMENT AND CONSTRUCTION OF SILT FENCE	DETAIL NO. ERO-001
	NO SCALE	



BITUMINOUS TRAIL TYPICAL SECTION

	CITY OF NORTH BRANCH	2021 - STANDARD DETAIL
	TYPICAL BITUMINOUS TRAIL	DETAIL NO. RDW - 011
	NO SCALE	



6' WIDE CONCRETE WALK
TYPICAL SECTION

	CITY OF NORTH BRANCH	2021 - STANDARD DETAIL
	TYPICAL CONCRETE WALK	DETAIL NO. RDW - 012
	NO SCALE	

REVISIONS

NO.	DATE	DESCRIPTION

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Candace C. Ambarg, PLA

DATE: 12-15-2023 LIC. NO. 40646

DETAILS

NORTHWOOD PARK
CITY OF NORTH BRANCH

CLIENT PROJECT NO.
OR24-008

WSB PROJECT NO.
024103-000

SHEET

SCALE: AS SHOWN
DESIGN BY: XXX
PLAN BY: XXX
CHECK BY: XXX

REVISIONS

NO.	DATE	DESCRIPTION

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Candace C. Amberg, PLA

DATE: 12-15-2023 LIC. NO. 40646

DETAILS

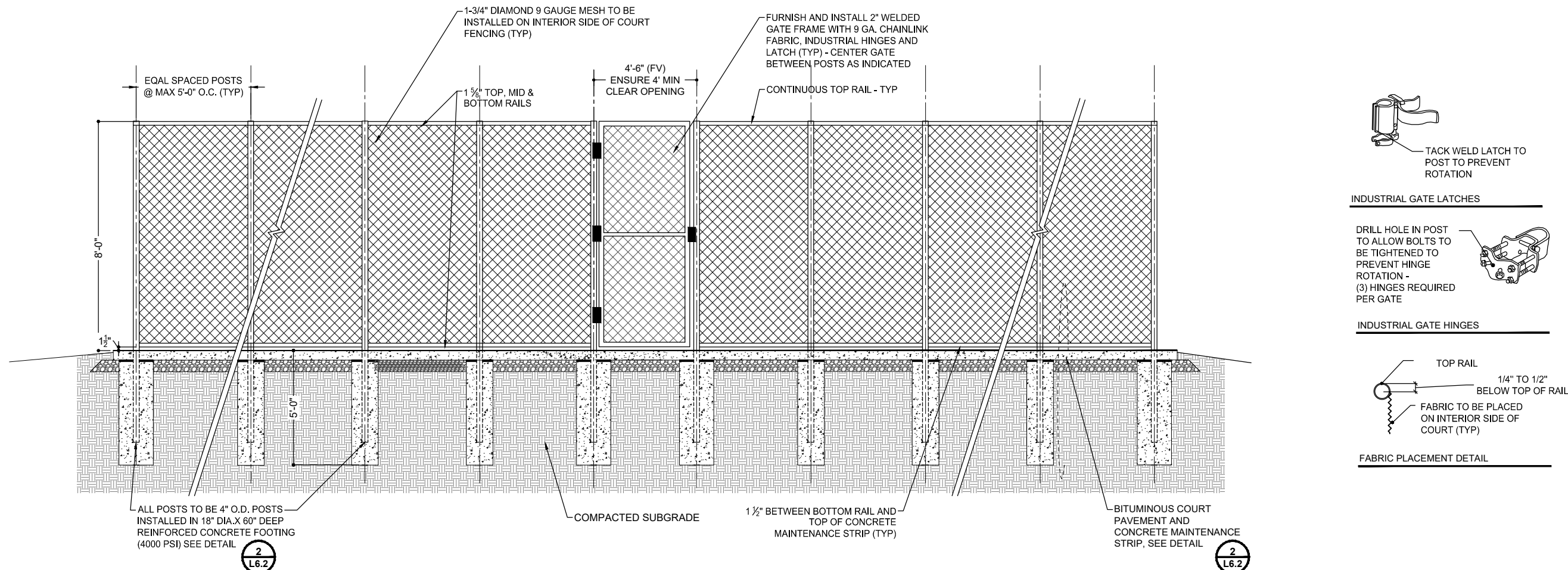
NORTHWOOD PARK
CITY OF NORTH BRANCH

CLIENT PROJECT NO.
OR24-008

WSB PROJECT NO.
024103-000

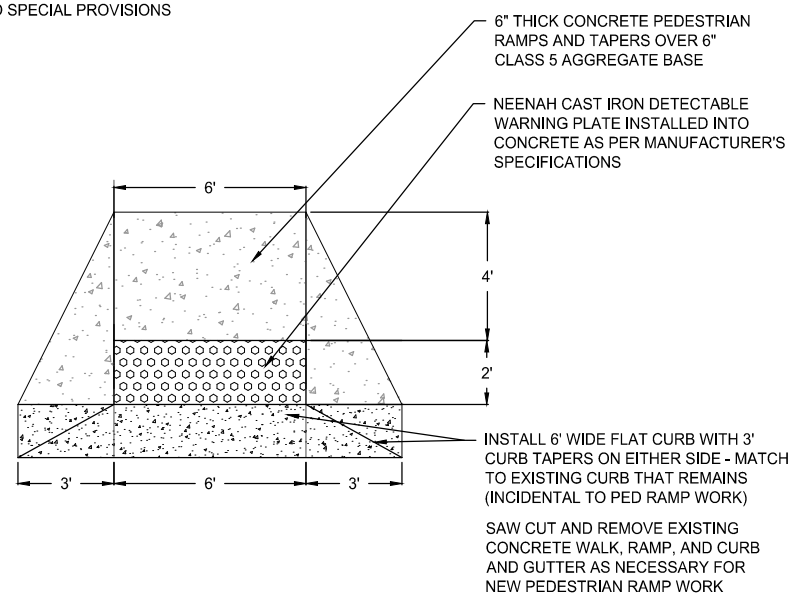
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L6.3
Page 43 of 502

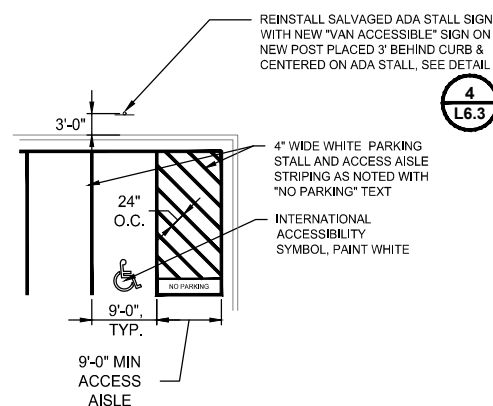


1 L6.3 8' HIGH CHAINLINK FENCE AND GATE ALTERNATE DETAIL (HEAVY DUTY)

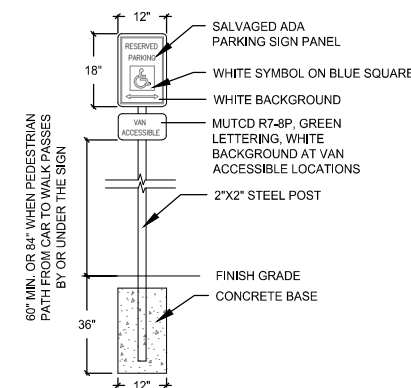
CONTRACTOR RESPONSIBLE FOR PEDESTRIAN RAMP COMPLIANCE WITH ALL PROWAG REQUIREMENTS AND SHALL REFER TO MnDOT STANDARD PLAN 5-297.250 AND SPECIAL PROVISIONS



2 L6.3 CONCRETE PEDESTRIAN RAMP



3 L6.3 ADA PARKING STALL & ACCESS AISLE



4 L6.3 ADA PARKING SIGN

					ESTIMATE	
No.	Spec	Item	Units	Quantity	Unit Price	Total Price
BASE BID						
1	2021.501	MOBILIZATION (5% MAX)	LS	1	\$8,909.50	\$8,909.50
2	2106.501	EXCAVATION - COMMON	LS	1	\$30,000.00	\$30,000.00
3	2360.504	4-INCH BITUMINOUS COURT	SY	960	\$48.00	\$46,080.00
4	2531.503	24" CONCRETE MAINTENANCE CURB	LF	412	\$45.00	\$18,540.00
5	2540.602	PICKLEBALL NET SYSTEM	EA	4	\$3,500.00	\$14,000.00
6	2557.502	8' HIGH CHAIN LINK MANGATE	EA	1	\$2,000.00	\$2,000.00
7	2557.502	8' HIGH x 10' WIDE CHAIN LINK MAINTENANCE GATE	EA	1	\$4,500.00	\$4,500.00
8	2557.503	4' HIGH 2-RAIL CHAIN LINK FENCE	LF	96	\$55.00	\$5,280.00
9	2557.503	8' HIGH 2-RAIL CHAIN LINK FENCE (STANDARD)	LF	400	\$90.00	\$36,000.00
10	2557.503	FENCE TOP PROTECTOR	LF	96	\$15.00	\$1,440.00
11	2573.501	CONSTRUCTION EXIT/MAT	LS	1	\$2,500.00	\$2,500.00
12	2573.503	SILT FENCE, TYPE MS OR BIOROLL	LF	300	\$3.50	\$1,050.00
13	2575.505	SEED W/BLANKET	ACRE	0.30	\$8,000.00	\$2,400.00
14	2582.504	ACRYLIC COLOR COAT & STRIPING	SY	960	\$15.00	\$14,400.00
TOTAL BASE BID SCHEDULE						\$178,190.00

ALTERNATE BID #1: PICKLEBALL COURT

A1.1	2521.518	6-INCH CONCRETE PICKLEBALL ALLEY	SF	640	\$15.00	\$9,600.00
A1.2	2360.504	(DEDUCT) 4-INCH BITUMINOUS COURT ALLEY	SY	71	(\$48.00)	-\$3,408.00
A1.3	2557.503	HEAVY DUTY 8' HIGH 2-RAIL CHAIN LINK FENCE	LF	192	\$150.00	\$28,800.00
A1.4	2557.503	(DEDUCT) STANDARD 8' HIGH 2-RAIL CHAIN LINK FENCE	LF	192	(\$90.00)	-\$17,280.00
TOTAL ALTERNATE BID #1						\$17,712.00

ALTERNATE BID #2: BITUMINOUS TRAILS

A2.1	2021.501	MOBILIZATION (5% MAX)	LS	1	\$4,500.00	\$4,500.00
A2.2	2104.518	REMOVE PAVEMENT	SF	2000	\$0.75	\$1,500.00
A2.3	2104.503	REMOVE FENCE	LF	100	\$3.00	\$300.00
A2.4	2106.501	EXCAVATION - COMMON	LS	1	\$15,000.00	\$15,000.00
A2.5	2360.504	3-INCH BITUMINOUS TRAIL	SY	975	\$40.00	\$39,000.00
A2.6	2575.505	SEED W/BLANKET	ACRE	0.25	\$8,000.00	\$2,000.00
TOTAL ALTERNATE BID #2						\$62,300.00

					ESTIMATE	
No.	Spec	Item	Units	Quantity	Unit Price	Total Price
ALTERNATE BID #3: PARKING LOT & CONCRETE						
A3.1	2021.501	MOBILIZATION (5% MAX)	LS	1	\$4,500.00	\$4,500.00
A3.2	2104.502	SALVAGE SIGN PANEL	EA	1	\$25.00	\$25.00
A3.3	2104.518	REMOVE PAVEMENT	SF	75	\$0.75	\$56.25
A3.4	2106.501	EXCAVATION - COMMON	LS	1	\$10,000.00	\$10,000.00
A3.5	2521.518	4-INCH CONCRETE	SF	2605	\$10.00	\$26,050.00
A3.6	2521.518	6-INCH CONCRETE (PED RAMP)	SF	75	\$15.00	\$1,125.00
A3.7	2531.618	TRUNCATED DOMES	SF	12	\$80.00	\$960.00
A3.8	2564.502	INSTALL SIGN	EA	1	\$150.00	\$150.00
A3.9	2582.501	PARKING LOT STRIPING & TEXT	LS	1	\$300.00	\$300.00
TOTAL ALTERNATE BID #3						\$43,166.25



PROJECT MANUAL

NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS

CITY OF NORTH BRANCH | CHISAGO COUNTY | MINNESOTA

JANUARY 5, 2024

Prepared for:
City of North Branch
6408 Elm Street
North Branch, MN 55056

CITY PROJECT NO. OR24-008
WSB PROJECT NO. 024103-000



PROJECT MANUAL

NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS

CITY PROJECT NO. OR24-008

FOR THE CITY OF NORTH BRANCH
CHISAGO COUNTY, MINNESOTA

JANUARY 5, 2024

Prepared By:



CERTIFICATION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed professional architect under the laws of the State of Minnesota.

Candace Amberg, RLA

Date: January 5, 2024

Lic. No. 40646

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ADVERTISEMENT FOR BIDS

NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS

CITY PROJECT NO. OR24-008

FOR THE CITY OF NORTH BRANCH
CHISAGO COUNTY, MINNESOTA

NOTICE IS HEREBY GIVEN that Bids for the construction of Northwood Park Pickleball & Site Improvements will be received online through QuestCDN vBid™ until **day of the week, date and time for receipt of Bids** local time. Immediately following expiration of the time for receiving bids, representatives of the City of North Branch will publicly view Bids at an online Bid opening meeting. Those interested in viewing the online Bid opening are welcome to join the meeting by logging on to <https://zoom.us/join> or calling **ENTER PHONE NUMBER FOR JOINING MEETING** and entering Meeting ID **ENTER ZOOM MEETING ID** and Passcode **ENTER ZOOM PASSCODE**. The as-read online Bid results will be available at www.questcdn.com following the Bid opening.

The Project includes the furnishing of all labor and materials for the construction complete in-place, to include but not be limited to, the following approximate quantities and items:

2,100	S F	Pavement Removal
960	S Y	4" Bituminous Court Pavement w/Acrylic Color Coat & Striping
975	S Y	3" Bituminous Trail Pavement
2,605	S F	6" Thick Concrete Pavement
412	L F	24" Wide Concrete Maintenance Strip
4	E A	Pickleball Net Systems
400	L F	8' High Chainlink Fence
96	L F	4' High Chainlink Fence w/Protector
1	E A	Chainlink Mangate
1	E A	10' Wide Maintenance Gate
1	L S	Excavation – Common (P)
300	L F	Silt Fence / Bioroll
0.5	Acre	Seeding w/Blanket

The provisions of MINN. STAT. 16C.285 Responsible Contractor are imposed as a requirement of this contract. All bidders and persons or companies providing a response/submission to the Advertisement for Bids of the City of North Branch shall comply with the provisions of the statute.

Information and Bidding Documents for the Project can be found at www.questcdn.com. Bidding Documents may be downloaded from the website for a nonrefundable fee of \$55 by inputting Quest project #**insert Quest project number** on the website's Project Search page.

The website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the website www.questcdn.com. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from other sources.

Bids will only be accepted via the electronic bidding service through QuestCDN.

The City Council reserves the right to reject any and all Bids and to waive any Bids received without explanation. No Bid may be withdrawn for a period of 60 days.

For all further requirements regarding Bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

DATED: January 5, 2024

BY THE ORDER OF THE CITY COUNCIL

s/s insert name of authorized individual
insert title of individual
insert Owner's name

PUBLISHED IN: insert title of publication
Insert title of publication

insert publication dates(s)
insert publication dates(s)

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

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INSTRUCTIONS TO BIDDERS – ELECTRONIC BIDDING

INTRODUCTION

These Instructions to Bidders amend or supplement the Definitions and Terms, the Bidding Requirements and Conditions, and the Bidding Requirements and Covenants contained in Division I of the Minnesota Department of Transportation (MnDOT) Standard Specifications for Construction (2020 Edition). All provisions, which are not so amended or supplemented, remain in full force and effect.

1. (1103) DEFINITIONS

The definitions in MnDOT 1103 are modified and/or supplemented as follows:

Department. The Department shall mean the City of North Branch.

Proposal. The **Bid**, as defined in Paragraph 1.01 of the General Conditions.

Proposal Package. The **Bidding Documents**, as defined in Paragraph 1.01 of the General Conditions.

Delete and replace the definition for “Working Day” in MnDOT 1103 with the following:

Working Day. Any Calendar Day, exclusive of Saturdays, Sundays, and Holidays, on which weather and other conditions not under the control of the Contractor will permit construction operations to proceed with the normal working force engaged in performing critical Work.

2. (1202) CONTENTS OF PROPOSAL PACKAGE

MnDOT 1202 is deleted in its entirety and replaced with the following:

1202 CONTENTS OF PROPOSAL PACKAGE

Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

Bidder shall not alter the contents of the Proposal Package, unless authorized in writing by the Owner. The Owner considers alterations to include any unauthorized additions, deletions, or changes.

3. (1203) ACCESS TO PROPOSAL PACKAGE

MnDOT 1203 is deleted in its entirety and replaced with the following:

1203 ACCESS TO PROPOSAL PACKAGE

Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

Bidder may register as a plan holder and obtain complete sets of Bidding Documents online at www.questcdn.com as indicated in the Advertisement or invitation to bid. Bidders may rely that sets of Bidding Documents obtained from www.questcdn.com are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf). It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents described above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

4. PRE-BID CONFERENCE

A pre-bid conference will not be conducted for this Project.

5. USE OF ON-LINE BIDDING TOOL

This project will be bid using QuestCDN's on-line bidding tool known as VirtuBid™ (vBid™). **Only bids received through vBid™ will be accepted.** See the Project Manual Appendix for instructions on the use of this bidding tool.

6. QUALIFICATIONS OF BIDDERS

A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

No requirement to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

6.1 RESPONSIBLE CONTRACTOR

The successful bidder must be a "Responsible Contractor" as defined in Minnesota Statutes, section 16C.285, subdivision 3.

A Bidder must verify it meets the minimum criteria specified in the statute by submitting the "Responsible Contractor Verification and Certification of Compliance" form. A company owner or officer must sign the "Responsible Contractor Verification and Certification of Compliance" form under oath verifying compliance with each of the minimum criteria. The completed forms must be submitted with the Bid.

A Bidder must obtain a verification from each Subcontractor it will have a direct contractual relationship with. At the Owner's request, a Bidder must submit signed Subcontractor verifications. A Contractor or Subcontractor must obtain an annual verification from each motor carrier it has a direct contractual relationship with. A motor carrier must give immediate written notice if it no longer meets the minimum responsible Contractor criteria. The requirement for Subcontractor verifications does not apply to:

- Design professionals licensed under Minnesota Statutes, section 326.06; and

- A business or person that supplies Materials, Equipment, or supplies to a Subcontractor on the Project, including performing delivering and unloading services in connection with the supply of Materials, Equipment, and supplies. But, a business or person must submit a verification if it delivers mineral Aggregate such as sand, Gravel, or stone that will be incorporated into the Work by depositing the Material substantially in place, directly or through spreaders, from the transporting vehicle.

A Bidder or Subcontractor who does not meet the minimum criteria specified in the statute, or who fails to verify compliance with the criteria, is not a “Responsible Contractor” and is ineligible to be awarded the Contract for this Project or to work on this Project. Submitting a false statement may lead to Contract termination.

6.2 RESPONSIBLE/RESPONSIVE BID

A “responsible” bid is a bid from a Bidder that has:

- Financial resources, technical qualifications, experience, organization and facilities adequate to carry out the project, or a demonstrated ability to obtain these;
- Resources to meet the completion schedule contained in the Agreement; and
- A satisfactory performance record for completion of other projects.

A “responsive” bid must include the following:

- Completed Bid Worksheet submitted electronically via QuestCDN vBid™;
- Completed Bidder Information Form;
- Non-Collusion Affidavit;
- Responsible Contractor Verification and Certification of Compliance Form;
- Bid Security in accordance with MnDOT 1208.

6.3 FURNISHING OF EVIDENCE OF RESPONSIBILITY

When requested by the Owner, the bidder shall furnish a balance sheet, certified by a certified public accountant as to a date not more than 60 days prior to the date of the opening of the bids which shall set forth outstanding assets and liabilities in reasonable detail. The bidder shall also furnish when requested, a list of work of a similar nature performed with dates of completion thereof. The bidder shall also furnish any other additional information relative to financial responsibility and competence to do the work as may be requested by the Owner prior to the acceptance of any Bid.

7. (1205) EXAMINATION OF PROPOSAL PACKAGE AND SITE OF WORK

MnDOT 1205 is modified and/or supplemented with the following:

1205.1 PROPOSAL PACKAGE AND SITE OF WORK

Amend the first paragraph of MnDOT 1205.1 by adding the following immediately after the first sentence:

Each Bidder shall become familiar with and satisfy itself as to all laws and regulations that may affect cost, progress and performance of the work.

Add the following new paragraphs to MnDOT 1205.1:

The Project Site is identified in the Bidding Documents. The Site includes right-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

Review of the project site includes but is not limited to the structure of the ground, the existence of surface and ground water, the availability of drainage, and obstacles which may be encountered.

Review of haul routes includes but is not limited to means of approach to the site, manner of delivery and handing of materials, and transporting of equipment.

No plea of ignorance of conditions that exist or that may hereafter exist, or of difficulties that will be encountered in the execution of the work, which result from failure to make necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this Contract. Nor will they be accepted as a basis for any claim whatsoever for extra compensation or for an extension of time.

No bidder may rely upon any statements or representations of any officer, agent or employee of the Owner as to the conditions of the work, the character of the soils, or other hazards which may be encountered during construction.

1205.2 ADDITIONAL INFORMATION

Add the following new paragraph to MnDOT 1205.2:

The above shall also apply if the test boring information is provided in the form of boring logs.

Add the following to new paragraph to MnDOT 1205:

1205.3 BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

The Bidder Information Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

8. CONTRACT TIMES

The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement. Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

9. (1206) PREPARATION AND DELIVERY OF PROPOSAL

MnDOT 1206 is deleted in its entirety and replaced with the following:

1206 PREPARATION AND DELIVERY OF PROPOSAL

1206.1 BASIS OF BID

Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid Worksheet using the vBid™ portal.

The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Worksheet, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The Bid Unit

Price shall be offered as a dollar value to two decimal places (\$XXX.XX). The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

For cash allowances the Bid Price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profits, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

1206.2 PREPARATION OF PROPOSALS

The Bidder Information Form included with the Bidding Documents is to be completed, signed, and submitted electronically with the Bid.

The Bidder shall complete the Bid Worksheet using the vBid™ portal. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein. Bidders are required to enter a unit price for each item and all unit prices will remain in effect for the duration of the Contract. If a Unit Price of zero dollars is proposed, enter 0.00 into the Unit Price. If a Unit Price or extended amount of less than one dollar is proposed, enter the zero before the decimal point in those entries.

If a correction is necessary, simply un-submit the Bid, modify the amount in the Bid Worksheet, and resubmit the Bid. The Bid amounts may be changed multiple times and resubmitted until the Bid opening date and time. View the information in the Appendix regarding submitting, un-submitting, and if applicable, resubmitting a Bid.

A Bid by a corporation must be executed on the Bidder Information Form in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

A Bid by a partnership must be executed on the Bidder Information Form in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

A Bid by a limited liability company must be executed on the Bidder Information Form in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

A Bid by an individual must show the Bidder's name and official address on the Bidder Information Form.

A Bid by a joint venture must be executed on the Bidder Information Form by an authorized representative of each joint venturer in the manner indicated on the Bidder Information Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

All names must be printed below the signatures.

Bidders are not able to submit a Bid without download of all Addenda. Acknowledgement of the download and receipt of each Addendum occurs digitally through vBid™ when each Addendum is properly downloaded by the Bidder.

Postal and email addresses and telephone number for communications regarding the Bid must be shown on the Bidder Information Form.

The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bidder Information Form.

1206.3 DELIVERY OF PROPOSAL

The Bidder shall submit its Bid Worksheet by using the vBid™ portal.

The Bidder Information Form, Non-Collusion Affidavit, and the Responsible Contractor Verification and Certification of Compliance Form are also to be submitted using the vBid™ portal. These items can be downloaded and printed from vBid™, signed/executed, and then uploaded to the portal.

The Bidder shall submit the Bid Security electronically. A scanned copy of the Bid Bond is to be uploaded to the vBid™ portal prior to submitting a Bid.

Bids must be received no later than the time set for receiving them in the Advertisement for Bids. View the instructions in the Appendix for submitting your Bid on-line. Bidders must ensure that Bids are submitted successfully.

Electronic Bids will not be accepted after the date and time for receiving Bids.

10.(1208) PROPOSAL GUARANTY

A Bid must be accompanied by Bid security in an amount equal to 5 percent of the Bidder's maximum Bid price (determined by summing the base bid and all alternates).

MnDOT 1208 is modified and/or supplemented with the following:

Add the following item to the second paragraph of MnDOT 1208:

- (3) The Bid Bond form included with the Bidding Documents may be used if Bid security is provided in the form of a bond.

11.(1210) REVISION OF PROPOSAL PACKAGE OR WITHDRAWAL OF PROPOSALS

MnDOT 1210 is modified and/or supplemented as follows:

Delete the first three paragraphs of MnDOT 1210 and replace with the following:

If submitting a Bid, the Bidder may revise its Bid an unlimited number of times and may withdraw its Bid before the date and time for opening Bids through the vBid™ portal. View the information in the Appendix regarding submitting, un-submitting, and if applicable, resubmitting a Bid.

The Owner reserves the right to revise the Proposal Package at any time before the date and time for opening Bids. The Owner will issue a numbered and dated Addendum for any revision of the Proposal Package.

Add the following new paragraphs to MnDOT 1210:

Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Direct questions about this Project to Candace Amberg at 612.518.3694 and camberg@wsbeng.com.

Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

QuestCDN vBid™ will not allow the submittal of a Bid without all Addenda being properly downloaded. Acknowledgement of the download and receipt of each Addendum occurs digitally through vBid™ when each Addendum is properly downloaded by the Bidder.

If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

12.(1211) CONDITIONAL PROPOSALS

MnDOT 1211 is deleted in its entirety and replaced with the following:

1211 CONDITIONAL PROPOSALS

The Bidder shall not stipulate in its Bid any conditions not provided for on the Bid Form.

13.(1212) OPENING OF PROPOSALS

MnDOT 1212 is deleted in its entirety and replaced with the following:

1212 OPENING OF PROPOSALS

Bids will be opened on-line at the time and place indicated in the advertisement or invitation to bid and unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

14.(1213) DISQUALIFICATION OF BIDDERS

MnDOT 1213 Is modified and/or supplemented as follows:

Modify the third item of the first paragraph of MnDOT 1213 to read as follows:

- (3) The Bidder failed to perform on a previous Contract with the Owner

15.(1301) CONSIDERATION OF PROPOSALS

MnDOT 1301 is modified and/or supplemented with the following:

Add the following new paragraphs to MnDOT 1301:

Contractor shall be familiar with the abbreviations used in the Schedule of Prices, available online at: <http://www.dot.state.mn.us/pre-letting/prov/order/sch-price.pdf>.

Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

16.(1302) AWARD OF CONTRACT

MnDOT 1302 is modified and/or supplemented with the following:

Modify the first sentence to read as follows:

Within 60 days after opening proposals, the Owner will Award the Contract to the lowest responsible Bidder provided that the lowest responsible Bidder complies with the Bidding Requirements.

Add the following new paragraphs to MnDOT 1302:

Owner reserves the right to delete any line item from the Bid prior to final Contract execution.

All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

17.(1305) REQUIREMENTS OF CONTRACT BOND

MnDOT 1305 is modified and or supplemented with the following:

Add the following new paragraph to MnDOT 1305:

In addition to the performance and payment bonds required by MINN. STAT. 574.26, Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

18.(1306) EXECUTION AND APPROVAL OF CONTRACT

MnDOT 1306 is modified and/or supplemented with the following:

Delete the first paragraph of MnDOT 1306 in its entirety and replace with the following:

When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 Calendar Days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required by the Contract Documents to Owner. Within 10 Calendar Days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

Modify the second paragraph of MnDOT 1306 to read as follows:

If the Contract specifies the Contract time as working days and the Successful Bidder fails to return the signed Contract documents within 15 Calendar Days, the Owner may reduce the Contract Time to reflect the delay caused by the Contractor.

Modify the last paragraph of MnDOT 1306 to read as follows:

The Award is not binding and the Contract is not effective until both parties fully execute the Contract and the Owner approves the Contract, as required by law.

19. SUBSTITUTE AND “OR EQUAL” ITEMS

The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items.

All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

20. SURETY DEPOSITS

All out-of-state contractors on construction work over \$100,000 will be required to file an exemption from Surety Deposit (Form SDE) prior to their first progress payment.

21. NONDISCRIMINATION IN EMPLOYMENT

If awarded the Contract, the Bidder (as Contractor) agrees not to discriminate on account of race, creed or color as required by Minnesota Statutes, section 181.69 and Minnesota Statutes, chapter 363A.

**MINNESOTA DEPARTMENT OF TRANSPORTATION
NOTICE TO BIDDERS:
SUSPENSIONS/DEBARMENTS
THIS NOTICE APPLIES TO STATE-FUNDED AND FEDERALY-FUNDED PROJECTS**

Do not use suspended or debarred parties as subcontractors or material suppliers on this project!

Both the federal government and the State of Minnesota suspend and debar vendors. Review the list of suspended and debarred vendors before submitting a bid or a request to sublet. If your bid is based on using a suspended or debarred vendor, you will not be entitled to additional compensation for replacing the suspended or debarred vendor with a qualified vendor.

State Suspensions and Debarments

The State of Minnesota's list of suspended and debarred vendors is maintained by the Minnesota Department of Administration, Office of State Procurement, and can be found at this link: <http://www.mmd.admin.state.mn.us/debarredreport.asp> . This list includes vendors suspended and debarred by the Department of Administration and MnDOT.

Federal Suspensions and Debarments

The federal government maintains a searchable database of suspensions and debarments, called the System for Award Management (SAM), which is found at this link: <https://www.sam.gov/SAM/> . You can use the "Search Records" function without registering for an account.

November 9, 2020 (MnDOT orig.)
July, 2023 (replace State Aid doc)

BIDDER INFORMATION FORM

PROJECT NAME: NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS	
BID OPENING DATE: February 22, 2024	BID OPENING TIME: 10:00 a.m.
Bidder:	
Address:	
City, State, Zip:	
Email Address:	Telephone No.:

This bid is submitted for the above referenced project electronically to Quest CDN vBid:

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices in this Bid, within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
2. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
3. In submitting this Bid, Bidder represents the following:
 - a. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 - b. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - c. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - d. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings; and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 - e. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (3) Bidder's (Contractor's) safety precautions and programs.
 - f. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 - g. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
 - h. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
 - i. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
 - j. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
4. Bidder will perform the Work at the unit prices entered for this project on the QuestCDN vBid. The Statement of Estimated Quantities that follows this section is provided for information only.
5. Bidder acknowledges that: (a) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (b) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

6. Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
7. Bidder accepts the provisions of the Agreement as to liquidated damages.
8. Bidder is not able to submit a Bid without downloading all Addenda from QuestCDN for this project. Acknowledgment of the download and receipt of each Addendum occurs digitally through vBid™ when each Addendum is properly downloaded by the Bidder.
9. The following documents are submitted with and made a condition of this Bid:
 - a. Bidder Information Form;
 - b. Non-Collusion Affidavit;
 - c. Responsible Contractor Verification and Certification of Compliance; and
 - d. Bid Security.

BIDDER: *[Indicate correct name of bidding entity]*

By: _____
[Signature] _____
[Printed name] _____
Title: _____
Date: _____
Address for giving notices: _____

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____
[Signature] _____
[Printed name] _____
Title: _____
Date: _____
Federal Employer ID Number (EIN): _____

BID BOND (PENAL SUM FORM)

Bidder Name: [Full formal name of Bidder] Address <i>(principal place of business)</i> : [Address of Bidder's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Address of Surety's principal place of business]
Owner Name: [Full formal name of Owner] Address <i>(principal place of business)</i> : [Address of Owner's principal place of business]	Bid Project <i>(name and location)</i> : [Owner project/contract name, and location of the project] Bid Due Date: [Enter date bid is due]
Bond Penal Sum: [Amount] Date of Bond: [Date]	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

NON-COLLUSION AFFIDAVIT

PROJECT NAME NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS

The following Non-Collusion Affidavit shall be executed by the bidder:

State Project No. _____

Federal Project No. _____

State of _____

County of _____

I, *[name]* _____, do state under penalty of perjury under 28 U.S.C. 1746 of the laws of the United States:

(1) that I am the authorized representative of *[company]* _____ and that I have the authority to make this affidavit for and on behalf of said bidder;

(2) that, in connection with this proposal, the said bidder has not either directly or indirectly entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding;

(3) that, to the best of my knowledge and belief, the contents of this proposal have not been communicated by the bidder or by any of his/her employees or agents to any person who is not an employee or agent of the bidder or of the surety on any bond furnished with the proposal and will not be communicated to any person who is not an employee or agent of the bidder or of said surety prior to the official opening of the proposal; and

(4) that I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signature: _____
[Signature of bidder or his/her authorized representative]

**ATTACHMENT A
PRIME CONTRACTOR RESPONSE**

RESPONSIBLE CONTRACTOR VERIFICATION AND CERTIFICATION OF COMPLIANCE

STATE PROJECT NUMBER/NAME: NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS

This form includes changes by statutory references from the Laws of Minnesota 2015, chapter 64, sections 1-9. This form must be submitted with the response to this solicitation. A response received without this form, will be rejected.

Minn. Stat. § 16C.285, Subd. 7. **IMPLEMENTATION.** ... any prime contractor or subcontractor or motor carrier that does not meet the minimum criteria in subdivision 3 or fails to verify that it meets those criteria is not a responsible contractor and is not eligible to be awarded a construction contract for the project or to perform work on the project...

Minn. Stat. § 16C.285, Subd. 3. **RESPONSIBLE CONTRACTOR, MINIMUM CRITERIA.** "Responsible contractor" means a contractor that conforms to the responsibility requirements in the solicitation document for its portion of the work on the project and verifies that it meets the following minimum criteria:

- | | |
|-----|---|
| (1) | <p>The Contractor:</p> <ul style="list-style-type: none">(i) is in compliance with workers' compensation and unemployment insurance requirements;(ii) is in compliance with Department of Revenue and Department of Employment and Economic Development registration requirements if it has employees;(iii) has a valid federal tax identification number or a valid Social Security number if an individual; and(iv) has filed a certificate of authority to transact business in Minnesota with the Secretary of State if a foreign corporation or cooperative. |
| (2) | <p>The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 177.24, 177.25, 177.41 to 177.44, 181.03, 181.101, 181.13, 181.14, or 181.722, and has not violated United States Code, title 29, sections 201 to 219, or United States Code, title 40, sections 3141 to 3148. For purposes of this clause, a violation occurs when a contractor or related entity:</p> <ul style="list-style-type: none">(i) repeatedly fails to pay statutorily required wages or penalties on one or more separate projects for a total underpayment of \$25,000 or more within the three-year period, provided that a failure to pay is "repeated" only if it involves two or more separate and distinct occurrences of underpayment during the three-year period;(ii) has been issued an order to comply by the commissioner of Labor and Industry that has become final;(iii) has been issued at least two determination letters within the three-year period by the Department of Transportation finding an underpayment by the contractor or related entity to its own employees;(iv) has been found by the commissioner of Labor and Industry to have repeatedly or willfully violated any of the sections referenced in this clause pursuant to section 177.27;(v) has been issued a ruling or findings of underpayment by the administrator of the Wage and Hour Division of the United States Department of Labor that have become final or have been upheld by an administrative law judge or the Administrative Review Board; or(vi) has been found liable for underpayment of wages or penalties or misrepresenting a construction worker as an independent contractor in an action brought in a court having jurisdiction. Provided that, if the contractor or related entity contests a determination of underpayment by the Department of Transportation in a contested case proceeding, a violation does not occur until the contested case proceeding has concluded with a determination that the contractor or related entity underpaid wages or penalties;* |

(3)	The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 181.723 or chapter 326B. For purposes of this clause, a violation occurs when a contractor or related entity has been issued a final administrative or licensing order;*
(4)	The contractor or related entity has not, more than twice during the three-year period before submitting the verification, had a certificate of compliance under section 363A.36 revoked or suspended based on the provisions of section 363A.36, with the revocation or suspension becoming final because it was upheld by the Office of Administrative Hearings or was not appealed to the office;*
(5)	The contractor or related entity has not received a final determination assessing a monetary sanction from the Department of Administration or Transportation for failure to meet targeted group business, disadvantaged business enterprise, or veteran-owned business goals, due to a lack of good faith effort, more than once during the three-year period before submitting the verification;*
	* Any violations, suspensions, revocations, or sanctions, as defined in clauses (2) to (5), occurring prior to July 1, 2014, shall not be considered in determining whether a contractor or related entity meets the minimum criteria.
(6)	The contractor or related entity is not currently suspended or debarred by the federal government or the state of Minnesota or any of its departments, commissions, agencies, or political subdivisions that have authority to debar a contractor; and
(7)	All subcontractors and motor carriers that the contractor intends to use to perform project work have verified to the contractor through a signed statement under oath by an owner or officer that they meet the minimum criteria listed in clauses (1) to (6).

Minn. Stat. § 16C.285, Subd. 5. **SUBCONTRACTOR VERIFICATION.**

A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project. Prior to execution of a construction contract, and as a condition precedent to the execution of a construction contract, the apparent successful prime contractor shall submit to the contracting authority a supplemental verification under oath confirming compliance with subdivision 3, clause (7). Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.

If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors.

A prime contractor shall submit to the contracting authority upon request copies of the signed verifications of compliance from all subcontractors of any tier pursuant to subdivision 3, clause (7). A prime contractor and subcontractors shall not be responsible for the false statements of any subcontractor with which they do not have a direct contractual relationship. A prime contractor and subcontractors shall be responsible for false statements by their first-tier subcontractors with which they have a direct contractual relationship only if they accept the verification of compliance with actual knowledge that it contains a false statement.

Subd. 5a. Motor carrier verification. A prime contractor or subcontractor shall obtain annually from all motor carriers with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each motor carrier. A prime contractor or subcontractor shall require each such motor carrier to provide it with immediate written notification in the event that the motor carrier no longer meets one or more of the minimum criteria in subdivision 3 after submitting its annual verification. A motor carrier shall be ineligible to perform work on a project covered by this section if it does not meet all the minimum criteria in subdivision 3. Upon request, a prime contractor or subcontractor shall submit to the contracting authority the signed verifications of compliance from all motor carriers providing for-hire transportation of materials, equipment, or supplies for a project.

Minn. Stat. § 16C.285, Subd. 4. **VERIFICATION OF COMPLIANCE.**

A contractor responding to a solicitation document of a contracting authority shall submit to the contracting authority a signed statement under oath by an owner or officer verifying compliance with each of the minimum criteria in subdivision 3, with the exception of clause (7), at the time that it responds to the solicitation document.

A contracting authority may accept a signed statement under oath as sufficient to demonstrate that a contractor is a responsible contractor and shall not be held liable for awarding a contract in reasonable reliance on that statement. A prime contractor, subcontractor, or motor carrier that fails to verify compliance with any one of the required minimum criteria or makes a false statement under oath in a verification of compliance shall be ineligible to be awarded a construction contract on the project for which the verification was submitted.

A false statement under oath verifying compliance with any of the minimum criteria may result in termination of a construction contract that has already been awarded to a prime contractor or subcontractor or motor carrier that submits a false statement. A contracting authority shall not be liable for declining to award a contract or terminating a contract based on a reasonable determination that the contractor failed to verify compliance with the minimum criteria or falsely stated that it meets the minimum criteria. A verification of compliance need not be notarized. An electronic verification of compliance made and submitted as part of an electronic bid shall be an acceptable verification of compliance under this section provided that it contains an electronic signature as defined in section 325L.02, paragraph (h).

CERTIFICATION

By signing this document I certify that I am an owner or officer of the company, and I certify under oath that:

- 1) My company meets each of the Minimum Criteria to be a responsible contractor as defined herein and is in compliance with Minn. Stat. § 16C.285, and**
- 2) if my company is awarded a contract, I will submit Attachment A-1 prior to contract execution, and**
- 3) if my company is awarded a contract, I will also submit Attachment A-2 as required.**

Authorized Signature of Owner or Officer:

Printed Name:

Title:

Date:

Company Name:

NOTE: Minn. Stat. § 16C.285, Subd. 2, (c) If only one prime contractor responds to a solicitation document, a contracting authority may award a construction contract to the responding prime contractor even if the minimum criteria in subdivision 3 are not met.

ATTACHMENT A-1

FIRST-TIER SUBCONTRACTORS LIST

SUBMIT PRIOR TO EXECUTION OF A CONSTRUCTION CONTRACT

STATE PROJECT NUMBER/NAME: NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS

Minn. Stat. § 16C.285, Subd. 5. A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project. Prior to execution of a construction contract, and as a condition precedent to the execution of a construction contract, the apparent successful prime contractor shall submit to the contracting authority a supplemental verification under oath confirming compliance with subdivision 3, clause (7). Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.

FIRST TIER SUBCONTRACTOR NAMES* (Legal name of company as registered with the Secretary of State)	Name of city where company home office is located

*Attach additional sheets as needed for submission of all first-tier subcontractors.

SUPPLEMENTAL CERTIFICATION FOR ATTACHMENT A-1	
By signing this document I certify that I am an owner or officer of the company, and I certify under oath that: All first-tier subcontractors listed on attachment A-1 have verified through a signed statement under oath by an owner or officer that they meet the minimum criteria to be a responsible contractor as defined in Minn. Stat. § 16C.285.	
Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

ATTACHMENT A-2

ADDITIONAL SUBCONTRACTORS LIST

PRIME CONTRACTOR TO SUBMIT AS SUBCONTRACTORS ARE ADDED TO THE PROJECT

STATE PROJECT NUMBER/NAME: NORTHWOOD PARK PICKLEBALL & SITE IMPROVEMENTS

This form must be submitted to the Project Manager or individual as identified in the solicitation document.

Minn. Stat. § 16C.285, Subd. 5. ... If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors. ...

ADDITIONAL SUBCONTRACTOR NAMES* (Legal name of company as registered with the Secretary of State)	Name of city where company home office is located

*Attach additional sheets as needed for submission of all additional subcontractors.

SUPPLEMENTAL CERTIFICATION FOR ATTACHMENT A-2

By signing this document I certify that I am an owner or officer of the company, and I certify under oath that:

All additional subcontractors listed on Attachment A-2 have verified through a signed statement under oath by an owner or officer that they meet the minimum criteria to be a responsible contractor as defined in Minn. Stat. § 16C.285.

Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT

THIS AGREEMENT is by and between _____ (“Owner”) and
_____ (“Contractor”).

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE - 1 WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

The furnishing of all labor, materials, tools, and equipment necessary to complete the construction of pickleball courts, trails, and concrete pads including corresponding removals, grading, restoration, and appurtenant work.

ARTICLE - 2 THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Northwood Park Pickleball & Site Improvements for the City of North Branch, City Project No. OR24-008, WSB Project No. 024103-000.

ARTICLE - 3 ENGINEER

3.01 The Owner has retained WSB LLC (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by WSB LLC.

ARTICLE - 4 CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially completed on or before **August 2, 2024**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **September 6, 2024**.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration

proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner liquidated damages in accordance with MnDOT Table 1807-1 for each Calendar Day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner liquidated damages in accordance with MnDOT Table 1807-1 for each Calendar Day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Milestones, Substantial Completion and final completion are not additive and will not be imposed concurrently.

ARTICLE - 5 CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. *Contract Price:* _____ and XX/100 Dollars (\$_____) for Base Bid/Base Bid and Selected Alternate(s) No. ____ subject to adjustment based on the provisions of the Contract.
- B. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item). The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.
- C. The Contractor's Bid, attached hereto as an exhibit, provides the basis for the extended prices for the Unit Price Work.

ARTICLE - 6 PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment once each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
 - a. 95 percent of Work completed (with the balance being retainage).
 - b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Contractor shall submit to the Engineer an Application for Payment for the retainage amount less the following amounts:
 1. 250 percent of the anticipated cost to complete the punch list items; and
 2. the greater of \$500 or 1 percent of the Contract price to ensure delivery of final paperwork which includes, but is not limited to operation manuals, payroll documents for projects subject to prevailing wage requirements, and the IC134 form.

The Owner, upon certification from the Engineer, shall make payment of any undisputed amounts within 30 days of receipt of the Application for Payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or at any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due shall bear interest at the rate of 1.5 percent per month.

ARTICLE - 7 CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
 1. This Agreement.
 2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
 3. General Conditions.
 4. Supplementary Conditions.
 5. Specifications as listed in the table of contents of the Project Manual.
 6. Drawings (not attached but incorporated by reference) consisting of [] sheets with each sheet bearing the following general title: [], dated [].
 7. Addenda (numbers [] to [], inclusive).

8. Exhibits to this Agreement (enumerated as follows):
 - a. Completed Bid Form.
 - b. Non-Collusion Affidavit.
 - c. Responsible Contractor Verification and Certification of Compliance Form.
9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
 - e. Maintenance Bond.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE - 8 REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 Contractor's Representations

- A. In order to induce the Owner to enter into this Contract, Contractor makes the following representations:
 1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 2. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Contractor has carefully studied all: (a) reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings; and (b) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 5. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 6. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price,

within the Contract Times, and in accordance with the other terms and conditions the Contract.

7. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
8. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
9. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
10. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

- A. The provisions of MINN. STAT. 16C.285 Responsible Contractor are imposed as a requirement of this Contract. This Contract may be terminated by the Owner at any time upon discovery by the Owner that the prime contractor or subcontractor has submitted a false statement under oath verifying compliance with any of the minimum criteria set forth in the Statute.
- B. The provisions of MINN. STAT. 471.425, subdivision 4a. are imposed as a requirement of this Contract.
 1. Each contract of a municipality must require the prime contractor to pay any subcontractor within ten days of the prime contractor's receipt of payment from the municipality for undisputed services provided by the subcontractor. The contract must require the prime contractor to pay interest of 1.5 percent per month or any part of a month to the subcontractor on any undisputed amount not paid on time to the subcontractor. The minimum monthly interest penalty payment for an unpaid balance of \$100 or more is \$10. For an unpaid balance of less than \$100, the prime contractor shall pay the actual penalty due to the subcontractor. A Subcontractor who prevails in a civil action to collect interest penalties from a prime contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineer's Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:

Contractor:

By: _____

By: _____

Date: _____

Date: _____

Name: _____

Name: _____

Title: _____

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

Designated Representative:

Designated Representative:

Name: _____

Name: _____

Title: _____

Title: _____

Address: _____

Address: _____

PERFORMANCE BOND

Contractor Name: [Full formal name of Contractor] Address <i>(principal place of business)</i> : [Address of Contractor's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Address of Surety's principal place of business]
Owner Name: [Full formal name of Owner] Mailing address <i>(principal place of business)</i> : [Address of Owner's principal place of business]	Contract Description <i>(name and location)</i> : [Owner's project/contract name, and location of the project] Contract Price: [Amount from Contract] Effective Date of Contract: [Date from Contract]
Bond Bond Amount: [Amount] Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☐ None ☐ See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____	By: _____
<i>(Signature)</i>	<i>(Signature)(Attach Power of Attorney)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____	Attest: _____
<i>(Signature)</i>	<i>(Signature)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: **[Describe modification or enter “None”]**

PAYMENT BOND

Contractor Name: [Full formal name of Contractor] Address <i>(principal place of business)</i> : [Address of Contractor's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Address of Surety's principal place of business]
Owner Name: [Full formal name of Owner] Mailing address <i>(principal place of business)</i> : [Address of Owner's principal place of business]	Contract Description <i>(name and location)</i> : [Owner's project/contract name, and location of the project] Contract Price: [Amount, from Contract] Effective Date of Contract: [Date, from Contract]
Bond Bond Amount: [Amount] Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☐ None ☐ See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

Contractor Affidavit

This Contractor Affidavit must be certified by the Minnesota Department of Revenue before the state of Minnesota or any of its subdivisions can make final payment to contractors. For more detailed information, see the instructions on the back of this form.

Please type or print clearly. This information will be used for returning the completed form.

Company name			Daytime phone	Minnesota tax ID number
Address			Total contract amount	Month/year work began
City	State	ZIP code	\$	Month/year work ended
			Amount still due	
			\$	

Project number	Project location			
Project owner	Address	City	State	ZIP code

Did you have employees work on this project? ☐ Yes ☐ No. If no, who did the work?

Check the box that describes your involvement in the project and fill in all information requested.

☐ **Sole contractor**

☐ **Subcontractor**

Name of contractor who hired you

Address

☐ **Prime contractor**—If you subcontracted out any work on this project, all of your subcontractors must submit their own Contractor Affidavits and have them certified by the Department of Revenue *before* you can submit your Contractor Affidavit. For each subcontractor you had, fill in the information below and attach a copy of each subcontractor's certified Contractor Affidavit. If you need more space, attach a separate sheet.

Business name	Address	Owner/Officer

I declare that all information I have filled in on this form is true and complete to the best of my knowledge and belief. I authorize the Department of Revenue to disclose pertinent information relating to this project, including sending copies of this form, to the prime contractor if I am a subcontractor, and to any subcontractors if I am a prime contractor, and to the contracting agency.

Contractor's signature	Title	Date
------------------------	-------	------

Mail to: Minnesota Revenue, Mail Station 6610, St. Paul, MN 55146-6610
Phone: 651-282-9999 or 1-800-657-3594

Certificate of Compliance

Based on records of the Minnesota Department of Revenue, I certify that the contractor who has signed this Contractor Affidavit has fulfilled all the requirements of Minnesota Statutes 290.92 and 270C.66 concerning the withholding of Minnesota income tax from wages paid to employees relating to contract services with the state of Minnesota and/or its subdivisions.

Department of Revenue approval

Date

Form IC134 Instructions

Contractor Affidavit

No state agency or local unit of government can make final payment to a contractor until the Department of Revenue has certified that the contractor and any subcontractor have fulfilled the requirements of Minnesota withholding tax laws.

If you are a prime contractor, a contractor or a subcontractor who did work on a project for the state of Minnesota or any of its local government subdivisions — such as a county, city or school district — you must submit a Contractor Affidavit to the Department of Revenue to receive a certificate of compliance.

Use of Information

The Department of Revenue needs **all** the requested information to determine if you have met the state income tax withholding requirements. If all required information is not provided, Form IC134 will be returned to you for completion.

All information on this Contractor Affidavit is private by state law. It cannot be given to others without your permission, except to the Internal Revenue Service, other states that guarantee the same privacy and certain government agencies as provided by law.

Minnesota Tax ID Number

You must have a Minnesota tax ID number if you have employees who work in Minnesota. You must enter your Minnesota tax ID number on Form IC134.

If you don't have a Minnesota tax ID number, apply online at www.revenue.state.mn.us or by calling our Business Registration Office at 651-282-5225 or 1-800-657-3605.

If you have no employees and did all the work yourself, you do not need a Minnesota tax ID number. Instead, enter your Social Security number in the space for Minnesota tax ID number and explain who did the work.

Submit Contractor Affidavit

Form IC134 cannot be processed by the Department of Revenue until you finish the work. If you submit the form before the project is completed, it will be returned to you unprocessed.

If any withholding payments are due to the state, Minnesota law requires certified payments before we approve your Form IC134.

If you are a subcontractor or sole contractor, submit the form when you have completed your part of the project.

If you are a prime contractor, submit the form when the entire project is completed and you have received certified Contractor Affidavits from all of your subcontractors.

If you're a prime contractor and a subcontractor on the same project

If you were hired as a subcontractor to do work on a project, and you subcontracted all or a part of your portion of the project to another contractor, you are a prime contractor as well. Complete both the subcontractor and prime contractor areas on a single Form IC134.

You may submit your Contractor Affidavit either electronically **or** by mail. This affidavit must be certified and returned before the state or any of its subdivisions can make final payment for your work.

For an immediate response: Complete and submit your Contractor Affidavit electronically. Go to www.revenue.state.mn.us and choose **Withholding Tax**. Under the File and Pay tab, click on Contractor Affidavit Information for Government Projects.

You may complete and mail Form IC134 to: Minnesota Revenue, Mail Station 6610, St. Paul, MN, 55146-6610. If you have fulfilled the requirements of Minnesota withholding tax laws, the department will sign your Form IC134 and return it to you. To receive your final payment, submit the certified Contractor Affidavit to the government unit for which the work was done. If you are a subcontractor, submit the certified Contractor Affidavit to your prime contractor to receive your final payment.

Information and Assistance

Additional forms and information, including fact sheets and frequently asked questions, are available on our website.

Website: www.revenue.state.mn.us

Email: withholding.tax@state.mn.us

Phone: 651-282-9999 or 1-800-657-3594

This information is available in alternate formats.

Form SDE, Exemption from Surety Deposits for Non-Minnesota Contractors

Please type or print clearly.

Non-Minnesota Contractor			Minnesota Tax ID Number	
Address			Contact Person	
City	State	ZIP Code	Daytime Phone	Email Address

Name of Contract Owner		Contact Person	Daytime Phone	
Contract Owner's Address		City	State	ZIP Code
Project Number	Project Location Address	City	State	ZIP Code
Total Contract Amount		Contract Start Date	Projected Contract Completion Date	

I request exemption from surety deposits under Minnesota Statute 290.9705 for this reason (check one box only):

- ☐ I have a bond secured by an insurance company licensed in Minnesota. Attach Form SDB, *Non-Minnesota Contractor's Bond*.
- ☐ I have a cash surety. Bank or other financial institution: _____ Account number: _____
- ☐ I have done construction work in Minnesota during the past three calendar years and have fully complied with Minnesota income, sales and use, corporate franchise, and withholding tax laws during that time.

I hereby certify that I have the legal authority to sign this form on behalf of the Non-Minnesota Contractor, and that the information is correct and complete to the best of my knowledge and belief. I authorize the Minnesota Department of Revenue: 1) to disclose pertinent return information to the Surety Company that issued the bond for this project if needed in order to collect on the bond; and 2) to disclose pertinent return information to the Contract Owner for this project if needed concerning the surety deposit and its withholding.

Non-Minnesota Contractor's Signature	Title	Date
--------------------------------------	-------	------

Email or mail this completed form to:

Email: Contractor.Compliance@state.mn.us

Mail: Minnesota Department of Revenue
Mail Station 6501
600 N. Robert St.
St. Paul, MN 55146-6501

Form SDE Instructions

When to Complete Form SDE

Complete and file Form SDE, *Exemption from Surety Deposits for Non-Minnesota Contractors*, with the Minnesota Department of Revenue before starting a construction project in Minnesota if all of these apply:

- You are a non-Minnesota construction contractor
- You have one or more contracts expected to exceed \$50,000 for construction work done in Minnesota
- You qualify for a surety deposit exemption (see Exemption Requirements)

You must have a Minnesota Tax ID Number to request an exemption. If you do not have a Minnesota Tax ID number:

- Apply online at www.revenue.state.mn.us
- Call the department at 651-282-5225 or 1-800-657-3605

Surety Deposit Requirement

If a business or government agency hires or contracts with you, they must withhold 8% (.08) from their payments to you as a Minnesota surety deposit if both of these apply:

- The work is being performed in Minnesota
- Total payments on the contract will exceed \$50,000

Note: All payments – including the first \$50,000 – are subject to the 8% withholding.

Exemption Requirements

You may qualify for an exemption from the surety deposit requirements if one of these is true:

- You have done construction work in Minnesota during the past three calendar years and have filed all returns and paid all amounts due, including Minnesota income, withholding, corporate franchise, and sales and use tax.
- You give the department a bond that is secured by an insurance company licensed in Minnesota and is equal to 8% of the contract amount. The bond remains in effect until you satisfy all tax liabilities. You may complete Form SDB, Non-Minnesota Contractor's Bond, to send this bond to the department.
- You give the department a cash surety. A cash surety is evidence of a savings account, deposit, or certificate of deposit in, or issued by, a state bank, national bank, or savings and loan association doing business in Minnesota. You may keep any interest and dividends earned on the principal amount.

If You're Exempt

If you qualify for an exemption, we will send you a Surety Deposit Withholding Waiver. Make a copy for your records and give the original letter to the business or government agency you are working for.

If You're Not Exempt

If you do not qualify for an exemption, the business or government agency you are working for must withhold and remit 8% of each payment to you.

To have the deposits refunded to you, complete Form SDR, *Refund of Surety Deposits for Non-Minnesota Contractors*. If we determine that you have complied with all applicable Minnesota income, withholding, and sales and use tax laws for the periods covered by the deposit, we will send you a refund plus interest.

Information and Assistance

Additional forms and information, including fact sheets and frequently asked questions, are available on our website. Website: www.revenue.state.mn.us

Email: withholding.tax@state.mn.us

Phone: 651-282 9999 or 1-800-657-3594

This information is available in alternate formats.

Use of Information

The information you enter on this form may be private or nonpublic under state law. We use it to determine if you qualify for a surety deposit exemption under Minn. Stat. § 290.9705. You are not required to provide the information requested; however, we are unable to process the exemption from surety deposits unless the form is complete. We cannot share any such private or nonpublic information without your written consent, authorization by law, or court order.

STATE FUNDED ONLY CONSTRUCTION CONTRACTS

SPECIAL PROVISIONS DIVISION A - LABOR

I. INTRODUCTION

- A. **Policy Statement.** It is in the public interest that public buildings and other public works projects be constructed and maintained by the best means and the highest quality of labor reasonably available and that persons working on public works projects be compensated according to the real value of the services they perform.¹
- B. **State Regulations Govern.** This Contract is subject to the Minnesota Prevailing Wage Act², Minnesota Fair Labor Standards Act³, Minnesota Rules⁴, Minnesota Department of Labor and Industry (MnDLI) Wage Decision(s), and the MnDLI Truck Rental Rate Schedule.
- C. **Purpose.** These provisions: (1) outline your obligations under state and federal laws, rules and regulations; (2) explain the requirements necessary to demonstrate compliance; and (3) explain the processes that the Department will undertake to ensure compliance.
- D. **Questions or Resources.** Please visit the Minnesota Department of Transportation (MnDOT) Labor Compliance Unit (LCU) website at: www.dot.state.mn.us/const/labor.

II. DEFINITIONS

Many of the terms used in these provisions are defined in MnDOT's Standard Specifications for Construction,⁵ unless defined below.

- A. **Apprentice.** A Worker at least 16 years of age who is employed to learn an apprenticeable trade or occupation in a registered apprenticeship program.⁶
- B. **Bona Fide.** Made or carried out in good faith; authentic.⁷
- C. **Certified Payroll Report (CPR).** A report comprised of two components; (1) a payroll report, and (2) a statement of compliance report.⁸
- D. **Contractor.** An individual or business entity that is engaged in construction or construction service-related activities including trucking activities either directly or indirectly through a Contract, or by Subcontract with the Prime Contractor, or by a further Subcontract with any other person or business entity performing Work.⁹
- E. **Employer.** An individual, partnership, association, corporation, business trust, or other business entity that hires a Worker.¹⁰
- F. **Fringe Benefit.** An employment benefit given in addition to a Worker's wages or salary.¹¹
- G. **Independent Truck Owner/Operator (ITO).** An individual, partnership, or principal stockholder of a corporation who owns or holds a vehicle under lease and who contracts that vehicle and the owner's services to an entity which provides construction services to a public works project.¹²

¹ Minn. Stat. 177.41

² Minn. Stat. 177.41 to 177.44

³ Minn. Stat. 177.21 to 177.35

⁴ Minn. R. 5200.1000 to 5200.1120

⁵ MnDOT Standard Specifications for Construction, Section 1103

⁶ Minn. Stat. 178.011, Subdivision 2

⁷ The American Heritage College Dictionary, Third Edition, 2000

⁸ Minn. R. 5200.1106, Subpart 10

⁹ Minn. R. 5200.1106, Subpart 2(D)

¹⁰ Minn. Stat. 177.42, Subdivision 7

¹¹ The American Heritage College Dictionary, Third Edition, 2000

¹² Minn. R. 5200.1106, Subpart 7(A)

- H. **Journeyworker.** A person who has attained a level of skill, abilities, and competencies recognized within and industry as having mastered the skills and competencies required for the trade or occupation.¹³
- I. **Prime Contractor.** An individual or business entity that enters into a Contract with the Department.¹⁴
- J. **Subcontract.** A Contract that assigns some obligations of a prior Contract to another party.¹⁵
- K. **Substantially In Place.** Mineral aggregate is deposited on the project site directly or through spreaders where it can be spread from or compacted at the location where it was deposited.¹⁶
- L. **Total Prevailing Wage Rate.** The sum of the prevailing hourly “basic” and “fringe” rate that is established in a Wage Decision.
- M. **Trucking Broker (Broker).** An individual or business entity, the activities of which include, but are not limited to: contracting to provide trucking services in the construction industry to users of such services, contracting to obtain such services from providers of trucking services, dispatching the providers of the services to do Work as required by the users of the services, receiving payment from the users in consideration of the trucking services provided, and making payment to the providers for the services.¹⁷
- N. **Trucking Firm/Multiple Truck Owner (MTO).** Any legal business entity that owns more than one vehicle and hires the vehicles out for services to Trucking Brokers or Contractors on public works projects.¹⁸
- O. **Truck Rental Rate Schedule.** A document prepared by the MnDLI through a Contractor survey process that identifies the required hourly Total Prevailing Wage Rate and operating cost for various types of trucks that perform hauling activities (Work) under a Contract that is funded in whole or in part with state funds.¹⁹
- P. **Wage Decision.** A document prepared by the MnDLI through a Contractor survey process that identifies the required hourly basic rate of pay and hourly Fringe Benefits for various labor classifications that perform Work under a Contract that is funded in whole or in part with state funds.²⁰
- Q. **Work (Work).** All construction activities associated with a public works project, including any required hauling activities on-the-site-of or to-or-from a public works project and conducted pursuant to a Contract, regardless of whether the construction activity or Work is performed by the Prime Contractor, subcontractor, Trucking Broker, Trucking Firm (MTO), ITO, independent contractor, or employee or agent of any of the foregoing entities.²¹
- R. **Worker (Laborer or Mechanic).** A Worker in a construction industry labor class identified in or pursuant to Minnesota Rules 5200.1100, Master Job Classifications.²²

III. APPLICATION & UNDERSTANDING

- A. **Provisions & Prevailing Wage Rates Apply.** These provisions, along with the prevailing Wage Decision(s) that are incorporated into the Contract, apply to all Contractors contracting to do all or part of the Work.²³

¹³ Minn. Stat. 178.011, Subdivision 9

¹⁴ Minn. R. 5200.1106, Subpart 2(C)

¹⁵ The American Heritage College Dictionary, Third Edition, 2000

¹⁶ Minn. R. 5200.1106, Subpart 5(C)

¹⁷ Minn. R. 5200.1106, Subpart 7(C)

¹⁸ Minn. R. 5200.1106, Subpart 7(B)

¹⁹ Minn. R. 5200.1105

²⁰ Minn. R. 5200.1020 to 5200.1060

²¹ Minn. R. 5200.1106, Subpart 2(A)

²² Minn. R. 5200.1106, Subpart 5(A)

²³ Minn. Stat. 177.44, Subdivision 1

- B. **Truck Rental Rates Apply.** The Truck Rental Rate Schedule incorporated into the Contract applies to all hired trucking entities that perform covered hauling activities related to the project.²⁴
- C. **Prevailing Wage Terms Must Be Included in All Contracts.** The Prime Contractor is required to ensure that all subcontractors performing Work receive the Contract Wage Decision(s), Truck Rental Rate Schedule, and a copy of these provisions with their written Subcontracts, agreements and/or purchase orders.²⁵
- D. **Responsible for Understanding All Requirements.** Each Contractor is responsible for understanding all laws, rules, regulations, plans, and specifications that are incorporated physically, or by reference, into the Contract.²⁶
- E. **E-Verify.** For services valued in excess of \$50,000, the Contractor certifies that as of the date of services performed on behalf of State, the Contractor will have implemented or be in the process of implementing the federal E-Verify program for all newly hired employees in the United States who will perform work under the contract. The Prime Contractor is responsible to collect all subcontractor certifications and may do so utilizing the E-Verify Subcontractor Certification Form available at <http://www.mmd.admin.state.mn.us/doc/EVerifySubCertForm.doc>. All subcontractor certifications must be kept on file with the Prime Contractor and made available to the State upon request.

IV. **VENDOR REGISTRATION**

Vendor Registration Required. A Contractor that performs Work, supplies material, or product must be registered with MnDOT. The Contractor must complete and submit a vendor form²⁷ to the MnDOT LCU²⁸, along with all applicable documentation that is required. This registration process is separate and distinct from other state agency requirements.

V. **LABOR CLASSIFICATIONS**

- A. **Labor Classification Assignment.** A Worker must be paid at least the Total Prevailing Wage Rate in the same or most similar trade or occupation.²⁹ To determine the appropriate labor classification for a Worker, a Contractor must refer to the Wage Decision(s) incorporated into the Contract, the labor classification descriptions for laborers and special crafts established in Minnesota Rules or the United States Department of Labor's Dictionary of Occupational Titles.³⁰
- B. **Labor Classification Clarification & Disputes.** A Contractor needing assistance in determining a labor classification must submit a Classification Clarification Request³¹ to the MnDOT LCU for a written decision. If the Contractor chooses to contest the classification assignment, it must provide written notice to the MnDOT LCU. The MnDOT LCU will forward the matter to the MnDLI for a final ruling.
- C. **Performing Work in Multiple Labor Classifications.** For Workers performing Work in multiple labor classifications, the Contractor must compensate at a minimum the Total Prevailing Wage Rate, and report the hours worked, in each applicable labor classification.³²

VI. **WAGE DECISION(S) & WAGE RATE(S)**

- A. **Applicability of a Highway and Heavy Wage Decision.** A highway and heavy Wage Decision applies to a Worker that is engaged in a construction activity or performing Work to construct or maintain a highway or other public works project, such as a road, street, airport runway, bridge,

²⁴ Minn. Stat. 177.44, Subdivision 3

²⁵ MnDOT Standard Specifications for Construction, Section 1801

²⁶ MnDOT Standard Specifications for Construction, Section 1701

²⁷ www.dot.state.mn.us/const/labor/documents/forms/contractorform2016.pdf for www.dot.state.mn.us/const/labor/documents/forms/truckvendorform2016.pdf

²⁸ lcusupport.dot@state.mn.us

²⁹ Minn. Stat. 177.44, Subdivision 1

³⁰ Minn. R. 5200.1101 and 1102 and USDOL Dictionary of Occupational Titles

³¹ <http://www.dot.state.mn.us/const/labor/documents/forms/classification-clarification-request.pdf>

³² Minn. Stat. 177.44, Subdivision 1

power plant, dam or utility³³ that is external to a sheltered enclosure (structure). This includes, but is not limited to, the following Work: site clearing; grading; excavating backfilling; paving; curbs; gutters; sidewalks; culverts; bridges; lighting systems; traffic management systems; installing of utilities out from an exterior meter; fuel islands; communication towers; or other activities similar to highway and/or heavy Work.

- B. **Applicability of a Commercial Wage Decision.** A commercial Wage Decision applies to a Worker that is engaged in a construction activity or performing Work to construct a sheltered enclosure (structure) with walk-in access for the purpose of housing persons, machinery, equipment or supplies.³⁴ This includes, but is not limited to, the following Work: constructing foundations, aprons, stoops; framing walls; installing windows, doors, tiling, plumbing, electrical, HVAC systems; roofing; installing utilities into the building from an exterior meter.
- C. **Pay According to Wage Decision(s).**
1. **Contract with One Wage Decision.** If the Contract contains one Wage Decision, the Contractor must examine the Wage Decision and compensate the Worker at a minimum the Total Prevailing Wage Rate for the appropriate labor classification(s).
 2. **Contract with Multiple Highway/Heavy Wage Decisions.** If the Contract contains multiple Highway/Heavy Wage Decisions, the Contractor must examine each Wage Decision and compensate the Worker, at a minimum, the Total Prevailing Wage Rate that is the greatest³⁵ for the appropriate labor classification(s).
 3. **Contract with Highway/Heavy and Commercial Wage Decision(s).** If the Contract contains a Highway/Heavy and Commercial Wage Decision(s), the Contractor must first determine which Wage Decision is applicable to the Worker. The Contractor must then compensate the Worker, at a minimum, the Total Prevailing Wage Rate for the appropriate labor classification(s).
- D. **Must Pay Total Prevailing Wage Rate.** A Contractor must compensate each Worker, at a minimum, the Total Prevailing Wage Rate(s) for all hours worked on the project for the appropriate labor classification(s).³⁶
- E. **Missing Wage Rate.** If a Wage Decision fails to include a wage rate for a labor classification(s) that will be utilized on a project, the Contractor must obtain a wage rate prior to furnishing an estimate, quote or bid.³⁷
1. **Wage Rate Request.** A Contractor must complete a Request for Rate Assignment form³⁸ and submit it to the MnDOT LCU³⁹ for processing.
 2. **No Contract Price Adjustment for Missing Wage Rate.** If MnDLI determines that a higher wage rate applies, the Department will not reimburse the Contractor.
- F. **Salaried Worker.** A salaried Worker is not exempt from these Provisions. A Contractor must convert the Worker's salary to an average hourly rate of pay by dividing the Worker's salary by the total number of hours Worked (government and non-government) during the pay period.⁴⁰ A salaried Worker must be included on a CPR.
- G. **Reduction in Standard (Private) Contractual Regular Rate of Pay Prohibited.** A Contractor must not reduce a Worker's standard, contractual regular rate of pay when the prevailing wage rate(s) certified by the MnDLI is less.⁴¹

³³ Minn. R. 5200.1010, Subdivision 3

³⁴ United States Department of Labor All Agency Memorandum #130

³⁵ Minn. Stat. 177.44, Subdivision 4

³⁶ Minn. Stat. 177.44, Subdivision 1

³⁷ Minn. R. 5200.1030, Subpart 2a(C)

³⁸ <http://www.dot.state.mn.us/const/labor/documents/forms/request-for-rate-assignment.doc>

³⁹ lcusupport.dot@state.mn.us

⁴⁰ Refer to Appendix A

⁴¹ Minn. Stat. 181.03, Subdivision 1(2)

- H. **Prohibited Payment Practices.** A Contractor is prohibited from taking (accepting) a rebate for the purpose of reducing or otherwise decreasing the value of the compensation paid.
- I. **Prohibited Deductions.** No deductions, direct or indirect, may be made for the items listed below which when subtracted from wages would reduce the wages below Minnesota's minimum wage rate as established in section 177.24⁴²
1. **Uniforms.** Purchased or rented uniforms or specifically designed clothing that is required by the Employer, by the nature of employment, or by statute, or as a condition of employment, which is not generally appropriate for use except in that employment.
 2. **Equipment.** Purchased or rented equipment used in employment, except tools of a trade, a motor vehicle, or any other equipment which may be used outside the employment. The cost of the Worker's use of equipment used outside of employment, such as tools, a motor vehicle, cell phone, may be deducted only if an agreement between the Employer and employee existed prior to the deduction.
 3. **Supplies.** Consumable supplies required in the course of employment.
 4. **Travel Expenses.** Travel expenses in the course of employment except those incurred in traveling to and from the employee's residence and place of employment.

VII. HOURS OF WORK

- A. **Work Performed Under the Contract.** A Worker performing Work is subject to prevailing wage for all hours associated with the Contract⁴³, unless the Worker is exempt under state law.⁴⁴
- B. **Wait Time Subject to Prevailing Wage.** A Worker who is required to remain on the project and is waiting to Work because of the fault of the Contractor is considered "engaged to wait" and subject to prevailing wage for the time spent, unless the Worker is completely relieved of duty and free to leave the project for a defined period of time.

VIII. FRINGE BENEFITS

- A. **Funded Fringe Benefit Plan Criteria.** In order for a funded Fringe Benefit (e.g., health/medical insurance, disability insurance, life insurance, pension, etc.) to be considered and creditable towards the Total Prevailing Wage Rate it must be:⁴⁵
1. a contribution irrevocably made by a Contractor on behalf of an Worker to a financially responsible trustee, third person, fund, plan, or program;
 2. carried out under a financially responsible plan or program;
 3. legally enforceable;
 4. communicated in writing to the Worker; and
 5. made available to the Worker once he/she has met all eligibility requirements.
- B. **Unfunded Fringe Benefit Plan Criteria.** In order for a unfunded Fringe Benefit (e.g., vacation, holiday, sick leave, etc.) to be considered and creditable towards the Total Prevailing Wage Rate it must be:⁴⁶
1. reasonably anticipated to provide a benefit;
 2. a commitment that can be legally enforced;

⁴² Minn. Stat. 177.24, Subdivision 4(1-4)

⁴³ Minn. Stat. 177.44, Subdivision 1

⁴⁴ Minn. Stat. 177.44, Subdivision 2 or Minn. R. 5200.1106, Subpart 4

⁴⁵ Minn. Stat. 177.42, Subdivision 6

⁴⁶ Minn. Stat. 177.42, Subdivision 6

3. carried out under a financially responsible plan or program;
 4. communicated in writing to the Worker; and
 5. made available to the Worker once he/she has met all eligibility requirements.
- C. **Fringe Benefit Contributions for Hours Worked.** A Contractor that provides Fringe Benefits to a Worker must make contributions, not less than quarterly⁴⁷, for all hours worked,⁴⁸ including overtime hours, unless it's a defined benefit or contribution plan that provides for immediate participation and immediate or essentially immediate vesting (see subpart D2 of this section).
- D. **Hourly Fringe Benefit Credit.** An hourly Fringe Benefit credit toward the Total Prevailing Wage Rate must be determined separately for each Worker based on one or more of the following methods:
1. **Monthly, Quarterly or Annual Computation Methods.** A Contractor must compute its monthly, quarterly or annual cost of a particular Fringe Benefit and divide that amount by the estimated total number of hours worked (government and non-government) during the time frame used.⁴⁹ Typical plans that require monthly, quarterly or annual computations include but are not limited to: health/medical insurance, disability insurance, life insurance, vacation, holiday, sick leave and defined benefit or contribution pension plans that do not provide for immediate participation and immediate or essentially immediate vesting.
 2. **Fringe Benefit Credit not Requiring Monthly, Quarterly or Annual Computation Methods.** A defined benefit or contribution pension plan that allows for a higher hourly rate of contribution for government work (prevailing wage) than non-government (non-prevailing wage) will be fully credited only if the plan provides for immediate participation and immediate or essentially immediate vesting.
- E. **Wages In Lieu of Fringe Benefits.** A Contractor that does not provide full Fringe Benefits must compensate a Worker the difference between the Total Prevailing Wage Rate and the rate actually paid for the appropriate labor classification(s). The compensation paid is considered wages and subject to tax liabilities.
1. **Overtime.** The cash equivalent (wages paid) made in lieu of Fringe Benefits is excluded from the overtime calculation requirement, unless the cash equivalent (wages paid) is part of the Worker's standard straight time wage.
- F. **Administrative Costs Not Creditable.** Administrative expenses incurred by a Contractor in connection with the administration of a Bona Fide Fringe Benefit plan are not creditable towards the Total Prevailing Wage Rate.
- G. **Federal, State & Local Fringe Benefit Credit Prohibited.** No credit is allowed for benefits required by federal, state or local law, such as: worker's compensation, unemployment compensation, and social security contributions.⁵⁰

IX. OVERTIME

- A. **Overtime after 8 Hours per Day or 40 Hours per Week.** A Contractor must not permit or require a Worker to work longer than the prevailing hours of labor unless the Worker is paid for all hours in excess of the prevailing hours at a rate of at least 1.5 times the hourly basic rate of pay.⁵¹ The prevailing hours of labor is defined as not more than 8 hours per day and more than 40 hours per week.⁵²

⁴⁷ 29 CFR, Part 5.5(a)(1)(i)

⁴⁸ Government and non-government Work

⁴⁹ Refer to Appendix B

⁵⁰ Minn. Stat. 177.42, Subdivision 6

⁵¹ Minn. Stat. 177.44, Subdivision 1 and Refer to Appendix D

⁵² Minn. Stat. 177.42, Subdivision 4

- B. **Wages in Lieu of Fringe Benefits Overtime.** Wages paid in Lieu of Fringe Benefits must be paid for all hours worked under the contract.
- C. **Multiple Labor Classifications and Overtime.** A Worker employed in multiple labor classifications throughout a workweek must be compensated at the applicable labor classification overtime rate in effect during the hours worked in excess of 8 hours per day or 40 hours per week.
- D. **Federal Fair Labor Standards Act (FLSA) and Overtime.** A Contractor subject to the FLSA may be subject to additional overtime compensation requirements.

X. PAYROLLS AND STATEMENTS

- A. **Reporting.** Each Contractor that is performing Work must submit a CPR(s) to the Department.
 - 1. **Payroll Report (Paper).** Each Contractor performing Work must submit a paper (written) payroll report to the Department. The payroll report is available on the MnDOT LCU website.⁵³
 - 2. **Statement of Compliance (Paper).** Each Contractor's paper (written) payroll report must include a paper (written) "Statement of Compliance Form". The "Statement of Compliance Form" must: (1) state whether or not Fringe Benefits are provided to a Worker; (2) provide a description of each benefit, the hourly contribution made on behalf of each Worker, along with fund/plan information; and (3) a signature attesting that the payroll and Fringe Benefit information provided is truthful and accurate.⁵⁴
 - 3. **Electronic Reporting.** If the Contract is subject to electronic reporting, each Contractor performing Work must submit a CPR(s) using the AASHTOWare, Civil Rights Labor (CRL) system. Refer to the **Special Provisions Division S – "Electronic Submission of Payrolls and Statements"** which is incorporated into and found elsewhere in the Contract for detailed requirements.
- B. **Biweekly Payroll Reporting and Payment of Wages.** A CPR(s) must be submitted no later than 14 calendar days after the end of each Contractor's pay period⁵⁵ to the Department. A Contractor must pay its employees at least once every 14 calendar days.⁵⁶
- C. **Payroll Report Data.** Each payroll report must include all Workers that performed Work and provide at a minimum the following information:⁵⁷
 - 1. Contractor's name, address, and telephone number.
 - 2. State project number.
 - 3. Contract number (if applicable).
 - 4. Project number.
 - 5. Payroll report number.
 - 6. Project location.
 - 7. Workweek end date.
 - 8. Each Worker's name, home address, and social security number.⁵⁸
 - 9. Labor classification(s) title(s) and optional three-digit code for each Worker.

⁵³ www.dot.state.mn.us/const/labor/certifiedpayroll.html

⁵⁴ Minn. R. 5200.1106, Subpart 10

⁵⁵ Minn. Stat. 177.43, Subdivision 3

⁵⁶ Minn. Stat. 177.30 (a)(4)

⁵⁷ Minn. Stat. 177.30 (a)(1-4) and Minn. R. 5200.1106, Subpart 10

⁵⁸ Minn. R. 5200.1106, Subpart 10A & Minn. Stat. 13.355, Subdivision 1

10. Hours worked daily and weekly in each labor classification, including overtime hours, for each Worker.
11. Wage rate paid to each Worker for straight time and overtime.
12. Authorized legal deductions for each Worker.
13. Project gross amount, weekly gross amount, and net wages paid to each Worker.

- D. **Prime Contractor to Ensure Compliance.** The Prime Contractor must review the CPR(s) submitted by each lower tier Contractor and sign the "Statement of Compliance Form".⁵⁹ The Prime Contractor must ensure that each lower tier Contractor's CPR(s) include all Workers that performed Work and accurately reflect labor classifications, hours worked, regular and overtime rates of pay, gross earnings for the project and Fringe Benefits.⁶⁰
- E. **Retention of CPR(s).** The Prime Contractor must keep its written CPR(s), including those of all lower tier Contractors, for three (3) years after the final payment is issued.⁶¹
- F. **Retention of Employment-Related Records.** Each Contractor must keep employee records, including, but not limited to: Fringe Benefit statements, time cards, payroll ledgers, check registers and canceled checks⁶² for at least three (3) years after the final payment is issued.⁶³ Other laws may have longer retention requirements.
- G. **Detailed Earning Statement.** At the end of each pay period, each Contractor must provide every Worker, in writing or by electronic means, an accurate, detailed earnings statement.⁶⁴
- H. **Reports and Records Request.** Upon a request from the Department, the Prime Contractor must promptly furnish copies of CPR(s) for its Workers and those of all lower tier Contractors, along with employment-related records, documents, and agreements that the Department considers necessary to determine compliance.⁶⁵

XI. APPRENTICES, TRAINEES AND HELPERS

- A. **Apprentice.** An Apprentice will be permitted to Work at less than the prevailing basic hourly rate only if the Apprentice is:
 1. Registered with the U.S. Department of Labor (DOL), Bureau of Apprenticeship and Training or MnDLI Division of Voluntary Apprenticeship.⁶⁶
 2. Performing Work of the trade, as described in the apprenticeship agreement.
 3. Compensated according to the rate specified in the program for the level of progress.⁶⁷
 4. Supervised by a Journeyworker from the same company, in accordance with the program ratio requirements.⁶⁸
- B. **Ratio Requirement.** If an approved apprenticeship program fails to define a ratio allowance, the first Apprentice must be supervised by a Journeyworker within the same trade or occupation. Any subsequent Apprentice must be supervised by an additional three Journeyworkers.⁶⁹

⁵⁹ MnDOT Standard Specifications for Construction, Section 1701

⁶⁰ MnDOT Standard Specifications for Construction, Section 1801

⁶¹ Minn. Stat. 177.30 (a)(5)

⁶² Minn. R. 5200.1106, Subpart 10

⁶³ Minn. Stat. 177.30 (a)(5)

⁶⁴ Minn. Stat. 181.032

⁶⁵ Minn. Stat. 177.44, Subdivision 7; Minn. Stat. 177.33(a)(5)

⁶⁶ Minn. R. 5200.1070, Subpart 1

⁶⁷ Minn. R. 5200.1070, Subpart 1 and Refer to Appendix C

⁶⁸ Minn. Stat. 178.036, Subdivision 5

⁶⁹ Minn. Stat. 178.036, Subdivision 5

- C. **Failure to Comply with Apprenticeship Requirements.** If a Contractor fails to demonstrate compliance with the terms established in this section, the Contractor must compensate the Apprentice not less than the applicable Total Prevailing Wage Rate for the actual classification of labor performed.⁷⁰
- D. **Trainee and Helper.** A trainee or helper is not exempt from prevailing wage under state law. The Contractor must assign the trainee or helper a labor classification that is the "same or most similar"⁷¹ and compensate the trainee or helper for the actual Work performed regardless of the trainee's or helper's skill level.

XII. INDEPENDENT CONTRACTORS, OWNERS, SUPERVISORS, AND FOREMAN

- A. **Independent Contractor.** An independent contractor (IC) that is not an Independent Truck Owner/Operator (ITO), who is performing Work must be properly classified and compensated.⁷² The IC must submit a CPR(s) to the Department. If the IC does not receive an hourly wage, but instead a weekly, biweekly, monthly or quarterly distribution for performance, the IC must calculate its hourly rate of pay by dividing the weekly, biweekly, monthly, or quarterly company distribution by all hours worked during that time frame and report the information on a CPR. If necessary, the Department may request documentation from the IC to determine how the hourly wage rate was calculated.⁷³
- B. **Owners, Supervisors and Foreman.** An owner, supervisor, or foreman performing Work is subject to prevailing wage and must be properly classified, compensated and reported.⁷⁴

XIII. TRUCKING

- A. **Covered Hauling Activities.** A Contractor must ensure that all Workers, including hired Trucking Brokers, MTOs and ITOs are paid the applicable Total Prevailing Wage Rate or truck rental rate for the following Work:
1. The hauling of any or all stockpiled or excavated materials on the project work site to other locations on the same project even if the truck leaves the work site at some point.⁷⁵
 2. The delivery of materials from a non-commercial establishment to the project and the return haul to the starting location either empty or loaded.⁷⁶
 3. The delivery of materials from another construction project site to the public works project and the return haul, either empty or loaded. Construction projects are not considered commercial establishments.⁷⁷
 4. The hauling required to remove any materials from the project to a location off the project site and the return haul, either empty or loaded from other than a commercial establishment.⁷⁸
 5. The delivery of materials or products by trucks hired by a Contractor, subcontractor, or agent thereof, from a commercial establishment.⁷⁹
 6. The delivery of sand, gravel, or rock, by or for a commercial establishment, which is deposited "substantially in place," either directly or through spreaders from the transporting vehicles is work under the contract. In addition, the return haul to the off-site facility empty or loaded is also considered work under the contract.⁸⁰

⁷⁰ Minn. R. 5200.1070, Subpart 3

⁷¹ Minn. Stat. 177.44, Subdivision 1

⁷² Minn. Stat. 177.44, Subdivision 1

⁷³ Minn. Stat. 177.30(a)(5); Minn. Stat. 181.723

⁷⁴ Minn. Stat. 177.44, Subdivision 1

⁷⁵ Minn. R. 5200.1106, Subpart 3B(1)

⁷⁶ Minn. R. 5200.1106, Subpart 3B(2)

⁷⁷ Minn. R. 5200.1106, Subpart 3B(3)

⁷⁸ Minn. R. 5200.1106, Subpart 3B(4)

⁷⁹ Minn. R. 5200.1106, Subpart 3B(5)

⁸⁰ Minn. R. 5200.1106, Subpart 3B(6)

- B. **Hauling Activities Not Subject to Prevailing Wage or Truck Rental Rates.** A Contractor may exclude a Worker, including hired Trucking Brokers, MTOs and ITOs from prevailing wage or truck rental rates for the Work described in (1-2) of this section. However, this Work may be considered hours worked and subject to standard compensation pursuant to the Minnesota Fair Labor Standards Act.
1. The delivery of processed or manufactured goods to a public works project by the employees of a commercial establishment including truck owner-operators hired by and paid by the commercial establishment, unless it is the delivery of mineral aggregate that is incorporated into the work under the contract by depositing the material substantially in place.⁸¹
 2. The delivery of oil offsite, as an example, to a Prime Contractor's permanent (commercial) asphalt mixing facility that is not to, from, or on the project Work site.⁸²
- C. **Repair, Maintenance & Waiting to Load Time.** An ITO and MTO must be paid the truck rental rate for time spent repairing or maintaining the truck owner-operator's equipment, and for waiting to load or unload if the repair, maintenance, or wait time is the fault of the Trucking Broker, Contractor, its agent or employees.⁸³
- D. **Month End Trucking Report.** A Contractor that acquires the services of an ITO or MTO must submit a "MnDOT – MTO and/or ITO Month-End Trucking Report", and a "MnDOT – Month-End Trucking Statement of Compliance Form" to the Department for each month hauling activities are performed under the Contract.⁸⁴ The forms are available on the MnDOT LCU website.⁸⁵
- E. **Broker Fee.** A truck broker contracting to provide trucking services directly to a prime contractor or subcontractor is allowed to assess a broker fee.

XIV. OFF-SITE FACILITIES

- A. **Off-Site Facility Activities Subject to Prevailing Wage.** A Contractor must ensure that all Workers performing Work at a covered off-site facility are paid the applicable Total Prevailing Wage Rate for the following Work:
1. The processing or manufacturing of material at a Prime Contractor's off-site facility that is not a separately held commercial establishment.⁸⁶
 2. The processing or manufacturing of material at an off-site facility that is not considered a commercial establishment.⁸⁷
- B. **Off-Site Facility Activities Not Subject to Prevailing Wage.** A Contractor may exclude a Worker from prevailing wage for the following work:
1. The processing or manufacturing of material or products by or for a commercial establishment.⁸⁸
 2. The work performed by Workers employed by the owner or lessee of a gravel or borrow pit that is a commercial establishment, even if the screening, washing or crushing machines are portable.⁸⁹

XV. SUBCONTRACTING PART OF THE CONTRACT

⁸¹ Minn. R. 5200.1106, Subpart 4(C)

⁸² J.D. Donovan, Inc. vs. Minnesota Department of Transportation, 878 N.W.2d 1 (2016)

⁸³ Minn. R. 5200.1106, Subpart 8(A)(1)

⁸⁴ Minn. R. 5200.1106, Subpart 10

⁸⁵ <http://www.dot.state.mn.us/const/labor/forms.html>

⁸⁶ ALJ Findings of Fact, Conclusions of Law, and Recommendation, Conclusions (7), Case #12-3000-11993-2

⁸⁷ Minn. R. 5200.1106, Subpart 3(A)

⁸⁸ Minn. R. 5200.1106, Subpart 4(A)

⁸⁹ Minn. R. 5200.1106, Subpart 4(B)

The Prime Contractor must include the Contract Special Provisions, Wage Decision(s) and Truck Rental Rate Schedule in all Subcontracts, agreements and purchase orders with lower tier Contractors.⁹⁰ This requirement also applies to all lower tier subcontractors.

XVI. SITE OF WORK REQUIREMENTS

- A. **Poster Board.** The Prime Contractor must construct and display a poster board containing all required posters. The poster board must be accurate, legible, and accessible to all project Workers from the first day of Work until the project is one hundred percent (100%) complete.⁹¹ A poster board at an off-site location, or inside a construction trailer, does not meet this requirement.
- B. **How to Obtain a Poster Board.** The Prime Contractor may obtain the required posters and the necessary contact information that is required to be inserted on each poster by visiting the MnDOT LCU website.⁹²
- C. **Employee Interviews.** The Contractor must permit representatives from the Department or other governmental entities⁹³ to interview Workers at any time during working hours on the project.⁹⁴

XVII. CHILD LABOR

- A. **No Worker under the Age of 18.** No Worker under the age of 18 is allowed to perform Work on a Project Site, except pursuant to Section XVII B below.⁹⁵
- B. **Parental Supervision.** A Worker under the age of 18 may perform Work on a Project Site if all of the following criteria are met:
 1. The Contractor (Employer) is not subject to FLSA.
 2. The Worker is employed in a corporation owned solely by one or both parents.
 3. The Worker is supervised by the parent(s).
 4. The Worker is not working in a hazardous occupation.⁹⁶
- C. **Removal of Minor from Project.** The Engineer or inspector may remove a Worker that appears to be under the age of 18 from the Project Site until the Contractor or Worker can demonstrate proof of age and compliance with all applicable federal and state regulations.⁹⁷

XVIII. NON-COMPLIANCE AND ENFORCEMENT

- A. **Case-by-Case Enforcement.** The Department has the authority to enforce the prevailing wage law on a case-by-case.⁹⁸
- B. **Prime Contractor Responsible for Unpaid Wages.** The Prime Contractor will be held liable for any unpaid wages to its Workers or those of any lower tier Contractor.⁹⁹
- C. **Enforcement Options.** If evidence shows that a Contractor has violated prevailing wage requirements, or these Special Provisions, the Department may, after written notice, implement one or more of the following:

⁹⁰ MnDOT Standard Specifications for Construction, Section 1801

⁹¹ Minn. Stat. 177.44, Subdivision 5

⁹² www.dot.state.mn.us/const/labor/posterboards

⁹³ MnDLI, U.S. DOL., U.S. Department of Transportation, Federal Highways Administration

⁹⁴ MnDOT Standard Specifications for Construction, Section 1511

⁹⁵ Minn. R. 5200.0910, Subpart F; 29 CFR Part 570.2(a)(ii)

⁹⁶ Minn. R. 5200.0930, Subpart 4

⁹⁷ Minn. Stat. 181A.06, Subdivision 4; MnDOT Standard Specifications for Construction, Section 1701

⁹⁸ See International Union of Operating Engineers, Local 49 v. MnDOT, No. C6-97-1582, 1998 WL 74281, at *2 (Minn. App. Feb. 24, 1998)

⁹⁹ MnDOT Standard Specifications for Construction, Section 1801

1. **Withholding Payment.** The Department may withhold from the Prime Contractor payments relating to prevailing wage underpayments.¹⁰⁰
2. **Non-Responsible Contractor.** The Department may reject a bid from a Prime Contractor that has received two (2) or more Determination Letters within a three (3) year period from the Department finding an underpayment by the Contractor to its own employees.¹⁰¹
3. **Default.** The Department may take the prosecution of the Work out of the hands of the Prime Contractor, place the Contractor in default, and terminate the Contract for failure to comply.¹⁰²
4. **Suspension or Debarment.** The Department may refer violations and matters of non-compliance by a Contractor to the Minnesota Department of Administration for suspension or debarment proceedings.¹⁰³
5. **County Attorney.** The Department may refer suspected criminal violations by Contractor to the appropriate local county attorney for prosecution.¹⁰⁴
6. **Financial Penalties.** Any Contractor who violates the state prevailing wage law is guilty of a misdemeanor and may be fined not more than \$300 or imprisoned not more than 90 days or both. Each day that the violation continues is a separate offense.¹⁰⁵ A Contractor may be fined up to \$1,000 for each failure to maintain records.¹⁰⁶
7. **False Claims Act Violation.** All required payroll and certification reports are legal documents; knowing falsification of the documents by a Contractor may result in civil action and/or criminal prosecution¹⁰⁷ and may be grounds for debarment proceedings.¹⁰⁸
8. **Compliance Order.** The Department may request that MnDLI issue a compliance order to a Contractor for violations of the state prevailing wage law. If the Contractor is found to have committed a violation, liquidated damages and other costs may be assessed against the Employer.¹⁰⁹
9. **Private Right of Action.** The Department may direct an employee to pursue a civil action in district court against its Employer for failure to comply with the proper payment of wages.¹¹⁰ If the Employer is found to have committed a violation, liquidated damages and other costs may be assessed against the Employer.¹¹¹
10. **Fringe Benefits; Misdemeanor.** A Contractor that is obligated to deposit Fringe Benefit contributions on behalf of a Worker into a financially responsible trustee, third person, fund, plan, or program and fails to make timely contributions is guilty of a gross misdemeanor or other violations under federal law.¹¹²

¹⁰⁰ MnDOT Standard Specifications for Construction, Section 1906

¹⁰¹ Minn. Stat. 16C.285

¹⁰² MnDOT Standard Specifications for Construction, Section 1808

¹⁰³ Minn. R. 1230.1150, Subpart 2(A)(4)

¹⁰⁴ Minn. Stat. 177.44, Subdivision 7

¹⁰⁵ Minn. Stat. 177.44, Subdivision 6

¹⁰⁶ Minn. Stat. 177.30(b)

¹⁰⁷ Minn. Stat. 15C.02; , Minn. Stat. 161.315; Minn. Stat. 177.32; Minn. Stat. 177.43, Subdivision 5, Minn. Stat. 609.63

¹⁰⁸ Minn. Stat. 161.315 and Minn. Stat. 609.63

¹⁰⁹ Minn. Stat. 177.43, Subdivision 6a

¹¹⁰ Minn. Stat. 177.27, Subdivision 8

¹¹¹ Minn. Stat. 177.27, Subdivision 10

¹¹² Minn. Stat. 181.74, Subdivision 1

**THE FOLLOWING APPENDICES ARE FOR
EXPLANATORY PURPOSES ONLY.
FOR SPECIFIC QUESTIONS, PLEASE CONTACT LCU.¹¹³**

APPENDIX A**SALARIED WORKER WAGE COMPUTATION**

Salaried Workers. In order to convert the Worker's salary into an hourly rate of pay, divide the employee's weekly, bi-weekly or monthly earnings by the total number of hours Worked (government and non-government), including overtime hours for the time period used.¹¹⁴

$$\text{\$800.00 (weekly salary) / 40 (total weekly hours) = \$20.00}$$

$$\text{\$1,600.00 (bi-weekly salary) / 80 (total bi-weekly hours) = \$20.00}$$

$$\text{\$3,200.00 (monthly salary) / 160 (total monthly hours) = \$20.00}$$

APPENDIX B**FRINGE BENEFIT CREDIT**

Fringe Benefit Credit Calculation. The Employer contributes monthly (\$600.00) for medical insurance on behalf of a Worker. In order to calculate the projected hourly credit that the Employer can take, the Employer should: (1) add the monthly contributions for each Worker, (2) multiply by twelve (12) months, and (3) divide the total cost of the benefit by the total hours worked (government and non-government)¹¹⁵ (see annual example below). Quarterly and monthly examples are also provided.

Annual: $(\$600.00) \times (12 \text{ months}) = \$7,200.00$
 $(\$7,200.00) / (2080 \text{ hours}) = \underline{\underline{\$3.46 \text{ per hour credit}}}$

Quarterly: $(\$600.00) \times (3 \text{ months}) = \$1,800.00$
 $(\$1,800.00) / (520 \text{ hours}) = \underline{\underline{\$3.46 \text{ per hour credit}}}$

Monthly: $(\$600.00) \times (1 \text{ month}) = \600.00
 $(\$600.00) / (173 \text{ hours}) = \underline{\underline{\$3.47 \text{ per hour credit}}}$

End of Year Self-Audit. At the end of the calendar year, the Contractor must conduct an audit to determine if the hourly fringe benefit credit taken for each Worker was accurate. The Contractor must calculate the total annual fringe benefits paid on behalf of each Worker and divide that amount by the total number of hours worked (government and non-government) by that Worker. If the hourly fringe benefit credit was less than what was reported on a CPR, the contractor must compensate the Worker the hourly difference, multiplied by the total hours worked under the Contract.

APPENDIX C**APPRENTICE RATE OF PAY**

State Requirements. The Apprentice must be compensated according his/her level of progress, which is expressed as a percentage of the Journeyworker wage that is established in the program.

$$\text{Journeyworker Wage Established in Program} = \$25.00$$

$$\underline{\text{Apprentice Level of Progress} = 60\%}$$

$$(\$25.00) \times (.60) = \$15.00$$

¹¹³ lcusupport.dot@state.mn.us or (651) 366-4238

¹¹⁴ United States Department of Labor Field Operation Handbook, Section 15f08

¹¹⁵ United States Department of Labor Field Operation Handbook, Section 15f12

APPENDIX D**PREVAILING WAGE OVERTIME CALCULATION**

Overtime Hourly Rate of Pay. Here is the formula to calculate the required minimum overtime.¹¹⁶

$$OT = (PW * .5) + (HW) + (RF) + (F)$$

Definition of OT Acronyms

OT: overtime.

PW: the basic hourly prevailing wage rate established in a federal and/or state prevailing Wage Decision.

HW: hourly wage rate paid to a Worker.

RF: remaining fringe, which means the difference between the Contract hourly Fringe Benefit rate and the actual hourly Fringe Benefit rate paid by the Contractor to a third party on behalf of a Worker.

F: Fringe Benefit contributions that are bona-fide and contributed by an Employer to a third party on behalf of a Worker.

The Total Prevailing Wage Rate for a Worker is \$30.00, which is comprised of an hourly basic rate of \$20.00 and an hourly fringe rate of \$10.00. The table below includes various hourly basic and Fringe Benefit payments that a Contractor could potentially make to a Worker.

OT CALCULATION FORMULA AND EXAMPLES				
$OT = (PW * .5) + (HW) + (RF) + (F)$				
Hourly Wage Paid	Fringe Benefits Paid	<u>Payment To Employee</u> $(PW * .5) + (HW) + (RF)$	<u>Fringe Payment</u> + (F)	<u>Total Payment</u> = OT
\$ 20.00	\$ 10.00	$(\$ 20.00 * .5) + (\$ 20.00) + (\$ 0.00) = \$ 30.00$	+ \$ 10.00	= \$ 40.00
\$ 18.00	\$ 12.00	$(\$ 20.00 * .5) + (\$ 18.00) + (\$ 0.00) = \$ 28.00$	+ \$ 12.00	= \$ 40.00
\$ 22.00	\$ 8.00	$(\$ 20.00 * .5) + (\$ 22.00) + (\$ 0.00) = \$ 32.00$	+ \$ 8.00	= \$ 40.00
\$ 30.00	\$ 0.00	$(\$ 20.00 * .5) + (\$ 30.00) + (\$ 0.00) = \$ 40.00$	+ \$ 0.00	= \$ 40.00
\$ 24.00	\$ 4.00	$(\$ 20.00 * .5) + (\$ 24.00) + (\$ 2.00) = \$ 36.00$	+ \$ 4.00	= \$ 40.00

Regarding the last example the Contractor would be required to pay an additional \$2.00 to the Worker, which is wages in lieu of fringe for a straight time hourly rate of \$26.00 not \$24.00.

A Contractor subject to the Fair Labor Standards Act (FLSA) may be subject to additional overtime compensation requirements.

¹¹⁶ United States Department of Labor Field Operation Handbook, Section 15k

MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY PREVAILING WAGES FOR STATE FUNDED CONSTRUCTION PROJECTS



THIS NOTICE MUST BE POSTED ON THE JOBSITE IN A CONSPICUOUS PLACE

Construction Type: Highway and Heavy

Region Number: 09

Counties within region:

- ANOKA-02
- CARVER-10
- CHISAGO-13
- DAKOTA-19
- HENNEPIN-27
- RAMSEY-62
- SCOTT-70
- WASHINGTON-82

Effective: 2023-11-20

This project is covered by Minnesota prevailing wage statutes. Wage rates listed below are the minimum hourly rates to be paid on this project.

All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at a rate of one and one half (1 1/2) times the basic hourly rate. *Note: Overtime pay after eight (8) hours on the project must be paid even if the worker does not exceed forty (40) hours in the work week.*

Violations on MnDOT highways and road projects should be reported to:

Department of Transportation
Office of Construction
Transportation Building MS650
John Ireland Blvd
St. Paul, MN 55155
(651) 366-4209

All other prevailing wage violations and questions should be sent to:

Department of Labor and Industry
Prevailing Wage Section
443 Lafayette Road N
St Paul, MN 55155
(651) 284-5091
DLI.PrevWage@state.mn.us

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
LABORERS (101 - 112) (SPECIAL CRAFTS 701 - 730)					
101	LABORER, COMMON (GENERAL LABOR WORK)	2023-11-20	38.90	23.49	62.39
		2024-05-01	41.63	24.24	65.87
102	LABORER, SKILLED (ASSISTING SKILLED CRAFT JOURNEYMAN)	2023-11-20	38.90	23.49	62.39
		2024-05-01	41.63	24.24	65.87

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
103	LABORER, LANDSCAPING (GARDENER, SOD LAYER AND NURSERY OPERATOR)	2023-11-20	28.29	20.41	48.70
		2024-05-01	30.04	21.16	51.20
104	FLAG PERSON	2023-11-20	38.90	23.49	62.39
		2024-05-01	41.63	24.24	65.87
105	WATCH PERSON	2023-11-20	35.50	22.94	58.44
		2024-05-01	38.23	23.69	61.92
106	BLASTER	2023-11-20	22.08	6.87	28.95
107	PIPELAYER (WATER, SEWER AND GAS)	2023-11-20	42.40	23.49	65.89
		2024-05-01	45.13	24.24	69.37
108	TUNNEL MINER	2023-11-20	40.40	23.49	63.89
		2024-05-01	43.13	24.24	67.37
109	UNDERGROUND AND OPEN DITCH LABORER (EIGHT FEET BELOW STARTING GRADE LEVEL)	2023-11-20	40.40	23.49	63.89
		2024-05-01	43.13	24.24	67.37
110	SURVEY FIELD TECHNICIAN (OPERATE TOTAL STATION, GPS RECEIVER, LEVEL, ROD OR RANGE POLES, STEEL TAPE MEASUREMENT; MARK AND DRIVE STAKES; HAND OR POWER DIGGING FOR AND IDENTIFICATION OF MARKERS OR MONUMENTS; PERFORM AND CHECK CALCULATIONS; REVIEW AND UNDERSTAND CONSTRUCTION PLANS AND LAND SURVEY MATERIALS). THIS CLASSIFICATION DOES NOT APPLY TO THE WORK PERFORMED ON A PREVAILING WAGE PROJECT BY A LAND SURVEYOR WHO IS LICENSED PURSUANT TO MINNESOTA STATUTES, SECTIONS 326.02 TO 326.15.	2023-11-20	38.90	23.49	62.39
		2024-05-01	41.63	24.24	65.87
111	TRAFFIC CONTROL PERSON (TEMPORARY SIGNAGE)	2023-11-20	38.90	23.49	62.39

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
		2024-05-01	41.63	24.24	65.87
112	QUALITY CONTROL TESTER (FIELD AND COVERED OFF-SITE FACILITIES; TESTING OF AGGREGATE, ASPHALT, AND CONCRETE MATERIALS); LIMITED TO MN DOT HIGHWAY AND HEAVY CONSTRUCTION PROJECTS WHERE THE MN DOT HAS RETAINED QUALITY ASSURANCE PROFESSIONALS TO REVIEW AND INTERPRET THE RESULTS OF QUALITY CONTROL TESTERS. SERVICES PROVIDED BY THE CONTRACTOR.	2023-11-20	16.28	4.07	20.35
SPECIAL EQUIPMENT (201 - 204)					
201	ARTICULATED HAULER	2023-11-20	42.49	25.20	67.69
		2024-04-29	44.67	26.40	71.07
202	BOOM TRUCK	2023-11-20	44.94	25.20	70.14
		2024-04-29	47.25	26.40	73.65
203	LANDSCAPING EQUIPMENT, INCLUDES HYDRO SEEDER OR MULCHER, SOD ROLLER, FARM TRACTOR WITH ATTACHMENT SPECIFICALLY SEEDING, SODDING, OR PLANT, AND TWO-FRAMED FORKLIFT (EXCLUDING FRONT, POSIT-TRACK, AND SKID STEER LOADERS), NO EARTHWORK OR GRADING FOR ELEVATIONS	2023-11-20	28.29	20.41	48.70
		2024-05-01	30.04	21.16	51.20
204	OFF-ROAD TRUCK	2023-11-20	42.49	25.20	67.69
		2024-04-29	44.67	26.40	71.07
205	PAVEMENT MARKING OR MARKING REMOVAL EQUIPMENT (ONE OR TWO PERSON OPERATORS); SELF-PROPELLED TRUCK OR TRAILER MOUNTED UNITS.	2023-11-20	32.04	21.96	54.00

HIGHWAY/HEAVY POWER EQUIPMENT OPERATOR

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
GROUP 2		2023-11-20	43.38	25.20	68.58
		2024-04-29	45.61	26.40	72.01
302	HELICOPTER PILOT (HIGHWAY AND HEAVY ONLY)				
303	CONCRETE PUMP (HIGHWAY AND HEAVY ONLY)				
304	ALL CRANES WITH OVER 135-FOOT BOOM, EXCLUDING JIB (HIGHWAY AND HEAVY ONLY)				
305	DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR OTHER SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS THREE CUBIC YARDS AND OVER MANUFACTURER.S RATED CAPACITY INCLUDING ALL ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)				
306	GRADER OR MOTOR PATROL				
307	PILE DRIVING (HIGHWAY AND HEAVY ONLY)				
308	TUGBOAT 100 H.P. AND OVER WHEN LICENSE REQUIRED (HIGHWAY AND HEAVY ONLY)				
GROUP 3		2023-11-20	42.81	25.20	68.01
		2024-04-29	45.01	26.40	71.41
309	ASPHALT BITUMINOUS STABILIZER PLANT				
310	CABLEWAY				
311	CONCRETE MIXER, STATIONARY PLANT (HIGHWAY AND HEAVY ONLY)				
312	DERRICK (GUY OR STIFFLEG)(POWER)(SKIDS OR STATIONARY) (HIGHWAY AND HEAVY ONLY)				
313	DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS, UP TO THREE CUBIC YARDS MANUFACTURER.S RATED CAPACITY INCLUDING ALL ATTACHMENTS (HIGHWAY AND HEAVY ONLY)				
314	DREDGE OR ENGINEERS, DREDGE (POWER) AND ENGINEER				
315	FRONT END LOADER, FIVE CUBIC YARDS AND OVER INCLUDING ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)				
316	LOCOMOTIVE CRANE OPERATOR				
317	MIXER (PAVING) CONCRETE PAVING, ROAD MOLE, INCLUDING MUCKING OPERATIONS, CONWAY OR SIMILAR TYPE				
318	MECHANIC . WELDER ON POWER EQUIPMENT (HIGHWAY AND HEAVY ONLY)				
319	TRACTOR . BOOM TYPE (HIGHWAY AND HEAVY ONLY)				
320	TANDEM SCRAPER				
321	TRUCK CRANE . CRAWLER CRANE (HIGHWAY AND HEAVY ONLY)				
322	TUGBOAT 100 H.P AND OVER (HIGHWAY AND HEAVY ONLY)				
GROUP 4		2023-11-20	42.49	25.20	67.69
		2024-04-29	44.67	26.40	71.07
323	AIR TRACK ROCK DRILL				
324	AUTOMATIC ROAD MACHINE (CMI OR SIMILAR) (HIGHWAY AND HEAVY ONLY)				
325	BACKFILLER OPERATOR				
326	CONCRETE BATCH PLANT OPERATOR (HIGHWAY AND HEAVY ONLY)				
327	BITUMINOUS ROLLERS, RUBBER TIRED OR STEEL DRUMMED (EIGHT TONS AND OVER)				
328	BITUMINOUS SPREADER AND FINISHING MACHINES (POWER), INCLUDING PAVERS, MACRO SURFACING AND MICRO SURFACING, OR SIMILAR TYPES (OPERATOR AND SCREED PERSON)				
329	BROKK OR R.T.C. REMOTE CONTROL OR SIMILAR TYPE WITH ALL ATTACHMENTS				

LABOR CODE AND CLASS	EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
330		CAT CHALLENGER TRACTORS OR SIMILAR TYPES PULLING ROCK WAGONS, BULLDOZERS AND SCRAPERS		
331		CHIP HARVESTER AND TREE CUTTER		
332		CONCRETE DISTRIBUTOR AND SPREADER FINISHING MACHINE, LONGITUDINAL FLOAT, JOINT MACHINE, AND SPRAY MACHINE		
333		CONCRETE MIXER ON JOBSITE (HIGHWAY AND HEAVY ONLY)		
334		CONCRETE MOBIL (HIGHWAY AND HEAVY ONLY)		
335		CRUSHING PLANT (GRAVEL AND STONE) OR GRAVEL WASHING, CRUSHING AND SCREENING PLANT		
336		CURB MACHINE		
337		DIRECTIONAL BORING MACHINE		
338		DOPE MACHINE (PIPELINE)		
339		DRILL RIGS, HEAVY ROTARY OR CHURN OR CABLE DRILL (HIGHWAY AND HEAVY ONLY)		
340		DUAL TRACTOR		
341		ELEVATING GRADER		
342		FORK LIFT OR STRADDLE CARRIER (HIGHWAY AND HEAVY ONLY)		
343		FORK LIFT OR LUMBER STACKER (HIGHWAY AND HEAVY ONLY)		
344		FRONT END, SKID STEER OVER 1 TO 5 C YD		
345		GPS REMOTE OPERATING OF EQUIPMENT		
346		HOIST ENGINEER (POWER) (HIGHWAY AND HEAVY ONLY)		
347		HYDRAULIC TREE PLANTER		
348		LAUNCHER PERSON (TANKER PERSON OR PILOT LICENSE)		
349		LOCOMOTIVE (HIGHWAY AND HEAVY ONLY)		
350		MILLING, GRINDING, PLANNING, FINE GRADE, OR TRIMMER MACHINE		
351		MULTIPLE MACHINES, SUCH AS AIR COMPRESSORS, WELDING MACHINES, GENERATORS, PUMPS (HIGHWAY AND HEAVY ONLY)		
352		PAVEMENT BREAKER OR TAMPING MACHINE (POWER DRIVEN) MIGHTY MITE OR SIMILAR TYPE		
353		PICKUP SWEEPER, ONE CUBIC YARD AND OVER HOPPER CAPACITY(HIGHWAY AND HEAVY ONLY)		
354		PIPELINE WRAPPING, CLEANING OR BENDING MACHINE		
355		POWER PLANT ENGINEER, 100 KWH AND OVER (HIGHWAY AND HEAVY ONLY)		
356		POWER ACTUATED HORIZONTAL BORING MACHINE, OVER SIX INCHES		
357		PUGMILL		
358		PUMPCRETE (HIGHWAY AND HEAVY ONLY)		
359		RUBBER-TIRED FARM TRACTOR WITH BACKHOE INCLUDING ATTACHMENTS (HIGHWAY AND HEAVY ONLY)		
360		SCRAPER		
361		SELF-PROPELLED SOIL STABILIZER		
362		SLIP FORM (POWER DRIVEN) (PAVING)		
363		TIE TAMPER AND BALLAST MACHINE		
364		TRACTOR, BULLDOZER (HIGHWAY AND HEAVY ONLY)		
365		TRACTOR, WHEEL TYPE, OVER 50 H.P. WITH PTO UNRELATED TO LANDSCAPING (HIGHWAY AND HEAVY ONLY)		
366				

LABOR CODE AND CLASS	EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
367				
368				
GROUP 5	2023-11-20	39.33	25.20	64.53
	2024-04-29	41.36	26.40	67.76
369				
370				
371				
372				
373				
374				
375				
376				
377				
378				
379				
380				
381				
382				
383				
384				
385				
GROUP 6	2023-11-20	42.49	25.20	67.69
	2024-04-29	44.67	26.40	71.07
387				
388				
389				
390				
391				
392				
393				
394				
395				
396				
397				

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
TRUCK DRIVERS					
GROUP 1		2023-11-20	31.25	17.50	48.75
601	MECHANIC . WELDER				
602	TRACTOR TRAILER DRIVER				
603	TRUCK DRIVER (HAULING MACHINERY INCLUDING OPERATION OF HAND AND POWER OPERATED WINCHES)				
GROUP 2		2023-11-20	34.70	21.76	56.46
604	FOUR OR MORE AXLE UNIT, STRAIGHT BODY TRUCK				
GROUP 3		2023-11-20	34.60	21.76	56.36
605	BITUMINOUS DISTRIBUTOR DRIVER				
606	BITUMINOUS DISTRIBUTOR (ONE PERSON OPERATION)				
607	THREE AXLE UNITS				
GROUP 4		2023-11-20	37.54	21.76	59.30
608	BITUMINOUS DISTRIBUTOR SPRAY OPERATOR (REAR AND OILER)				
609	DUMP PERSON				
610	GREASER				
611	PILOT CAR DRIVER				
612	RUBBER-TIRED, SELF-PROPELLED PACKER UNDER 8 TONS				
613	TWO AXLE UNIT				
614	SLURRY OPERATOR				
615	TANK TRUCK HELPER (GAS, OIL, ROAD OIL, AND WATER)				
616	TRACTOR OPERATOR, UNDER 50 H.P.				
SPECIAL CRAFTS					
701	HEATING AND FROST INSULATORS	2023-11-20	47.10	24.40	71.50
702	BOILERMAKERS	2023-11-20	44.37	30.55	74.92
		2024-01-01	46.00	31.93	77.93
703	BRICKLAYERS	2023-11-20	45.47	25.76	71.23
		2024-05-01	48.51	25.76	74.27
704	CARPENTERS	2023-11-20	43.58	27.91	71.49
		2024-05-01	47.08	27.91	74.99
705	CARPET LAYERS (LINOLEUM)				

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
		FOR RATE CALL 651-284-5091 OR EMAIL <u>DLI.PREVWAGE@STATE.MN.US</u>			
706	CEMENT MASONS	2023-11-20	45.17	24.22	69.39
		2024-04-29	48.57	24.22	72.79
707	ELECTRICIANS	2023-11-20	52.00	32.80	84.80
711	GROUND PERSON	2023-11-20	35.60	18.92	54.52
712	IRONWORKERS	2023-11-20	43.00	34.11	77.11
		2024-04-28	46.00	34.11	80.11
713	LINEMAN	2023-11-20	50.86	23.57	74.43
714	MILLWRIGHT	2023-11-20	40.39	33.37	73.76
		2024-05-01	43.44	33.37	76.81
715	PAINTERS (INCLUDING HAND BRUSHED, HAND SPRAYED, AND THE TAPING OF PAVEMENT MARKINGS)	2023-11-20	38.70	22.76	61.46
716	PILEDRIIVER (INCLUDING VIBRATORY DRIVER OR EXTRACTOR FOR PILING AND SHEETING OPERATIONS)	2023-11-20	43.53	27.91	71.44
		2024-05-01	47.03	27.91	74.94
717	PIPEFITTERS . STEAMFITTERS	2023-11-20	53.94	33.30	87.24
		2024-05-01	57.14	33.30	90.44
719	PLUMBERS	2023-11-20	52.60	31.10	83.70
721	SHEET METAL WORKERS	2023-11-20	44.46	29.17	73.63
723	TERRAZZO WORKERS	FOR RATE CALL 651-284-5091 OR EMAIL <u>DLI.PREVWAGE@STATE.MN.US</u>			
724	TILE SETTERS	2023-11-20	34.76	23.29	58.05
725	TILE FINISHERS	FOR RATE CALL 651-284-5091 OR EMAIL <u>DLI.PREVWAGE@STATE.MN.US</u>			

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
727	WIRING SYSTEM TECHNICIAN	2023-11-20	44.61	20.16	64.77
728	WIRING SYSTEMS INSTALLER	2023-11-20	31.25	16.34	47.59
729	ASBESTOS ABATEMENT WORKER	2023-11-20	37.63	23.36	60.99
		2024-01-01	39.86	24.11	63.97
730	SIGN ERECTOR	FOR RATE CALL 651-284-5091 OR EMAIL DLLPREVWAGE@STATE.MN.US			

Notice of truck rental rate certification and effective date

The Department of Labor and Industry (DLI) commissioner has certified the minimum truck rental rates for state-funded highway projects effective Dec. 19, 2022. This certification follows the publication of the Notice of Truck Rental Rate Determination in the *State Register* on Nov. 21, 2022, and the informal conference held pursuant to Minnesota Rules, part 5200.1105 on Dec. 7, 2022.

According to Minnesota Rules, part 5200.1105, the purpose of the informal conference was for DLI to obtain further input regarding the determined rates prior to the certification. No written input regarding the determination was received by DLI prior to the informal conference.

The truck rental rate is determined for each equipment type by adding the average hourly cost of operating the vehicle to the certified prevailing wage rate for the driver. The average hourly operating costs are determined by voluntary survey of truck owner operators, trucking contractors and trucking firms.

The determination of the minimum truck rental rates by region are as follows.

Three-axle units

Region	Effective date	607 driver rate	Operating cost	Truck rental rate
Region 1	Certification date	\$55.95	\$37.35	\$93.30
Region 2	Certification date	\$46.75	\$37.35	\$84.10
Region 3	Certification date	\$45.02	\$37.35	\$82.37
Region 4	Certification date	\$52.79	\$37.35	\$90.14
Region 5	Certification date	\$43.60	\$37.35	\$80.95
Region 6	Certification date	\$54.15	\$37.35	\$91.50
Region 7	Certification date	\$46.10	\$37.35	\$83.45
Region	Effective date	607 driver rate	Operating cost	Truck rental rate

Region 8	Certification date	\$32.16	\$37.35	\$69.51
Region 9	Certification date	\$56.35	\$37.35	\$93.70
Region 10	Certification date	\$37.00	\$37.35	\$74.35

Four or more axle units

Region	Effective date	604 driver rate	Operating cost	Truck rental rate
Region 1	Certification date	\$56.05	\$51.50	\$107.55
Region 2	Certification date	\$41.51	\$51.50	\$93.01
Region 3	Certification date	\$38.51	\$51.50	\$90.01
Region 4	Certification date	\$41.30	\$51.50	\$92.80
Region 5	Certification date	\$21.00	\$51.50	\$72.50
Region 6	Certification date	\$54.25	\$51.50	\$105.75
Region 7	Certification date	\$42.15	\$51.50	\$93.65
Region 8	Certification date	\$40.50	\$51.50	\$92.00
Region 9	Certification date	\$56.45	\$51.50	\$107.95
Region 10	Certification date	\$40.40	\$51.50	\$91.90

Tractor

Region	Effective date	602 driver rate	Operating cost	Tractor-only truck rental rate	Plus trailer operating cost	Tractor trailer rental rate
Region 1	Certification date	\$56.60	\$54.96	\$111.56	\$11.46	\$123.02
Region 2	Certification date	\$42.02	\$54.96	\$96.98	\$11.46	\$108.44
Region 3	Certification date	\$48.35	\$54.96	\$103.31	\$11.46	\$114.77
Region 4	Certification date	\$50.27	\$54.96	\$105.23	\$11.46	\$116.69
Region 5	Certification date	\$23.90	\$54.96	\$78.86	\$11.46	\$90.32
Region 6	Certification date	\$54.80	\$54.96	\$109.76	\$11.46	\$121.22
Region 7	Certification date	\$48.00	\$54.96	\$102.96	\$11.46	\$114.42
Region 8	Certification date	\$47.50	\$54.96	\$102.46	\$11.46	\$113.92
Region 9	Certification date	\$48.75	\$54.96	\$103.71	\$11.46	\$115.17
Region 10	Certification date	\$37.00	\$54.96	\$91.96	\$11.46	\$103.42

The current operating costs and truck rental rates may be reviewed by accessing DLI's website at dli.mn.gov. Questions about the truck rental rates or the informal conference notice below can be answered by calling 651-284-5091.

The minimum truck rental rate for these four types of trucks in the state's 10 highway and heavy construction areas will be effective for all Minnesota Department of Transportation (MnDOT) highway construction work financed in whole or part with state funds advertised for bid on or after the day the notice of certification is published in the *State Register*.

Nicole Blissenbach,
Temporary commissioner

DIVISION 1

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DIVISION 1

GENERAL REQUIREMENTS

INTRODUCTION

These General Requirements amend or supplement The City of North Branch General Specifications and Standard Details Plates for Street and Utility Construction, and Division I of the Minnesota Department of Transportation (MnDOT) Standard Specifications for Construction (2020 Edition). With the exclusion of *Definitions and Terms, Bidding Requirements and Conditions, and Bidding Requirements and Covenants*, unless specifically stated, provisions of MnDOT Division I which are not amended or supplemented **shall not apply** to this Contract. Any of the City General Standard Specifications and Standard Detail Plates which are not amended or supplemented shall apply as indicated in the original document.

GR - 1 SUMMARY OF WORK

The Northwood Pickleball Court & Site Improvements Project shall include the furnishing of all labor, materials, tools, and equipment necessary to complete the court construction, site improvements, grading, restoration, and appurtenant work as shown on the Plans and specified herein.

GR - 2 WORK SEQUENCE

The Contractor shall:

1. Limit the area under construction at any given time to minimize the impacts to park areas that will remain open to the public, adjoining properties, and limit the duration that activities will disturb residents on each street.

GR - 3 (1401) INTENT OF CONTRACT

The provision of MnDOT 1401 shall apply.

GR - 4 (1402) CONTRACT REVISIONS

The provision of MnDOT 1402 are modified and/or supplemented with the following:

Delete Paragraph 1402.6 in its entirety.

GR - 5 (1403) NOTIFICATION FOR CONTRACT REVISIONS

The provision of MnDOT 1403 are modified and/or supplemented with the following:

Modify the first sentence of MnDOT 1403.6 to read as follows:

If the Contractor disagrees with the Engineer's final written response or the Engineer's response is untimely, the Contractor may pursue a claim in accordance with the General Conditions, Article 12.

GR - 6 (1406) PRESERVATION OF HISTORICAL OBJECTS

The provisions of MnDOT 1406 shall apply.

GR - 7 (1408) VALUE ENGINEERING INCENTIVE

The provision of MnDOT 1408 are modified and/or supplemented with the following:

MnDOT 1408 is deleted in its entirety and will not apply.

GR - 8 (1502) PLANS AND WORKING DRAWINGS

The provisions of MnDOT 1502 are modified and/or supplemented with the following:

Drawings provided by the Owner will include the information, as applicable to the project, in accordance with MnDOT 1502. The Owner's Standard Plates, MnDOT's Standard Plates, and MnDOT's Standard Plans may provide supplemental information.

GR - 9 (1504) COORDINATION OF CONTRACT DOCUMENTS

The provisions of MnDOT 1504 are modified and/or supplemented with the following:

Delete the second sentence of the first paragraph of MnDOT 1504 and replace with the following:

If discrepancies exist between the Contract documents, the following order of precedence applies:

1. Addenda,
2. Project Manual,
3. Project Plans,
4. City of North Branch General Specifications and Standard Plates for Street and Utility Construction (2022),
5. MnDOT Standard Specifications for Construction, and
6. CEAM Standard Specifications.

GR - 10 (1506) SUPERVISION BY CONTRACTOR

The provisions of MnDOT 1506 shall apply.

GR - 11 (1507) UTILITY PROPERTY AND SERVICE

The provisions of MnDOT 1507 are modified and/or supplemented with the following:

The plans show only known underground utilities, public and private, and the locations are approximate. No assurance is given that additional underground facilities do not exist. The utilities are classified as "Level D" unless the plans specifically state otherwise. This utility quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guidelines for the Collection and Depiction of Existing Subsurface Data".

State law requires the Contractor to contact Gopher State One Call (811) for utility locations before doing any underground excavation. The Contractor is responsible for ascertaining the actual location of underground utilities.

Prior to commencing construction, the Contractor shall check all existing manholes, catch basins, gate valve boxes, stop boxes, culverts, and storm sewer lines in the construction zones to determine their condition. Failure to report deficiencies in writing, and have such deficiencies acknowledged in writing by the Engineer, will be cause for any required repairs and/or cleaning to be charged to this Contractor.

The Contractor shall coordinate schedules with the work schedules of the utility owners present within the project limits to avoid delays.

The Contractor must provide a safe Work place for personnel and the utilities, including the payment of any fee charged by the utility for preparing a safe Work area for the Contractor.

Where construction operations require the interruption of service of a utility, the Contractor shall notify the utility at least 48 hours before the interruption and shall advise the utility of the probable time when the service will be restored.

GR - 12 (1512) UNACCEPTABLE AND UNAUTHORIZED WORK

The provisions of MnDOT 1512 are modified and/or supplemented with the following:

MnDOT 1512.1 is deleted in its entirety and replaced with the following:

1512.1 UNACCEPTABLE WORK

The Owner will consider all Work and Materials that do not meet the Contract requirements, or do not meet generally accepted industry standards if the Contract does not provide specific standards, to be unacceptable.

Unacceptable Work resulting from poor workmanship, use of nonconforming Materials, damage through carelessness, or any other cause existing before final acceptance of the Work shall be handled in the same manner as Defective Work, in accordance with Article 14 of the General Conditions.

GR - 13 (1601) SOURCE OF SUPPLY AND QUALITY

The provisions of MnDOT 1601 shall apply.

GR - 14 (1606) STORAGE OF MATERIALS

The provisions of MnDOT 1606 are modified and/or supplemented with the following:

Any disturbed area shall be cleaned up and fully restored to the pre-existing condition prior to closing out this project. The Contractor shall be required to install protective fencing and silt fence around the storage area. The protection, cleanup, and restoration of the project storage area shall be the Contractor's responsibility; no compensation will be made for this work. It is anticipated that all work, including stockpiling of materials, will be completed within the roadway right-of-way.

GR - 15 (1607) HANDLING MATERIALS

The provisions of MnDOT 1607 shall apply.

GR - 16 (1701) LAWS TO BE OBSERVED

The provisions of MnDOT 1701 are modified and/or supplemented with the following:

The Contractor shall not discriminate against prospective employees because of age, race, color, sex, creed, religion, nationality, or disability.

Delete MnDOT 1701.2 in its entirety and replace with the following:

1701.2 WORKER CONDUCT

The Owner intends to provide a workplace free of violence, threats of violence, harassment, and discrimination. The Owner has zero tolerance for violence in the workplace. Contractors shall maintain a workplace free of violence, harassment, and discrimination. The Contractor must immediately remove from the Project any employee of the Contractor or a Subcontractor in violation of these requirements.

Delete MnDOT 1701.3 in its entirety.

Delete MnDOT 1701.5 in its entirety and replace with the following:

1701.5 PROMPT PAYMENT AND RETAINAGE

A. Prompt payment of Subcontractors is required by MINN. STAT. 471.425.

The Contractor must pay a Subcontractor no later than ten days after receiving payment from the Owner for undisputed Work provided by that Subcontractor. If the Contractor fails to pay a Subcontractor on time, then the Contractor must pay interest, at the rate of 1.5 percent per month or any part of a month, to the Subcontractor on the undisputed amount not paid on time. For an unpaid amount under \$100, the Contractor must pay the actual interest penalty (calculated at 1.5 percent per month) or \$10, whichever is greater.

MINN. STAT. 471.425, subdivision 4a. also provides that a Subcontractor who prevails in a civil action to collect interest penalties from a prime Contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

B. Payment of retainage is governed by MINN. STAT. 337.10, and 15.72.

The Contractor may not withhold more than 5 percent in retainage from a Subcontractor, as provided by MINN. STAT. 337.10 subdivision 4(b). The Contractor must pay any retainage no later than 10 Calendar Days after the Contractor receives payment of retainage from the Owner, unless there is a dispute about the Work under a subcontract. If there is a dispute about the Work under a subcontract, the Contractor must pay out retainage to any Subcontractor whose Work is not involved in the dispute, and must provide a written statement detailing the amount and reason for the withholding to the affected Subcontractor.

GR - 17 (1702) PERMITS, LICENSES, AND TAXES

The provisions of MnDOT 1702 are modified and/or supplemented with the following:

The following permits will be acquired by the Owner (except as noted). The Contractor is required to follow the provisions of all permits:

Minnesota Pollution Control Agency (MPCA):

This Contract requires a Construction Stormwater General Permit (CSG Permit) administered by the MPCA. The Contractor shall become a co-permittee with the Owner to ensure compliance with the State of Minnesota Construction Stormwater General Permit (MNR100001), which is part of the National Pollutant Discharge Elimination System (NPDES) and the State Disposal System (SDS) Program. This permit establishes conditions for discharging storm water to waters of the State from construction activity disturbing one or more acres of total land area.

By completing the online CSG Permit application, the Contractor must ensure compliance with the terms and conditions of the permit that reference the "operator."

The Contractor shall cooperate with the Owner to implement a fully-documented inspection and maintenance program for all temporary erosion and sediment control measures as required by the Permit.

Minnesota Department of Natural Resources (DNR):

The Contractor shall acquire a DNR Water Appropriations permit if any dewatering becomes necessary.

GR - 18 (1706) EMPLOYEE HEALTH AND WELFARE

The provisions of MnDOT 1706 are modified and/or supplemented with the following:

The Contractor, at their own expense, shall provide and maintain temporary toilet facilities at the site during the construction period sufficient for the scheduled workforce. The Contractor and Engineer shall agree to the location of the temporary toilet facilities.

The Contractor must not use motor vehicle Equipment that has an obstructed rear view unless the vehicle has a reverse alarm that is audible above the surrounding noise level; or an observer signals to the operator that it is safe to reverse.

Areas of special concern include, but are not limited to, excavation stability protection, fall protection, protection from overhead hazards, vehicle backup protection, confined space safety, blasting operations, and personal safety devices.

GR - 19 (1707) PUBLIC CONVENIENCE AND SAFETY

The provisions of MnDOT 1707 are modified and/or supplemented with the following:

Regular working hours will be from 7:00 a.m. to 9:00 p.m., Monday through Saturday. The Contractor shall not be permitted to work on Sundays or holidays, except in the case of emergencies. Requests for modification of working hours must be approved by the Owner. The Contractor shall submit all requests in writing to the Engineer. The Contractor shall structure the proposed project schedule based on the stated working hours.

The Contractor shall comply with local and state ordinances on noise abatement. All equipment shall have effective mufflers on engine exhaust systems.

The Contractor shall be required to accommodate garbage collection while the project is under construction. Coordination shall include contact with the garbage companies service the area and maintaining access to the individual residences. If the Contractor fails to accommodate garbage collection, the Contractor shall contract independently to have the garbage removed at no cost to the Owner.

The Contractor shall provide any barricades, fences or other means of protection necessary to properly execute the work and adequately protect its employees, employees of the Owner, employees of the Engineer, and members of the public according to federal, state, and local regulators. All utility trenches shall be backfilled at the end of each working day to the satisfaction of the Engineer. All labor and materials necessary to comply with these provisions are incidental, and no payment shall be made.

The Contractor shall ensure that employees and Subcontractors do not display items such as, but not limited to, flags, banners, and symbols on the Project Site, that may disrupt the proper prosecution of the Work, impede public safety, or create a distraction for the traveling public.

GR - 20 (1708) RAILROAD HIGHWAY PROVISIONS

The provisions of MnDOT 1708 shall apply.

GR - 21 (1712) PROTECTION AND RESTORATION OF PROPERTY

The provisions of MnDOT 1712 are modified and/or supplemented with the following:

The Contractor shall protect, and/or remove and reinstall all fences, street signs, retaining walls, and other items required to construct the proposed improvements. Work associated with protecting, and/or removing and reinstalling fences, street signs, lawn irrigation systems, and other items shall be considered incidental to the project unless specific bid items are included.

The Contractor shall take whatever steps necessary to protect adjoining properties and structures from hazards due to performance of the work. The Contractor is responsible for any and all damage to properties and structures that occur as a result of the Contractor's operations.

The street and utility construction may occur in close proximity to a number of existing structures. The Contractor shall use shoring or other means as necessary to ensure that those structures are protected during construction.

Existing residences may not be of modern construction and are thus sensitive to vibrating equipment. The Contractor shall take care when utilizing vibratory equipment to avoid damage to adjoining structures. Damage to structures resulting from the use of vibratory equipment are the responsibility of the Contractor. In the event of a complaint or perceived problem, a seismograph will be required to be provided at the Contractor's expense.

All labor and materials necessary to comply with the provisions of this section are incidental, and no payment shall be made.

Delete Paragraph MnDOT 1712.1.A in its entirety and replace with the following:

A. Monuments

The Contractor shall preserve all land and property corner monuments, Right-of-way monuments, and vertical and horizontal control point monuments in the vicinity of the Work. The Owner will mark all such monuments the Owner is aware of prior to construction. The Contractor shall notify the Engineer of any monument, whether the Owner has marked them or not, which the Contractor may disturb, in sufficient time to allow the Engineer to establish ties to the corner. The replacement of monuments removed by the Contractor shall be completed by the Owner at the Contractor's expense.

GR - 22 (1716) CONTRACTOR'S RESPONSIBILITY FOR WORK

The provisions of MnDOT 1716 are modified and/or supplemented with the following:

The Contractor shall guarantee and maintain the stability of all work, equipment and materials for a period of two years from the date of Notice of Acceptability of Work. The Contractor shall provide as part of the contract security a separate two-year maintenance bond to be dated to begin the date of Notice of Acceptability of Work. The provisions of this paragraph shall not be construed as restricting Contractor's liability for breach of contract by reason of non-conformance with the specification for defects or faulty workmanship.

GR - 23 (1801) SUBLETTING OF CONTRACT

The provisions of MnDOT 1801 are modified and/or supplemented with the following:

Modify the first sentence of the second to the last paragraph of MnDOT 1801 to read as follows:

The Contractor must ensure that the subcontracts at least contain the following (if required by the Contract):

GR - 24 (1802) QUALIFICATIONS OF WORKERS

The provisions of MnDOT 1802 shall apply.

GR - 25 (1804) PROSECUTION OF WORK

The provisions of MnDOT 1804 are modified and/or supplemented with the following:

Delete the first sentence of the first paragraph of MnDOT 1804.1.

Delete the third and fourth paragraphs of MnDOT 1804.1 and replace with the following:

Should the Contractor fail to maintain satisfactory progress, the Engineer will require that the Contractor provide additional resources (e.g., labor, Materials, Equipment) as necessary to bring the Work up to the level of progress required in the current accepted Progress Schedule to ensure completion of the Work within the time(s) specified in the Contract.

Special Project ADA Requirements:

All pedestrian facilities and shared use paths on this Project must be constructed according to Public Rights-of-Way Accessibility Guidelines (PROWAG) which can be found at: <http://www.dot.state.mn.us/ada/pdf/PROWAG.pdf>. The appropriate pedestrian ramp details for each quadrant are included in the Plan. The Engineer may provide additional details to those provided in the Plan that meet the PROWAG guidelines as the need arises and field conditions dictate.

- A) The Contractor must designate a responsible person competent in all aspects PROWAG to assess proposed sidewalk layouts at each site before work begins. Any time work the Contractor is performing concerns pedestrian facilities, the Contractor's responsible person shall be on site.
- B) Pedestrian facilities must be constructed to meet the following criteria:
 - (1) Pedestrian Access Routes (PAR) must be constructed to meet the following:
 - Minimum four feet (4') width.
 - A maximum cross slope of 2.0%.
 - Vertical discontinuities must be less than 0.25 inches.
 - Must provide positive drainage without allowing any ponding and maintain existing drainage flow patterns unless indicated otherwise in the Plan.
 - All grade breaks shall be constructed perpendicular to the path of travel.
 - (2) Landings are part of the PAR and must be constructed to meet the following:
 - Four feet by four feet (4' by 4') minimum width.
 - Maximum slope of 2.0% in all directions.
 - Required at all locations where the PAR changes directions or inverse grades.
 - Must be connected to the PAR.
 - (3) Ramps are part of the PAR and must be constructed to meet either of the following criteria:
 - Longitudinal slopes less than 5.0% in the direction of travel requires no landing at the top of the ramp (unless the PAR changes direction).
 - Longitudinal slopes between 5.0 - 8.3% in the direction of travel require a landing at the top of the ramp.

If the Contractor constructs any pedestrian or shared-use trail facilities that are not per Plan, do not meet the above requirements, or do not follow the agreed upon resolution, the Contractor will be responsible for correcting the deficient facilities with no compensation paid for the corrective work. To ensure that the pedestrian facilities are constructed in compliance with PROWAG, the Contractor shall follow the following three steps:

- (1) The Contractor shall use the appropriate ramp details in the Plan and identify the removal limits for the sidewalk and curb and gutter. If Contractor determines the removal limits are not adequate to meet PROWAG, the Contractor shall stop work immediately and consult the Engineer to determine the best solution. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may finish the removals.

- (2) Prior to pouring each curb and gutter segment, the Contractor must verify the zero-height curb and curb transitions will be located as shown in the Plans and will provide an adequate detectable edge as shown on Standard Plan Sheet No. 5-297.250 (sheet 4 of 5). The Contractor shall also verify the proposed curb flow lines will provide positive drainage as well as maintain existing drainage patterns including existing gutter inflows/outflows. The curb and gutter shall be constructed as detailed in the Plan with a defined flow line and no vertical discontinuities. The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with pouring the curb and gutter.
- (3) After the curb has been correctly poured, the Contractor has set the sidewalk forms, and prior to placing the concrete curb ramps/sidewalks, the Contractor shall verify the requirements in this section will be achieved.

In addition, the longitudinal slopes shown in the Construction Plans and the Standard Plans shall be utilized unless these conditions cannot be met. The starting point for setting the forms on the controlling ramp leg should be the following:

Steep (S) = 7%
Flat (F) = 4%
Landing = 1.5%
Sidewalk Cross Slope = 1.5%
Fan ramp = 5%

If any of these requirements cannot be met the Contractor shall meet with the Engineer to determine the best solution. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with the curb ramp/sidewalk pour.

Landings – An initial landing is the first required landing of a pedestrian ramp. All initial landings required at the top of a ramped sloped surface (>2% longitudinal slope), shall be formed and placed separately in an independent concrete pour. This does not include initial landings placed at roadway grade such as depressed corners, parallel ramps, or rural flat landings. Secondary landings consist of all landings beyond the initial landing. These secondary landings do not require a separate landing pour. All landings adjacent to push buttons shall be formed and placed separately in an independent concrete pour, regardless of ramp type.

Wet casting or drill and grouting of dowel bars will be required in accordance with the details shown in Standard Plan 5-297.250 Sheet 5 of 5. These bars may be either smooth or deformed and shall be installed with two-inch (2") minimum concrete cover. When not accounted for in the Plan, payment for these bars will be made under Item 2301.602 (Drill & Grout Reinforcement Bar (Epoxy Coated)) by the Each at the Predetermined Price of \$10.00 per bar furnished and installed. All necessary subgrade preparation and aggregate base placement for the entire ramp construction limit shall be done before the initial landing is constructed at each location.

- C) It shall be the responsibility of the Contractor, or Contractor's Surveyor if applicable, to layout all proposed work at each intersection in accordance with the Plan and requirements listed in this Special Provision. The Contractor may confer with the Engineer for guidance in laying out the proposed work, but it will be the Contractor's responsibility to ensure the proposed work meets all the requirements of this Special Provision. This layout includes, but is not limited to placement of grade breaks, curb transitions, gutter flow lines, truncated dome placement, crosswalk marking placement, flares, landing limits, and ramp limits. It is important that the Contractor layout this work properly to achieve the construction of a compliant pedestrian facility. The Owner's surveyor will only stake points and elevations provided in the Plan. For custom designs, other than specific dimensions provided in the Plan, the Contractor shall be expected to scale dimensions from the Plan as needed to construct the facility. If scaled dimensions do not allow for a facility to be constructed to meet

the requirements of this Special Provision, the Contractor shall follow the process listed in this section. This layout work shall be incidental.

- D) The Contractor shall utilize measures and methods when working near existing buildings that will avoid damaging the building's face or structure. The Contractor will be responsible for any damage to the building's face or structure, both below and above ground. Any damage resulting from Contractor operations will be repaired at the Contractor's expense to the satisfaction of the Engineer.
- E) This section applies when no sidewalk joint information is provided in the plan. The Contractor will round all sidewalk joints with a quarter inch ($\frac{1}{4}$ ") radius edging tool, contraction joints shall extend to at least thirty (30) percent of walk thickness and shall be quarter inch ($\frac{1}{4}$ ") maximum width. The Contractor shall have the option of providing saw cuts to construct all sidewalk joints and the gutter joints within the PAR. When greater than fifty feet (50') of continuous sidewalk runs are constructed the contractor shall saw cut all joints. The top grade break of walkable flares need a visual joint to indicate a change in grade. This visual joint shall have quarter inch ($\frac{1}{4}$ ") radius, quarter inch ($\frac{1}{4}$ ") maximum width and quarter inch ($\frac{1}{4}$ ") depth. All saw cut work associated with PAR construction shall be incidental.
- F) In areas where the sidewalk is to be constructed around fixed structures and the grade has been changed, the sidewalk shall be finished around these structures to the satisfaction of the Engineer at no additional cost.

GR - 26 (1805) METHODS AND EQUIPMENT

The provisions of MnDOT 1805 shall apply.

GR - 27 (1806) DETERMINATION AND EXTENSION OF CONTRACT TIME

The provisions of MnDOT 1806.1 are deleted in their entirety and replaced with the following:

1806.1 GENERAL

The Contractor shall prosecute the Work continuously and effectively, with the least possible delay, to the end that all Work is completed within the Contract Time.

If the Owner grants an extension of the Contract Time, the extended time for completion will be in full force and effect as though it was originally specified.

The Notice to Proceed is anticipated to be issued by the Owner in April 2024. The exact date of issuance will be determined based on the Contractor's schedule. Construction shall start within seven days of receiving the Notice to Proceed.

The Work will be substantially completed on or before **August 2, 2024**.

Substantial completion includes all removals, earthwork, pavements, site improvements, court construction and color coating, restoration (seeding and blanket), and cleanup.

The Work will be ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **September 6, 2024**.

Final completion includes removal and replacement of damaged pavements and site work, and resolving punch list items.

The project schedule has been set to accommodate sufficient time for private utility relocation and weather delays. It is the Contractor's responsibility to complete the project within the assigned schedule. No extension of time will be granted for weather conditions typical to the time of year the work is undertaken.

Delete MnDOT 1806.2 in its entirety.

GR - 28 (1807) FAILURE TO COMPLETE THE WORK ON TIME

The provisions of MnDOT 1807 are modified and/or supplemented with the following:

Contractor and Owner recognize that time is of the essence and that the Owner will suffer financial loss and other losses if the work is not completed within the times specified by the Owner, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay the Owner as follows:

- The liquidated damages shall be in accordance with Table 1807-1 Schedule of Liquidated Damages for all stated completion dates, as well as any intermediate completion dates.

GR - 29 (1901) MEASUREMENT OF QUANTITIES

The provisions of MnDOT 1901 shall apply.

GR - 30 (1902) SCOPE OF PAYMENT

The provisions of MnDOT 1902 are modified and/or supplemented with the following:

Modify the second sentence of MnDOT 1902 to read as follows:

This includes compensation for all risk, loss, damage, and expense incurred by the Contractor for performing the Work required by the Contract subject to the General Conditions.

GR - 31 (1903) COMPENSATION FOR ALTERED QUANTITIES

The provisions of MnDOT 1903 are modified and/or supplemented with the following:

The Owner reserves the right to reduce certain quantities or delete certain items from each section of the bids as the Owner sees fit, either before or after the Award of Contract.

There will be no additional compensation due to remobilization of equipment as necessary to complete punch list items or other items not completed by the Contractor.

There will be no additional compensation due to restocking charges for materials not used on the project.

GR - 32 (1908) FINAL ESTIMATE AND PAYMENT – CONDITIONS AND PROCESS

MnDOT 1908 is deleted in its entirety and replaced with the following:

1908 FINAL ESTIMATE AND PAYMENT – CONDITIONS AND PROCESS

Absent complete and legally effective releases or waivers of all Lien rights arising out of the Work, and of Liens filed in connection with the Work, the Owner may retain out of any monies due said Contractor sums sufficient to cover all unpaid liens/claims.

The Owner cannot make final payment to the Contractor until the Contractor demonstrates that it and all its Subcontractors have complied with the Income Tax withholding requirements of Minnesota Statutes, section 290.92 for wages paid for Work performed under the Contract. To establish compliance, the Contractor must submit a "Contractor Affidavit" either online or in paper form (IC134) to the Minnesota Department of Revenue. The Contractor will receive written certification of compliance when the Department of Revenue determines that all withholding tax returns have been filed and all withholding taxes attributable to the Work performed on the Contract have been paid. The Contractor must then provide this written certification to the Owner to receive final payment.

Every Subcontractor working on the Project must submit an approved "Contractor Affidavit" from the Minnesota Department of Revenue to the Contractor before the Contractor can file its own Contractor Affidavit. The Contractor is advised to obtain the certification from each Subcontractor as soon as the Subcontractor completes Work on the Project. Experience has shown that waiting until the Project is complete to obtain the forms from all Subcontractors is likely to result in significant additional Work for the Contractor as it will be difficult or impossible to collect all forms.

The Department of Revenue, in association with the Department of Employment and Economic Development, offers a free seminar to help contractors understand tax law requirements. The Department strongly urges the Contractor and all Subcontractors to attend the "Employment Taxes & Employer Responsibilities Seminar" or similarly offered classes. You can find a schedule and more information on the Department's website at: <https://www.revenue.state.mn.us/sites/default/files/2019-05/Employment%20Taxes%20Seminar%20Flyer.pdf>.

Complying with this requirement is considered part of the Work under this Contract. The Department will enforce this requirement equally with all other Contract requirements. Contractor delay in complying with this requirement will cause the Department to delay final payment and Contract Acceptance. The Department may also report non-compliance to the Department of Revenue, which may result in enforcement action by the Department of Revenue.

Contractor Affidavit requirements and Form IC134 can be found here:
<https://www.revenue.state.mn.us/contractor-affidavit-requirements>.

DIVISION 2

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DIVISION 2

SPECIFICATIONS

These specifications modify/supplement Division II of the MnDOT Standard Specifications for Construction (2020 Edition) and the City of North Branch General Specifications and Standard Detail Plates for Street and Utility Construction, dated 2022. Any of the City General Standard Specifications and Standard Detail Plates which are not amended or supplemented shall apply as indicated in the original document.

2021 MOBILIZATION

The provisions of MnDOT 2021 are modified and/or supplemented as follows:

2021.5 BASIS OF PAYMENT

Mobilization: Payment shall be made at the lump sum price bid, which shall not exceed five percent (5%) of the total Contract amount for mobilization and traffic control and shall be payment in full for of all labor, materials, and equipment required to complete the project as specified. Payment shall be made at the lump sum item "Mobilization". Partial payments of the lump sum bid price will be made in accordance with construction progress per the MnDOT specification section 2021.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2021.501	MOBILIZATION	LS

2104 REMOVING PAVEMENT AND MISCELLANEOUS STRUCTURES

The provisions of MnDOT 2104 are modified and/or supplemented as follows:

2104.3 CONSTRUCTION REQUIREMENTS

B. Haul Salvaged Materials

Salvaged Materials, not required for installation elsewhere under this Contract, shall be loaded and hauled to the designated storage area(s) where they shall be unloaded and deposited in a manner satisfactory to the Engineer.

C. Removal Operations

Removals made by sawing, shall result in a neat, straight line, or a square edge. The use of wedges driven into the saw cut to break off the portion to be removed will not be permitted.

2104.5 BASIS OF PAYMENT

Measurement and payment for the removal and disposal of materials will be made only for those Items of removal work specifically included for payment as such in the Bid Form and as listed in the Plans.

Salvage Sign Panel: All costs of hauling salvaged materials shall be included in the cost of salvaging the material.

Remove Fence: All costs for removal of fence includes associated footings, connections and other appurtenances.

Remove Pavement: Saw cutting necessary for the removal of walks, trails or concrete curb and gutter shall be considered incidental with no direct compensation made.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2104.502	SALVAGE SIGN PANEL	EACH
2104.503	REMOVE FENCE	L F
2104.518	REMOVE PAVEMENT	S F

2106 EXCAVATION AND EMBANKMENT – COMPACTED VOLUME METHOD

The provisions of MnDOT 2106 are modified and/or supplemented as follows:

2106.1 DESCRIPTION

Excavating operations include all earthwork within the project area to include topsoil stripping, stockpiling and respreading, all on-site earthwork excavations, and backfilling to final finished grades. All excess or unsuitable soils will become the property of the Contractor to be disposed of off-site at an approved facility.

Add the following new paragraph to MnDOT 2106.1:

A. Dewatering

The Contractor shall provide groundwater excavation dewatering as necessary to allow for construction on a stable foundation. The work potentially involves the drawdown of the water table (using wells or other means), placement of temporary barriers, or other satisfactory types of water control to allow for construction and to protect the improvements. Dewatering operations are controlled by permit from the DNR or other agencies. Dewatering operations must be in accordance with the MnDOT 2573. Rerouting surface water is not considered dewatering and is incidental.

The Contractor is responsible for application for any necessary permits and compliance with all conditions of permits. The Contractor shall also be responsible for noise control during dewatering as directed by the Engineer.

The Contractor shall make their own determination as to the extent of the groundwater on the project prior to bidding. No additional compensation will be made for a higher than expected groundwater table or any compliance requirements from regulatory agencies.

Dewatering systems and excavations must remain inside construction limits.

2106.2 MATERIALS

B.3 Select Granular Embankment

Select Granular Material in accordance with MnDOT Table 3149.2-1 for use as Select Granular Embankment shall also be free-draining, non-recycled (virgin) sand with 100% passing the 3/8 inch sieve.

2106.3 CONSTRUCTION REQUIREMENTS

A. General

Mining of materials for removal from the project area and replacement with less desirable materials by the Contractor shall not be permitted.

Management of the excavated materials on the site is the Contractor's responsibility. Excess material shall become property of the Contractor.

B. Contractor Quality Control (QC) Testing and Aggregate Certification

Correct areas represented by failing QC or Quality Assurance (QA) tests. Submit test results to the Engineer within one business day.

C. Moisture Control

Note that optimum moisture content determination tests and moisture tests during compaction are required for all compaction requirements, including quality compaction, LWD, penetration index, and specified density.

The Owner's proctor test results are used to determine optimum moisture determination.

E. Excavating Operations

Earthwork operations consists of all earthwork operations, including, but not limited to; topsoil stripping, stockpiling and respreading; all subgrade excavation, subgrade preparation and compaction; embankment hauling and backfilling; export of excess or unsuitable soils, and finished grading operations per plans.

Subgrade excavations shall be performed for the removal of any unstable or unsuitable materials which may be encountered. Such excavations shall be backfilled with granular embankment material as directed by the Engineer. It is the intent of this project to use imported select granular embankment to bring the site to the proposed subgrade elevations as necessary to meet plan grades.

Under turf and unpaved areas, scarify/rip and lightly recompact the subgrade soils within the top twelve inches (12") and lightly compact each layer of backfill or fill soil material at eighty five percent (85% prior to placement of topsoil materials.

Remove roots, weeds, rocks over one inch (1") in any dimension, as well as any foreign material encountered.

Site Grading: Slope grades to direct water away from buildings and pavement to prevent ponding. Finish grades to elevations required to achieve indicated finish elevations, within the following tolerances (measured with a 10-foot rod):

- A. Turf or Unpaved Areas: Plus or minus one inch (1").
- B. Sports Turf Field Areas: Laser grading required, plus or minus one quarter inch (1/4") over the plane of the field
- C. Walks: Plus or minus half an inch (1/2")
- D. Pavements: Plus or minus half an inch (1/2")

I. Finishing Operations

Common Topsoil Borrow meeting the requirements of MnDOT 3877.2.A shall be used only when specifically authorized by the Engineer. It shall only be used when there is not sufficient in place topsoil to restore the disturbed area. This work shall not be substituted for the work required of the Contractor to salvage and replace existing topsoil.

All topsoil (salvaged and borrow) shall be free of all sticks, rocks/stones, and debris. Topsoil shall be of a consistency acceptable to the Engineer.

Excess topsoil may be disposed of outside the road core as directed by the Engineer.

2106.4 METHOD OF MEASUREMENT

B. Embankment Material

Granular embankment shall be used only as directed by the Engineer.

2106.5 BASIS OF PAYMENT

The Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required as Quality Control (QC). The Owner shall be responsible for all inspections and tests required as Quality Assurance (QA).

Excavation – Common: Payment shall be at the unit price bid of lump sum and shall be compensation in full for all earthwork operations, including, but not limited to; topsoil stripping, stockpiling and resspreading; all subgrade excavation, preparation and compaction / decompaction; embankment hauling, placement and compaction; export of all excess or unsuitable soils, and finished grading operations per plans.

Select Granular Borrow: Payment shall be made at the unit price bid per cubic yard at a planned in-place volume (P) and shall be compensation in full for import, hauling, stockpiling, installing, and compaction operations.

Potholing to locate existing utilities may be required. All labor and materials used for potholing will be incidental.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2106.501	EXCAVATION – COMMON	L S
2106.507	SELECT GRANULAR BORROW (P)	C Y

2123 EQUIPMENT RENTAL

The provisions of MnDOT 2123 are modified and/or supplemented as follows:

2123.3 SPECIFIC REQUIREMENTS

Add the following item to the list in MnDOT 2123.3:

- (14) Street Sweeper with Pickup Broom: Provide self-propelled street sweeping equipment with a pick-up broom.

Throughout construction, constructed streets and roadways adjacent to the project shall be swept and cleaned as directed by the Engineer, and shall be in conformance with the NPDES permit. The Engineer may require additional sweeping of roads to ensure safety for the general public, protect the environment, uphold local requirements, or as otherwise directed. Material that is tracked off the project site shall be swept within 24 hours.

Removal of dirt and debris shall be accomplished to the satisfaction of the Engineer. All materials shall be collected and retained within the sweeping equipment as they are swept. Disposal of the swept material shall be in accordance with MnDOT 2104.3.D.

2123.5 BASIS OF PAYMENT

Add the following new paragraph to MnDOT 2123.5:

A. Street Sweeper with Pickup Broom

Payment for street sweeping will only be made for hours of time required to maintain cleaned roadways for the traveling public, as approved by the Engineer. No payment shall be made for sweeping that is normally required to construct the project, including, but not limited to, removal of

bituminous millings, sweeping between bituminous lifts, and sweeping prior to placement of pavement markings. No payment will be made for sweeping done by "kickoff brooms."

Street sweeping with pickup broom will be considered *incidental* work to conform to the NPDES project permit and no separate payment will be made.

2130 APPLICATION OF WATER FOR DUST CONTROL

The provisions of MnDOT 2130 are modified and/or supplemented as follows:

2130.5 BASIS OF PAYMENT

Delete the third paragraph of MnDOT 2130.5 in its entirety.

Application of water for dust control is considered *incidental* to the Project with no separate payment made.

2211 AGGREGATE BASE

The provisions of MnDOT 2211 are modified and/or supplemented as follows:

2211.2 MATERIALS

Aggregate base shall be Class 5, virgin material, in accordance with MnDOT 3138 or may contain up to 10 percent recycled concrete materials meeting Class 5 gradations.

Before any aggregate base is placed, the Contractor shall submit an aggregate gradation from an approved testing laboratory certifying that the materials to be incorporated into the work meet these specifications with no exceptions. All costs associated with testing and certification shall be borne by the Contractor and considered incidental to the project with no additional compensation allowed.

2211.3 CONSTRUCTION REQUIREMENTS

B. Contractor Quality Control (QC) Testing

If required by the Schedule of Materials Control, perform Contractor QC testing and submit results and all required forms to the Engineer within one business day.

C. Placing and Compacting

The Contractor shall install the aggregate base immediately, no more than 24 hours after completion and approval of the Grading Grade. If placement of the aggregate base is done more than 24 hours after the initial test roll, a second test roll shall be required and paid for by the Contractor.

The Contractor shall be responsible to maintain the aggregate base until completion of bituminous surfacing with no direct payment therefore. Additional aggregate base required due to erosion, washouts, trench settlements or other similar causes shall be replaced by the Contractor without additional compensation therefore.

D.4 Moisture Testing

Note that moisture tests during compaction are required for all compaction requirements, including quality compaction, LWD, penetration index, and specified density.

2211.5 BASIS OF PAYMENT

The Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required as Quality Control (QC). The Owner shall be responsible for all inspections and tests required as Quality Assurance (QA).

Class 5 Aggregate base beneath bituminous and concrete pavements shall be considered incidental to the unit price of the corresponding pavements and shall be compensation in full for testing, import, hauling, stockpiling, installing, and compaction operations.

2357 BITUMINOUS TACK COAT

The provisions of MnDOT 2357 are modified and/or supplemented as follows:

2357.5 BASIS OF PAYMENT

Bituminous Tack Coat: shall be considered *incidental* to bituminous pavement operations and no additional payment will be made.

2360 PLANT MIXED ASPHALT PAVEMENT (LOCAL AGENCY)

The provisions of MnDOT 2360 are modified and/or supplemented as follows:

2360.1 DESCRIPTION

Mix Designation Numbers for the bituminous mixtures on this Project are as follows:

TRAILS

3.0 Inch Thickness = TYPE P 9.5 SPWEA240B (RAP-FREE)

PICKLEBALL COURT

2.0 inch Wear Course = TYPE SP 9.5 SPWEA240B (RAP-FREE)

2.5 inch Non-Wear Course = TYPE SP 12.5 SPWEB230B

2360.2 MATERIALS

G. Mixture Quality Management

Delete and replace the third through sixth sentences of the first paragraph of MnDOT 2360.2.G.4.b with the following:

Sample mixture from behind the paver. Sampling from the truck box at the plant site is not allowed unless approved by the Engineer. In addition to the QC sample, the Contractor will also bring an additional split of the mixture sample to the plant site and store for the Owner for 10 calendar days.

2360.3 CONSTRUCTION REQUIREMENTS

D. Compaction

Perform ordinary compaction for all bituminous trail paving on the Project, as directed by the Engineer.

Perform Maximum Density compaction for all bituminous court paving on the project, as directed by the Engineer.

2360.4 METHOD OF MEASUREMENT

When paying for Material by Square Yard the Engineer will measure the Plan dimensions for standard width and/or irregular width paving at the dimensions and thickness specified. There will be no additional payment for asphalt pavement constructed with a greater thickness or width than required by the Plan.

The Engineer may direct the Contractor to construct asphalt pavement in thicknesses different than that shown on the plan for small quantities. The Method of Measurement will be a direct proration from the original thickness to the changed thickness, with payment to be made at Contract Unit Prices.

2360.5 BASIS OF PAYMENT

The Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required as Quality Control (QC). The Owner shall be responsible for all inspections and tests required as Quality Assurance (QA).

Where bituminous driveway pavement is measured by the square yard, aggregate base material and excavation required beneath the pavement shall be considered included in the cost of the bituminous driveway pavement.

4-inch Bituminous Court: Where bituminous pavement is measured by the square yard, multiple bituminous lifts to required maximum density, tack coat binder, and aggregate base material required beneath the proposed pavement (including shoulder extending beyond edge of pavement), shall be considered included in the cost of the bituminous pavement.

3-inch Bituminous Trail: Where bituminous pavement is measured by the square yard, bituminous pavement and aggregate base material required beneath the proposed pavement (including shoulder extending beyond edge of pavement and topdressing or adding to existing aggregate base), shall be considered included in the cost of the bituminous pavement.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2360.504	4-INCH BITUMINOUS COURT	S Y
2360.504	3-INCH BITUMINOUS TRAIL	S Y

2521 WALKS

The provisions of MnDOT 2521 are modified and/or supplemented with the following:

2521.3 CONSTRUCTION REQUIREMENTS

Add the following new paragraph to MnDOT 2521.3:

Joint Construction: Expansion joints shall be placed at locations where a fixed object or structures extend through the walk, at pedestrian ramps and where thicknesses may vary. Spacing of contraction joints shall equal the width of the walk or not to exceed the maximum of fifty feet (50') apart. Refer to plans for joint patterns and review on site with Landscape Architect and Owner for review and approval prior to joint placement.

Membrane and Extreme Service Membrane Curing Method: Membrane curing method in accordance with MnDOT 3754 will be allowed with the minimum rate of application being one (1) gallon per 124 square feet of exposed surface area. The furnished material shall be Type 2, Class B and conforming to ASTM C 309.

H. ADA Requirements (MnDOT Standard Plan Sheet No. 5-297-250)

H.1 Concrete Walk

The minimum continuous and unobstructed clear width of a Pedestrian Access Route (PAR) shall be 4.0 feet. All new or reconstructed sidewalk widths shall match or exceed in place sidewalk and in no case shall it be less than 5.0 feet in width except at locations where obstructions cannot be moved or at driveways where slopes exceed the maximum allowable grades. The cross slope of the sidewalk shall not exceed 2% and shall be measured across the entire surface width of the sidewalk. Curb ramps shall meet or exceed existing sidewalk widths and curb openings. Maintain a consistent flat smooth surface within the PAR.

Where sidewalk grade changes adjacent to fixed structures, the sidewalk shall be finished around these structures to the satisfaction of the Engineer.

Sawcut concrete curb ramp, sidewalk, and driveway contraction joints. Exceptions for tooling relief joints are allowed for large driveway placements, long sidewalk placements to prevent random cracks, and minor repairs. Obtain approval from the Engineer where tooling of contraction relief joints will occur.

Sawcut curb and gutter contraction joints within the PAR including contraction joints at zero-inch height curb locations.

Sawcut a visual joint at the top grade break of walkable flares to indicate a change in grade meeting MnDOT 2521.3.D, except the depth requirement is reduced to 1/4 inch.

To avoid corner breaks, all walk edges shall be formed and constructed perpendicular to the back of curb and gutter sections and concrete structures for a one foot minimum distance.

H.2 Grading

Fill sections shall be graded flush with the top of walk for a minimum 18 inches from the edge of walk at maximum 2% slope and then down at a maximum 1:3 slope to existing terrain unless otherwise detailed in the Plan. Blend in the toe of fill slope and adjacent areas so as not to adversely affect drainage.

H.3 Landings

An initial landing is the first required landing of a pedestrian ramp. Form and place initial landings at the top of a ramped sloped surface (>2% longitudinal slope), with an independent concrete pour unless the initial landing is located at roadway grade such as depressed corners, parallel ramps, rural flat landings, or flat cut-throughs. Secondary landings consist of all landings beyond the initial landing. These secondary landings do not require a separate landing pour.

Construct initial landings in a single concrete placement, whenever possible, as a single plane surface having no grade breaks. If single concrete placement is not possible, follow the requirements for tie bar placement in accordance with the details shown in Standard Plan 5-297.250 Sheet 6 of 6 and tie adjacent landings together. Keep architectural elements such as brick pavers or concrete stamping outside the curb ramps and curb ramp landings.

Cast in-place or drill and grout tie bars will be required in accordance with the details shown in Standard Plan 5-297.250 Sheet 6 of 6. If cast in place, install tie bars through holes in the forms, with a form height at least equal to the walk thickness of the formed concrete shown in the Plans. These bars shall be deformed and shall be installed with 2" minimum concrete cover.

All necessary subgrade preparation and aggregate base placement for the entire ramp construction limit shall be done before the initial landing is constructed.

2521.5 BASIS OF PAYMENT

Concrete Pavement: Payment for concrete pavement shall be made at the unit bid price per square foot for each type and thickness indicated and shall be payment in full for all labor, materials, and equipment including finishing, formwork, protection, joints, reinforcement, curing compound, and base material required beneath the proposed pavement, including shoulder extending beyond edge of pavement. Surface tolerances will be verified prior to payment.

Concrete Pavement (Ped Ramp): Payment for concrete pavement shall be made at the unit bid price per square foot for each type and thickness indicated and shall be payment in full for all labor, materials, and equipment including finishing, formwork, protection, joints, reinforcement, curing compound, and base material required beneath the proposed pavement, including shoulder extending beyond edge of pavement. Concrete parking lot curb with tapers and flat section to meet ADA requirements are incidental. Surface tolerances will be verified prior to payment.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2521.518	4" CONCRETE	S F
2521.518	6" CONCRETE	S F

2531 CONCRETE CURBING

The provisions of MnDOT 2531 are modified and/or supplemented with the following:

2531.1 DESCRIPTION

This work also consists of furnishing and installing Truncated Dome Systems at pedestrian curb ramps in compliance with the Public Rights-of-Way Accessibility Guidelines (PROWAG).

2531.2 MATERIALS

Add the following new paragraph to MnDOT 2531.2:

G. Truncated Domes

The truncated dome shall be cast iron detectable warning plate with raw finish meeting PROWAG requirements.

2531.3 CONSTRUCTION REQUIREMENTS

B. Placing and Finishing Concrete

For concrete curb and gutter, including curb fill-ins, mechanical vibration of the concrete will be required to produce a smooth curb face.

For concrete driveway pavement, a power concrete screed shall be used on all concrete driveway pavement. Roller screeds will not be allowed.

C. Slipform Machine Placement

Where existing driveways are being protected, or do not need to be removed, the Contractor shall hand pour the concrete curb along these driveways. No additional compensation will be granted the Contractor for this work.

L. Backfill Construction

Backfilling of the curb and gutter shall be completed prior to bituminous surfacing of the roadway.

M. Workmanship and Finish

Unacceptable work shall be removed and replaced with acceptable work as ordered by the Engineer.

Add the following new paragraph to MnDOT 2531.3:

N. Truncated Domes

Firmly press truncated domes into concrete filling the vent holes on the truncated dome plates.

Obtain Engineer's approval prior to cutting truncated domes. Minimum cut section surface area is two square feet. Grind cut edges smooth. A maximum of one cut section is allowed per pedestrian ramp. Coated colored truncated domes shall not be cut.

Screed the surrounding concrete finishing flush with the truncated dome plate edge. The maximum surface deviation is 3/16 inches. Provide a 3 inch minimum concrete border around the edges of the truncated domes.

Contractor shall modify the curb line radius in accordance with MnDOT Standard Plan 5-297-250 and may adjust the zero-length height curb locations up to 6 inches laterally if radial dome sections are used.

Add the following new paragraph to MnDOT 2531.3:

K. ADA Requirements (MnDOT Standard Plan Sheet No. 5-297-250)

K1. Concrete Curb and Gutter

Construct curb and gutter to meet the details in the Plan. When machine placed, the gutter inslope shall be poured at 3% inflow around the radius or at a minimum distance of 10 feet from any zero-height curb section. Construct the gutter inslope and transitions as detailed in the Plans. Modify the proposed gutter width to not protrude into the adjacent travel.

Leave a minimum 3 feet of in place curb and gutter between an existing joint and the saw cut. If the 3 foot minimum cannot be maintained, place the saw cut over the existing joint. Install epoxy coated reinforcement bars per Standard Plans 5-297.250 (Sheet 6 of 6) if construction joints are utilized within a quadrant radius.

Form, at a minimum, the top 1.5 inches of the gutter face (front of gutter). The existing roadway edge is not to be used as a form for the top 1.5 inches of the gutter face unless approved by the Engineer.

If the gutter flow line in front of the proposed curb ramp exceeds 2.0% slope, adjust the flow line to 2% or less if feasible while following the roadway criteria as per Standard Plans 5-297.250 (Sheet 6 of 6). The bituminous patch in front of the truncated domes should be 1% minimum to 5% maximum slope measured perpendicular to the flow line. In no case shall a newly constructed curb and gutter flow line exceed 8% unless the roadway profile exceeds 8%.

Drainage patterns shall not be altered unless called for in the Plans or approved by the Engineer.

Construct a contraction joint through the curb and gutter section where the curb height equals zero inches. If any curb and gutter joints fall within the Pedestrian Access Route (PAR), meet the requirements of MnDOT 2521.3.C.

When constructing directional curb where truncated domes are perpendicular to the path of travel, the triangular concrete area between the grade break/edge of truncated domes and the gutter face (front face of gutter) shall be constructed integral.

2531.4 METHOD OF MEASUREMENT

A. Length

Concrete maintenance curbs valley gutter shall be measured per linear foot installed as measured through the center line.

B. Area

The Engineer will measure the area of square or rectangular truncated dome areas along the edge and radial truncated domes along the long chord multiplied by two.

2531.5 BASIS OF PAYMENT

The Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required as Quality Control (QC). The Owner shall be responsible for all inspections and tests required as Quality Assurance (QA).

Concrete Curb & Gutter: Payment for concrete curb and gutter for curb tapers and flat curb are incidental to the concrete pedestrian ramp.

Concrete Maintenance Curb: Payment for the concrete maintenance strip/curb shall be made at the unit bid price per lineal foot and shall be payment in full for all labor, materials, and equipment including finishing, formwork, protection, joints, reinforcement, curing compounds, and aggregate base material required beneath the proposed curb pavement, including shoulder extending beyond edge of curb pavement. Surface tolerances will be verified prior to payment.

Truncated Domes: The Contract unit prices for Truncated Domes shall be compensation in full for equipment, labor and materials required to complete the Work.

The Contractor shall designate a responsible person (ADA Compliance Supervisor) in accordance with the requirements of Division 1 (1804) Prosecution of Work. No measurement will be made of the various duties of the ADA Compliance Supervisor, and all such work shall be considered **incidental** to the Work.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2531.503	CONCRETE MAINTENANCE CURB	L F
2531.618	TRUNCATED DOMES	S F

2540 MISCELLANEOUS AMENITIES

The provisions of MnDOT 2540 are modified and/or supplemented with the following:

2540.1 DESCRIPTION

Project site amenities and furnishings. Amenities and products listed below shall not be substituted without OWNER and Engineer approval of alternate manufacturer and product line. Any request for such a substitution must be in writing and made at not less than seven (7) days prior to bid opening date. The requests must be self-explanatory with all product line, technical drawings and manufacturer information supplied for review by the OWNER and Engineer Requests for substitutions for this equipment subsequent to this date will not be considered.

2540.2 MATERIALS

The following site amenities are to be purchased and installed by the Contractor. The Contractor will be responsible for all fabrication, assembly and installation, including concrete footings, anchor bolts or other hardware required for installation.

Pickleball Net System: Douglas Sport Nets including three-inch (3") round pickleball post system (model Premier RD-36 Pickleball Posts, item #63071) with three-inch (3") corresponding ground sleeves (model GS-24RD, item #63424), pickleball net (model JTN-30, item #20105), with center net tie down anchor (item #63428), and net tie down strap (item #20600).

Pickleball Net System Local Product Rep:
Northland Recreation, LLC
10085 Bridgewater Bay
Woodbury, MN 55129
Contact: Sue Ayers
Tel: 651-815-4097
Email: sue@northlandrec.com

2540.3 CONSTRUCTION REQUIREMENTS

Provide product data and shop drawings. Colors will be selected by Owner/ LA-E at time of shop drawing review from manufacturer's list of standard colors, as applicable. Contractor to install per manufacturer's specifications and construction plans and details. CONTRACTOR shall be responsible for all labor, equipment, concrete, hardware, and miscellaneous expenses associated with fabrication and installation of the site amenities.

Provide manufacturer's standard limited warranty covering all components against failure resulting from normal use.

2540.5 BASIS OF PAYMENT

The contract unit price bid for each Contractor-supplied miscellaneous amenities per each shall be compensation in full for all equipment, materials and labor required to furnish and install the site amenities, including footings, hardware, and attachments, as applicable.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2540.602	PICKLEBALL NET SYSTEM	EACH

2557 FENCING

The provisions of MnDOT 2557 are modified and/or supplemented with the following:

2557.1 DESCRIPTION

All work for fencing shall conform to ANSI/ASTM and MnDOT standards. Chain link fencing must be obtained from a single source. Contractor must submit shop drawings indicating layout of fences for approval prior to installation. If any of the fencing materials are damaged prior to substantial completion, the Contractor must replace or repair the material at Contractor's expense. All chainlink fencing systems to be galvanized steel.

2557.2 MATERIALS

- A. 4' High 2-Rail Chainlink Fence: Includes 3" O.D. schedule 40 galv. steel end posts set in a sleeve with 12" dia. X 60" deep concrete footings, 2" O.D. line posts driven to a 48" depth, 1-5/8" rails, and all fabric, framework, tension rods, attachments, etc. for complete installation.

- B. 8' High Chainlink Mangate: Includes 4" O.D. schedule 40 galv. steel gate posts with 12" dia. X 60" deep concrete footings, 2" welded gate frame, 1-5/8" rails, industrial hinges, strongarm latch, and all fabric, framework, tension rods, attachments, etc. for complete installation.
- C. 8' High x 10' Wide Chainlink Maintenance Gate: Includes. 4.0" O.D. schedule 40 galv. steel gate posts with 18" dia. X 60" deep concrete footings, 2" welded gate frame, 1-5/8" rails, industrial hinges, strongarm double gate latch with keyless mechanical lock system, and all fabric, framework, tension rods, attachments, etc. for complete installation.
- D. 8' High 2-Rail Chainlink Fence (standard): 8' high, 2-rail chainlink fence. Includes 4" O.D. schedule 40 galv. steel end, corner, and gate posts with 12" dia. X 60" deep concrete footings, 3" O.D. schedule 40 galv. steel line posts set in 12" dia x 60" deep concrete footings, 1-5/8" upper and lower rails, and all fabric, framework, tension rods, attachments, etc. for complete installation.
- E. 8' High 2-rail Chainlink Fence (heavy duty): 8' high, 2-rail chainlink fence. Includes all 4" O.D. schedule 40 galv. posts with 18" dia. X 60" deep concrete footings with reinforcement, 1-5/8" upper and lower rails, and all fabric, framework, tension rods, attachments, etc. for complete installation.
- F. Fence Chainlink Fabric: Nine (9) gauge galvanized aluminum coated steel wire, one and three-quarter inch (1-3/4") diamond mesh and six (6) gauge galvanized steel wire, top and bottom selva ge knuckle end closed.
- G. Fence Top Protector: Shall be fence guard top rail cover, premium exterior grade UV-resistant polyethylene with ties, 0.10" wall width, teardrop shape, as supplied by Hoover Fence Company, or approved equal. Color to be selected by Owner at time of construction.
- H. Miscellaneous:
 - a. Wire ties to be 9 gauge galv. steel wire for attachment of fabric to posts and tension wires.
 - b. Rail sleeves to be 6" expansion sleeves with spring, allowing for expansion and contraction of top rail.
 - c. Post caps to be formed steel, cast malleable iron, or aluminum alloy weathertight closure cap to complete fence system. Galvanize each ferrous metal item and finish to match framing.
 - d. Brace rail ends to be pressed steel per ASTM F 626 for connection of rails and braces to terminal posts.
 - e. Truss rods and tighteners to be steel rods with minimum diameter of 5/16" capable of withstanding a tension of minimum 2,000 lbs and brade rods to be 3/8".
 - f. Tension bars to be galvanized steel and made of one continuous piece in the same height as the fence. Provide one (1) bar per end or gate post and two (2) bars per corner posts.
 - g. Fittings: All fittings to be galvanized pressed steel.

2557.3 CONSTRUCTION REQUIREMENTS

Contractor must submit shop drawings indicating layout of fences and gates, concrete footings, attachments, hinges, locks, and latches for approval prior to installation. If any of the fencing materials are damaged prior to substantial completion, the Contractor must replace or repair the material at Contractor's expense.

There shall be no gaps in any fencing that allows a 4.0 inch diameter sphere to pass.

Fence gate posts shall be embedded in concrete footings per plans and details. Posts may be set prior to pour – or sleeves may be placed in concrete that are of the proper diameter to receive the post and provide adequate space for grout. Posts noted for sleeves to have non-shrink grout applied upon

completion.

Posts shall be set plumb and shall be uniform in height per details and elevations. Posts shall be installed with a maximum variation of one eighth inch (1/8") plumb in 20 feet horizontally or one eighth inch 1/8" from plan elevations shall not be accepted and shall be cause for removal and reinstallation.

Fence fabric fasteners shall be installed to be twisted and the sharp ends shall not protrude out into the interior play space. Position bottom of fence chainlink fabric a maximum of one and a half inches (1.5") clear to the concrete maintenance strip. Fence fabric shall not be allowed to touch the concrete maintenance strip. Any fence fabric not meeting these requirements are cause for rejection.

2557.5 BASIS OF PAYMENT

The Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required as Quality Control (QC). The Owner shall be responsible for all inspections and tests required as Quality Assurance (QA).

Chainlink Fence: Payment for chainlink fence shall be made at the unit bid price per lineal foot and shall be payment in full for all labor, materials, and equipment for full installation, including all posts, railings, framework, attachments, fittings, tension rods, ties, concrete footings, and miscellaneous appurtenances.

Chainlink Fence Gates: Payment for chainlink fence gates shall be made at the unit bid price per each and shall be payment in full for all labor, materials, and equipment for full installation, including all posts, railings, framework, attachments, fittings, tension rods, ties, concrete footings, reinforcement, hinges, latches, key locks, and miscellaneous appurtenances.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2557.502	8' HIGH CHAIN LINK GATE	EACH
2557.502	8' HIGH X 10' WIDE CHAIN LINK MAINTENANCE GATE	EACH
2557.503	4' HIGH 2-RAIL CHAIN LINK FENCE	L F
2557.503	8' HIGH 2-RAIL CHAIN LINK FENCE	L F
2557.503	FENCE TOP PROTECTOR	L F

2563 TEMPORARY TRAFFIC MANAGEMENT

2563.1 DESCRIPTION

Furnish, install, maintain, and remove all traffic control devices required to provide safe movement of traffic and pedestrians through the Project at all times from commencement of the Work until project acceptance. Do not close streets or pedestrian facilities, except as authorized. The Engineer may modify the requirements for traffic control as deemed necessary.

All temporary traffic management must conform to and be installed in accordance with:

- the "Minnesota Manual on Uniform Traffic Control Devices" (MN MUTCD);
- the "Minnesota Temporary Traffic Control Field Manual" (Field Manual);
- the "Speed Limits in Work Zone Guidelines";
- the "Minnesota Flagging Handbook";
- the "MnDOT Standard Signs and Markings Manual";
- the Plan; and
- all applicable standard Specifications and Special Provisions.

Manuals listed above may be found at: <http://www.dot.state.mn.us/trafficeng/publ/index.html>.

2563.2 MATERIALS

A. Temporary Signs and Devices

Reflectorize all signs, paddles, and other traffic control devices including those used for daytime operations. Fabricate temporary rigid signs and devices with retroreflective sheeting material of the appropriate color listed on the Approved Products List (APL) for either “Sheeting for Rigid Temporary Work Zone Signs, Delineators, and Markers (Type IX and XI)” or “Sheeting for Rigid Permanent Signs, Delineators, and Markers (Type IX and XI)”. The sheeting Materials APL is located at the following link: <http://www.dot.state.mn.us/products/signing/sheeting.html>.

Inplace signs that still apply during temporary operations need no change in sign sheeting.

B. Vehicle Conspicuity Tape

The Approved Products List for “Conspicuity Vehicle Sheeting (Type VII)” is found at <http://www.dot.state.mn.us/products/signing/sheeting.html>.

C. Truck/Trailer Mounted Attenuators

The Approved Products List for “Mobile Crash Attenuators” is found at: <http://www.dot.state.mn.us/products/temporarytrafficcontrol/mobilecrashattenuators.html>.

D. Drum Sheeting

On Projects requiring drums per MnDOT Standard Plate 8000 (Channelizers – Type B), provide all drums with six inch fluorescent orange and white sheeting material with no gap between sheeting layers.

E. Crashworthy Signs, Traffic Control Devices, and Ballast

Signs and traffic control devices must meet the crash testing requirements of the AASHTO Manual for Assessing Safety Hardware 2016 (MASH-16). The Owner may require a letter of compliance stating that all signs and traffic control devices comply with MASH-16 requirements. The Letter of Compliance must include drawings of the different signs and devices along with a copy of the FHWA issued Letter of Eligibility or MnDOT MASH Crashworthy Evaluation.

See MnDOT Technical Memorandum No. 19-03-T-01 for information and timelines on the allowable use of crashworthy devices tested under NCHRP-350. <https://techmemos.dot.state.mn.us/techmemo.aspx>.

The approved ballast system for signs and devices mounted on temporary portable supports is sandbags, unless it is designed, crash tested, and approved for the specific device. Add a deicer during freezing conditions to prevent the sand from freezing. Place sandbags at the base of the sign or traffic control device. Do not use any ballast that causes a sign or traffic control device to become hazardous to motorists or workers.

2563.3 CONSTRUCTION REQUIREMENTS

Road Work Begins Notice Signs (G20-X1) shall be installed seven calendar days prior to the anticipated start of Work for all roads that will be impacted by construction longer than seven days.

A. Traffic Control Plan, Maintenance, and Inspection

Submit a proposed traffic control plan to the Engineer for acceptance, at least seven days before implementation. If Field Manual layouts are used, specify layout number(s) but do not submit the layouts from the Field Manual. Do not implement the proposed traffic control until accepted by the Engineer.

Immediately repair or replace all traffic control devices that become damaged, moved, or destroyed, and all ballasts that are damaged, destroyed, or otherwise fail to stabilize the device.

Meet the traffic control device quality standards as required in the Field Manual. Immediately replace unacceptable traffic control devices. Signs that are dirty and result in a noticeable loss of reflectivity at night are considered unacceptable and must be cleaned or replaced. Respond promptly to any call from the Engineer concerning the notification of unacceptable traffic control devices.

Provide the names, address, and phone numbers of at least two individuals responsible for placing and maintaining traffic control devices to the Engineer at the Pre-construction Conference. These individuals will be "on call" 24 hours per day, seven days per week during the times any temporary traffic control devices are in place.

Inspect all traffic control devices daily, including one nighttime inspection per week. Verify that the devices are placed in accordance with the Traffic Control Plan, these Special Provisions, and the MN MUTCD. Immediately correct discrepancies between the actual placement and the required placement. Respond immediately to any call from the Engineer concerning any request for improving or corrective traffic control devices.

B. Traffic Control Signs and Devices

The Engineer may require extra traffic control devices in addition to the traffic control devices shown on the Plan or in the Field Manual.

Roll-up signs are not allowed unless authorized by the Engineer.

Cover, modify, or remove all signs that are not consistent with traffic operations. Cover the entire sign or that part of the legend that is inappropriate. Sign covers must conform to the Typical Temporary Sign Covering Detail Sheet found in the Plan or at the following link:

<http://www.dot.state.mn.us/trafficeng/workzone/wz-templates/pdf/layout%2020A.pdf>

Maintain street identification signage at all times. Signs may be installed on temporary supports if the permanent sign Structures are affected by operations. This is necessary to maintain the 911 emergency system.

Post mount all signs that will remain in the same location for more than 30 consecutive days. This does not include portable signs which are set up and taken down at the beginning and end of each Work shift.

When the proper location of a sign is on pavement, do not core through the surface. If there is a conflict with underground utilities, attempt to move the sign while maintaining its visibility to traffic. If it is not possible to drive posts into the ground, mount signs on portable supports as approved by the Engineer.

When signs are removed, the sign posts and stub posts must also be removed from the Right-of-way. Posts left in place for future use or removal at a later date must be properly delineated with tubular markers, flags, or other delineation as approved by the Engineer at no additional cost.

All in place signs and delineators that interfere with the Contractor's normal operation may be temporarily relocated by the Contractor at the direction of the Engineer. Store salvaged signs in such a manner as to protect the sign from scratching, fading, or other harmful effects until the signs are reinstalled. After completing work at each sign location, or at the direction of the Engineer, replace the signs as near to their original location as possible or to a location designated by the Engineer. Reinstall sign Structures according to the Type C & D Sign Structural Details Sheet located at the following link:

<http://www.dot.state.mn.us/trafficeng/signing/plansheets/groundmounted.pdf>

Signs and structures damaged by the Contractor shall be replaced at the Contractor's Expense.

C. Traffic Safety

Do not suspend material, equipment, tools or personnel over lanes or pedestrian facilities open to traffic.

Protect traffic and pedestrians from excavations, drop-offs, falling objects, splatter or other potential construction hazards.

Do not store Materials or Equipment in the Work zone clear zone unless approved by the Engineer. If Materials or Equipment must be stored within the Work zone clear zone, protect with temporary barrier. If the Engineer agrees that temporary barrier is not practical, delineate with Type B channelizers.

Do not park vehicles or construction Equipment in the clear zone or any location that obstructs traffic control devices. Workers are not allowed to park their private vehicles within the Project limits unless approved by the Engineer.

D. High Visibility Apparel

During night work or low light conditions, all workers must wear high visibility Class E long pants and retro-reflective headgear in addition to the ANSI Class 2 or 3 vest, shirt, or jacket.

All high visibility apparel must be worn in the manner for which it was designed. All apparel worn on the torso must be closed in the front to provide 360-degree visibility. A worker's high visibility apparel must be removed from service and replaced if it becomes faded, worn, torn, dirty, or defaced, reducing the conspicuity of the apparel.

E. Night Work

Night work is not permitted on this project without prior approval of the Engineer.

F. Vehicle Warning Light Specification

All vehicles and Equipment operating in the Right-of-way must have operable warning lights that are amber in color and meet the appropriate SAE specification. The SAE specification requirements are as follows:

- Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles – SAE Specification J845.
- Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles – SAE Specification J595.

Details on SAE Specification can be found at: <http://www.dot.state.mn.us/const/wzs/lighting.html>.

G. Lane Closure Requirements

Temporary lane closures or other traffic restrictions by the Contractor, during work hours and consistent with any time restrictions, will be permitted only during those hours and at those locations approved by the Engineer. Request temporary lane closures at least two Business Days prior to the closure.

Temporary lane closures will be permitted in accordance with the hours and number of lanes allowed as indicated in the Metro Lane Closure Manual; <http://www.dot.state.mn.us/metro/trafficeng/laneclosure/index.html>. Lane closures that cross segments as defined in the Manual shall follow the more restrictive limits.

Place traffic control devices in any temporary lane closure that is adjacent to traffic and extends beyond 1000 feet as shown on Layout 61 of the Field Manual. When the lane closure is in place three days or longer, use only Type III barricades.

Use Drum Channelizers in all lane closure tapers and in any shifts in traffic alignment.

Maintain a minimum of two miles between temporary lane closures.

Temporary lane closures will not be permitted during inclement weather, nor any other time when, in the opinion of the Engineer, the lane closure will be a greater than normal hazard to traffic.

H. Truck/Trailer Mounted Attenuators (TMAs) for Mobile/Short Duration Operations

Truck/Trailer Mounted Attenuators (TMAs) must be used on all shadow and protection vehicles operating totally or partially in a traffic lane if any temporary traffic control zone is defined as “Mobile/Short Duration” by the Field Manual. All references to “should” in the Field Manual in regards to TMA use for Mobile/Short Duration layouts are hereby changed to “shall.” This requirement applies to all operations utilizing Field Manual layouts 9, 12, 13, 36, 41, 49, 50, 51, 54, 55, 63, 76, 77, 78, and 79. Providing TMAs for “Mobile/Short Duration” work zones is incidental.

I. Flagging Operations

Flaggers must attend a training session taught by a MnDOT-Qualified Flagger Trainer. The trainer must have completed a “MnDOT Flagger Train the Trainer Session” within the last five years and be on file as a qualified Trainer with MnDOT. Provide all flaggers with the MnDOT Flagging Handbook. Flaggers must be in possession of the handbook while flagging on the Project. Furnish the signed “Checklist for Flagger Training” or “Flagger Qualification Card” to the Engineer any time a new flagger reports to work on the Project. The “Checklist for Flagger Training” and other forms and information is found at:

<http://www.dot.state.mn.us/const/wzs/flagger.html>.

All signs associated with the flagging operation must be removed or covered when flagging operations are not present.

Coordinate the flagging operations in a manner that causes minimum delay to the traveling public.

J. Maintenance and Staging of Traffic Control

Pedestrian traffic must be maintained and guided through, or around, the Project at all times.

2563.5 BASIS OF PAYMENT

Temporary traffic control shall be *incidental* to the Work without any direct compensation being made.

2564 TRAFFIC SIGNS AND DEVICES

The provisions of MnDOT 2564 are modified and/or supplemented with the following:

2564.1 DESCRIPTION

Salvaged existing sign panels.

Van Accessible Sign: Shall be “Van Accessible” panel R7-8P with green lettering and white background, and meeting MUTCD requirements.

2564.3 CONSTRUCTION REQUIREMENTS

A. General

Unless designated otherwise, or directed by the Engineer, all existing sign panels removed shall be salvaged and delivered to the Owner.

2564.5 BASIS OF PAYMENT

The Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required as Quality Control (QC). The Owner shall be responsible for all inspections and tests required as Quality Assurance (QA).

Install Sign: Payment for shall be made at the unit bid price per Each and shall be payment in full for all labor, materials, and equipment for full installation of the salvaged sign panel and the new sign panel on a new post, including all mounting hardware necessary for sign panel attachment.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2564.502	INSTALL SIGN	EACH

2572 PROTECTION AND RESTORATION OF VEGETATION

The provisions of MnDOT 2572 are modified and/or supplemented with the following:

2572.3 CONSTRUCTION REQUIREMENTS

A. Protecting and Preserving

Any trees or shrubs not designated for removal shall be fully protected by the Contractor during construction. Any trees or shrubs removed or damaged by the Contractor, which were not designated for removal, will be replaced at the Contractor's expense.

2572.5 BASIS OF PAYMENT

All work under this section shall be considered incidental to the contract with no additional compensation allowed unless provided for in the Bid Form.

2573 STORM WATER MANAGEMENT

The provisions of MnDOT 2573 are modified and/or supplemented with the following:

2573.1 DESCRIPTION

The Contractor will be required to comply with NPDES General Storm Water Permit regulations to prevent erodible materials from leaving the site, even if such permit is not required due to the project scope, size or location. A copy of the permit is available at <https://www.pca.state.mn.us/water/construction-stormwater>

2573.2 MATERIALS

BMP devices shall be a MnDOT approved product. The Contractor shall verify with the Engineer prior to installation that the proposed BMP device is suitable for prevention of soil and sediment erosion in the field.

Construction Exit / Mat:

2573.3 CONSTRUCTION REQUIREMENTS

A.5 Temporary Sediment Control Measures

All manholes shall be protected from surface water drainage. All storm sewer systems shall be protected from sedimentation, along with downstream ponding areas. All catch basins shall be protected with approved means of protection, immediately following construction.

M. Maintenance

The Contractor shall be responsible for the maintenance of all-temporary erosion and sediment control measures. These measures shall be repaired, replaced, or supplemented as set forth in the NPDES General Storm Water Permit.

If the Contractor fails to provide maintenance of the temporary erosion and sediment control measures as set forth in the NPDES permit requirements, the Engineer shall have the authority under the terms of this contract to hire the work done and deduct the costs incurred from the amounts due to the Contractor.

The Contractor shall be assessed liquidated damages for each specified area for which the Contractor has not installed or repaired erosion and sediment control devices (including sod) within 48 hours after receiving written notice.

2573.5 BASIS OF PAYMENT

Erosion Control Supervisor is considered *incidental* to the contract.

Payment for all items shall be at the unit prices bid and shall be compensation in full for labor, equipment, materials, cleaning/maintenance, disposal of debris, removal upon project completion, and restoration of disturbed areas as necessary.

Payment shall be limited to 50% of the actual quantities installed until 50% of the Contract Work including any Change Orders has been completed. At that point in time, payment shall be increased but limited to 80% of the actual quantities installed until all temporary erosion control measures have been removed from the project site and the site has been restored.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2573.501	CONSTRUCTION EXIT / MAT	L S
2573.503	SILT FENCE, TYPE MS OR BIOROLL	L F

2574 SOIL PREPARATION

The provisions of MnDOT 2574 are modified and/or supplemented with the following:

2574.3 CONSTRUCTION REQUIREMENTS

C. Topsoil

The topsoil shall be free from roots, stick, chunks of miscellaneous debris, rocks larger than 1 in, and garbage. Topsoil placement shall be approved by the Engineer prior to installation.

2574.4 METHOD OF MEASUREMENT

E. Topsoil Borrow

Topsoil borrow shall be imported only at the direction of the Engineer. Load tickets will be required for payment.

2574.5 BASIS OF PAYMENT

Placement and finished grading of salvaged topsoil is considered *incidental* under Excavation – Common.

2575 ESTABLISHING TURF AND CONTROLLING EROSION

The provisions of MnDOT 2575 are modified and/or supplemented with the following:

2575.1 DESCRIPTION

All disturbed areas within the project shall be either seeded or sodded to an equal or better condition to that which was in place prior to construction and as directed by the Engineer. All exposed areas of the site shall receive seed and mulch, sod or rolled erosion prevention product within two weeks after final grade on slopes flatter than 1(V):3(H) and one week on slopes steeper than 1(V):3(H). Restoration may include areas outside of the construction limits as determined by the Engineer.

If bituminous base is placed, the final turf establishment shall be installed within two weeks of bituminous placement. Failure to install final turf establishment within two weeks of the bituminous base being placed will result in penalty of \$100 per calendar day to be deducted from any monies due or coming due to the Contractor.

All areas adjacent to the roadway disturbed by construction shall be excavated to a depth as specified to allow for placement of topsoil. The Contractor shall import topsoil as necessary to provide for a minimum depth of topsoil specified. All rock, Class 5, debris, and excess concrete shall be removed from the area behind the curb to the satisfaction of the Engineer prior to the placement of topsoil. The Contractor shall cut a clean, square edge and install sod or seed in areas as directed by the Engineer.

Where boulevard sodding is identified by the plans, sod shall be placed in the boulevard area adjacent to curb and gutter installation/replacement. A minimum of 4 ft and maximum of 6 ft of sod shall be placed along curb unless the extended area is directed by the Engineer.

2575.2 MATERIALS

Turf Seed Mixture (as supplied by Twin City Seed or approved equal):

25% Ashland Kentucky Bluegrass
25% Mazama Kentucky Bluegrass
30% Tarnation GT Turf Type Tall Fescue
20% Intrigue Chewings Fescue

Seeding Rate: 400 lbs/acre

Rolled Erosion Prevention Products

The Machine Direction (MD) Tensile Strength and TD Tensile Strength requirements of MnDOT Table 3885.2-1 and Table 3885.2-2 are modified as follows:

Machine Direction (MD) Tensile Strength, minimum (pounds per foot):

Category 10	Category 20	Category 30	Category 25	Category 35	Category 45
70	160	160	160	160	160

TD Tensile Strength, minimum (pounds per foot):

Category 10	Category 20	Category 30	Category 25	Category 35	Category 45
50	110	150	110	110	110

2575.3 CONSTRUCTION REQUIREMENTS

A. General

Permanent turf establishment shall commence within seven days after finish grading has been completed, unless the NPDES permit requirements specify a more stringent timeline.

Delete MnDOT 2575.3.A.4 and replace with the following:

A.4 Substitutions

The Engineer may allow substitutions for the following Materials: plastic, geotextile, mulch, Rolled erosion prevention, and hydraulic erosion control products. The Engineer may authorize requested substitutions for specific locations shown in the Plan. Provide substitutions equal to or better than initially specified Material.

K.3 Seed

The Contractor shall be responsible for maintaining seeded areas until accepted by the Owner and the requirements of MnDOT 2575.3.L and NPDES are met with a minimum of 70 percent cover. The Contractor shall be solely responsible for replacement and/or repair of any seeded areas that may wash out, erode, or fail to grow prior to acceptance with no additional compensation therefore. The Contractor will be responsible for maintenance, repair and replacement of any erosion control blanket that is damaged or lost during turf establishment and/or erosion, at no additional cost to the Owner. Contractor will be required to remove and repair blanket areas once the turf is showing sufficient growth in order to mow.

Maintenance of the seeded areas shall be the Contractor's responsibility throughout a one-year maintenance period or until final acceptance by the Engineer. Maintenance shall include watering, weed control, fertilization, and re-seeding, until final acceptance. Final acceptance of the seeded areas shall be in accordance with these specifications and at the discretion of the Owner.

Add the following new paragraph to MnDOT 2575.3:

R. Water (Turf Establishment)

Watering will become the responsibility of the owner only after the maintenance period has expired AND final acceptance of the turf has been obtained.

R.1 Seeded Areas

For turf seeded areas, the Engineer will accept the seeded areas after the perennial seed germinates, vegetation is at least 4 inches in height, and a minimum 70 percent uniform cover is achieved.

2575.5 BASIS OF PAYMENT

Seed with Blanket: Payment shall be made at the unit bid price per acre for seed and rolled erosion prevention blanket and shall be payment in full for all labor, materials, and equipment necessary to perform the work as specified including finished grade preparation, fertilizer, seeding operations, watering, and maintenance and will include up to 75 percent payment upon completion of seeding operations, as approved, and remaining payments made following final acceptance of seeded areas meeting a minimum 70% cover as approved by the Owner.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2575.505	SEED W/BLANKET	ACRE

2582 PAVEMENT MARKINGS

The provisions of MnDOT 2582 are modified and/or supplemented with the following:

2582.1 DESCRIPTION

The Contractor shall be responsible for the layout of all temporary and permanent pavement markings (striping). The Owner will check and approve layout before application of pavement markings is allowed.

2582.2 MATERIALS

For pavement marking installations between the dates of October 15 and April 1, provide and use pavement marking materials listed on the Late Season pavement marking Materials Approved Products List.

Parking Lot line striping: shall be Sherwin Williams HOTLINE acrylic waterborne paint, or approved equal.

Sports Court 100% Acrylic System with schedule of materials as follows:

- a. Finish Coat: 100% acrylic emulsion formulated with acrylic resins, mineral fillers, color fast pigments and manufacture's approved silica sand. Finish coat shall be fully pigmented. Finished court colors to be as indicated on plans and details or as selected by Owner at time of construction.
- b. Resurfacer: 100% acrylic resurfacer.
- c. Patch Mix: Acrylic court patch binder
- d. Line Paint: Court lines shall be white except where noted otherwise on plans and details
- e. Control Joint Caulk: Resilient outdoor latex-based caulk as recommended by color coat supplier.

The acrylic surfacing material shall be manufactured by:

1. Novacrylic Sports
2. California Products
3. Sport Master Color Plus System
4. Laykold
5. Advantage Sport Coatings

2582.3 CONSTRUCTION REQUIREMENTS

B. Application

The Engineer's involvement in the application of the material shall be limited to field consultation and inspection. The Contractor will place necessary 'spotting' at appropriate points to provide horizontal control for striping and to determine necessary starting and cutoff points. Longitudinal joints, pavement edges and existing marking may serve as horizontal control when so directed.

Parking Lot Preparation:

Existing bituminous surfaces shall have existing pavement markings removed prior to application of new pavement markings. Surfaces shall be cleaned and free of dirt, grease, or other foreign matter.

Court Pavement Surface Preparation:

New bituminous surfaces shall be allowed to cure for a minimum of 30 days prior to application of acrylic surfacing and line striping. Surfaces shall be cleaned and free of dirt, grease, or other foreign matter. The Contractor shall be required to powerwash the bituminous court surface prior to application of acrylic surfacing.

Surfaces shall be dry, as well as clean, since moisture on the surface on hot days can turn to steam or vapor. If this is trapped under an application of material, blisters may occur.

Prior to surfacing, the court shall be flooded with clean potable water and allowed to drain for one (1) hour. If there is any remaining water that is deeper than one sixteenth (1/16) of an inch, that area shall be patched with acrylic court patch binder and leveled in accordance with manufacturer's recommendations. **Flooding shall be redone until the surface is sufficiently toleranced as determined by the Engineer.** After all of the acrylic court patch binder has cured, a minimum of two (2) coats of resurfacer (minimum 0.06 gallons per square yard per coat) shall be applied at 90 degrees to each other.

Finish Coat:

Surfaces shall be cleaned and free of dirt, grease, or other foreign matter.

Surface shall be dry, as well as clean, since moisture on the surface on hot days can turn to steam or vapor. If this is trapped under an application of material, blisters may occur.

No work shall be performed when rain is imminent.

The finishing coating materials shall be installed in multiple applications, at least two (2) coats, as per manufacturer's recommendation, so as to form true, uniform texture and color. The base coat shall include sand texture. Contractor shall apply additional coats over entire surface until uniformity is achieved. Application of the work shall be performed by skilled workers by a manufacturer approved installer. No work shall be performed when rain is imminent. Air temperatures shall be 50 degrees Fahrenheit and rising during installation. Application rates shall be as per manufacturer's recommendation (minimum of 0.06 gallons per square yard per coat for the first two (2) coats).

The finish line striping shall not be applied until the underlying surface is thoroughly dried as required by sport coatings product manufacturer. Lines shall be textured using same type and pattern of manufactured silica sand as utilized for color coating. Layout court lines as indicated on the drawings. Tape for masking shall be primed or sealed prior to painting lines to prevent the paint from bleeding under the tape. Lines shall be applied without variations in width or alignment.

Materials shall have a minimum one (1) year limited written warranty supplied by the manufacturer.

2582.5 BASIS OF PAYMENT

Layout is incidental with no additional compensation allowed therefore.

Parking Lot Striping & Text: Payment shall be compensation in full for all materials, labor, and equipment necessary to complete the parking lot pavement striping in accordance with plans and details, including ADA symbol, access aisle striping and NO PARKING text, in accordance with MMUTCD.

Acrylic Color Court and Striping: Payment shall be compensation in full for all materials, labor, and equipment necessary to complete the installation of multiple colors of acrylic surfacing and line striping, in accordance with plans and details.

Payment will be made based on the following schedule:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
2582.501	PARKING LOT STRIPING & TEXT	L S
2582.504	ACRYLIC COLOR COAT & STRIPING	S Y

APPENDIX A

CITY OF NORTH BRANCH GENERAL SPECIFICATIONS AND STANDARD DETAIL PLATES FOR STREET AND UTILITY CONSTRUCTION DECEMBER 2022



GENERAL SPECIFICATIONS AND STANDARD DETAIL PLATES FOR STREET AND UTILITY CONSTRUCTION

DECEMBER 2022

City of North Branch | PO Box 910 | North Branch, MN 55056

City of North Branch

**General Specifications and
Standard Detail Plates
for
Street and Utility Construction**

December 2022

**City of North Branch
6408 Elm Street, PO Box 910
North Branch, Minnesota 55056
Phone: 651.674.8113
Fax: 651.674.8262**

CERTIFICATION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.



Jeff Pearson, PE

Date: December 2022

Lic. No. 45087

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This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

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1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 *Terminology*

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. abnormal weather conditions;
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

- A. *Limitation on Use of Site and Other Areas:*
 - 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

- c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
- 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
- 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 - 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 - 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after

becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
- d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during

or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 Cost of the Work

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will

include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 - 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 - 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
 - 1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 - 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount

remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

- A. *Application for Payment:*
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses,

and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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SUPPLEMENTARY GENERAL CONDITIONS

S.G.C.0 INTRODUCTION

These Supplementary General Conditions amend or supplement the Standard General Conditions of the Construction Contract (C-700, 2013 Ed.) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended, or supplemented, remain in full force and effect.

S.G.C.1.01 DEFINED TERMS

The terms used in these Supplementary Conditions, which are defined in the Standard General Conditions of the Construction Contract (C-700, 2013 Edition), have the meanings assigned to them in the General Conditions.

Owner shall mean the City of North Branch, 6408 Elm Street, North Branch, MN 55056.

Engineer shall mean the City Engineer of the City of North Branch or the Engineer representing the Owner on the project.

Department shall mean the City Public Works.

Contractor shall mean the individual or entity with whom the Owner has entered into the Agreement.

Observer shall mean the individual or entity by whom the Owner and Engineer is represented in the observation and construction of the project.

S.G.C.2.01 DELIVERY OF BONDS AND EVIDENCE OF INSURANCE

Delete paragraph 2.01B and insert the following:

Before any work at the site is started, Contractor shall deliver to Owner, with a copy to Engineer, certificates (and other evidence of insurance requested by Owner) that Contractor is required to purchase and maintain in accordance with Article 6.

S.G.C.2.03 BEFORE STARTING CONSTRUCTION

Paragraph 2.03.A of the General Conditions shall be deleted in its entirety and replaced by the following paragraphs:

- A. Within ten (10) days after the Effective Date of the Agreement (unless otherwise specified in the General Conditions) and before the preconstruction conference, Contractor shall submit to Engineer the following for its timely review.
 1. A Progress Schedule indicating the order in which the Contractor proposes to perform the various stages of the Work, the dates on which the Contractor will start the various features thereof, and the contemplated dates for completing the same. The lack of a schedule shall be cause for withholding progress payments and could result in a work stoppage. If the work is stopped, no credit for working days or payment of down time will be provided.

The Contractor shall not deviate from this Schedule after it is approved without the written permission of the Engineer. The Progress Schedule will be acceptable to the Engineer if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on the Engineer responsibility for adherence to the Progress Schedule nor interfere with or relieve the Contractor from the Contractor's full responsibility therefore.

2. The Contractor shall present to the Engineer six (6) copies of detailed, dimensioned manufacturer's drawings of all materials, apparatus and machinery, and for such fittings and devices as the Engineer may direct. Shop drawings will not be accepted for review by the Engineer until after they have been checked and approved by the Contractor as evidenced by his approval stamp and signature. The Engineer will keep two copies of each set and return the rest to the Contractor with the Engineer's approval or notations. In case of lack of approval, the Contractor shall submit new drawings, corrected as required by the Engineer. All such drawings shall be submitted to the Engineer at least 14 days prior to manufacture of the material product for consideration. Submittals shall be required for, but not limited to: Manhole Structures, Castings, Sewer Pipe, Water Main, Lift Stations, and Waterworks Brass.
3. The Engineer's approval of such drawings and Progress Schedules shall not relieve the Contractor from responsibility for deviations from drawings or specifications unless the Contractor has, in writing, called the Engineer's attention to such deviations at the time of submission, nor shall it relieve the Contractor from the responsibility for errors of any sort in shop drawings or Progress Schedules. No Work shall be started until the drawings and Progress Schedules have been approved by the Engineer.

S.G.C.2.04 PRECONSTRUCTION CONFERENCE; DESIGNATION OF AUTHORIZED REPRESENTATIVES

Add a new paragraph immediately after 2.04.A of the General Conditions, which is to read as follows:

- B. The preconstruction meeting will be arranged by the Engineer. Representatives of the Engineer, Owner, Contractor, utility companies and other parties involved in the project shall be present at this meeting. The Contractor's project superintendent and foreman will be present at this meeting. The Contractor's project superintendent shall be familiar with all phases of the work to be executed and shall oversee the work during its progress. The project superintendent shall represent the Contractor in the Contractor's absence, and communications and directions given to the project superintendent shall be as binding as if given to the Contractor. The Contractor's list of subcontractors and suppliers shall be submitted and reviewed along with any other information necessary for the orderly execution of the work at the preconstruction conference.

S.G.C.2.05 INITIAL ACCEPTANCE OF SCHEDULES

Paragraph 2.05 of the General Conditions shall be deleted in its entirety.

S.G.C.3.02 REFERENCE STANDARDS

Add new paragraphs immediately after 3.02.A.2 of the General Conditions, which are to read as follows:

3. The work shall be performed in accordance with:
 - a. The current edition of the Minnesota Department of Transportation Standard Specifications for Construction (MnDOT Specifications), and any supplements or amendments thereto issued prior to the date of these Contract Documents, including the current MnDOT 2360 Plant Mixed Asphalt Pavement Specification;
 - b. The City of North Branch General Specifications and Standard Detail Plates dated September 2021;
 - c. The 2013 Edition of the Standard Utilities Specifications for Water Main and Service Line Installation and Sanitary Sewer and Storm Sewer Installation as published by the City Engineers Association of Minnesota (CEAM), St. Paul, Minnesota, and Standard Detail Plates; and

- d. The Project Manual, which contain individual project Bidding Requirements, Proposal Form, Conditions of the Contract, Contract Forms, Specifications, and any other project-specific information in the form of appendices.
- e. The current edition of the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD), including the current edition of the Field Manual for Temporary Traffic Control Zone Layouts.

The provisions for construction shall comply with the following order of precedence ("1" being the highest precedence, "4" being the lowest):

- 1) Individual Project Plan
- 2) Individual Project Manual
- 3) City of North Branch General Specifications and Standard Detail Plates
- 4) MnDOT Standard Specifications for Construction

Any conflicting requirements or language shall follow that stated in the highest precedence document of those listed above, unless directed in writing by the Engineer.

- 4. Coordination of Plans and Specifications shall be in accordance with the provisions of MnDOT Specification 1504, as modified by the following definitions:
 - a. Standard Specification: Standard Utilities Specifications of the City Engineers Association and all amendments thereto; MnDOT Standard Specifications for Construction and all amendments thereto; and the other specifications of ASTM, ANSI, AWWA, etc., as referenced and as published on the date of the bid advertisement.
 - b. Supplemental Specifications: Refer in precedent order to the Supplementary Conditions and the General Conditions as contained in these Contract Documents.
 - c. Work under these Contract Documents shall be governed by all applicable federal, state, and local laws, regulations, codes and ordinances, and the Contract Documents, which are as follows:

- General Conditions
 - Supplementary Conditions
 - General Requirements
 - Special Provisions
 - Addenda
 - Proposal
 - Contract Documents
 - Technical Specifications

Should the Contract Documents conflict with any of the regulations and standards mentioned in preceding paragraphs of these Supplementary Conditions, the regulations and standards shall take precedence. This shall not, however, be construed to relieve the Contractor from complying with the requirements of the Contract Documents, which are in excess of, but not contrary to, the regulations and standards.

S.G.C.4.03 REFERENCE POINTS

Add new paragraphs immediately after 4.03.A of the General Conditions, which are to read as follows:

- B. All property corner monuments and section corners known by the Engineer will be marked prior to construction. Any such monuments required to be removed by the proposed construction will be replaced at the Owner's expense. Any such monuments outside the proposed construction limits shall be protected by the Contractor. Should any monuments outside the proposed construction limits be disturbed, a Licensed Land Surveyor will reset them at the Contractor's expense.
- C. The Engineer will provide horizontal and vertical control construction stakes to allow the Contractor to construct the utilities as follows:
 - 1. One set of offset stakes placed at twenty-five (25) foot intervals for the first one hundred (100) feet out of each manhole, then one hundred (100) foot intervals thereafter for gravity sewer. A cut sheet indicating horizontal and vertical distances from the stake to the pipe invert will be provided along with hub elevations and benchmarks.
 - 2. One set of offset stakes placed at fifty (50) foot intervals, with a cut sheet including changes in direction and appurtenances for water main construction. The cut sheet should also include hub elevations and benchmarks.
 - 3. One set of hubs at fifty foot (50') intervals on street centerline to re-establish sub-grade.
 - 4. One set of offset cut and fill stakes placed at fifty-foot (50') intervals on each side of the street for fine grading and curb and gutter. A cut sheet showing hub elevations and benchmarks will be provided.
- D. The Contractor shall give the Engineer forty-eight (48) hour notice of need for the establishment of line and grade so that the Engineer may have time to provide them. No additional compensation shall be allowed by the Contractor for any claims of crews being held up because of lack of line and grade stakes. After lines and grades for any part of the work have been given by the Engineer, the Contractor will be held responsible for such lines and grades. It shall be the Contractor's total responsibility to accurately construct the streets and utilities in accordance with the construction stakes. All stakes or other marks given shall be protected and preserved by the Contractor until the Contractor is authorized to remove them. The Contractor shall be billed the cost of any re-staking due to their negligence. The Contractor shall, at their own expense, correct any mistakes that may be caused by the unauthorized disturbance or removal of line and grade stakes. The Engineer may require that work be suspended when, for any reason, such marks cannot be properly followed.
- E. The Contractor shall supply hubs and lath to the project site. The Contractor shall furnish and deliver to the construction site one-inch by two-inch by twelve-inch (1"x2"x12") pointed hubs and thirty-six inch (36") and forty-eight inch (48") pointed lath, prior to the start of the project in sufficient numbers as directed by the Engineer. Furnishing and delivering the hubs and lath shall be considered incidental to the project with no additional compensation allowed therefore.

S.G.C.4.04 PROGRESS SCHEDULE

Paragraph 4.04.A of the General Conditions shall be deleted in its entirety.

S.G.C.5.01 AVAILABILITY OF LANDS

Add the following to paragraph 5.01.A of the General Conditions, which is to read as follows:

If the Contractor believes that there has been delay in Owner's furnishing these permits, lands, rights-of-way or easements, Contractor's sole remedy shall be an extension of contract time, for which the Contractor may make a claim therefore as provided in Article 10.05.

S.G.C.5.03 SUBSURFACE AND PHYSICAL CONDITIONS

Add a new paragraph immediately after 5.03.B of the General Conditions, which is to read as follows:

- C. Notwithstanding Paragraphs 5.03.A and 5.03.B, under no circumstances may the Contractor rely upon the accuracy of the technical data concerning the amounts, elevations, or locations of subsurface groundwater.

S.G.C.5.04 DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS

Amend paragraph 5.04.d.2.a. by inserting in the second line of this paragraph immediately after the word "conditions" the following:

or reasonably should have known thereof.

S.G.C.5.06.I HAZARDOUS ENVIRONMENTAL CONDITION AT SITE

Paragraph 5.06.I of the General Conditions shall be deleted in its entirety.

S.G.C.6.01.B PERFORMANCE, PAYMENT, AND OTHER BONDS

The first sentence of this section is changed to read as follows:

All bonds shall be in a form acceptable to Owner and shall fulfill statutory requirements.

S.G.C.6.03 CONTRACTOR'S INSURANCE

Add the following immediately after paragraph 6.03.B:

- C. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide the following coverages for not less than the following amounts or greater where required by laws and regulations:

1. Worker's Compensation

(1) State	Statutory
(2) Applicable Federal (e.g. Longshoreman's):	Statutory
(3) Employer's Liability:	\$2,000,000

2. Contractor's Liability Insurance including completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

(1)	General Aggregate (Except Products - Completed Operations)	\$2,000,000
(2)	Products - Completed (Operations Aggregate)	\$2,000,000
(3)	Personal and Advertising Injury (Per Person/Organization)	\$2,000,000
(4)	Each Occurrence (Bodily Injury and Property Damage)	\$2,000,000
(5)	Property Damage Liability Insurance will provide explosion, collapse and underground coverages where applicable.	\$2,000,000
(6)	Excess Liability	
	General Aggregate	\$2,000,000
	Each Occurrence	\$2,000,000

3. Automobile Liability:

- (1) Bodily Injury:

\$2,000,000	Each Person
\$2,000,000	Each Accident

Property Damage:

\$2,000,000	Each Accident
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or

- (2) Combined Single Limit (Bodily Injury and Property Damage)

\$2,000,000	Each Accident
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The Owner and WSB & Associates, Inc. shall be named as additional insured on the insurance certificate.

The Contractor shall be responsible to meet all insurance requirements set by the Railroad for any work on or under railroad right-of-way.

S.G.C.6.04 OWNER'S LIABILITY INSURANCE

Paragraph 6.04A of the General Conditions shall be deleted in its entirety.

S.G.C.6.05 PROPERTY INSURANCE

Delete paragraph 6.05 in its entirety and insert the following:

Builder's Risk Insurance: Before commencement of the Work, the Contractor shall provide Builder's Risk Insurance on a multiple peril form in the full amount of the total construction and material contract. Such insurance shall contain an appropriate rider to include as Additional Named Insureds, the Owner, the Engineer and his consultants, and each of their officers, employees and agents, all subcontractors, the equipment contractors and all of their subcontractors on the construction premises. Such insurance may have a deductible clause but the deductible amount shall be borne by the Contractor and shall not exceed \$1,000.00.

The Builder's Risk Insurance required herein shall apply to projects involving construction of structures and building only. The requirements of this section shall be waived on projects involving only underground utilities, grading, street improvements and similar construction work, but any damage or loss to property shall be the sole responsibility of the Contractor until final acceptance of the Work.

S.G.C.6.06 WAIVER OF RIGHTS

Paragraph 6.06 of the General Conditions shall be deleted in its entirety.

S.G.C.7.02 LABOR; WORKING HOURS

Add two new sentences immediately after the end of 7.02.B of the General Conditions to read as follows:

Regular working hours shall be restricted to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. Expansion of regular working hours, including Sunday's and Federal Holidays, require Engineer approval.

S.G.C.7.06 CONCERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS

At the end of the paragraph 7.06.O.2 add the following:

In accordance with Minnesota Statute 471.425, the Contractor shall pay any subcontractor within ten days of the Contractor's receipt of payment from the municipality.

S.G.C.7.10 LAWS AND REGULATIONS

Add Paragraph D: DATA PRACTICES ACT

The Contractor must comply with the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13, as it applies to (1) all data provided by the Owner pursuant to this Agreement, and (2) all data, created, collected, received, stored, used, maintained, or disseminated by the Contractor pursuant to this Agreement. The Contractor is subject to all the provisions of the Minnesota Government Data Practices Act, including but not limited to the civil remedies of Minnesota Statutes Section 13.08, as if it were a government entity. In the event the Contractor receives a request to release data, the Contractor must immediately notify the Owner. The Owner will give the Contractor instructions concerning the release of the data to the requesting party before the data is released. Contractor agrees to defend, indemnify, and hold the Owner, its officials, officers, agents, employees, and volunteers harmless from any claims resulting from Contractor's officers', agents', owners', partners', employees', volunteers', assignees' or subcontractors' unlawful disclosure and/or use of protected data. The terms of this paragraph shall survive the cancellation or termination of this Agreement.

S.G.C.7.12 SAFETY AND PRECAUTION

Add a new paragraph immediately after 7.12.G of the General Conditions, which is to read as follows:

- H. The Contractor shall provide all necessary temporary barricades, fences and other protection as required for the proper execution of the work and for the protection of his employees, employees of the Owner, other construction personnel, and the general public according to all Federal, State, and Local regulations. This may include increased signing as necessary. The Contractor may need to furnish, erect, and maintain lights to provide a safe work environment according to all state and federal codes. All utility trenches shall be backfilled at the end of each working day and driveway access provided to individual residences to the satisfaction of the Engineer. The Contractor shall immediately call "911" if a gas utility line is struck or damaged.

S.G.C.7.18 INDEMNIFICATION

Add the following as subparagraph 7.18.D of the General Conditions to read as follows:

- 4. Provided however, if the claim, damage, loss or expense referred to in Paragraph 7.18A results from failure of the Engineer to discover a condition or object which is underground or otherwise not reasonably observable by the Engineer, and if said failure to discover is apparent to the Contractor in that the said condition or object is omitted from the Engineer's maps, drawings, opinions, reports, surveys, change orders, designs or specifications, then the Contractor shall be liable for indemnification of Engineer under Paragraph 7.18 for damage resulting from said failure to discover unless Contractor shall have notified Engineer of the existence and location of such condition or object prior to the occurrence of such damage and in sufficient time for Engineer to have made provisions therefore. Further, in the event neither Engineer nor Contractor discover such condition or object, Contractor shall bear the burden of indemnification under Paragraph 7.18.

S.G.C.8.01 OTHER WORK

Add the following to 8.01.C of the General Conditions to read as follows:

The Contractor shall cooperate with all parties to facilitate the prompt completion of all contracts.

Add the following immediately after 8.01.D of the General Conditions, which is to read as follows:

- E. The Contractor is hereby advised that the following work may be performed on the site by others during the contract time.
 - 1. The individual lot owners or their agents may be site grading and/or constructing buildings on the lots adjacent to the proposed streets.
 - 2. Private utility companies may be installing and/or relocating underground facilities on or adjacent to the project.
- F. If Owner performs work for the Contractor, the Contractor must pay Owner for such work with no deduction in Contract amount.

S.G.C.9.11 EVIDENCE OF FINANCIAL ARRANGEMENTS

Paragraph 9.11 of the General Conditions shall be deleted in its entirety.

S.G.C.10.02 VISITS TO SITE

Add a new paragraph immediately after 10.02.B of the General Conditions, which is to read as follows:

- C. Throughout the construction phase, regular weekly meetings will be held by the Engineer on site to review progress and to discuss items necessary for an orderly completion of the project. The weekly construction meetings shall include the Owner, Engineer and Contractor. The Contractor's representative must be able to make decisions for the Contractor pertaining to the project. All project conflicts shall be brought to these meetings, including requests for additional payment. Meeting minutes will be provided to all participants as a record of the meeting.

S.G.C.10.08 LIMITATION ON ENGINEER'S AUTHORITY AND RESPONSIBILITIES

Add the following at the end of the first sentence of paragraph 10.08A:

Insofar as the subject matter of any pertinent claim, dispute, or other matter falls within the realm of the technical expertise of Engineer, Engineer shall not render any decision on any claims, disputes, or other matters the subject matter of which, at Engineer's sole discretion, requires legal, rather than technical interpretation.

S.G.C.11.04 CHANGE OF CONTRACT PRICE

Add the following paragraphs to 11.04.d of the General Conditions to read as follows:

Except as specifically authorized in writing by the Engineer at the time additional work is done beyond the original scope of the Contract Documents, the Contractor shall make no claims for additional compensation. The Contractor's plea of ignorance of foreseeable conditions which will create difficulties or hindrances in the execution of the work will not be acceptable to the Owner as an excuse for any failure of the Contractor to fulfill the requirements of the Contract Documents, and shall not be a basis for the Contractor's claim for additional compensation.

Any discrepancies in or conflicts between the items described in these Contract Documents must be submitted in writing to the Engineer for adjustment prior to proceeding with the work as any claims for additional compensation to achieve compliance with the requirements of those items will not be allowed or considered.

S.G.C.12.01 CLAIMS

The first sentence of Paragraph 12.01.B of the General Conditions shall be deleted and the following inserted in its place:

Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to the Engineer and the other party to the Contract promptly but in no event later than ten (10) days after the start of the event giving rise thereto.

S.G.C.13.01B5F COST OF THE WORK

Paragraph 13.01B5F of the General Conditions shall be deleted in its entirety.

S.G.C.13.03 UNIT PRICE WORK

Delete paragraph 13.03.E in its entirety and insert the following in its place.

There will be no adjustment in unit price for increased or decreased quantities. In addition, the Owner reserves the right to reduce certain quantities or delete certain items from each section of the bids as the Owner sees fit, either before or after the Award of Contract. There will be no additional compensation due to remobilization of equipment as necessary to complete punch list items or other items not completed by the Contractor. There will be no additional compensation due to restocking charges for materials not used on the project.

S.G.C.14.02 TESTS AND INSPECTIONS

Add the following paragraphs to 14.02.A of the General Conditions to read as follows:

The Contractor shall provide a minimum twenty-four (24) hour notice to the Observer for any testing that must be observed or accomplished by someone other than the Contractor's personnel. All final tests and inspections shall be performed under the observation of the Resident Project Observer.

All tests on material to be placed shall be completed prior to the placing of any material. Tests shall be made in accordance with the American Society for Testing and Materials (ASTM) standard and tentative specifications that apply, except as otherwise specified.

Signed copies of all reports on tests shall be sent at once to the Owner, Engineer and Contractor. Inspection and testing shall in no way relieve the Contractor or supplier from the responsibility of furnishing materials and workmanship in accordance with the plans and specifications.

S.G.C.15.01 PROGRESS PAYMENTS

Amend paragraph 15.01B.3 of the General Conditions to read as follows:

The amount of retainage with respect to all progress payments will be as follows:

Minnesota Contractors	5%
Exempt Non-Minnesota Contractors	5%
Non-Exempt Non-Minnesota Contractors	5% + 8%* = 13%
*State Surety Deposit	

Non-Minnesota Contractors are advised to file Form SDE with the Minnesota Department of Revenue to determine their exemption status.

No reduction in retainage will be allowed until final acceptance of entire project, unless approved by the Engineer.

The first sentence in 15.01.C.5 of the General Conditions shall be deleted in its entirety and replaced by the following sentence:

The Engineer may refuse to recommend the whole or any part of any payment if the established Contract Time for Substantial Completion has expired or, if in the Engineer's opinion, it would be incorrect to make the representations to the Owner referred to in paragraph 15.01.C.2.

S.G.C.15.05 FINAL INSPECTION

Add the following after the second sentence of paragraph 15.05.A of the General Conditions:

If, after such measures are taken, subsequent inspections by the Engineer reveal that any of the previously identified construction items remain incomplete or defective, the Engineer will again notify the Contractor in writing of the remaining construction items. All costs associated with any subsequent inspections in which said remaining particulars are revealed, will be documented by the Engineer and paid by the Contractor to the Owner.

S.G.C.15.06 FINAL PAYMENT

Add a new paragraph immediately after paragraph 15.06.A.3 of the General Conditions, which is to read as follows:

4. Before final application for payment is made for the work, the Contractor must make satisfactory showing of compliance with M.S.A. 290.92, which requires the withholding of state income taxes for wages paid to employees on this project. Receipt by the Engineer of a certificate of Compliance from the Commissioner of Taxation to the Owner will satisfy this requirement. The Contractor is advised that before such certificate can be issued, the Contractor must first place on file with the Commissioner of Taxation an affidavit that the Contractor has complied with the provisions of M.S.A. 290.92. The required affidavit form will be supplied by the Commissioner of Taxation, Centennial Building, St. Paul, Minnesota, on request.

Final payment will not be made until the Contractor shall have filed with the Engineer evidence in the form of an affidavit or such other evidence as may be required that all claims against him by reason of the Contract have been fully paid or satisfactorily secured. This shall be in the form of IC134 forms, paid-in-full final lien waivers from the Contractor, subcontractors, and major suppliers, and a Consent of Surety shall precede or accompany the final application for payment. In case such evidence is not furnished, the Owner may retain out of any monies due said Contractor sums sufficient to cover all lienable claims unpaid. In addition, a two (2) year warranty bond is required from the Contractor. Said maintenance bond is to be dated to begin the date the City Council formally accepts the project.

S.G.C.15.08 CORRECTION PERIOD

Replace paragraph 15.08.A of the General Conditions with the following:

If within two (2) years after the date of final acceptance of the project by the City Council; or such longer period of time as may be prescribed by Laws or Regulations; or by the terms of any applicable special guarantee required by the Contract Documents; or by any specific provision of the Contract Documents, any Work that is found to be defective, or if the repair of any damages to the land or areas made available for the Contractor's use by the Owner or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, the Contractor shall promptly, without cost to the Owner, and in accordance with the Owner's written instructions:

- (i) Repair such defective land or areas, or
- (ii) Correct such defective Work or, if the defective Work has been rejected by the Owner, remove it from the Project and replace it with Work that is not defective, and
- (iii) Satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting there from.

With regards to any surface concrete work, including but not limited to sidewalks, curb, gutter, and driveway aprons within the project area, the Contractor shall assume full responsibility for any warranty work unless written approval is provided by the Owner releasing the Contractor from the responsibility for damages.

The intent of this provision is to release the Contractor from accepting monetary losses for destruction of concrete sidewalk, curb, gutter, and driveway aprons due to damages and circumstances out of the control of the Contractor. At no point during the two-year warranty period shall this relieve the Contractor's responsibility for correction of the defective work as stated in the preceding paragraph, or as caused by poor construction and defective materials on the concrete sidewalk, curb, gutter, and driveway aprons within the project area. The Owner or Engineer shall make the final determination of what material is defective within the project area at any point within the two-year warranty period.

S.G.C.17.01 METHODS AND PROCEDURES

Article 17.01, Methods and Procedures, of the General Conditions shall be deleted in its entirety and replaced with the following paragraphs:

In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the project, the Contractor and the Engineer agree that all disputes between them arising out of or relating to this agreement shall be resolved, if possible, at the lowest possible staff level. If the dispute cannot be resolved between the Contractor and the Engineer staff, the Contractor President/CEO and the Community Development Director will meet to attempt to resolve the dispute(s). If resolution is not achieved, the dispute shall be submitted to non-binding mediation.

The rights and remedies available to the Contractor shall be limited to breach of Contract, and no other cause of action, including, without limitation, negligence, misrepresentation or other tort theory. The Owner or Contractor may assert any such breach of contract claim in any court of competent jurisdiction. Neither the Owner nor the Contractor shall be entitled to a jury trial in any such action. The right and remedies to the Owner hereunder shall be in addition to and shall not be constructed in any way as a limitation of any rights and remedies available to the Owner, which is otherwise available by law or contract, by special warranty or guarantee, or by other provision of the Contract documents. The provision of this paragraph shall be as effective as if repeated specifically in the contract documents in connection with each particular duty, obligation, right and remedy to which it may apply. All representations, warranties and guarantees made in the Contract documents shall survive final payment, termination or completion of this agreement.

No waiver or failure to enforce any part or provision of the contract documents, including but not limited to the change order process, shall be deemed to be waiver by the Owner of any subsequent default or breach of the same or any other part of provision contained herein, or right to enforce the same or any other part or provision contained herein.

S.G.C.18 NON-DISCRIMINATION TOWARD HANDICAPPED PERSONS

Before final payment is made for work on this project, the Contractor shall submit a letter to the Owner stating that the Contractor's firm maintains a policy of non-discrimination toward persons with handicapped conditions.

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DIVISION 1

GENERAL REQUIREMENTS

SUMMARY OF WORK

The work to be done under this Contract shall include the furnishing of all labor, materials, tools and equipment necessary to complete the sanitary sewer, watermain, street construction, storm sewer, grading and appurtenant work as shown on the plans and specified herein.

The project schedule has been set to accommodate sufficient time for private utility relocation and weather delays. It is the Contractor's responsibility to complete the project within the assigned schedule.

PROJECT STORAGE AREA

The Contractor shall be responsible for identifying and providing a project storage area. The area shall be cleaned up and fully restored to the pre-existing condition prior to closing out this project. The clean-up and restoration of the project storage area shall be the Contractor's responsibility, no compensation will be made for this work.

FIELD ENGINEERING

The Owner will provide horizontal and vertical control construction stakes to allow the Contractor to construct the utilities as follows:

- A. Offset stakes placed at twenty-five (25) foot intervals for the first one hundred (100) feet out of each manhole, then one hundred (100) foot intervals thereafter for gravity sewer, with a cut sheet indicating horizontal and vertical distances from the stake to the pipe invert.
- B. Offset stakes placed at fifty (50) foot intervals, including changes in direction and appurtenances for watermain construction.
- C. Curb and Gutter: Three-foot offset stakes placed at 25-foot intervals with a cut sheet indicating a cut/fill to the proposed top of curb.

It shall be the Contractor's total responsibility to accurately construct the utilities in accordance with the construction stakes. Construction stakes will not be placed by the Owner until a written request is received from the Contractor giving the Engineer forty-eight (48) hours' notice, describing where and when he wants the construction stakes placed for the next week's construction. The stakes will be set only one time and it will be the responsibility of the Contractor to preserve the stakes.

The Engineer shall have the right to order the Contractor to have construction stakes replaced if the Engineer determines that a significant number of stakes have been destroyed.

The replacement of any construction stakes will be done by the Owner at the Contractor's expense and for which the Contractor will be billed.

The Contractor shall be responsible for replacement of all property or section corners he removes. The Owner will mark all property corners and section corners the Owner is aware of prior to construction. The Contractor shall notify the Engineer of any property corner, whether the Owner has marked them or not, which the Contractor may disturb in sufficient time to allow the Engineer to establish ties to the corner. The replacement of property or section corners shall be by the Owner at the Contractor's expense and for which the Contractor will be billed.

No additional compensation shall be allowed the Contractor for any claims of crews being held up because of lack of line and grade stakes.

HUBS AND LATH

Hubs and lath will be furnished by the Engineer for the project. All costs associated with providing hubs and lath for the project will be charged to the Contractor. An itemized invoice will be provided to the Contractor for payment.

PROJECT MEETINGS

Prior to the start of the work, there will be a preconstruction meeting arranged by the Engineer. Representatives of the Engineer, Owner, Contractor, City, geotechnical firm, and public utility companies shall be present at this meeting.

The Contractor's project superintendent will be present at the preconstruction meeting. He shall be familiar with all phases of the work to be executed and shall oversee the work during its progress. The project superintendent shall represent the Contractor in his absence, and communications and directions given to him shall be as binding as if given to the Contractor.

The Contractor shall submit a detailed work schedule that shall be reviewed, along with any other information necessary for an orderly execution of the work. (See Submittals for Additional Information.)

Throughout the construction phase, regular meetings will be called as deemed necessary by the Engineer to review progress and discuss items necessary for an orderly completion.

SUBMITTALS

The Contractor shall present to the Engineer four (4) copies of detailed, dimensioned manufacturer's shop drawings of all materials, apparatus and machinery, and for such fittings and devices as the Engineer may direct. The Engineer will keep two (2) copies of each set and return the rest to the Contractor with the Engineer's approval or notations. In case of lack of approval, the Contractor shall submit new drawings, corrected as required by the Engineer. All such drawings shall be submitted to the Engineer with ample time allowance for consideration. Submittals shall be required for, but not limited to, manhole structures, castings, sewer pipe, watermain and waterworks brass.

The Engineer's approval of such drawings or schedules shall not relieve the Contractor from the responsibility for errors of any sort in shop drawings or schedule. No work shall be started until the drawings have been reviewed and accepted by the Engineer.

Prior to the preconstruction conference, the Contractor shall submit in writing to the Engineer for review a schedule of procedure indicating the order in which the Contractor proposes to perform the various stages of the work, the dates on which he will start the various features thereof, and the contemplated dates for completing the same. The Contractor shall not deviate from this schedule, once approved without written permission of the Engineer. The schedule may be influenced by acquisition of easements or by accommodations for affected residents. The contractor shall modify the schedule to accommodate these occurrences and shall reschedule accordingly at no additional compensation. An updated monthly work schedule must be included with any partial payment request. The lack of a schedule shall be cause for withholding of progress payments and could result in a work stoppage. If the work is stopped, no credit of working days or payment of down time will be provided. The schedule must include down times for unforeseen weather conditions typical for the time of year the work is completed. The Contractor must notify the Engineer of any and all delays within ten (10) days of the occurrence. These may be considered for an extension to the completion dates.

CODES AND STANDARDS

Reference to codes and standards established by federal, state, and local agencies, or the professional and trade societies and associations shall be to the latest edition at the time of contract award.

When conflicting information is given, the most restrictive shall apply. Any questions of intent will be determined by the Engineer upon written request by the Contractor.

GR 01402 – “OR EQUAL” CLAUSE

Whenever a material or article required is shown on the Plans or in the Specifications by using the name of a product or of a particular manufacturer, it is to be understood that other products or materials which will adequately perform the required function may be considered equal and satisfactory in the Engineer's opinion. A comparable product shall not be purchased or installed without the Engineer's approval. A "Contract Change Order" shall be used if the Contract is to be modified.

GR 01403 – UTILITY PROPERTY AND SERVICE

All bidders are expected and assume the responsibility to contact the affected utilities prior to submitting the bid to determine the extent of their facilities within the project area and the scope and anticipated schedule of the facility relocation, removal, or adjustment.

The Contractor may not make claims for costs or damages due to alleged delays or disruption and releases the Owner from any such claims for the failure of any private utility with facilities affected by the project to promptly relocate, remove, or adjust such facilities.

GR 01404 – BARRICADES AND MAINTENANCE OF TRAFFIC

The Contractor shall furnish, erect and maintain warning lights and barricades as required by the Engineer to adequately warn and protect the public from hazardous protrusions, materials, excavations, etc., resulting directly or indirectly from the construction. All signs, barricades, and warning lights shall conform to the requirements of the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD).

Traffic control shall be the sole responsibility of the Contractor and shall conform to the requirements of the MMUTCD. The Contractor shall give the Engineer 48-hour notice prior to a proposed partial blockage or closure of any street or public right-of-way.

The Contractor shall designate one person and an alternate who are on-call 24 hours to have responsible charge of proper erection and maintenance of traffic barriers, warning signs, warning lights, street maintenance, etc.

Construction signing and barricades shall be furnished, installed and maintained at all job site entrances throughout the project.

Traffic control devices shall be inspected daily, and warning lights shall be checked weekly by the Contractor or its representative for proper operation and cleaned as required. All broken or ineffective traffic barriers, warning signs, and warning lights shall be replaced immediately at no additional compensation.

All temporary signs, barricades, and warning lights required by the Engineer shall be paid for at the lump sum price bid for traffic control.

GR 01407 – CLEANUP

During the progress of the work, the area affected shall be kept clean and free of all rubbish and surplus materials. All unneeded construction equipment shall be removed from the site and all damage repaired so that the public and adjacent property owners are inconvenienced as little as possible.

Where materials or debris have washed or flowed into or have been placed in water courses, ditches, gutters, drains, catch basins, or elsewhere as a result of the Contractor's operations, such material or debris shall be removed and satisfactorily disposed of during progress of work. All ditches, channels, drains, etc. shall be kept in a clean and neat condition. Street sweeping adjacent areas affected by construction will be required periodically by Engineer.

On or before the completion of work, the Contractor shall, unless otherwise directed in writing, remove all temporary works, tools and machinery or other construction equipment placed by him. He shall remove all rubbish from any grounds which he has occupied and shall leave all of the premises and adjacent property affected by the operation in a neat and restored condition satisfactory to the Engineer. Clean up is incidental to the project cost.

GR 01507 – UTILITY PROPERTY AND SERVICE

Prior to commencing construction, the Contractor shall check all existing manholes, catch basins, gate valve boxes, stop boxes, culverts and storm sewer lines in the construction zones to determine their condition. Failure to report deficiencies in writing, and have such deficiencies acknowledged in writing by the Engineer, will be cause for any required repairs and/or cleaning to be charged to this Contractor.

It is the Contractor's responsibility to coordinate his work with the non-municipal utility companies and preserve the existing condition of said utilities. All crossings will be thoroughly backfilled and compacted, using mechanical tampers to prevent any displacement or settlement of the utility lines.

Protection of existing utilities shall be considered incidental to the overall project. No compensation will be provided for this work. The Contractor will not be compensated for repair or replacement of damaged utilities during construction. The utilities shown on the plans are approximate.

It shall be a construction priority for the Contractor to contact Gopher State One, call (651-454-0002) for utility locations before doing any underground excavation.

GR 01603 – MATERIALS TESTING

Testing for field work done in this contract shall be completed to assure quality of materials and/or workmanship. The Construction Observer will coordinate and order the tests to be performed. For new developments, testing of all materials included in this section that are within public right-of-way or are proposed to be within public right-of-way will be completed by the City and shall be reimbursed by the Developer.

Copies of all test results, either passing or failing, shall be provided to the Construction Observer, Public Works Director, and WSB & Associates, Inc. Failing test results shall be retested to confirm compliance with the project specifications. All costs associated with retesting shall be at the Contractor's expense.

Test reports shall include the following:

- Project name
- City project number
- WSB project number
- Location/client
- Street name
- Street location per plan stationing
- Depth below finished grade and/or elevation
- Results of test performed

Comparison of the test results to project specifications. If failing, retest results to confirm compliance with project specifications.
Certification by a MnDOT certified tester or registered professional engineer

The following material tests shall be performed:

Subgrade

In-place density and moisture	1/500 LF
Roll Test	

Class 5 Aggregate Base

Gradation and percent crushed	1/2000 TN
In-place density and moisture	1/500 LF
Roll Test	

Select Granular Borrow

Gradation	1/2000 TN
In-place density and moisture	1/500 LF
Roll Test	

Concrete

Slump	1/First Load of the Day, plus 1/100 CY thereafter
Air entrainment	1/First Load of the Day, plus 1/100 CY thereafter
Cylinders	1/First Load of the Day, plus 1/100 CY thereafter

Bituminous

In-place density	Only required if Engineer deems necessary
Asphalt content	1/500 TN
Gradation/Extraction	1/500 TN

Trench Backfill (Sanitary Sewer, Watermain, Storm Sewer)

In-place density	Upper 3 feet, 1 per 6-inch lift per 1000 LF
	Below 3 feet, 1 per 12-inch lift per 1000 LF

The rates of testing to be completed may be adjusted as determined by the City Engineer. MnDOT's "Schedule of Materials Control" will be followed on all State-aid projects.

GR 01701 – CONTRACT CLOSEOUT PROCEDURES

Final payment will not be made until the Contractor has filed with the Engineer evidence in the form of an affidavit or such other evidence as may be required that all claims against him by reason of the Contract have been fully paid or satisfactorily secured. This shall be in the form of paid-in-full lien waivers from each supplier and subcontractor. In case such evidence is not furnished, the Owner may retain out of any monies due said Contractor sums sufficient to cover all lienable claims unpaid.

Before final payment is made for the work on this project, the Contractor must make a satisfactory showing that he has complied with the provisions of Minnesota Statutes Annotated 290.92 requiring the withholding of state income taxes for wages paid the employees on this project. Receipt by the Engineer of a certificate of compliance from the Commissioner of Taxation will satisfy the requirement.

GR 01710 – TRAFFIC CONTROL

The Contractor shall include costs for temporary roadway materials required to maintain access to properties affected by construction. It is understood that there will be periods of time when a portion of the roadway will need to be closed to construct the utilities; however, the roadway must be passable at the end of each working day. No open trenches will be allowed to be left when work is not occurring.

Traffic control on affected streets shall be measured and paid for as a single lump sum item for all labor, materials, and equipment required to control traffic flow through the project area as specified. Payment will be based on the percentage complete as determined by the Engineer.

GR 01807 – LIQUIDATED DAMAGES

MnDOT Section 1807.2, Waiver of Liquidated Damages, is amended by eliminating the second paragraph in its entirety. The liquidated damages shall be charged per calendar day for the project, as well as for any intermediate completion dates. The amount per calendar day will be based on the construction contract value as outlined in Section 1807.1.

GR 01903 – COMPENSATION FOR INCREASED OR DECREASED QUANTITIES

It should be noted that there will be no adjustment in unit price for increased or decreased quantities. In addition, the City reserves the right to reduce certain quantities or delete certain items from each section of the bids as the City sees fit, either before or after the Award of Contract. There will be no additional compensation due to remobilization of equipment as necessary to complete punch list items or other items not completed by the Contractor. There will be no additional compensation due to restocking charges for materials not used on the project.

QUALITY CONTROL

Any person representing federal or state agencies, the Engineer, or Owners shall have the right-of-entry to inspect the work being performed by the Contractor. If the case warrants, the Contractor shall provide proper facilities for such access and inspection.

The Contractor shall notify the resident observer anytime he anticipates working on this project. No work will be allowed without notifying the observer a minimum of twenty-four (24) hours beforehand.

The Owner will check construction of the sanitary sewer and storm sewer by closed circuit television before final acceptance and at any time within the warranty period. Such inspection will be at the Contractor's expense unless a specific bid item is provided.

PROTECT EXISTING PAVEMENTS

The Contractor shall provide and use only rubber-tire dozers, front-end loaders and other necessary equipment on all work where street pavements or portions of pavements are undisturbed for the protection of the pavements or in such locations as the Engineer may direct.

No compensation will be allowed to the Contractor for replacement of damaged utilities and resurfacing or replacing damaged pavements.

PROTECT EXISTING SURFACE IMPROVEMENTS

It shall be the Contractor's responsibility to protect, and/or remove and reinstall all fences, street signs, retaining walls, and other items required to construct the proposed improvements.

The work associated with protecting, and/or removing and reinstalling all fences, street signs, lawn irrigation systems, and other items shall be considered incidental to the project unless specific bid items are provided.

ACCESS ROADS

The Contractor shall maintain access to all areas for residents and commercial traffic, and emergency vehicles at all times.

CONSTRUCTION WATER

Water for new construction purposes may be obtained from the North Branch Water and Light Commission. The Contractor shall make suitable arrangements with the Water Department staff for the location where water may be obtained. The City will not charge for reasonable amounts of water for dust control, filling mains and flushing mains. Water for all other uses will be charged at the current rates.

TEMPORARY SANITARY FACILITIES

The Contractor, at their own expense, shall provide and maintain temporary toilet facilities at the site during the construction period. The Contractor and Engineer shall agree to the location of the temporary toilet facilities.

MAIL SERVICE

The Contractor shall be required to carefully remove each existing mailbox and standard as necessary for construction. The mailbox and standard shall be delivered to the homeowner for storage during construction. During construction, the Contractor shall furnish temporary mailboxes at an accessible location for interim mail delivery as approved by the Postmaster. Each box shall be clearly labeled and mounted on a stable standard. Upon completion of construction, the Contractor shall be required to reinstall the original box and standard as directed by the Engineer.

In rural areas when addresses are removed with mail boxes, or in any situation when temporary addresses are required, the contractor shall provide reflective address labels visible for emergency vehicles.

Unless the proposal includes an item for mail service, this item shall be considered incidental to the project cost.

GARBAGE SERVICE

The Contractor shall be required to accommodate garbage pickup while the project is under construction. This coordination shall include contact with the garbage companies serving the area and maintaining access to the individual residences. In the event that garbage pickup is not accommodated, the Contractor shall be responsible for contracting independently to have the garbage removed at no cost to the project.

Unless the proposal includes an item for garbage service, this item shall be considered incidental to the project cost.

WORKING HOURS

Working hours will be from 7:00 a.m. to 9:00 p.m., Monday through Saturday. Requests for expansion of working hours must be received at least 48 hours in advance and approved by City staff and the Engineer. The Contractor shall structure the proposed project schedule based on the stated working hours.

NOISE CONTROL

The Contractor shall comply with local and state ordinances on noise abatement. All equipment shall have effective mufflers on engine exhaust systems.

DUST CONTROL

The Contractor shall be responsible for dust control. Water is available to the Contractor for this use, but suitable arrangements must be made with the water department to determine locations where water may be obtained. Dust control will be considered incidental to project cost.

EROSION CONTROL

Erosion control shall be placed and maintained by the Contractor and as directed by the Engineer. The Contractor shall use the appropriate means of control for individual situations. The erosion control types may include filter fence, fiber blanket, rock construction entrances, diversion ditches, temporary seed, and hay bales, all of which will be considered incidental to the project cost. Failure to maintain the erosion control will be sufficient cause to withhold further payments on the project until the maintenance is complete.

The Contractor shall become a co-permittee with the Owner to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) General Storm Water Permit (MNR 100000) required by the Minnesota Pollution Control Agency (MPCA). This permit establishes conditions for discharging storm water to waters of the State from construction activity disturbing one (1) or more acres of total land area.

The Contractor shall be required to sign the NPDES permit forty-eight (48) hours prior to beginning construction operations and shall abide by all permit requirements until the site has undergone final stabilization and a notice of termination has been submitted to the MPCA. The Contractor shall cooperate with the Owner to implement a fully-documented inspection and maintenance program for all temporary erosion and sediment control measures as required by the NPDES permit.

The erosion control measures for the project have been identified in the plan set; however, modifications can be made depending on actual site conditions. All erosion control shall be installed prior to the commencement of construction.

All manholes shall be protected from surface water drainage. All storm sewer systems, including downstream ponding areas, shall be protected from sedimentation. The protection of storm sewer systems and catch basins from sedimentation shall be incidental to the project.

Prior to final acceptance of the project or the end of the warranty period, the Contractor shall remove all erosion control items.

MAINTENANCE OF SERVICE

Installation of the sanitary sewer and watermain improvements may disrupt the operation of existing utility systems. The Contractor shall be responsible for providing and maintaining temporary service until the new utilities are installed, tested and available for connections.

Maintenance of service will be considered incidental to the overall project. No separate measurement or payment will be made for this work unless a specific bid item is provided.

Sweeping by the Contractor is required throughout the project, and as directed by the Engineer. If the Contractor does not complete the sweeping, the City will complete the street sweeping and will bill the Contractor for the work.

WARRANTY

The Contractor for this work shall guarantee and maintain the stability of all his work, equipment and materials for a period of two (2) years from date of final payment. The two (2) year maintenance guarantee shall be included in and be a part of the Contractor Security (Performance Bond) previously specified. The provisions of this paragraph shall not be construed as restricting Contractor's liability for breach of contract by reason of non-conformance with the specification for defects or faulty workmanship.

CONSTRUCTION LIMITS

The Contractor shall confine his operations to the limits of the construction area as shown on the plans. The City will endeavor to have obtained necessary rights-of-entry, rights-of-way, and easements prior to the Contractor commencing work. Failure to acquire all rights-of-entry, rights-of-way, and easements prior to the start of construction shall not be cause for a request of time extension or additional monies by the Contractor. Construction limits shall be updated on grading plans and SWPPP documents if limits change after pre-construction meeting.

Should special and/or extraordinary construction methods need to be employed by the Contractor for the completion of the project such as, but not limited to, trench box construction, any special and/or extraordinary construction methods used shall be considered incidental to the project.

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DIVISION 2

SITE WORK

02000 – GENERAL

This work shall be done in accordance with the most current edition of the Minnesota Department of Transportation's "Standard Specifications for Construction" (referenced "MnDOT"), and the "Standard Utilities Specifications for Water Main Service Line Installation and Sanitary Sewer and Storm Sewer Installation" (referenced "CEAM") as published by the City Engineers Association of Minnesota, St. Paul, Minnesota, dated 2013, or as modified herein. The numbering system used herein corresponds to the numbering systems used in the above-named specifications with the exception that a "0" has been added preceding the five-digit number.

MnDOT Specifications including amendments and the CEAM Specifications are binding unless noted herein.

02101 – CLEARING AND GRUBBING

This item includes removing trees and brush as necessary for construction as shown on the plans or directed by the Engineer. No trees shall be removed unless approved by the Engineer.

Clearing shall be construed as the complete removal and disposal of all portions of a tree which exist above ground except stumps. Grubbing shall be construed as the removal and disposal of the portions of a tree which exist below ground and stumps. No disposal of debris shall be allowed on-site.

02101.4 – METHOD OF MEASUREMENT

The Engineer will measure clearing and grubbing by area, lump sum, or individual unit as required by the contract. Payment shall include all labor, materials, equipment and fees required to clear and grub the trees and dispose of the debris at a facility approved for tree and brush disposal. The Engineer will measure tree diameter by measuring at 4½ ft above the ground or by measuring the diameter of the tree stump after removal. Removal of trees smaller than three-inch (3") trunk diameter, brush removal and disposal shall be considered incidental and no direct measurement or payment will be made for brush removal.

A. Qualifying Trees and Stumps

The Engineer will only measure trees for payment having a diameter greater than 3 in at a point measured 4½ ft above the ground surface.

The Engineer will only measure stumps for payment having a diameter greater than 3 in when measured at the point of cutoff.

The Engineer will not measure for the removal and disposal of stumps and brush with a diameter equal to or less than 3 in at the point of cutoff.

B. Area Basis

If the contract specifies the unit as an acre, the Engineer will determine quantities by measuring, to the nearest 0.05 acre, all areas cleared and all areas grubbed within the limits as shown on the plans or staked by the Engineer. The Engineer will make all measurements horizontally to points 10 ft outside the trunks of qualifying trees or stumps on the perimeter of the area being measured. The Engineer will measure separate areas less than 0.05 acre as 0.05 acre.

If isolated trees or stumps require removal outside the areas designated for clearing or grubbing by the acre, and no unit price is provided in the contract for clearing and grubbing individual trees or stumps, the Department will pay based on the following:

1. The Engineer will consider each isolated qualifying tree having a diameter less than 40 in when measured at a point 2 ft above the ground surface, and each isolated qualifying stump having a diameter less than 40 in at the point of cutoff as 0.05 acre.
2. The Engineer will consider each isolated tree or stump having a diameter of at least 40 in when measured at the points described in (1) above as 0.1 acre.

C. Individual Unit Basis

When the contract specifies “tree” as the unit, the Engineer will count the number of qualifying trees cleared and the number of qualifying stumps grubbed to determine the quantity.

D. Lump Sum Basis

The Engineer will not measure an individual area, tree, or stump if the contract specifies clearing and grubbing as a lump sum item.

02104 – REMOVING MISCELLANEOUS STRUCTURES

02104.3 – CONSTRUCTION REQUIREMENTS

C Removal Operations: The Contractor shall be responsible for removal, care of, and replacement of all signs, mailboxes, posts, etc., that may be within the construction limits as directed by the Engineer.

D Disposal of Materials and Debris: Materials and debris removed from the project site shall be disposed of at a site selected by the Contractor. Such disposal areas shall be approved landfills or property under the direct control of the Contractor, in accordance with State and local rules and regulations. No burning or burying of debris on the project site will be permitted. Dumping receipts are required and should be given to the Engineer.

F Abandon Operations

Abandon Pipe: Pipe that is intended to be abandoned in-place shall be blown full of sand and have each end bulkheaded.

Abandon Manholes: Any manholes to be abandoned in-place shall have the castings and top section removed and shall be filled with sand, compacted and then covered up as directed by the City Engineer. Castings shall be salvaged by the Contractor and delivered to the City Public Works Department.

Milling pavement: To accommodate matching of new bituminous shall be considered incidental to the new pavement. No separate payment will be made for milling work. Disposal of the millings shall be the responsibility of the Contractor.

02104.5 – BASIS OF PAYMENT

Unless the proposal includes an item for sign, mailbox, post, etc. the removal, care of, and replacement of signs, mailboxes, posts, etc. shall be done at the Contractor’s expense without any direct compensation being made therefor.

Payment for removal shall be at the unit prices bid and shall be compensation in full for removal, repair and/or replacement of damaged or lost items as required, hauling of material and debris to a disposal area selected by the Contractor, complete compaction of trenches and depressions, and cleanup of the area. No additional payment shall be made for pavement thicknesses which vary from those indicated on the plans or in the specifications.

Payment for abandoned in-place pipe will be at the Contract unit price bid. Bulkheads shall be incidental to the sand-filled pipe that is to be abandoned in-place.

02105 – EXCAVATION AND EMBANKMENT

02105.1 – DESCRIPTION

This work consists of the project grading in accordance with the plans and as directed by the Engineer. Management of the excavated materials on the site will be the Contractor's responsibility. No materials suitable for backfill will be removed from the site without authorization from the Engineer.

The topsoil shall be stripped and stockpiled separately within the project area. The stockpiled topsoil shall be re-spread and compacted on all disturbed non-street areas at a minimum four-inch (4") thickness by the Contractor at no additional compensation following the installation of the utilities and the street construction.

02105.2 – MATERIALS

A Excavation Material: Excavations may be classified differently depending on the material excavated. Suitable material from common excavation will be allowed for granular borrow, providing it meets the specifications. All excess material not wanted by the Owner shall become the property of the Contractor for disposal off-site in a non-wetland/flood plain area.

B Borrow Material: Select granular borrow and granular borrow shall be used for backfilling below finished subgrade elevations where removal of unsuitable materials is required and directed by the Engineer in accordance with the provisions of MnDOT 3149.2B except as modified below:

No more than 10 percent of the material, by weight, shall pass a No. 200 sieve. The material shall not contain particles greater than 3 inches in size.

Suitable material from common excavation will be allowed for granular borrow, providing it meets the specifications. All excess material not wanted by the Owner shall become the property of the Contractor for disposal off-site in a non-wetland/flood plain area.

02105.3 – CONSTRUCTION REQUIREMENTS

A General: Prior to the commencement of the excavations, topsoil shall be stripped and stockpiled for respreading upon the graded area.

F Compacting Embankments: Compaction of embankments under roadways shall be constructed using the Specified Density Method.

1. Areas outside the street rights-of-way shall be compacted to ninety-eight percent (98%) of Standard Proctor Density (T-99) ASTM D-698.
2. Areas within street right-of-way embankment construction shall meet the following requirements:

Below Upper Three Feet (3'): The zone from bottom of embankment or trench to within three feet (3') of top of subgrade, except adjacent to structures, shall be compacted to ninety-five percent (95%) of Standard Proctor Density (T-99) ASTM D-698.

Upper Three Feet (3'): The zone from three feet (3') below top of subgrade to top of subgrade, together with those portions of embankment or trench backfill below the upper three feet (3') adjacent to structures, shall be compacted to one hundred percent (100%) of Standard Proctor Density (T-99) ASTM D-698.

Fill material shall be placed at four percent plus or minus (4%±) of optimum moisture content.

Vertical grading tolerance shall be within zero point two feet (0.2') of the grading. The Contractor shall grade to the street subgrade tolerance as directed by the Engineer.

The moisture content of the sands or sand and clay common borrow soils shall comply with the criteria established for granular borrow soils. The moisture content of common borrow soils comprised of clay or silt shall be within three percent (3%) of the optimum moisture content defined by AASHTO T-180.

- I Disposition of Excavated Material: Mining of materials for removal from the project area and replacement with less desirable materials by the Contractor shall not be permitted.

02105.4 – METHOD OF MEASUREMENT

- A Excavation Material: Measurement for excavation shall be by the cubic yard as a plan quantity at the unit bid price. No adjustments to the plan quantity will be made unless the dimensions of the work are changed by the Engineer.
- B Borrow Material: Select granular borrow and granular borrow shall be measured by the cubic yard, loose volume measurement.

02105.5 – BASIS OF PAYMENT

Grading: All final grading is considered incidental to earth work quantities: including grading ditches to drain around storm sewer, pond work and embankments.

- D Excavation Material: Placement and/or removal from site will be considered incidental to the excavation bid item. Compensation will not be made to haul or temporarily stockpile excavated material from within the project area. If stockpiles are used, onsite restoration is incidental. All excess material shall become property of the Contractor.
- D.5 Salvage and Respread Topsoil: Salvage and resspreading topsoil shall be considered incidental to common excavation.
- H Topsoil Borrow: Topsoil borrow required to meet the topsoil thickness requirement shall be considered incidental to turf establishment items.
- F Potholing: Potholing to locate existing utilities will be required prior to working. All labor and materials used for potholing will be incidental to the project.

02105 – DEWATERING

The Contractor shall provide dewatering as necessary, to allow for construction on a stable foundation, at the expense of the Contractor unless a specific bid item is provided. Dewatering operations may be controlled by permit from the DNR or other agencies. The Contractor is responsible to obtain any necessary permits and compliance with all conditions of permits. The work potentially involves the drawdown of the water table, placement of temporary barriers or other satisfactory types of water control to allow construction and to protect the work. Groundwater elevations shown on borings are those encountered at the time borings were completed. Since elevations are dependent upon hydrologic conditions, the Contractor shall perform the necessary dewatering operations, irrespective of the actual water table surface water elevation which prevails at the time the work is accomplished. All pipes shall be constructed in a dry trench as specified in CEAM (2013 edition) Section 2600.3-B5 and accomplished as specified.

Dewatering systems will be necessary to maintain the ground water table a minimum of two feet (2') below the excavation invert. Prior to starting the project, the Contractor shall submit a complete dewatering plan for the entire project to the Engineer for information purposes only. Special precautions shall be taken adjacent to structures so dewatering does not create any structural damage.

Dewatering systems and excavations must remain inside construction limits.

The dewatering system plan must show in plan and profile view the proposed dewatering operations and include a Contractor's estimate regarding the time required from start of dewatering to a soil condition such that successful construction can occur. Should the Contractor propose a dewatering operation that requires wells or headers placed below existing surface elevations, the dewatering plan shall include measures proposed, including trenching and backfill of dewatering components, to minimize disruption to an impact on areas abutting the project. A dewatering operation that significantly disrupts private property usage in advance of actual construction operations shall not be permitted. Any additional costs related to utility work or project disturbance and restoration caused by the dewatering operation shall be incidental to other work items.

For all utility work, granular foundation material (including 1½-inch clear rock) may be used in conjunction with or in lieu of dewatering. Any use of granular foundation material or other material to maintain a dry trench or improve the pipe foundation shall be considered incidental to dewatering.

The Contractor shall install at his expense the necessary trench support to meet the varying soil conditions and to protect existing structures and property.

02105.5 – BASIS OF PAYMENT

Dewatering: Payment shall be lump sum at the contract unit price bid and include all the costs related to dewatering, including well points, pumping, discharge outlet maintenance, permitting, and all granular foundation material.

Pipe Bedding: Pipe bedding is incidental to utility installation.

02111 – TEST ROLLING SELECT

02111.1 – DESCRIPTION

This work shall consist of test rolling the finished subgrade prior to placement of aggregate base and test rolling the aggregate base before placement of pavement.

02111.2 – EQUIPMENT

A loaded dump truck delivering a 9-ton axle load may be used as test rolling equipment and shall be supplied by the Contractor.

02111.3 – CONSTRUCTION REQUIREMENTS

A representative of the City, Engineer and Contractor shall be present during the operation.

The subgrade will be considered unstable if, under the operation of the test rolling equipment, the surface shows rutting (at the time the test rolling equipment passes over the grade) of more than two inches (2") measured from the top of the constructed grade to the bottom of the rut. The subgrade will also be considered unstable if, under the operation of the test rolling equipment, the surface shows deflection or yielding of more than one inch (1") (at the time the test rolling equipment passes over the grade). The aggregate base will be considered unstable if, under the operation of the test rolling equipment, the surface shows rutting, deflection or yielding. In addition, the subgrade or aggregate base material shall not roll under the weight of the vehicle.

02111.5 – BASIS OF PAYMENT

Test rolling of the subgrade (including all repairs to unstable sections and retesting) will be considered to be incidental work and no direct compensation will be made therefor.

Test rolling of the aggregate base (including all repairs to unstable sections and retesting) will be considered incidental work and no direct compensation will be made therefor.

02112 – SUBGRADE PREPARATION

02112.1 – DESCRIPTION

This work shall consist of shaping and compacting the subgrade prior to placing the Class 5 aggregate base.

02112.3 – CONSTRUCTION REQUIREMENTS

The Contractor shall compact and shape the subgrade to the full width of the street to be constructed. The top three feet (3') of the subgrade shall be compacted to one hundred percent (100%) of Standard Proctor Density. All other soils located within the street right-of-way shall be compacted to ninety-five percent (95%) of the Standard Proctor Density. Vertical tolerance of the street subgrade and aggregate base shall be within 0.1 feet of the proposed elevation. Compaction density tests will be taken along the length of the street by the Owner's testing firm. The Contractor shall maintain drainage for surface water to avoid unnecessary saturation of the subgrade.

In street areas that are not excavated for the sewer and water lines, the subgrade shall be scarified at least 12 inches deep and compacted to 100% of Standard Proctor Density in 6 inch lifts, prior to test rolling.

02112.5 – BASIS OF PAYMENT

Subgrade Preparation: Subgrade preparation shall be incidental to common excavation, unless a specific bid item is provided.

02211 – AGGREGATE BASE CLASS 5, CLASS 7

02211.2 – MATERIALS

Aggregate base shall be Class 5 or Class 7 meeting Class 5 or Class 7 gradation, respectively, as specified in MnDOT 3138. Before any aggregate base is placed, the Contractor shall submit an aggregate gradation from an approved testing laboratory certifying that the materials to be incorporated into the work meet these specifications. The Contractor shall bear the cost of this testing. Class 7 shall not contain objectionable materials as defined in MnDOT 3138.2.C.

02211.3 – CONSTRUCTION REQUIREMENTS

Compaction shall be obtained by the Specified Density Method to a minimum of one hundred percent (100%) of the Standard Proctor Density.

02211.4 – METHOD OF MEASUREMENT

Aggregate base material shall be measured in tons based on weight slips collected at the job site on the day of delivery. Weight slips will only be collected that contain the following information: project, truck number, date, leave time, gross weight, tare weight and net weight.

02211.5 – BASIS OF PAYMENT

Payment for Class 5 or Class 7 aggregate base will be at the contract unit price per ton of compacted base, including all costs incidental to construction, such as water added for compaction, erosion, washouts, and settlements.

02357 – BITUMINOUS TACK COAT

02357.5 – BASIS OF PAYMENT

Tack Coat: Payment of bituminous materials for tack coat will be on the actual volume used, converted from application temperature to sixty degrees Fahrenheit (60° F) at the unit price bid per gallon. Payment shall include sweeping and cleaning of all debris and dirt from the road surface as incidental to placement of the tack coat.

02360 – PLANT MIXED ASPHALT PAVEMENT

02360.1 – DESCRIPTION

The provisions for MnDOT Specification 2360 are modified as follows:

- A The designation numbers for the bituminous mixtures on this project shall be as shown on the plans.

02360.2 – MATERIALS

E.2 Recycled Asphalt Pavement Materials (RAP)

The Contractor may not utilize reclaimed asphaltic pavement within the wear course layer.

02360.3 – CONSTRUCTION REQUIREMENTS

B.2.a Paving Operations

The paver used for the project shall be capable of paving the roadways so that any seams of the wear course are along the centerline of the proposed roadway. For a typical City project, a 10-ft paver will be required.

E Pavement Smoothness

The requirements of 2399 (Pavement Surface Smoothness) shall not apply to the bituminous paving required under this Contract. The Contractor will not be required to perform profilograph testing on any roadways. No incentive for smoothness will be offered as part of this Contract.

02451 – (CEAM 2600) STRUCTURE EXCAVATIONS AND BACKFILLS

The provisions of MnDOT 2451 shall apply, in addition to the provisions of CEAM 2600, Trench Excavation and Backfill/Surface Restoration, which are modified and/or supplemented as follows:

02451.2 – (CEAM 2600.2) MATERIALS

The provisions of CEAM 2600.2 are modified and/or supplemented as follows:

A.1 Granular Material Gradation Classifications

Bedding and encasement materials, unless noted otherwise, shall meet the requirements of MnDOT 3149.2.B.1 Granular Material, except that 100 percent by weight shall pass the one inch sieve.

Add the following new paragraph to CEAM2600.2:

D. Tracer Wire for Non-Conductive Pipe

Tracer wire for use with all thermoplastic pipe types shall be in accordance with CEAM 2611.2.I.

02451.3 – (CEAM 2600.3) CONSTRUCTION REQUIREMENTS

The provisions of CEAM 2600.3 are modified and/or supplemented as follows:

Add the following new paragraph to CEAM 2600.3.A:

A.6 Tracer Wire for Non-Conductive Pipe

Tracer wire for use with thermoplastic pipe types shall be installed in accordance with CEAM 2611.3.B.4 and shall be installed with all forcemain, services, and drain tile. Tracer wire shall be installed with main lines as directed by the Engineer.

E. Pipeline Backfilling Operations

If insufficient suitable materials are available to complete backfilling, excess suitable materials from other areas of the project may be used to complete the work, as directed by the Engineer. Granular foundation, bedding, and encasement materials shall be placed around all pipe within areas of rock excavation.

Bedding as specified within the CEAM Standard Specifications and shall be used for all ductile iron pipe (DIP) and reinforced concrete pipe (RCP) installations unless otherwise called for in the drawings or directed by the Engineer.

Backfilling above the encasement zone shall comply with the general requirements specified in 2600.3.E and the following:

1. Backfill within the roadbed or building pad areas shall be placed in accordance with MnDOT 2105.3.E and shall be compacted to Specified Density Requirements in accordance with MnDOT 2105.3.F.1.
2. Backfill not within the roadbed or building pad areas shall be compacted to 95 percent of maximum density (MnDOT Standard Proctor).
3. Maximum backfill lift thicknesses may be increased or decreased by authority and at the discretion of the Engineer in consideration of material type, material disposition, or the demonstrated capability of compaction equipment.

4. The Engineer shall have full authority to suspend backfill operations until the preceding lift of backfill has been determined by the Engineer to be fully compacted and a passing compaction test has been taken. No additional compensation for lost time shall be made if backfill operations are suspended by the Engineer for the purposes of determining adequate trench backfill compaction.

02451.5 – (CEAM 2600.5) BASIS OF PAYMENT

The provisions of CEAM 2600.5 are modified and/or supplemented with the following:

Furnishing and placing of granular materials for foundation, bedding, cover or backfill placement as specified in connection with pipe or structure items shall be incidental to the pipe or structure item without any direct compensation being made.

For all utility work, granular foundation material (including 1 ½-inch clear rock) may be used in conjunction with or in lieu of dewatering. Any use of granular foundation material or other material to maintain a dry trench or improve the pipe foundation shall be considered incidental with no additional compensation.

All surplus excavated materials not required for backfill shall be disposed of by the Contractor at no expense to the Owner and in a manner satisfactory to the Engineer. All costs associated with the disposal of the surplus excavated materials are considered incidental to the pay item.

02502 – SUBSURFACE DRAINS

The provisions of MnDOT 2502 are modified and/or supplemented as follows:

02502.1 – DESCRIPTION

The location and alignment of the subsurface drains and outlets are shown in a general manner on the Plans. Modifications to the proposed alignment may be made by the Engineer in the field to ensure that the drain properly collects groundwater and infiltration water that may accumulate in the bottom of granular base material.

Perforated corrugated thermoplastic (TP) pipe or perforated corrugated PE pipe as designated, shall be installed in accordance with the requirements for subcut drains, (MnDOT 2502.3.F) **except that perforated pipe drains shall be bedded on coarse filter aggregate (MnDOT3149.2.H). Trenches shall also be backfilled with coarse filter aggregate.**

Tracer wire shall be installed with all subsurface drains in accordance with CEAM 2611 and CEAM 2621.

02502.2 – MATERIALS

Delete MnDOT 2502.2.A1 and replace with the following:

A.1 Thermoplastic (TP)

Provide thermoplastic pipe and fittings (for use as pipe sewers or subsurface drains) meeting the requirements of the Contract. If pipe is not specified in the Contract, use pipe meeting the applicable application, i.e. use perforated pipe for drainage application and unperforated pipe for outlet into ditch, etc.

1. AASHTM M278, Class PS 46, Polyvinyl Chloride (PVC) Pipe (perforated and unperforated)
2. Blank
3. ASTM D3034, Type PSM PVC Sewer Pipe, SDR 35, (unperforated only)

4. ASTM F758, Smooth-Wall PVC, Type PS 46 (perforated and unperforated)
5. ASTM F949, PVC Corrugated Sewer Pipe (perforated and unperforated)
6. ASTM D17885, Schedule 40 pipe (perforated & unperforated as applicable) with one of the following:
 - a. Perforated: Slotted with maximum slot width of $\frac{1}{16}$ in and minimum slot area of $1\frac{1}{2}$ sq. in/linear ft for 4 in diameter pipe and greater than 1 sq. in/linear ft for pipe having a diameter less than 4 in.
 - b. Perforated: Circular holes with two to four rows of holes. Hole diameter equal to $\frac{3}{16}$ in to $\frac{3}{8}$ in, and minimum area of holes $1\frac{1}{2}$ sq. in/linear ft for 4 in diameter pipe and greater and 1 sq.in/linear ft for pipe having a diameter less than 4 in.
 - c. Unperforated.
7. AASHTO M252, Corrugated Polyethylene (CP) dual-wall, Type "S" (unperforated) or "SP" (perforated) pipe, PS 50.

If perforated pipe is specified, provide pipe with perforations in accordance with the applicable specification. Create all perforations at manufacturer's plant; no field perforations are allowed.

Unless otherwise specified in the applicable specifications, plans, or special provisions, the Contractor may choose the joint type.

Submit to the Engineer a manufacturer's Certificate of Compliance with each pipe shipment.

02521 – WALKS

02521.1 – DESCRIPTION

Walks shall be constructed as required by Standard Detail Plates in the specifications and the Plans.

02521.2 – MATERIALS

E Granular Materials:

Concrete Base: Subgrade shall meet the requirements of MnDOT 3149.2-B1, granular borrow, except that 100 percent of the material shall pass a 1-1/2 inch sieve. Existing, on site materials may be used if approved by the Engineer.

Bituminous Base: Subgrade shall meet requirements of Section 2211 Class 5 Aggregate Base.

02521.5 – BASIS OF PAYMENT

Concrete Walk: The unit price bid shall include all excavation, grading, granular borrow, materials, labor, and equipment required to complete the construction.

Bituminous Walk: The unit price bid shall include all excavation, grading, Class 5 aggregate base course, materials, labor, and equipment required to complete the construction.

Surface tolerances will be verified prior to payment.

02531 – CONCRETE CURB AND GUTTER

02531.1 – DESCRIPTION

This work shall consist of constructing cast-in-place concrete curbs, curb and gutter, medians, driveway pavement, and other similar traffic delineation or service items.

02531.4 – METHOD OF MEASUREMENT

No deductions will be made for catch basins.

- A Length: Concrete curbing shall be by the lineal foot along the face of curb at gutter line. Curb drops for alleys, private entrances, driveway entrances, and valley gutters shall be included in the length measurement of the curb and gutter.

02531.5 – BASIS OF PAYMENT

Curb and Gutter: The unit price bid per linear foot shall include all necessary excavation, joints, expansion material, protective coating, tamped backfill, curb drop work, and catch basins. Payment shall be limited to 80% of the actual footage installed until all curbing has been backfilled and the topsoil placed.

Medians, Driveway, Aprons/pavement: The unit price bid shall include excavation, grading, granular borrow, materials, labor, and equipment required to complete the construction.

02531 – PEDESTRIAN CURB RAMPS

02531.2 – MATERIALS

The truncated dome detectable warning panel should be a natural cast iron material. See MnDOT Standard Plans.

02531.5 – BASIS OF PAYMENT

Pedestrian Curb Ramps: Payment shall be at the unit price bid for all materials, labor, and equipment required to install pedestrian curb ramp as detailed in City Standard Plate, including aggregate base.

02564 – TRAFFIC SIGNS AND DEVICES

02564.2 – MATERIALS

Sign posts shall be 3-pound galvanized. Sign sheeting shall be High Intensity.

Salvage and Reinstall Sign: This item includes Type C and Type D signs, removal, storage, and replacement of existing signs. If the signs are damaged during construction, the Contractor shall replace them without compensation.

02572 – PROTECTION AND RESTORATION OF VEGETATION

02572.3 – CONSTRUCTION REQUIREMENTS

- A Protecting and Preserving: No trees shall be removed without permission of the Engineer. No compensation will be paid for cutting down, removing and disposing of shrubs. Any trees or shrubs deemed savable will be field located by the Engineer and shall be fully protected by this Contractor during construction. Any trees or shrubs removed or damaged by the Contractor, which were deemed savable by the Engineer will be replaced at the Contractor's expense.

The following procedures shall be adhered to when constructing utilities near trees.

- a. Cut roots cleanly.
- b. Paint cut root ends with asphalt base paint.
- c. Backfill trench as soon as possible; do not leave the roots exposed to air.
- d. No equipment or construction materials shall be stored beneath a tree's drip line.
- e. Clean up around trees immediately after construction.

A.7 Pruning: All pruning of trees has to be approved by the Engineer. All trees damaged during construction shall be pruned and repaired. All wounds on trees shall be treated with an asphalt varnish containing an antiseptic. If an antiseptic asphalt varnish is not available, a plain asphalt varnish can be used if the wound is swabbed with alcohol or coated with shellac. Wounds shall be painted as soon as possible after the area is dry.

02572.5 – BASIS OF PAYMENT

All work under protection and restoration of vegetation shall be considered incidental to the contract with no additional compensation allowed therefor.

02573 – STORM WATER MANAGEMENT

02573.1 – DESCRIPTION

Regardless of whether this project requires a National Pollutant Discharge Elimination System (NPDES) General Storm Water Permit or not, the Contractor will be required to comply with NPDES regulations in order to prevent erodible materials from leaving the site.

02573.3 – CONSTRUCTION REQUIREMENTS

- A General: All items shall be furnished and installed in accordance with the Plans, Standard Detail Plates, and/or where directed by the Engineer. If the Contractor believes additional or alternative erosion control measures are necessary, the Contractor shall immediately inform the Engineer.
- P Maintenance: The Contractor shall be responsible for the maintenance of all temporary erosion and sediment control measures. These measures shall be repaired, replaced, or supplemented as set forth in the NPDES General Storm Water Permit, which is summarized below for reference:

EROSION & SEDIMENT CONTROL MEASURE	FAILURE CRITERIA	TIME FRAME FOR REPLACING, REPAIRING, OR SUPPLEMENTING
Silt Fence and Straw Bales	Sediment depth reaches $\frac{1}{3}$ height	Within 24 hours of discovery (or as soon as field conditions allow)
Sedimentation Basins	Sediment depth reaches $\frac{1}{2}$ height or sediment volume reaches $\frac{1}{2}$ basin volume	Within 72 hours of discovery (or as soon as field conditions allow)

EROSION & SEDIMENT CONTROL MEASURE	FAILURE CRITERIA	TIME FRAME FOR REPLACING, REPAIRING, OR SUPPLEMENTING
Stabilized Drainage Ditches	Sediment in drainage ditch, storm sewer, or a water of the State.	Within 7 days of discovery or within 7 days of obtaining access
Stabilized Construction Site - Vehicle Exit Locations	Sediment is being tracked off-site	Within 48 hours of discovery (sediment that does not drain back to site must be removed)

If the Contractor fails to provide maintenance of the temporary erosion control measures, within the above time frames, the Engineer shall have the authority under the terms of this Contractor to hire the work done and deduct the costs incurred from the amounts due to the Contractor.

The Contractor shall be assessed liquidated damages of \$200 per day for each specified area for which the Contractor has not installed or repaired erosion control devices (including sod) within 48 hours after receiving written notice.

02573.5 – BASIS OF PAYMENT

Payment shall be limited to 50% of the actual quantities installed until 50% of the Contract Work including any Change Orders has been completed. At that point in time, payment shall be increased but limited to 80% of the actual quantities installed until all temporary erosion control measures have been removed from the project site.

02575 – CONTROLLING EROSION AND ESTABLISHING VEGETATION

02575.1 – DESCRIPTION

Sod, seed or wood fiber blanket shall be placed along boulevards and slopes as specified by the Engineer.

Sod shall be placed in right-of-way along the edge of all concrete curb or paved areas as directed by the Engineer in the field.

Seed shall be placed in all disturbed areas that are not sodded as directed by the Engineer. The Contractor will be responsible to seed areas considered beyond normal construction limits at no additional compensation. Areas outside of the construction limits used for stock piling will need to be seeded and will be considered incidental to the project costs.

If the Contractor fails to salvage all available topsoil or topsoil has been buried or wasted, the Contractor shall at his own expense, provide the balance of the topsoil to complete the project. Stripping, stockpiling, respreading and finish grading of topsoil shall be included with no additional compensation.

02575.2 – MATERIALS

- C Sod: Sod shall meet the requirements of MnDOT 3878 type lawn.
- E Fertilizer: The fertilizer shall be 22-0-10 slow release.
- F Mulch: Shall be Type 1 with disc anchoring.
- G Wood Fiber Blanket: Shall be MnDOT 3885.2 Category 3N.

02575.3 – CONSTRUCTION REQUIREMENTS

Sod shall be placed after placement of the concrete curb and gutter and the first lift of bituminous roadway. All of the sod shall be placed prior to applying the final lift. The area to be sodded shall be prepared by killing all weeds, removing all cobbles, and leveling to provide a suitable base for the sod.

Seed can be installed in the dormant state in accordance with MnDOT requirements. The Contractor is responsible for successful establishment of the seed and shall replace an unsuccessful seeding until adequate turf is established.

Maintenance: The Contractor shall be solely responsible for replacement and/or repair of any seeded area that may wash out, erode, or fail to grow prior to acceptance with no additional compensation therefor. The Contractor shall be responsible for maintaining new seed and sod for a period of 30 days.

02575.5 – BASIS OF PAYMENT

Payment at the unit price bid for sod or seeding shall include salvaging and respreading four (4) inches of topsoil and fertilizer on disturbed areas.

Seeding shall be paid for at the bid unit price per acre. This shall include seed, furnishing and installing mulch, grading, shaping, and all miscellaneous work.

Watering shall be considered incidental.

02600 – EXCAVATION AND BACKFILL OF UTILITY TRENCHES

The provisions of CEAM 2600 are modified and/or supplemented with the following:

02600.1 – DESCRIPTION

This work shall consist of excavating and backfilling trenches for water main, sanitary sewer and storm sewer utility construction.

02600.3 – CONSTRUCTION REQUIREMENTS

B Excavation and Preparation of Trench: The following shall be added to sections 2600.3B1-5:

B1 Operational Limitations and Requirements: Where possible, excavated materials shall be placed in areas that will not block existing vehicle and pedestrian traffic and drainage ways. The Contractor shall review proposed methods of operation with the Engineer prior to beginning the work.

The trench shall be dug only so far in advance of the work. Advance excavation shall be the minimum consistent with the Contractor's methods and scheduling, shall be subject to the approval of the Engineer and consistent with other sections of these specifications. The sides of the trench shall be sloped and/or braced and the trench drained to provide a stable excavation and permit pipe to be laid in a dry trench.

The trench excavation must conform to all local, state, and federal requirements. All work must be confined to the limits of the construction and to easements or rights-of-way as indicated on the plans.

The Contractor shall install at his expense the necessary trench support to meet the varying soil conditions and to protect existing structures and property.

- B3 Excavation Limitations and Requirements: It shall be the Contractor's responsibility to notify the Engineer of changing soil conditions which may be of poor bearing capacity and when organic soils are encountered. Where utilities are placed on unstable soils without notification of the Engineer, the Contractor shall be responsible for all repairs and correction of the installation without further compensation.

Should material be encountered in any trench that is in the judgment of the Engineer unsuitable, replacement materials may be ordered. Excavation and disposal of material shall be incidental. Replacement material shall be obtained from excess suitable material from other areas of the project. Contractor shall be responsible for management of the materials on the site.

Granular foundation materials for use where unstable foundation materials are encountered shall not be used as an aid to facilitate installation of pipe in wet soil conditions. Use of these materials in this manner in lieu of providing adequate dewatering measures shall be considered incidental to the construction with no additional compensation allowed therefor.

- B4 Sheeting and Bracing Excavations: The cost of all special construction techniques necessary to protect in place facilities shall be included in the unit price bid for pipe installation with no additional compensation allowed therefor.

C Trenchless Pipe Installation: The following shall be added to section 2600.3C:

C1 Jacking/Boring & Pipe Laying Operations:

The terms "auger", "boring", "jack", "jacking", and "tunneling" in the proposal, specifications, and plans refers only to non-open cut construction.

The Contractor shall inspect and verify soil conditions to his own satisfaction in order to determine the type of construction to employ. Natural and/or manmade obstructions may be encountered in the soil. These contract documents do not warrant the nature or condition of the soils, and do not warrant that natural or manmade obstructions will not be encountered. The Contractor shall not be entitled to additional compensation for any natural or manmade obstructions encountered during non-open cut construction or excavation.

During the construction, the Contractor shall be responsible for protecting all existing utilities above the pipe invert.

The carrier pipe shall be installed within the casing pipe using "wooden skids" or similar devices to center the carrier pipe within the casing pipe. Upon completion of the carrier pipe installation, the annular space between the carrier pipe and the casing shall be densely filled with sand and the ends sealed with cement. A simultaneous grouting and jacking procedure shall be used.

The jacking system shall be provided with an integral grout pipe and casing pipe. A one-inch (1") grout pipe shall be tack welded to the front edge of the first length of casing pipe. The grout pipe shall be extended with the casing pipe, but not fastened to the casing pipe during the remaining jacking operations. After the pipes are through to the receiving pit, cut the grout pipe free from the casing pipe. Pull the grout pipe back through the embankment applying positive piston pressure on the grout along the outside the casing pipe throughout the pulling operation. A cement slurry grout mix with as little water as possible shall be used. Bentonite shall not be used to fill voids. The Engineer shall approve grout and backfill material prior to placement of any material.

Deviation from the pipe grade, as provided by the Engineer, in excess of 0.05 percent may be cause for removal and relaying of the pipe by the Contractor with no additional compensation allowed therefore. The use of water under pressure (jetting) or puddling will not be permitted to facilitate boring, pushing, or jacking operations. No jacking or boring of pipe will be allowed below the water table until it has been dewatered. If a void develops, the jacking or boring operation shall stop until the void has been filled by an approved method

The Contractor shall take the following precautions when boring:

1. Extend casing through entire distance bored.
2. Check grade and alignment after each casing section is installed.
3. Coordinate operations to provide continuous support to surrounding earth materials.
4. Excavation shall be carried on in such a manner as to provide adequate support to surface structures and roads above and adjacent to the boring and not create any hazards to overhead traffic and other activities.
5. These contract documents do not warrant or guarantee the extent to which rocks, boulders, or other obstructions, regardless of size, may be encountered during boring operations. No extra compensation will be made for removal of rocks, boulders or other natural or manmade obstructions encountered during non-open cut construction or excavation.
6. All voids caused by boring shall be filled by pressure grouting. The grout material shall consist of a sand-cement slurry of at least two sacks of cement per cubic yard and a minimum of water to assure satisfactory placement. All slurry shall be pre-approved by the Engineer prior to use by the Contractor.

The Contractor shall take the following precautions when jacking:

1. The jacking machine shall be capable of controlling line and grade.
2. Progressively push carrier pipe through completed casing.
3. Strap two wooden saddle blocks to each pipe length to provide support at regular intervals.
4. Center carrier pipe in casing at all times.
5. Construct concrete bulkhead on casing pipe and partially fill annular space between casing and carrier pipe with dry blown sand. Space shall be considered filled when dry sand blows out of opposite end of casing pipe.
6. Fully seal each concrete bulkhead after the sand has been deposited and blow pipes are removed.
7. The location, size and configuration of all jacking pits shall be subject to approval of the Engineer.

C2 Directional Boring:

Boring and Jacking Operations: Deviation from the pipe grade, as provided by the Engineer, in excess of 0.05 percent may be cause for removal and relaying of the pipe by the Contractor with no additional compensation allowed therefor.

The casing pipe shall be welded steel pipe (new material) conforming to ASTM Designation A252, Grade 2 or ASTM Designation A139, Grade B. No recycled steel casing pipe shall be allowed. The wall thickness shall be the minimum shown in the table below for the corresponding pipe size.

Construction Requirements

The carrier pipe shall be installed within the casing pipe using "wooden skids" or similar devices to center the carrier pipe within the casing pipe. Upon completion of the carrier pipe installation, the annular space between the carrier pipe and the casing shall be densely filled with sand and the ends sealed with cement. A simultaneous grouting and jacking procedure shall be used.

The jacking system shall be provided with an integral grout pipe and casing pipe. A one-inch (1") grout pipe shall be tack welded to the front edge of the first length of casing pipe. The grout pipe shall be extended with the casing pipe, but not fastened to the casing pipe during the remaining jacking operations. After the pipes are through to the receiving pit, cut the grout pipe free from the casing pipe. Pull the grout pipe back through the embankment applying positive piston pressure on the grout along the outside of the casing pipe throughout the pulling operation. A cement slurry grout mix with as little water as possible shall be used. Bentonite shall not be used to fill voids. The Engineer shall approve grout and backfill material prior to placement of any material.

Boring and Jacking Operations: Deviation from the pipe grade, as provided by the Engineer, in excess of 0.05 percent may be cause for removal and relaying of the pipe by the Contractor with no additional compensation allowed therefore. The use of water under pressure (jetting) or puddling will not be permitted to facilitate boring, pushing, or jacking operations. No jacking or boring of pipe will be allowed below the water table until it has been dewatered. If a void develops, the jacking or boring operation shall stop until the void has been filled by an approved method.

The Contractor shall take the following precautions when boring:

- Extend casing through entire distance bored.
- Check grade and alignment after each casing section is installed.
- Coordinate operations to provide continuous support to surrounding earth materials.
- Excavation shall be carried on in such a manner as to provide adequate support to surface structures and roads above and adjacent to the boring and not create any hazards to overhead traffic and other activities.
- These contract documents do not guarantee the extent to which boulders may be encountered during boring operations. No extra compensation will be made for removal of boulders or for other costs caused by boulders encountered during excavation.
- All voids caused by boring shall be filled by pressure grouting. The grout material shall consist of a sand-cement slurry of at least two sacks of cement per cubic yard and a minimum of water to assure satisfactory placement.

The Contractor shall take the following precautions when jacking:

- The jacking machine shall be capable of controlling line and grade.
- Progressively push carrier pipe through completed casing.
- Strap four wooden skids to each pipe length and to provide support at regular intervals and prevent damage to pipe and bell joints during installation.
- Center carrier pipe in casing at all times.
- Partially fill annular space between casing and carrier pipe with dry blown sand.
- Seal each end of the casing with a concrete bulkhead after the sand has been deposited.
- The location, size, and configuration of all jacking pits shall be subject to approval of the Engineer.

Payment: Payment will be made at the contract bid price per linear foot, and shall be compensation in full for all costs incidental thereto, including the concrete bulkheads, filling with sand, grouting outside the casing pipe and dewatering (if necessary) as specified in the plan. Payment for pipe extending through the casing pipe will be paid for at the unit price bid for the size of pipe specified.

E Pipeline Backfilling Operations:

The following shall be added to section 2600.3E:

Bedding of DIP and RCP shall be defined as Class B and be accomplished in accordance with these specifications. Class B bedding shall be as specified within the CEAM specifications and shall be used for all DIP and RCP installations unless otherwise called for on the Plans or directed by the Engineer.

All PVC pipe shall be bedded in accordance with ASTM Specification D2321, "Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe". This shall include placement of granular materials meeting the requirements of 2600.2 from a point six (6) inches below the bottom of the pipe to a point twelve (12) inches above the top of the pipe.

Compaction of granular materials around PVC pipe shall be to ninety-five (95) percent of maximum density (ASTM D698). Placement and compaction of granular materials around PVC pipe shall be considered incidental to the installation of the pipe with no additional compensation allowed therefor. Where existing soils do not meet the requirements of Specification 2600.2, the Contractor shall furnish the required granular materials as incidental to the cost of the pipe.

Backfilling to the top of the encasement zone shall be completed with hand operated mechanical tampers in six (6") inch lifts.

Backfilling above the encasement zone shall comply with the general requirements specified in 2600.3E and the following.

1. Backfill within the roadbed or building pad areas shall be compacted to Specified Density Requirements as per MnDOT Specification 2105.3F1.
2. Backfill not within the roadbed or building pad areas shall be compacted to 95% of maximum density (ASTM D698).

Any settlement of road surfaces in excess of one (1") inch, as measured by a 10' straight edge, within the warranty period, shall be considered failure of the mechanical compaction and the Contractor shall be required to repair such settlement with no additional compensation allowed therefor.

If insufficient suitable materials are available to complete backfilling, excess suitable materials from other areas of the project shall be used to complete the work. Granular foundation, bedding, and encasement materials shall be placed around all pipe within areas of rock excavation.

02600.4 – METHOD OF MEASUREMENT

Granular Materials: Section 2600.4B shall be modified as follows:

One and one-half inches (1 ½ inches) clear foundation material can be substituted at the same price if deemed necessary and if approved by the Engineer. Granular foundation material shall be used only below the pipe invert and will be paid on a per ton basis for the material in place. No payment will be allowed without prior approval of the Engineer.

02600.5 – BASIS OF PAYMENT

The following shall be added to section 2600.5:

No additional compensation will be made for sewer and copper water service lines not constructed in a common trench.

02611 – WATERMAINS AND SERVICES

The provisions of CEAM 2611 are modified and/or supplemented with the following:

02611.1 – DESCRIPTION

The provision herein shall be applicable to all work necessary to construct connections of existing water main facilities to new or repaired water main facilities, either by the means of mechanical joints or by wet tap.

02611.2 – MATERIALS

- A1 Cast Iron and Ductile Iron Pipe and Fittings: Ductile iron pipe shall be Class 52 for six-inch (6"), eight-inch (8"), ten-inch (10") and twelve-inch (12") diameter, and Class 50 for sixteen-inch (16") diameter and larger. All fittings shall be ductile iron Class 350 compact fittings in accordance with ANSI/AWWA C153/A21.53-84 and shall be paid for as ANSI/AWWA C110/A21.15-83 Class 350 C.I. Body Weight. Ductile iron pipe watermain shall be used only as directed by the Engineer.
- A2 PVC Watermain: The 6-inch through 12-inch Polyvinyl Chloride (PVC) Pressure Pipe shall conform to the requirements of AWWA C900 for Water Distribution. 14-inch through 24-inch Polyvinyl Chloride (PVC) Pressure Pipe shall conform to the requirements of AWWA C905 for Water Distribution. All PVC water main pipe shall meet the requirements of ANSI/NSF 61 "Drinking Water System Components – Health Effects." All trunk watermain shall be C900 DR 18 PVC unless directed by the Engineer.
- B Fire Hydrants: Hydrants shall be Waterous Pacer; Model WB-67-250 conforming to AWWA C502 with eight and one half feet (8 ½ feet) of bury. The nozzle shall be a minimum of eighteen inches (16") above grade break-off flange. Hydrants shall have National Standard Thread connections. Nozzle caps shall be nut type with chain. **Each hydrant shall be equipped with a red "FlexStake" type flag and a spare flag for future replacement. Contractor shall provide spare flag to the North Branch Water and Light Department.**

The Contractor shall install one yellow "Out of Order" tag on pumper connection after backfilling of the hydrant has been completed. The tag can be removed once the results of the bacteria test have been received by North Branch Water and Light Department and the City of North Branch, and the system is put online.

- C1 Valve Boxes: Valve boxes shall be cast iron, three-piece screw type boxes with 5 ¼" diameter shaft suitable for 7 1/2' of cover over water main, and a drop lid with the word "WATER" on the lid. Valve boxes shall be Tyler 6860 series or approved equal.
- C2 Gate Valves: All valves shown on the drawings as twelve-inch (12") or less shall be compression resilient seated gate valves in accordance with the AWWA C509 (latest revision) Specifications and having one hundred fifty (150) psi pressure rating. Valves shall be Waterous Series 2500 or approved equal, including adaptors (incidental). Gate valves meeting AWWA C500 Specification will not be allowed.
- C3 Butterfly Valves: All valves larger than twelve-inch (12") shall be butterfly valves and shall conform to the requirements of AWWA C504 and the following requirements:
- (1) Working pressure rating of 150 psi minimum.
 - (2) Two-inch square operating nut opening counterclockwise.
 - (3) Double "O" ring or split V type stem seal.
 - (4) Traveling must type greater permanently sealed and lubricated.
 - (5) Manufacturers: Dresser, Pratt, or equal.

D The following shall be added to section 2611.2D:

Water Service Pipe and Fittings: Services shall be new and unused copper, Type K, as specified.

Corporation Stops shall be Mueller B25000, Ford F600, A.Y. McDonald 4701, or Engineer approved equal ball valve design with threaded inlet and flare type joint.

Curb stops shall be Mueller H-15154 Mark II, Ford B22 Series, A.Y. McDonald 6104, or Engineer approved equal ball valve design for use with Minneapolis Pattern Curb boxes with stationary rods.

Curb boxes and lids shall be Mueller, Ford, McDonald or Engineer approved equal. Curb boxes shall be adjustable up and down for seven and one-half feet (7 ½") of cover.

Curb boxes located in a driveway or parking lot shall be covered with a Ford A-1 Meter Box Cover or Engineer approved equal.

Service saddle on six-inch (6") mains shall have an epoxy coated ductile iron body with double stainless steel straps and neoprene gasket, Smith-Blair 317 or Engineer approved equal.

- F Retainer Glands: Retainer glands shall be ductile iron designed to withstand pressures shown in Table No. 9-6 of American Cast Iron Pipe Company's catalog. Retainer glands shall be by American, US Pipe or Mega-Lug type and shall be used at all changes in direction and at all fittings and valves in addition to reaction blocking. This shall be considered incidental to the pipe.

All watermain, hydrants, and services shall be installed with tracer wire, grounding anodes and access boxes as defined on the standard detail plates.

02611.3 – CONSTRUCTION REQUIREMENTS

TESTING: The City Inspector will receive twenty-four (24) hour advance notice for all testing.

- A2 Pipe Laying Operations: A horizontal separation distance of ten feet (10') shall be maintained to storm and sanitary sewers. An eighteen-inch (18") vertical separation shall be maintained at all crossings.

Excavation and Preparation of Trench: All trenches shall be excavated so that the pipe may be laid accurately to grade with a minimum of seven and one-half feet (7 1/2') of cover over the water main unless otherwise noted on the plans.

- A4 Blocking and Anchoring of Pipe: All water main piping shall be constructed to resist the thrust existing at valves, hydrants and at all fittings by the use of retainer glands and reaction blocking. The retainer glands and the reaction blocking shall be considered incidental to the project. All pipe joints within ten feet (10') of a bend shall be tied or restrained. All hydrants, valves and fittings shall be tied with two (2) three-fourth's inch (3/4") galvanized rods in addition to the required blocking. Refer to detail plate for size of blocking. Megalugs may be used with galvanized tie rods in lieu of thrust blocking for hydrants only.

- C Water Service Installations: Corporation stops shall be tapped into the main only when full of water under operating pressure. No taps shall be made into a dry pipe. Corporation stops shall be turned into the pipe until tight and shall not be turned back to facilitate having the operating nut on top.

The water service shall be installed with seven and one-half feet (7 1/2') of cover as shown on the detail plate. The water service shall be installed with a horizontal separation distance of three feet (3') from the sanitary sewer service and shall be installed upstream of the sanitary sewer service. The curb stop and box shall be placed 1' from the property line with a tail that extends 10-feet into the property within the drainage and utility easement. The top of the curb box shall be set to proper grade with the extension at the mid-point. All curb boxes to be marked with a heavy-duty "T" type steel fence post painted blue.

A five-foot (5') extension of one-inch (1") copper shall be brought to within three feet (3') of the ground surface in areas of high ground water.

At least two (2) ties shall be made for each service. All ties shall be completed prior to street construction.

- D Setting Valves, Hydrants, Fittings and Specials: Hydrants, gate valves and valve boxes shall be set plumb with valve boxes placed directly over valves. Top of valve boxes shall be set one-half inch (1/2") below finished grade unless otherwise noted on the plans. Valves shall be installed over one-fourth (1/4) cubic yard of crushed stone or coarse gravel to ensure drainage. Hydrants shall be set at such elevations that the connecting pipe will have a minimum of seven-foot, six-inch (7'-6") cover or as shown in the plans. Each hydrant shall be placed upon a slab of stone, brick or concrete not less than four inches (4") thick and fifteen inches (15") square. The back side of the hydrant opposite the pipe connection shall be firmly wedged against the vertical face of the trench with concrete blocking to prevent the hydrant from blowing off the line. Around the base of each hydrant shall be placed not less than one-half (1/2) cubic yard of crushed stone or coarse gravel with tar paper covering to ensure complete drainage of the hydrant when closed.

All hydrants shall be given one (1) additional coat of factory equivalent paint after installation. All abraded surfaces shall be cleaned prior to application of the final field coat.

When the hydrant leads are installed in groundwater the weep holes must be closed and the pumping nozzle cap painted black, verify with Engineer prior to work.

A hydrant shall be installed at all watermain dead ends for flushing and air bleed.

Connection and Assembly of Joints: All jointing of push-on and mechanical joint pipe shall be in accordance with AWWA C600.

Either copper straps or approved conductive gaskets with copper inserts shall be installed throughout the system to provide conductivity. Copper straps between pipes shall be not less than one-sixteenth inch (1/16") by three quarters of an inch (3/4") and be bolted to shop welded pipe straps of the same size. Bolts shall be five-sixteenths inch (5/16") diameter bronze. Where shop welded straps are not provided, field welds shall be made using the Cadweld method with size thirty-two (32) cartridge. Each field weld shall be properly made after filing the surface of the pipe to a clean bare metal over the entire area of the weld. Straps bolted to mechanical joint fittings shall be not less than one-sixteenth inch (1/16") by one and one-half inch (1 1/2"). All straps shall be securely fastened and backfilled, placed so as to not damage the conductivity.

- E Disinfection of Watermains: Disinfection procedures, sampling and testing shall meet the Minnesota Department of Health standards.

The disinfection of the watermain shall be performed according to AWWA Standard C651. If the tablet or continuous feed methods are used, the completed water main shall be disinfected for 24 hours with at least 50 ppm available chlorine, with a residual of at least 10 ppm throughout the length of the main at the end of the 24-hour period.

The Contractor shall perform the flushing operation 24 hours prior to bacteria testing. All watermain bacteria testing will be performed by the City, the City's designee or North Branch Water and Light personnel. Testing costs will be charged to the contractor/developer. Coliform bacteria shall not be present in the water sample at any level. The test results will be discussed with the developer after the City receives them. After receiving a passing test, the City will open the valves to connect the new pipe to the public system.

Testing must be completed with Engineer present by the authorized testing lab in the field. The testing lab technician shall take and transport the samples with results mailed and faxed to city's field representative, City of North Branch, and North Branch Water & Light Department.

- G Hydrostatic Testing of Watermain: Complete the pressure test as per Hydrostatic Testing of Watermains of the CEAM Standard Specifications, 2013 edition.

Paragraph 5 shall be removed and replaced with the following: There is no allowable drop during the two hour pressure test.

Paragraph 7 shall be removed.

If this fails, the Contractor shall attempt to locate and repair the leak. As a final option, the leakage test shall be performed as per I2 with the leakage formula being applicable.

After a successful pressure test, each valve will be tested for a minimum of 20 minutes with no allowable drop.

The pressure gauge shall be marked in one (1) psi increments.

The City does not guarantee that the existing gate valves will maintain the leakage test requirement and as an alternate, the Contractor will be required to plug the newly installed line and test separately each segment of line installed. All wet taps and/or cut-ins shall be tested separately and immediately prior to backfilling.

- I Adjusting Valve Boxes: The procedure for adjusting structures shall be in accordance with the standard procedures used to adjust structures within multiple lift bituminous pavement sections. Included in this work is the requirement to set the rim elevations to the interim surface elevation of the bituminous base course prior to suspension of operations for the winter. During the structure adjustment for the bituminous base course, the Contractor shall place traffic cones or other traffic barricades on the structure being adjusted.

The procedure shall consist of setting the valve box to the interim pavement grade, constructing bituminous pavements, and in the following year, setting the rims to final grade prior to paving the final bituminous wear course. The rims shall be set to final grade by utilizing a manhole riser ring installation per the Standard Detail Plate as shown in Appendix B. The manhole riser ring installation shall be as per manufacturer's recommendations.

- a. Valve boxes shall be set to have six (6) inches of adjustment up and down from finished grade. Adjustment of gate valves should include additional riser sections as needed to meet the above requirements.
- b. The final rim surface elevation of valve box casting shall be one-half (1/2) inch below the adjacent pavement elevation and at grade in turf.
- c. Patches for casting adjustments shall be saw cut in a square shape around the casting that is twice the size of the casting. Bituminous removal shall be kept to a minimum to allow adjustment of the casting and proper compaction using a jumping jack compactor.

The Contractor has ten (10) calendar days to raise all structures upon completion of the base course paving. Failure to do so shall result in a \$50.00 per structure reduction in the Contractor's partial payment. The Contractor shall remain responsible for the adjustments. Repeated failure to complete this item before the winter season shall be considered failure to perform and appropriate action will result.

The Contractor has forty-eight (48) hours to install the wear course paving after adjusting structures for the wear course paving, this time frame includes overlay projects. During the interim period between adjusting structures for the wear course paving and installing the wear course paving, the Contractor is responsible for providing traffic barriers to protect the public.

02611.5 – BASIS OF PAYMENT

Payment for watermain pipe shall be limited to 80 percent of the actual amount installed until all watermain has been tested, accepted, and backfilled to subgrade elevations.

Connect to Existing Watermain: Payment for connect to existing water main shall be on a unit basis for each connection regardless of size and include all materials/fittings, labor and equipment required to provide a complete connection as specified.

Hydrant Assembly: Payment at the unit price bid per hydrant assembly shall include one hydrant locator per hydrant, and delivering the extra locators and break offs to the North Branch Water and Light Department. It also includes fittings, 6-inch gate valve, pipe and foundation material.

Wet Tap: Payment at the unit price bid per each wet tap shall include excavation, backfill, and gate valve and box.

Watermain Lowering: Payment for watermain lowering shall be paid through DIP pipe lengths and fittings required for construction. All over depth shall be incidental.

Fittings: Payment for ductile iron fittings shall be at the unit price bid per pound of fitting according to AWWA C110/A21. No direct payment will be made for mega-lugs, which will be considered incidental to each fitting.

Gate/Butterfly Valve: Adjustment shall include additional riser sections as needed. Valve box adjustments to bituminous base and wear course shall be considered incidental to the gate valve/Butterfly valve bid item. Bituminous removal and replacement will be considered incidental to the gate valve/Butterfly valve item.

Adjust Gate Valve: Payment shall be at the unit price bid for each gate valve box that must be adjusted to match into the new street grade. Payment will only be made for adjustments to existing gate valve boxes and will only be paid for adjusting the valve boxes in preparation for the bituminous wear course. An initial valve box adjustment after base course construction is incidental to this pay item. Bituminous removal and replacement shall be considered incidental to this bid item. New gate valve box adjustments will be considered incidental to the installation bid item.

Plug Ends: Payment shall be considered incidental to watermain installation.

02621 – SANITARY SEWER, STORM SEWER, AND SEWER SERVICES

The provisions of CEAM 2621 are modified and/or supplemented with the following:

02621.1 – DESCRIPTION

This work shall consist of installing sanitary sewer, storm sewer, force main and appurtenances. All work shall be in accordance with MnDOT specifications 2503 Pipe Sewers.

02621.2 – MATERIALS

All ductile iron pipe (DIP) used for gravity sewers shall have an asphaltic exterior coating that is a minimum of 1-mil thickness. Interior lining to be American Polybond Plus Lining, 60-mil thickness or Clow Protector 401 Ceramic Epoxy, 40 – 60 mil thickness.

- A3 Reinforced Concrete Pipe and Fittings: Reinforced concrete pipe and fittings shall conform with the requirements of MnDOT Specification 3236 for the type, size and strength class specified.
- A5 Poly-vinyl Chloride (PVC) Pipe and Fittings: PVC pipe and fittings shall be Type PSM SDR-35 for zero to eighteen feet (0-18') of depth and Type PSM SDR-26 for eighteen feet (18') and below or as noted on the plans. Joints shall be either O-ring rubber gasket or solvent-cemented according to the manufacturer's specifications and with the approval of the Engineer. All service wyes and service pipe shall be SDR 26.

The Contractor shall furnish and place the necessary pipe bedding material as specified in ASTM D2321, Recommended Practice for Underground Installation of Flexible Thermo-Plastic Sewer Pipe, eight-inch (8"), ten-inch (10"), twelve-inch (12"), and fifteen-inch (15") and shall be paid for as part of the unit price bid for PVC as shown on the Proposal Form.

Deflection tests shall be performed on all flexible pipe as per the 10-State Standards and shall not exceed five percent (5%). Test shall be conducted after the final backfill has been in place at least thirty (30) days. An additional test may be required prior to the end of the two (2) year warranty period.

- A13 Pressure Sewer Pipe and Fittings: Piping material used for pressure (forcemain) sewer pipe four-inch (4") through twelve-inch (12") to be molecular oriented polyvinyl chloride (PVCO) pressure pipe meeting the requirements of AWWA C909, 150 psi pressure class, minimum. Use elastomeric gasketed push-on joints. Solvent cement welded joints not permitted. When pipe is cut in filed, deburr and bevel cut edges to prevent gasket damage. Protect pipe from prolonged (more than one month) exposure to direct sunlight. Fittings to be ductile iron class 250 compact fittings in accordance with ANSI/AWWA C153/A21.53-84 with asphaltic exterior coating, 1-mil thick, AWWA C104 standard thickness interior cement lining with seal coat. Bolts and nuts to be stainless steel. Fitting to be restrained using mega-lug type retainer glands. Fittings shall be paid for as ANSI (AWWA C110/A21.15-83 class 350 C.I. body weight. Mega-lug retainer glands shall be considered incidental.

- B Metal Sewer Castings: All castings shall be as shown on the detail plates. Manhole castings shall be labeled with the words "SANITARY SEWER" or "STORM SEWER". Furnishing and installing castings for sanitary manholes and storm sewer manholes is included in the bid unit price for casting assemblies.

Adjustment of existing sanitary and storm sewer castings or manholes shall include replacement of the existing adjustment rings and installation of an exterior chimney seal product such as Infi-Shield, or approved equal to seal the upper manhole area between the cone section and the casting frame. The use of 4 inch or 6 inch adjusting rings is required whenever possible.

Adjustment of existing storm sewer castings or manholes include replacement of existing adjusting rings and a four-inch (4") concrete collar poured on outside of rings between top section and casting.

- C Pre-cast Concrete Manholes: On the sanitary sewer, all connections to manholes shall be either of the Mini-Tee type, Re-seal gasketed type, PSX: Positive Seal or other approved watertight gasketed connections. Core drilling will be required for penetrations, breaking out manhole sections for pipe connections in the field will not be permitted.
- D Pre-Cast Concrete Manholes (Sanitary): In addition to the requirements of the CEAM Specifications and the details in the plans, all sanitary manholes shall have an exterior sealing system around the rings, from the casting to the barrel section. The system shall consist of a chimney seal, Infi-Shield or approved equal.
- E Sanitary and Storm Sewer Manholes: The Contractor shall furnish and install INFI-SHIELD GATOR WRAP (12-inch) or approved equal at all **manhole joints**, per manufacturer's recommendations and/or other approved methods to prevent leakage into the manhole. If leakage occurs, the Contractor will be responsible for providing a watertight manhole.

All sanitary services shall be installed with tracer wire and access boxes as defined on the standard detail plates.

02621.3 – CONSTRUCTION REQUIREMENTS

TESTING: The City Construction Observer shall receive twenty-four (24) hours of advance notice for testing.

- A2 Pipe Laying Operations: Deviation from the pipe grade, as provided by the Engineer, in excess of 0.05 percent may be cause for removal and relaying of the pipe by the Contractor with no additional compensation allowed therefore. **No re-rounding of pipe will be allowed.**

Tracer wire shall be installed with all sewer pipe, regardless of material, that is placed and is not part of the sanitary sewer main line.

Laser Beam Grade Control: When the Contractor uses laser beam control for grade and alignment, the Contractor shall check into the grade stakes provided. Any discrepancies found between the laser beam elevation and grade stake elevation shall be immediately brought to the Engineer's attention before continuing pipe installation. Failure to check into grade stakes provided or to notify Engineer of discrepancies shall put the full responsibility on the Contractor, for any removal and reinstallation of pipe necessary to conform to the line and grade as shown on the plans.

Unsuitable Materials: Should material be encountered in any trench that is in the judgment of the Engineer unsuitable, replacement materials may be ordered. Excavation, disposal, and replacement of material shall be incidental. Replacement material shall be aggregate backfill.

Pipe Bedding: The bedding on this project shall be Class B.

PVC plastic sewer pipe shall be bedded and installed in accordance with the requirements of ASTM-D-2321, "Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe". This shall include placement of granular materials meeting the requirements of 2600.2/FI from a point six inches (6") below the bottom of the pipe to a point 12 inches (12") above the top of the pipe.

- C Sewer Service Installations: It is the responsibility of the Contractor to record sewer service and wye locations. When installing sewer services, the Contractor shall (before backfilling), contact the Engineer or his representative and assist them in making ties to the end of the service or wye and survey the vertical elevation in the open trench. At least two (2) ties shall be made for each service and if backfilling proceeds before such ties are made, the Contractor shall dig up the end of all such services with no additional compensation for the purpose of making ties and obtaining the vertical elevation. Recorded with the ties shall be size and depth of service. During backfilling the Contractor shall furnish and **place a vertical four-inch by four-inch (4"x4") wooden stake** set flush with finished ground surface and extending down to the end of the sewer service. **The stake shall be marked with a heavy-duty "T" type steel fence post painted light green.**

New services shall be kept to a minimum depth of nine feet (9') at the property line or as directed by the Engineer. Services are to terminate 10 feet (10') inside the property line with an airtight stopper fastened or braced in place to permit air testing of the pipe.

Services shall be installed at a two percent (2%) grade for four inches (4"), and one percent (1%) grade for six inches (6") to the required termination point. Risers at forty-five degrees (45°) are to be constructed for the last five feet (5') and are to terminate at a minimum depth of one foot (1') above the ground water.

- E Sanitary Sewer Leakage Testing: The sanitary and storm sewer lines shall be jetted clean and televised after base course paving. The Contractor shall supply the videotape and a detailed report within seven (7) days of the televising being completed. Televising shall be considered incidental to the construction of the individual sewer. No separate measurement or payment will be made for this work.

In addition, the sanitary sewer line shall be air-tested in accordance with the CEAM requirements. This testing shall be considered incidental to the pipe installation. No separate measurement or payment will be made for this work.

- E2b Pressure Sewer Pipe and Fittings: Sanitary sewer force main piping shall be hydrostatically tested to 150 psi for a period of two hours in accordance with section "02611 – WATER MAINS AND SERVICES."

- F Deflection Testing of PVC Pipe:

The Contractor shall deflection test (Mandrel test), in the presence of the Engineer, between manhole sections immediately after the PVC has been installed and backfill materials have been compacted to their required densities. Deflections greater than five percent (5%) of the inside diameter of the pipe is considered a failure. This section of pipe will be Mandrel tested again thirty (30) days after the first successful Mandrel test has been made. Deflection testing shall be considered incidental to the bid cost of the pipe. The Owner reserves the right to have the Contractor measure the deflection of PVC pipe at any time during a two (2) year guarantee period following the final acceptance of the sewer pipe.

G Televising Sanitary and Storm Sewer:

Televising of the sanitary and storm sewers for all projects shall be coordinated and/or completed by the City. For projects completed as part of a private development, the televising costs shall be reimbursed by the project developer. All sanitary sewer shall be jetted clean and televised after the services are installed and within fifteen (15) days after the manholes are raised as directed by the Engineer. The televising contractor shall supply the owner, and developer if applicable, with video and a detailed report within seven (7) days of the televising being completed. The televising video shall be of high-quality color picture (high resolution definition 1080p or greater) and sound meeting the Owner's formatting requirements. The camera lighting shall be illuminated to see a minimum of 20 feet in front of the camera. The operator must stop at all joint connections, potential defects and services, and move the camera (pan and tilt) so the joint connection condition and interior of connecting pipe are clearly visible. The camera will be operative in 100% humidity conditions and the focal distance will be adjustable through a range of from 6" to infinity.

H Pressure Sewer Pipe and Fittings: The specifications for construction requirements for as stated under section "02611 – WATER MAINS AND SERVICES" shall apply to all pressure sewer pipe.

I Ductile Iron Adjusting Rings: Ductile iron manhole adjustment rings as manufactured by Ess Brothers & Sons, Inc., Neenah Foundry Company, or approved equal, shall be used on all sanitary and storm sewer manholes for adjustment between the non-wearing course and the wearing course. The height of the cast iron adjustment ring shall be determined so as to set the top of casting one-half (1/2) inch below finish wear grade at each manhole and still maintain the required wear course thickness. A one-quarter (1/4) inch bead of EBS Super Glue adhesive, or approval equal, shall be placed around the entire rim of the existing casting prior to placement of the adjustment ring. The existing casting shall be cleaned according to the adhesive manufacturer's recommendations.

The procedure shall consist of setting the rings and casting to the interim pavement grade, constructing bituminous pavements, and in the following year, setting the rims to final grade prior to paving the final bituminous wear course. The rims shall be set to final grade by utilizing a manhole riser ring installation per the Standard Detail Plate as shown in Appendix B. The manhole riser ring installation shall be as per manufacturer's recommendations.

On bituminous overlay projects the use of manhole risers is REQUIRED.

Structures shall be adjusted such that they conform to the following requirements:

- a. Manholes and catch basins shall have no more than six (6) nor less than two (2) HDPE adjusting rings and the maximum height of adjusting rings shall not exceed twelve (12) inches. The diameter or rectangular dimension shall conform to the type of casting on the structure.
- b. Frame and ring castings shall be set to the designated elevation per manufacturers' requirements. Sealant shall be used between the rings.. HDPE sloped rings and/or varied width may be required to match the slope and/or elevation adhesive.
- c. Catch basin castings and adjusting rings shall be HDPE with external chimney seal or adhesive wrap when installed in curbing in accordance with the Standard Detail Plates. Rim elevations shall be set to correspond with the depressed curb as illustrated in the Standard Detail Plates.
- d. The final rim surface elevation of the manhole casting shall be one-half (1/2) inch below the adjacent pavement elevation and at grade in turf.
- e. **All sanitary and storm sewer manholes shall include an Infi-Shield® or ENGINEER approved equivalent external manhole chimney seal. Contractor shall provide 24**

hour notice for inspection.

- f. Patches for casting adjustments shall be saw cut in a square shape around the casting that is twice the size of the casting. Bituminous removal shall be kept to a minimum to allow adjustment of the casting and proper compaction using a jumping jack compactor.

The Contractor has ten (10) calendar days to raise all structures upon completion of the base course paving. Failure to do so shall result in a \$50.00 per structure reduction in the Contractor's partial payment. The Contractor shall remain responsible for the adjustments. Repeated failure to complete this item before the winter season shall be considered failure to perform and appropriate action will result.

The Contractor has forty-eight (48) hours to install the wear course paving after adjusting structures for the wear course paving, this time frame includes overlay projects. During the interim period between adjusting structures for the wear course paving and installing the wear course paving, the Contractor is responsible for providing traffic barriers to protect the public.

Special Construction Techniques

The Contractor shall use "special construction methods," such as trench box construction and/or back-casting, to minimize the width of excavation to protect bituminous roadways, culverts, trees, mailboxes, signs, power poles, existing utilities and work within street right-of-way or easement as directed by the Engineer. The extra cost shall be incidental to the pipe construction.

All trench excavations shall be backfilled at the end of each working day. This applies to all utility trenches. Boring pits may be left open provided adequate traffic control including jersey barriers, barrels and other items as may be required, is installed. Traffic control measures will be paid for as part of the lump sum item "Traffic Control."

02621.4 – METHOD OF MEASUREMENT

- A Sewer Pipe: Sewer pipe will be measured by the linear foot for each type of diameter of pipe and according to pipe classification.

Unit bid shall include excavation, pumping, sheeting, pipe completely installed, and backfilled in-place. All measurements will be made along the centerline of the pipe and from center of manhole to center of manhole, or point of juncture with bends, tees or special structures. The services are also paid along the horizontal centerline of the pipe with no additional payment for quantities associated with vertical length.

- B Block Manholes: Manholes constructed of concrete blocks in lieu of precast concrete shall be paid for at the same unit price bid for conventional manholes, unless indicated as being lump sum bid items. Block manholes shall be used only in specific locations and as permitted by the Engineer.

- I Casting Adjustment: No measurement or payment will be made for casting adjustment for structures installed as part of new construction, including multiple adjustments to suit blacktop lifts. They will be considered incidental, and will be included as part of the casting assembly bid item. Adjustments of structures in reconstruction areas shall be measured on a unit basis for each casting adjustment. This unit shall include all materials, labor and equipment required to adjust the structure to the required elevation for new pavement surface.

02621.5 – BASIS OF PAYMENT

Payment shall be made as per the Standard Utility Specification, except as follows:

Riser service pipe installation will be paid for as service pipe.

Payment for sewer pipe shall be limited to eighty (80) percent of the actual amount installed until all sewer has been tested, accepted and backfilled to subgrade elevations.

Construct Sanitary Manholes: Payment shall be by the linear foot as measured from lowest invert to the top of casting including seal wrapped joints.

Construct Drainage Structure Special (2'x3' CB): Payment shall be at the unit price bid for each structure installed. The unit price bid should include all labor, materials and equipment required to install structure to the required elevation.

Construct Drainage Structure Design 48-4020 Through 120-4020: Payment shall be by the linear foot as measured from lowest invert to the top of casting at the flow line. The unit bid price should include all labor, materials, and equipment required to install structure to the required elevation.

Construct Drainage Structure Design H (27" Pot): Payment shall be at the unit price bid for each structure installed. The unit bid price should include labor, materials and equipment required to install structure to the required elevation.

Pond Outlet Structure: Payment shall be at the unit price bid for each structure and should include all labor, materials, and equipment required to install structure to the required elevation and size as specified. Galvanized grate, anchoring, and concrete maintenance collar shall be considered incidental to the cost of the structure.

Outside Drop Section: Payment will be at the unit price bid per vertical foot of drop including all labor and materials required, such as coring into manhole, manhole base, vertical pipe, and fittings.

Connection Between DIP and PVC Sanitary Sewer: The Contractor must use an approved fitting for DIP to PVC pipe connections. Fernco connections will not be allowed. This item is incidental to pipe quantities.

Casting Assembly (Storm Manholes and Catch Basins): Payment shall be at the contract unit price for each casting supplied, installed, and adjusted as specified. Payment shall be in full for all labor, materials, and equipment required to install casting to the required elevation, including but not limited to, adjustment rings and four inch (4") concrete collar around rings. Payment shall also include the final adjustment for the wear course with no additional compensation for ductile iron adjusting rings and required adhesives. Bituminous removal and replacement shall be considered incidental to this bid item.

Casting Assembly (Sanitary Sewer Manholes): Payment shall be at the contract unit price for each casting supplied, installed, and adjusted as specified. Payment shall be in full for all labor, material and equipment required to install casting to the required elevation, including but not limited to, adjusting rings and chimney seal. Payment shall also include the final adjustment for the wear course with no additional compensation for ductile iron adjusting rings and required adhesives. Bituminous removal and replacement shall be considered incidental to this bid item.

Adjust Casting: Payment for adjustment on an existing structure will be made at the unit price bid for each casting adjusted, and includes sanitary sewer manhole castings, storm sewer manhole castings, and catch basin castings. Payment will be in full for all labor, materials and equipment required to adjust and reset the structure to the new street grade as specified herein and shown on the individual project plans. For those manholes where ductile iron adjusting rings are allowed, as described above, the ductile iron adjusting rings and required adhesives shall be considered incidental. Interim adjustments shall be considered incidental. Bituminous removal and replacement shall be considered incidental to this bid item. New casting adjustments will be considered incidental to the installation bid item.

Plug Ends: Payment shall be considered incidental to sanitary and storm sewer installation.

APPENDIX A

STANDARD UTILITIES SPECIFICATIONS (CEAM 2013 EDITION)



CITY ENGINEERS ASSOCIATION OF MINNESOTA
Engineering Our Cities' Futures

CITY ENGINEERS ASSOCIATION OF MINNESOTA

STANDARD SPECIFICATIONS

2600 Trench Excavation and Backfill/Surface Restoration

2611 Watermain and Service Line Installation

2621 Sanitary Sewer and Storm Sewer Installation

2631-CIPPS Sewer Pipe Rehabilitation - Cured In Place Pipe Systems

2641 – Pipeline Rehabilitation - Pipe Bursting Method

2013 Edition

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SECTION 2600 – STANDARD SPECIFICATIONS FOR TRENCH EXCAVATION & BACKFILL/SURFACE RESTORATION

2600.1 DESCRIPTION

This work shall consist of excavation, trenching, backfilling, and restoration of existing surfaces for the construction of underground utilities.

The use of the term "Plans, Specifications and Special Provisions" within this specification shall be construed to mean those documents which compliment, modify, or clarify these specifications and are an enforceable component of the Contract Documents.

All references to MnDOT Specifications shall mean the latest published edition of the Minnesota Department of Transportation "Standard Specifications for Construction", and all supplements and amendments thereto, published prior to the date of advertisement for bids.

All reference to other Specifications of AASHTO, ASTM, ANSI, AWWA, etc. shall mean the latest published edition available on the date of advertisement for bids.

2600.2 MATERIALS

A Granular Materials

Granular materials furnished for foundation, bedding, encasement, backfill, or other purposes as may be specified shall consist of any natural or synthetic mineral aggregate such as sand, gravel, crushed rock, crushed stone, or slag that shall be so graded as to meet the gradation requirements specified herein for each particular use by the material manufacturer or as indicated in the Plans, Specifications, or Special Provisions.

A1 Granular Material Gradation Classifications

Granular materials furnished for use in Foundation, Bedding, Encasement, or Backfill construction shall conform to the following requirements:

Foundation materials shall have one hundred percent (100%) by weight passing the one and one-half inch (1 1/2") sieve and a maximum of ten percent (10%) by weight passing the No. 4 sieve. Not less than fifty percent (50%) of the material by weight that is retained on the No. 4 sieve shall have one (1) or more crushed faces. Hard, durable crushed carbonate quarry rock may be used for Foundation materials.

Bedding and encasement materials for flexible pipe shall meet the requirements of MnDOT Specification 3149.2B1, Granular Borrow, except that one hundred percent (100%) by weight shall pass the one inch (1") sieve.

Backfill materials shall consist of suitable existing trench materials, except as otherwise specified in the Special Provisions. Suitable material shall be defined as a mineral soil free of foreign materials (rubbish, organics, and debris), frozen clumps, oversize stone, rock, concrete or bituminous chunks, and other unsuitable materials that may damage the pipe, prevent thorough compaction, or increase the risks of settlement.

A gradation report, certified by an approved independent testing laboratory, of the proposed granular materials shall be furnished to the Engineer before any of the granular materials are delivered to the project.

A2 Granular Material Use Designations

Granular materials provided for Foundation, Bedding, Encasement, or Backfill use as required by the Plans, Specifications, and Special Provisions, either as part of the pipe item work unit or as a separate contract item, shall be classified as to use in accordance with the following:

Material Use	Designation Zone Designation
Granular Foundation	Placed below the bottom of pipe grade as replacement for unsuitable or unstable soils, to achieve improved foundation support.
Granular Bedding	Placed below the pipe midpoint, prior to pipe installation, to facilitate proper shaping and to achieve uniform pipe support. For flexible pipe installation, placed below the pipe midpoint to a point six inches (6") below the bottom of pipe or twenty five percent (25%) of the diameter below the pipe, whichever is greater.
Granular Encasement	Placed below an elevation one foot above the top of pipe, after pipe installation, for protection of the pipe and to assure proper filling of voids or thorough consolidation of backfill.
Granular Backfill	Placed below the surface base course, if any, as the second stage of backfill, to minimize trench settlement and provide support for surface improvements.

In each case above, unless otherwise indicated, the lower limits of any particular zone shall be the top surface of the next lower course as constructed. The upper limits of each zone are established to define variable needs for material gradation and compaction or void content, taking into consideration the sequence of construction and other conditions. The material use and zone designations described above shall only serve to fulfill the objectives and shall not be construed to restrict the use of any particular material in other zones where the gradation requirements are met.

B Insulation

Insulation shall be extruded rigid board material having a thermal conductivity of 0.23 BTU/hour/square foot/degree Fahrenheit/per inch thickness, maximum, at 40°F mean, a comprehensive strength of thirty five (35) psi minimum, and water absorption of one quarter percent (0.25%) by volume minimum. Unless otherwise specified in the Plans, Specifications, or Special Provisions, board dimensions shall measure eight feet (8') long, two or four feet (2' or 4') wide, and one (1), one and one half (1-1/2), two (2), or three (3) inches thick.

C Geotextile Fabric

Geotextile fabric shall meet the requirements of MnDOT Specification 3733 and be used as required by the Plans, Specifications, and Special Provisions.

2600.3 CONSTRUCTION REQUIREMENTS

A General Provisions

A1 Maintenance of Traffic

Whenever work interferes with the flow of traffic along a roadway, the Contractor shall provide traffic control signing and public safety in accordance with the provisions Minnesota Manual on of Uniform Traffic Control Devices (current edition and any amendments), MnDOT Specifications 1404 and 1710, and the Special Provisions. Neither road closures nor detours shall be permitted unless specified in the Special Provisions or authorized by the Engineer. Where road closures or detours are permitted by the Engineer, the Engineer shall determine the appropriate agencies, boards, or departments the Contractor must notify prior to taking the action and the proper advance notice to be provided to each body.

Compliance with this requirement shall not be construed to relieve the Contractor from the responsibility of notifying agencies or institutions whose services may be predicated upon a roadway being opened to traffic or whose services would be hindered if a roadway is closed to traffic. Such agencies or institutions shall include, but not be limited to, the police department, the fire department, municipal bus service, school bus service, and ambulance service, mail delivery, and waste hauler services. The Contractor shall keep the required agencies informed of changing traffic patterns and detour situations.

A2 Establishing Line and Grade

The primary line and grade will be established by the Engineer. For trench installation, line and grade stakes will be set parallel to the proposed pipeline at an appropriate offset therefrom as will best serve the Contractor's operations wherever practical. For tunnel installation, line and grade stakes will be set directly above the proposed pipeline setting.

The Contractor shall arrange operations to avoid unnecessary interference with the establishment of the primary line and grade stakes and shall render whatever assistance may be required by the Engineer in accomplishing the staking. The Contractor shall be responsible for preservation of the primary stakes and, if negligent in providing necessary protection, shall bear the full cost of any re-staking.

The Contractor shall be solely responsible for the correct transfer of the primary line and grade to all working points and for construction of the work to the prescribed lines and grades as established by the Engineer.

Unless otherwise specified in the Plans, Specifications, and Special Provisions the watermain shall generally be placed with the minimum specified cover. However, a greater depth may be required to avoid conflicts with other utilities and obstructions. Installation of watermain and services to a depth deeper than specified shall be considered incidental with no additional compensation allowed therefore.

The existing grade shown on the plans is approximate. Modification of the pipe location or differences in existing elevation shall not be cause for additional compensation.

In areas where direct conflicts arise between watermain and water services, with storm sewer, sanitary sewer, sanitary sewer services, sewer forcemains, septic tanks, or subsoil treatment systems, the following shall apply:

Watermain and services located near sewer forcemains:

A minimum of ten feet (10') of separation, measured horizontally between the outer surfaces of the pipes is required.

If ten feet (10') of separation cannot be provided, an approved additional measure of containment must be provided for either the watermain or the sewer forcemain.

Watermain and services located near septic tanks, or subsoil treatment systems:

A minimum of ten feet (10') measured horizontally between the outer surfaces of the watermain, tank and subsoil treatment system is required.

Watermain and services located near gravity sanitary and storm sewers:

A minimum of ten feet (10') measured horizontally between the outer surfaces of the pipes is required.

In locations where local conditions prevent the required separation indicated above (due to the presence of rock, buildings, other significant obstructions), the watermain may be laid closer to gravity sewer if **one** (1) of the following conditions is met:

The bottom of the watermain is laid at least eighteen inches (18") above the top of the sewer on a separate shelf; or

The sewer is constructed of materials and with joints that are equivalent to watermain standards of construction and is pressure tested to assure water tightness prior to backfilling.

Watermain and services crossing gravity sanitary and storm sewers:

A minimum vertical separation of eighteen inches (18") must be provided between the outer surfaces of the pipes, with preference that the watermain cross above the sewer, wherever possible.

One full length of water pipe shall be located so both joints will be as far from the sewer as possible.

Watermain above-water crossings:

The pipe shall be adequately supported and anchored, protected from vandalism, damage and freezing, and accessible for repair or replacement.

Watermain underwater crossings:

A minimum cover of five feet (5') shall be provided over the pipe unless otherwise approved by the Department of Health. When crossing water courses which are greater than fifteen feet (15') in width, the following shall be provided:

1. The pipe shall be of special construction, having flexible, restrained or welded watertight joints
2. Valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair; the valves shall be easily accessible, and not subject to flooding
3. Permanent taps or other provisions to allow insertion of a small meter to determine leakage and obtain water samples on each side of the valve closest to the supply source.

A3 Protection of Surface Structures

All surface structures and features located outside the permissible excavation limits for underground installations, together with those within the construction areas which are indicated in the Plans as being saved, shall be properly protected against damage and shall not be disturbed or removed without approval of the Engineer. Within the construction limits, as indicated on the plans or as directed by the Engineer, the removal of improvements such as pavement, curb, curb & gutter, walks, turf, etc., shall be subject to equivalent acceptable replacement after completion of underground work, with all expense of removal and replacement being borne by the Contractor to the extent that separate compensation is not specifically provided for in the Contract.

Obstructions such as street signs, guard posts, small culverts, mailboxes, and other items of prefabricated construction may be temporarily removed during construction provided that essential service is maintained in a relocated setting as approved by the Engineer and that nonessential items are properly stored for the duration of construction. Upon completion of the underground work, all such items shall be replaced in their proper setting at the sole expense of the Contractor to the extent that separate compensation is not specifically provided for in the Contract.

The Contractor shall be responsible for protection of existing overhead utilities and poles. This shall include arranging with the utility owner and arrange paying the utility for holding poles that will be close to the edge of any trench. Holding of poles and repair of any damage to these facilities shall be considered incidental to the project with no additional compensation allowed. If relocation or removal of these facilities is required, the Owner will contact the concerned utility owner and arrange and pay for the relocation or removal at no additional expense to the Contractor.

In the event of damage to any surface improvements, either privately or publicly owned, in the absence of construction necessity, the Contractor will be required to replace or repair the damaged property to the satisfaction of the Engineer and without cost to the Owner.

A4 Interference of Underground Structures

When any underground structure interferes with the planned placement of the pipeline or appurtenances to such an extent that alterations in the work are necessary to eliminate the conflict or avoid endangering effects on either the existing or proposed facilities, the Contractor

shall immediately notify the Engineer and the Owner of the affected structure. When any existing facilities are endangered by the Contractor's operations, the Contractor shall cease work at the site and take such precautions as may be necessary to protect the in-place structures until a decision is made as to how the conflict will be resolved.

Without specific authorization from the Engineer, no utility service shall be disrupted, nor shall any change be made in either the existing structures or the planned installations to overcome the interference. Alterations in existing facilities will be allowed only to the extent that service will not be curtailed and then only when the encroachment or relocation will satisfy all applicable regulations and conditions.

Wherever alterations are required as a result of unforeseen underground interferences not due to any fault or negligence of the Contractor, the Engineer will issue a written order covering any additional or extra work involved and specifying the revised basis of payment, if any. Any alterations made strictly for the convenience of the Contractor, shall be subject to prior approval and shall be at the Contractor's expense. No extra compensation will be allowed for delays caused by the interference of underground structures.

A5 Removal of Surface Improvements

Removal of surface improvements in connection with trench excavation shall be limited to actual needs for installation of the pipeline and appurtenances, based on the allowable trench widths and any other controls imposed in connection with the work. Removal operations shall be coordinated effectively with the excavation and installation operations as will cause the least practical disruption of traffic or inconvenience to the public. The debris resulting from removals shall become the property of the Contractor and shall be disposed of by the Contractor in accordance with MnDOT Specification 2104 and the Special Provisions. Removal debris shall not be deposited at locations that will block access to fire hydrants, private driveways, or other essential service areas, nor obstruct surface drainage. Removal and final disposal of debris shall be accomplished as a single operation wherever possible and, in any event, the debris shall be removed from the site before starting the excavating operations.

Removal of concrete or bituminous structures shall be by methods producing clean-cut breakage to pre-scored lines as will preserve the remaining structure without damage. Removal equipment shall not be operated in a manner that will cause damage to the remaining structure or adjoining property. Where not removed to an existing joint, concrete structures shall be sawed along the break lines to a minimum depth of one-third ($1/3$) of the structure depth.

Any reusable materials generated during the work, such as aggregate, sod, topsoil, shall be segregated from other waste materials and be stockpiled so as to maintain suitability and permit proper reuse.

The use of drop weight equipment for breaking pavement will be allowed to the extent that the Contractor shall assume full responsibility for any damages caused thereby. The pavement breaking operation shall not be allowed to become a nuisance to the public or a source of damage to underground or adjacent structures. The Engineer reserves the right to order discontinuance of drop weight breaking operations at any time.

A6 Temporary Service Measures

While any open excavations are maintained, the Contractor shall have available a supply of steel plates suitable for temporary bridging of open trench sections where either vehicular or pedestrian traffic must be maintained. Use of the plates shall be as directed or approved by the Engineer and where installed they shall be secured against possible displacement and be replaced with the permanent structure as soon as possible.

B Excavation and Preparation of Trench

B1 Operational Limitations and Requirements

Trench excavation must conform to all local, state and federal requirements. All work must be confined to the limits of the construction and to easements and right of way as indicated on the plans. The Contractor shall install at his expense the necessary trench support to meet the varying soil conditions and to protect existing structures and property. The trench shall be drained to provide stable excavation and permit the pipe to be laid in a dry trench.

Excavating operations shall proceed only so far in advance of pipe laying as will satisfy the needs for coordination of work and permit advance verification of unobstructed line and grade as planned, consistent with the Contractors methods and scheduling. Where interference with existing structures is possible or in any way indicated, and where necessary to establish elevation or direction for connections to in-place structures, the excavating shall be done at those locations in advance of the main operation so actual conditions will be exposed in sufficient time to make adjustments without resorting to extra work or unnecessary delay.

Wherever possible, excavated materials shall be placed in areas that will not block existing vehicle and pedestrian traffic and drainage ways. The Contractor shall review proposed methods of operation with the Engineer prior to beginning the work.

The Contractor shall backfill all trenches at the end of each work day, or upon written authorization of the Engineer, shall provide another approved method of protecting the trench area while work is not being performed.

All installations shall be accomplished by open trench with the exception that boring, jacking and tunnel construction methods shall be employed where specifically required by the Plans, Specifications, or Special Provisions.

The excavating operations shall be conducted so as to carefully expose all existing underground structures without damage. Wherever the excavation extends under or approaches so close to an existing structure as to endanger it in any way, precautions and protective measures shall be taken as necessary to preserve the structure and provide temporary support. Hand methods of excavating shall be utilized to probe for and expose such critical or hazardous installations as gas pipe, power and communication cables, watermain, gravity and pressure sewers, and respective service pipes.

The Engineer shall be notified of any need for blasting to remove materials which cannot be broken up mechanically, and there shall be no blasting operations conducted until the Engineer's approval has been secured. Blasting will be allowed only when proper precautions are taken to protect life and property, and then shall be restricted as the Engineer directs. The hours of blasting operations shall be set by the Owner. The Contractor shall assume full

responsibility for any damages caused by blasting, regardless of the requirements for notification and approval. The Contractor shall secure any required permits for blasting and shall conduct blasting operations in conformance with all applicable local, state and federal laws, regulations, and ordinances.

B2 Classification and Disposition of Materials

Excavated materials will be classified for payment only when specifically provided in the Special Provisions, or the Proposal. All other materials encountered in the excavations will be considered incidental to utility construction, with no additional compensation provided thereto.

Miscellaneous excavated materials that are not specifically identified for payment in the Special Provisions or Proposal, exceed one (1) cubic yard in volume, cannot be re-used within the project limits, and in the opinion of the Engineer requires special means for handling and disposal, may be considered for payment through supplemental agreement as extra work. Miscellaneous excavated materials include but are not limited to organic soils, rubble, wood debris, boulder stone, masonry, concrete fragments, and metals.

Rock excavation shall be defined to include all hard, solid rock in ledge formation, bedded deposits and unstratified masses; all natural conglomerate deposits so firmly cemented as to present all the characteristics of solid rock; and any boulder stone, masonry or concrete fragments exceeding one (1) cubic yard in volume. Materials such as shale, hard pan, soft or disintegrated rock which can be dislodged with a hand pick or removed with a power operated excavator will not be classified as Rock Excavation.

Excavated materials will be classified for reuse as being either Suitable or Unsuitable for backfill or other specified use, subject to selective controls. All suitable materials shall be reserved for backfill to the extent needed, and any surplus remaining shall be utilized for other construction on the project as may be specified or ordered by the Engineer. To the extent practicable, granular materials and topsoil shall be segregated from other materials during the excavating and stockpiling operations so as to permit best use of the available materials at the time of backfilling. Unless otherwise specified in the Plans, Specifications, and Special Provisions, material handling as described above shall be considered incidental with no additional compensation provided.

All excavated materials reserved for backfill or other use on the project shall be stored at locations approved by the Engineer that will cause a minimum of inconvenience to public travel, adjacent properties, and other special interests. The material shall not be deposited so close to the edges of the excavations in a manner that could create hazardous conditions, nor shall any material be placed so as to block the access to emergency services. All materials considered unsuitable by the Engineer, for any use on the project, shall be immediately removed from the project and be disposed of as arranged for by the Contractor with no additional compensation.

B3 Excavation Limitations and Requirements

Trench excavating shall be to a depth that will permit preparation of the foundation as specified and installation of the pipeline and appurtenances at the prescribed line and grade, except where alterations are specifically authorized. Trench widths shall be sufficient to permit the pipe to be laid and joined properly and the backfill to be placed and compacted as specified. Extra width shall be provided as necessary to permit convenient placement of sheeting and shoring and to accommodate placement of appurtenances.

Excavations shall be extended below the bottom of structures as necessary to accommodate any required Granular Foundation material. When rock or unstable foundation materials are encountered at the established grade, additional materials shall be removed as specified or directed by the Engineer to produce an acceptable foundation. Unless otherwise indicated or directed, rock shall be removed to an elevation at least six inches (6") below the bottom surface of the pipe barrel and below the lowest projection of flange and bell/spigot joint. All excavations below grade shall be to a minimum width equal to the outside pipe diameter plus two feet (2'). Rock shall be removed to such additional horizontal dimensions as will provide a minimum clearance of six inches (6") on all sides of appurtenant structures such as valves, housings, access structures, etc.

Where no other grade controls are indicated or established for the pipeline, the excavating and foundation preparations shall be such as to provide a minimum cover over the top of the pipe as specified. Trench widths shall allow for at least six inches (6") of clearance on each side of the flange and bell/spigot joint. The maximum allowable width of the trench at the top of pipe level shall be the outside diameter of the pipe plus two feet (2'), subject to the considerations for alternate pipe loading set forth below. The width of the trench at the ground surface shall be held to a minimum to prevent unnecessary destruction of the surface structures.

The maximum allowable trench width at the top of pipe level may be exceeded only by approval of the Engineer, after consideration of pipe strength and loading relationships. Any alternate proposals made by the Contractor shall be in writing, giving the pertinent soil weight data and proposed pipe strength alternate, at least seven (7) days prior to the desired date of decision. Approval of alternate pipe designs shall be with the understanding that there will be no extra compensation allowed for any increase in material or construction costs.

If the trench is excavated to a greater width than that authorized, the Engineer may direct the Contractor to provide a higher class of bedding and/or a higher strength pipe than that required by the Plans, Specifications, and Special Provisions in order to satisfy design requirements, without additional compensation.

The use of granular foundation materials shall not be used as an aid to facilitate installation of pipe in wet soil conditions. Use of these materials in this manner in lieu of providing adequate dewatering measures shall be considered incidental to the construction with no additional compensation allowed therefore.

B4 Sheet piling and Bracing Excavations

All trench excavations that require slope support shall be sheeted, shored, and braced in a manner that will meet all requirements of the applicable safety codes and regulations; comply with any specific requirements of the Contract; and prevent disturbance or settlement of adjacent surfaces, foundations, structures, utilities, and other properties. Any damage to the work under contract, to adjacent structures, or other property, caused by settlement, water or earth pressures, slides, cave-ins, or other causes due to the failure or lack of sheet piling, shoring, or bracing, through negligence or fault of the Contractor in any manner shall be repaired at the Contractor's expense and without delay.

The Plans, Specifications, and Special Provisions may require special precautions to protect life and property. The Engineer may order other precautions when excavation conditions appear to warrant additional measures. Failure of the Engineer to order correction of improper or

inadequate sheeting, shoring, or bracing shall not relieve the Contractor's responsibilities for protection of life, property, and the work.

The Contractor shall assume full responsibility for proper and adequate placement of sheeting, shoring, and bracing, to prevent displacement. Bracing shall be so arranged as to provide ample working space and without increase of stress or strain on the in-place structures to any extent that may cause damage.

Sheeting, shoring and bracing materials shall be removed only when and in such manner as will assure adequate protection of the in-place structures and prevent displacement of supported grounds. Sheeting and bracing shall be left in place only as required by the Plans, Specifications, and Special Provisions or ordered by the Engineer. Otherwise, sheeting and bracing may be removed as the backfilling reaches the level of respective support. Wherever sheeting and bracing is left in place, the upper portions shall be cut and removed to an elevation of three feet (3') or more below the established surface grade or as the Engineer may direct.

All costs of furnishing, placing and removing sheeting, shoring, and bracing materials, including the value of materials left in place as required by the Contract, shall be included in the prices bid for pipe installation and will not be compensated for separately. When sheeting, shoring, or bracing materials are left in place by written order of the Engineer, in the absence of specific requirements of the Contract, payment will be made for those materials by supplemental agreement.

B5 Preparation and Maintenance of Foundations

Foundation preparations shall be conducted as necessary to produce a stable foundation and provide continuous and uniform pipe bearing between bell holes. The initial excavating or backfilling operations shall produce a subgrade level slightly above finished grade as will permit hand shaping to finished grade by trimming of high spots and without the need for filling of low spots to grade. Final subgrade preparations shall be such as to produce a finished grade at the centerline of the pipe that is within three tenths of a foot (0.03') of a straight line between pipe joints and to provide bell excavation at each joint as will permit proper joining of pipe and fittings.

In excavations made below grade to remove rock or unstable materials, the backfilling to grade shall be made with available suitable materials unless placement of Granular Foundation or Bedding material is specified or is ordered by the Engineer. Placement of the backfill shall be in relatively uniform layers not exceeding eight inches (8") in loose thickness. Each layer of backfill shall be compacted thoroughly, by means of approved mechanical compaction equipment, as will produce uniform pipe support throughout the full pipe length and facilitate proper shaping of the pipe bed.

It shall be the Contractor's responsibility to notify the Engineer of changing soil conditions which may be of poor bearing capacity and when organic soils are encountered. Where utilities are placed on unstable soils without notification of the Engineer, the Contractor shall be responsible for all repairs and correction of the installation without further compensation.

Care shall be taken during final subgrade shaping to prevent any over-excavation. Should any low spots develop, they shall only be filled with approved material, which shall have optimum moisture content and be compacted thoroughly without additional compensation to the Contractor. The finished subgrade shall be maintained free of water and shall not be disturbed

during pipe lowering operations except as necessary to remove pipe slings. The discharge of trench dewatering pumps shall be directed to natural drainage channels or storm water drains. Draining trench water into sanitary sewers or combined sewers will not be permitted.

The Contractor shall install and operate a dewatering system of wells or points to maintain pipe trenches free of water whenever necessary or as directed by the Engineer. Unless otherwise specified in the Plans, Specifications, and Special Provisions such work shall be considered incidental.

All costs of excavating below grade and placing foundation or bedding aggregates as required shall be included in the bid prices for pipe items to the extent that the need for such work is indicated in the Contract provisions and the Proposal does not provide for payment under separate Contract Items. Any excavation below grade and any foundation or bedding aggregates required by order of the Engineer in the absence of Contract requirements will be compensated for separately.

If examination by the Engineer reveals that the need for placement of foundation aggregate was caused by the Contractor's manipulation of the soils in the presence of excessive moisture or lack of proper dewatering, the cost of the corrective measures shall be borne by the Contractor.

B6 Contaminated Materials and Regulated Wastes

If during the course of the Project, the Contractor unexpectedly encounters any of the following conditions indicating the possible presence of contaminated soil, contaminated water, or regulated waste, the Contractor shall immediately stop work in the vicinity, and notify the Engineer.

At the direction of the Engineer, a documented inspection and evaluation will be conducted prior to the resumption of work. The Contractor shall not resume work in the suspected area without authorization by the Engineer.

Indicators of contaminated soil, groundwater or surface water include, but are not limited to the following:

- (1) Odor including gasoline, diesel, creosote (odor of railroad ties), mothballs, or other chemical odor.
- (2) Soil stained green or black (but not because of organic content), or with a dark, oily appearance, or any unusual soil color or texture.
- (3) A rainbow color (sheen) on surface water or soil.

Indicators of regulated wastes include, but are not limited to the following:

- (1) Cans, bottles, glass, scrap metal, wood (indicators of solid waste and a potential dump site).
- (2) Concrete and asphalt rubble (indicators of demolition waste).
- (3) Roofing materials, shingles, siding, vermiculite, floor tiles, transite or any fibrous material (indicators of demolition waste that could contain asbestos, lead or other chemicals).
- (4) Culverts or other pipes with tar-like coating, insulation or transite (indicators of asbestos).

- (5) Ash (ash from burning of regulated materials may contain lead, asbestos or other chemicals).
- (6) Sandblast residue (could contain lead).
- (7) Treated wood including, but not limited to products referred to as green treat, brown treat and creosote (treated wood disposal is regulated).
- (8) Chemical containers such as storage tanks, drums, filters and other containers (possible sources of chemical contaminants).
- (9) Old basements with intact floor tiles or insulation (could contain asbestos), sumps (could contain chemical waste), waste traps (could contain oily wastes) and cesspools (could contain chemical or oily wastes).

Discovery of contaminated soil, contaminated water, or regulated waste on State right of way, State property, and State funded projects shall be handled in accordance with guidance procedures of the MNDOT Office of Environmental Services (OES) and the MPCA requirements for materials handling, disposal, re-use and remediation.

Discovery of contaminated soil, contaminated water, or regulated waste on projects or properties that are not under the ownership or financed by the State shall be handled in accordance with guidance procedures of the MPCA requirements for materials handling, disposal, re-use and remediation.

C Trenchless Pipe Installation

The Contractor shall inspect and verify soil conditions as necessary in order to determine the type of construction to employ. Natural and/or manmade obstructions may be encountered in the soil. These contract documents do not warrant the nature or condition of the soils, and do not warrant that natural or manmade obstructions will not be encountered, nor guarantee the extent to which rocks, boulders, or other obstructions, regardless of size, may be encountered during boring operations. The Contractor shall not be entitled to additional compensation for any natural or manmade obstructions encountered during trenchless construction.

The Contractor shall be responsible for protecting all existing utilities within the construction limits.

C1 Jacking/Boring

The terms "auger", "boring", "jack", "jacking", and "tunneling" in the proposal, specifications, and plans refers only to trenchless construction.

The minimum diameter of the casing pipe shall be four inches (4") greater than the outside diameter of the bell of the carrier pipe.

The Contractor shall prevent excavated materials from flowing back into the excavation during the trenchless construction. This shall include the use of a shield conforming to the size and shape of the casing that will prevent materials from flowing into the leading edge of the casing. The machine used shall be capable of controlling line and grade and shall conform to the size and shape of the casing pipe.

No jacking/augering of pipe will be allowed below the water table unless the water table has been lowered sufficiently to keep the water below the pipe being installed. The use of water

under pressure (jetting) or puddling will not be permitted to facilitate jacking/augering operations.

If any installation is augered, the head shall be approved by the Engineer and the auger shall be located six inches (6") behind the lead edge of the casing or carrier pipe.

The jacking system shall be provided with an integral grout pipe and casing pipe. A one inch (1") grout pipe shall be tack welded to the front edge of the first length of casing pipe. The grout pipe shall be extended with the casing pipe, but not fastened to the casing pipe during the remaining jacking operations. After the pipes are through to the receiving pit, the grout pipe shall be cut free from the casing pipe. The grout pipe shall be pulled back through the embankment applying positive piston pressure on the grout along the outside of the casing pipe throughout the pulling operation. A cement slurry grout mix with as little water as possible shall be used. Bentonite shall not be used to fill voids. The Engineer shall approve grout and backfill material prior to placement of any material.

Deviation from the pipe grade, as provided by the Engineer, in excess of five tenths of a percent (0.05%) may be cause for removal and relaying of the pipe by the Contractor with no additional compensation allowed therefore.

If a void develops, the jacking or boring operation shall be stopped immediately and the void shall be filled by an approved method.

The Contractor shall take the following precautions when boring:

- Extend casing through entire distance bored.

- Check grade and alignment after each casing section is installed.

- Coordinate operations to provide continuous support to surrounding earth materials.

Excavation shall be carried on in such a manner as to provide adequate support to surface structures and roads above and adjacent to the boring and not create any hazards to overhead traffic and other activities.

These contract documents do not guarantee the extent to which rocks, boulders, or other obstructions, regardless of size, may be encountered during boring operations. No extra compensation will be made for removal of rocks, boulders or other natural or manmade obstructions encountered during trenchless construction or excavation.

All voids caused by boring shall be filled by pressure grouting. The grout material shall consist of sand cement slurry of at least two (2) sacks of cement per cubic yard and a minimum of water to assure satisfactory placement. All slurry shall be pre-approved by the Engineer prior to use by the Contractor.

The Contractor shall take the following precautions when jacking:

- The jacking machine shall be capable of controlling line and grade.

- Progressively push carrier pipe through completed casing.

Strap two (2) wooden saddle blocks to each pipe length to provide support at regular intervals.

Center carrier pipe in casing at all times.

Partially fill annular space between casing and carrier pipe with dry blown sand. Space shall be considered filled when dry sand blows out of opposite end of casing pipe.

Seal each end of the casing with a concrete bulkhead after the sand has been deposited.

The location, size, and configuration of all jacking pits shall be subject to approval of the Engineer.

C2 Directional Boring

Direction boring/drilling installation shall be accomplished where required on the Plans or in the Special Provisions to minimize disturbance of existing surface improvements. The installer shall have a minimum of five (5) years of experience in this method of construction and have successfully installed at least ten thousand feet (10,000') of eight inch (8") or larger diameter pipe to specified grades. The field supervisor employed by the Contractor shall have at least five (5) years of experience and shall be at the site at all times during the boring/drilling installation.

The Contractor shall submit boring/drilling pit locations to the Engineer before beginning construction. Boring pits may be located within roadway right-of-way and easements. Any other boring pit locations that may be desired by the Contractor for boring or other uses shall be the responsibility of the Contractor to attain authorization, including use of private property.

Unless otherwise provided in the Special Provisions, the Contractor shall be compensated for the restoration work only within the areas at the connection points, or other locations as may be approved by the Engineer. The Contractor shall be responsible for repairs, without compensation, for any other repair areas, including pit/boring points and areas above the drilled pipe where drilling fluid pressure may have caused heaving or damage to pavement and other surfaces.

The drilling equipment shall be capable of placing the pipe as shown on the plans. The installation shall be by a steerable drilling tool capable of installing continuous runs of pipe between appurtenances such as valves, manholes, etc., without intermediate pits. The guidance system shall be capable of installing pipe within one and one half inch (1 ½") of the plan vertical dimensions and two inches (2") of the plan horizontal dimensions. The Contractor shall remove and reinstall pipes which vary in depth and alignment from these tolerances.

Pull back forces shall not exceed the allowable pulling forces for the pipe being installed. Drilling fluid shall be a mixture of water and bentonite clay, and shall be suitable for existing soil conditions. Disposal of excess fluid and spoils shall be the responsibility of the Contractor.

D Placement of Insulation

Rigid insulation board shall be placed within the pipe encasement zone, six inches (6") above the pipe.

Insulation boards shall be placed with the long dimension parallel to the centerline of the pipe. Boards shall be placed in a single layer with tight joints. No continuous joints or seams shall be placed directly over the pipe. If two (2) or more layers of insulation boards are used, each layer shall be placed to cover the joints of the layer immediately below.

The Contractor shall exercise caution to ensure that all joints between boards are tight during placement and backfilling with only extruded ends placed end to end or edge to edge.

Backfill material shall be placed in such a manner that construction equipment does not operate directly on the insulation, and compacted with equipment which exerts a contact pressure of less than eighty (80) psi.

E Pipeline Backfilling Operations

All pipeline excavations shall be backfilled to restore preexisting conditions as the minimum requirement, and fulfill all supplementary requirements indicated in the Plans, Specifications, and Special Provisions. The backfilling operations shall be started as soon as conditions will permit on each section of pipeline, so as to provide continuity in subsequent operations and restore normal public service as soon as practicable. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.

The backfilling shall be accomplished with the use of Suitable Materials selected from the excavated materials to the extent available and practical. Should the materials available within the trench section be unsuitable or insufficient, the required additional materials shall be furnished from outside sources as provided in the Special Provisions, or as arranged otherwise through supplemental agreement.

Backfill material selection shall be such as to make the best and fullest utilization of what is available, taking into consideration particular needs of different backfill zones. Material containing stone, rock, or chunks of any sort shall only be utilized where and to the extent there will be no detrimental effects. Placement of backfill material containing stones, boulders, chunks, greater than eight inches (8") in any dimension shall not be allowed.

All flexible pipe shall be bedded in accordance with ASTM Specification D2321, "Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe". Where existing soils do not meet the requirements of bedding and encasement materials, the Contractor shall furnish the required granular materials. Placement and compaction of bedding and encasement materials around the pipe shall be considered incidental to the installation of the pipe.

Compaction of materials placed within the pipe bedding and encasement zones shall be accomplished with portable or hand equipment methods, so as to achieve thorough consolidation under and around the pipe and avoid damage to the pipe. Above the cover zone material, the use of heavy roller type compaction equipment shall be limited to safe pipe loading.

Backfill materials shall be carefully placed in uniform loose thickness layers up to twelve inches (12") thick spread over the full width and length of the trench section to provide simultaneous support on both sides of the pipeline. Granular backfill may be placed in layers up to twelve inches (12") above an elevation one foot (1') above the top of the pipe.

Each layer of backfill material shall be compacted effectively, by approved mechanical or hand methods, until there is no further visual evidence of increased consolidation or the density of the compacted layer conforms to the density requirements specified in the Special Provisions. Compaction of each layer shall be completed acceptably before placing material for a succeeding layer thereon. The manner of placement, compaction equipment, or procedure effectiveness shall be subject to approval of the Engineer.

All surplus or waste materials remaining after completion of the backfilling operations shall be disposed of in an acceptable manner within twenty four (24) hours after completing the backfill work on each particular pipeline section. Disposal at locations within the project limits shall be as specified, or as approved by the Engineer; otherwise, disposal shall be accomplished outside the project limits at the Contractor's discretion. The backfilling and surplus or waste disposal operations shall be a part of the work required under the pipeline installation items, without until final cleanup.

Compaction of backfill within Roadbed areas shall meet the density requirements of MnDOT Specification 2105.3 F1. Compaction of backfill in all other areas shall be as required in the Special Provisions.

Until expiration of the guarantee period, the Contractor shall assume full responsibility and expense for all backfill settlement and shall refill and restore the work as directed to maintain an acceptable surface condition, regardless of location. All additional materials required shall be furnished without cost to the Owner.

Any settlement of road surfaces placed under this Contract and that are within the guarantee period that are in excess of one inch (1"), as measured by a ten foot (10') straight edge-shall be considered failure of the mechanical compaction. The Contractor shall be required to repair such settlement without cost to the Owner.

F Restoration of Surface Improvements

Wherever any surface improvements such as pavement, curbing, pedestrian walks, fencing, or turf have been removed, damaged or otherwise disturbed by the Contractor's operations, they shall be repaired or replaced to the Engineer's satisfaction, as will restore the improvement in kind and structure to the preexisting condition. Each item of restoration work shall be done as soon as practicable after completion of installation and backfilling operations on each section of pipeline.

In the absence of specific payment provisions, as separate Contract Items, the restoration work shall be compensated for as part of the work required under those Contract Items which necessitated the destruction and replacement or repair, and there will be no separate payment. If separate pay items are provided for restoration work, only that portion of the repair or reconstruction which was necessitated by the Contract work will be measured for payment. Any improvements removed or damaged unnecessarily or undermined shall be replaced or repaired at the Contractor's expense.

G Maintenance and Final Cleanup

All subgrade surfaces shall be maintained acceptably until the start of surfacing construction or restoration work, and until the work has been finally accepted. Additional materials shall be

provided and placed as needed to compensate for trench settlement and to serve as temporary construction pending completion of the final surface improvements.

Final disposal of debris, waste materials, and other remains or consequences of construction, shall be accomplished intermittently as new construction items are completed and shall not be left to await final completion of all work. Cleanup operations shall be considered an incidental part of the work covered under the Contract Items.

If disposal operations and other cleanup work are not conducted properly as the construction progresses, the Engineer may withhold partial payments until such work is satisfactorily performed or the Engineer may deduct the estimated cost of its performance from the partial estimate value.

2600.4 METHOD OF MEASUREMENT

All items will be measured separately according to design designation as indicated in the Pay Item name and as may be detailed and defined in the Plans, Specifications, or Special Provisions. Complete-in-Place items shall include all component parts thereof as described or required to complete the unit, but excluding any excesses covered by separate Pay Items.

A Rock Excavation

Rock Excavation shall be measured by volume in cubic yards. Depth shall be measured from the top of the rock to a point six inches below the outside barrel of the pipe and width shall be the inside diameter of the pipe plus twenty four inches (24") (12" from each side). The minimum width of measurement shall be four feet (4').

B Granular Materials

Granular materials furnished and placed as special foundation, bedding, encasement, or backfill construction will be measured by weight or volume of material furnished by the Contractor from outside sources and placed within the limits defined. Unless otherwise specified, volume will be determined by vehicular measure (loose volume) at the point of delivery. Measurements will not include any materials required to be placed as a component part of other Contract Items as may be specified.

C Geotextile Fabric

Where geotextile fabric is used for improving pipe foundation, it shall be measured by the square yard of material installed.

D Insulation

Rigid board insulation shall be measured on a square yard basis installed to the specified thickness noted on the Plans, Specifications, and Special Provisions and shall include all materials, equipment, and labor required for placement.

2600.5 BASIS OF PAYMENT

All costs of excavating to foundation grade, preparing the foundation, placing and compacting backfill materials, restoring surface improvements, and other work necessary for prosecution

and completion of the work as specified, shall be included for payment as part of the pipe and pipe appurtenance items without any direct compensation being made.

In the absence of special payment provisions, all costs of restoring surface improvements as required, disposal of surplus or waste materials, maintenance and repair of completed work, and final cleanup operations shall be incidental to the Contract Items under which the costs are incurred.

Granular materials furnished for foundation, bedding, cover, or backfill placement as specified in connection with pipe or structure items will only be paid for as separate Contract Items to the extent that the Proposal contains specific Pay Items. Otherwise the furnishing and placing of granular materials as specified shall be incidental to the pipe or structure item without any direct compensation being made.

Materials utilized for filling annular spaces due to jacking/boring and drilling fluids for directional boring shall be incidental to the installation of the casing and pipe installed.

Contaminated Materials and Regulated Wastes not anticipated in the plans, specifications and special provisions and unexpectedly discovered during construction shall be compensated for as negotiated by supplemental agreement.

Contaminated Materials and Regulated Wastes specifically identified for payment in the plans, specifications, and special provisions, will be paid for under separate Contract Items provided in the Proposal.

SECTION 2611 – STANDARD SPECIFICATIONS FOR WATERMAIN AND SERVICE LINE INSTALLATION

2611.1 DESCRIPTION

This work shall consist of the construction of watermain and building service pipelines utilizing plant fabricated pipe and other appurtenant materials, installed for conveyance of potable water. The work includes the relocation or adjustment of existing facilities as may be specified in the Plans, Specifications and Special Provisions.

The use of the term "Plans, Specifications, and Special Provisions" within this specification shall be construed to mean those documents which compliment, modify, or clarify these specifications and are an enforceable component of the Contract Documents.

All references to MnDOT Specifications shall mean the latest published edition of the Minnesota Department of Transportation "Standard Specifications for Construction", and all supplements and amendments thereto, published prior to the date of advertisement for bids.

All reference to other Specifications of AASHTO, ASTM, ANSI, AWWA, etc. shall mean the latest published edition available on the date of advertisement for bids.

The following American Water Works Association (AWWA) Specifications have been referenced in this Specification:

C104 American National Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water

C105 American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems

C110 American National Standard for Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. (75 mm Through 1200 mm), for Water and Other Liquids

C111 American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

C115 American National Standard for Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges

C116 AWWA Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings

C150 American National Standard for Thickness Design of Ductile-Iron Pipe

C151 American National Standard for Ductile-Iron Pipe, Centrifugally Case, for Water or Other Liquids

C153 American National Standard for Ductile-Iron Compact Fittings, 3 In. Through 24 In. (76 mm Through 610 mm) and 54 In. Through 64 In. (1,400 mm Through 1,600 mm), for Water Service

C301 AWWA Standard for Prestressed Concrete Pressure Pipe, Steel-Cylinder Type, for Water and Other Liquids

C304 AWWA Standard for Design of Prestressed Concrete Cylinder Pipe 26

C500 AWWA Standard for Metal-Seated Gate Valves for Water Supply Service (Includes addendum C500a-95.)

C502 AWWA Standard for Dry-Barrel Fire Hydrants (Includes addendum C502a-95.)

C504 AWWA Standard for Rubber-Seated Butterfly Valves

C509 AWWA Standard for Resilient-Seated Gate Valves for Water Supply Service (Includes addendum C509a-95.)

C515 AWWA Standard for Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
 C550 AWWA Standard for Protective Interior Coatings for Valves and Hydrants
 C600 AWWA Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances
 C605 AWWA Standard for Underground Installation of Polyvinyl Chloride (PVC and PVCO) Pressure Pipe and Fittings for Water
 C651 AWWA Standard for Disinfecting Water Mains
 C800 AWWA Standard for Underground Service Line Valves and Fittings
 C900 AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In., for Water Transmission and Distribution (Includes addendum C900a-92.)
 C901 AWWA Standard for Polyethylene (PE) Pressure Pipe and Tubing, 1/2 In. Through 3 In., for Water Service
 C904 AWWA Standard for Cross-Linked Polyethylene (PEX) Pressure Pipes, 1/2 In. (12 mm) Through 3 In. (76 mm) for Water Service
 C905 AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 In. Through 48 In., (350mm Through 1,200mm), for Water Transmission and Distribution
 C906 AWWA Standard for Polyethylene (PE) Pressure Pipe and Fittings, 4 In. Through 63 In., for Water Distribution and Transmission
 C907 AWWA Standard for Injection-Molded Polyvinyl Chloride (PVC) Pressure Fittings for Water - 4 In. Through 8 In. (100mm Through 200mm) for Water, Wastewater, and Reclaim Water Service
 AWWA C908 Standard for PVC Self-Tapping Saddle Tees for Use on PVC Pipe
 ASTM A48 Standard Specification for Gray Iron Castings
 ASTM A536 Standard Specification for Ductile Iron Castings
 ASTM B88 Standard Specification for Seamless Copper Water Tube
 ASTM C270 Standard Specification for Mortar for Unit Masonry
 ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections
 ASTM D543 Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents
 ASTM D1248 Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable
 ASTM D1784 Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
 ASTM D1785 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
 ASTM D2241 Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series)
 ASTM D2446 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
 ASTM D2467 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
 ASTM D3035 Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Controlled Outside Diameter
 ASTM D3261 Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
 ASTM D3350 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
 ASTM F593 Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs
 ASTM F594 Standard Specification for Stainless Steel Nuts
 ASTM F714 Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
 ASTM F876 Standard Specification for Crosslinked Polyethylene (PEX) Tubing

ASTM F877 Standard Specification for Crosslinked Polyethylene (PEX) Hot and Cold Water Distribution Systems

Service installations shall include either Branch Service Lines or Tapped Service Lines in accordance with the standards set forth herein.

Tapped Service installations shall include all water service lines less than three inches (3") nominal inside diameter pipe. The component parts of a tap service installation shall include a corporation stop coupling complete with watermain tap and saddle where required; a curb stop coupling complete with service box; and service piping extending from the corporation stop to the curb stop coupling and beyond to the property line or to the limits as established by the Engineer.

Branch Service installations shall include all water service lines of three inches (3") nominal inside diameter pipe and larger. The component parts of a branch service installation shall include a tapping sleeve and valve or a tee connection and valve complete with valve box, and piping extending from the watermain connection, to the property line or to the limits as specified by the Engineer.

All references to "structure" shall include any man-made object that is not otherwise exempted by special terminology or definition.

2611.2 MATERIALS

All materials required for this work shall be new material conforming to requirements of the reference specifications for the class, kind, type, size, grade, and other details indicated in the Contract. Unless otherwise indicated, all required materials shall be furnished by the Contractor. If any options are provided for, as to type, grade, or design of the material, the choice shall be limited as may be stipulated in the Plans, Specifications, or Special Provisions.

All manufactured products shall conform in detail to such standard design drawings as may be referenced or furnished in the Plans. Otherwise, the Owner may require advance approval of material suppliers, product design, or other unspecified details as it deems desirable for maintaining adopted standards.

At the request of the Engineer, the Contractor shall submit, in writing, a list of materials and suppliers for approval.

A Certificate of Compliance shall be furnished stating that the materials furnished have been tested and are in compliance with the specification requirements.

A Water Pipe Materials

All pipe furnished for watermain and branch line installations shall be of the type, kind, size, and class indicated for each particular line segment as shown in the Plan and designated in the Contract Items. Wherever connection of dissimilar materials or designs is required, the method of joining and any special fittings employed shall be subject to approval of the Engineer.

A1 Ductile Iron Pipe and Ductile Iron and Gray Iron Fittings

The pipe furnished shall be Ductile Iron pipe and pipe fittings furnished shall be of the Ductile Iron or Gray Iron type as specified for each particular use of installation. When Gray Iron is specified, either type may be furnished. Gray Iron may not be substituted for Ductile Iron unless specifically authorized in the Special Provisions.

Ductile iron pipe shall conform to the requirements of AWWA C115 or C151 for potable water, and thickness design shall conform to AWWA C 150. In addition, the pipe shall comply with the following supplementary provisions:

- (1) Fittings shall conform to the requirements of AWWA C110 (Gray Iron and Ductile Iron Fittings) or AWWA C153 (Ductile Iron Compact Fittings) for the joint type specified.
- (2) Unless otherwise specified all pipe and fittings shall be furnished with cement mortar lining meeting the requirements of AWWA C104 for standard thickness lining. All exterior surfaces of the pipe and fittings shall have an asphaltic coating at least one mil thick. Spotty or thin seal coating, or poor coating adhesion, shall be cause for rejection.

Fittings specified to be furnished with fusion bonded epoxy external coating and/or interior lining shall conform to the requirements of AWWA C550 and C116/A21.16, with 6-8 mil nominal thickness.

- (3) Rubber gasket joints for Ductile Iron Pressure Pipe and fittings shall conform to AWWA C111.
- (4) The nuts and bolts shall be constructed of corrosion resistant, high-strength, low-alloy steel with a ceramic filled, baked on fluorocarbon resin. The nuts and bolts shall be in compliance with ANSI/AWWA C111/A21.11 (Current Revision).
- (5) Conductivity shall be maintained through pipe and fittings with an external copper jumper wire or specialty gaskets which are capable of meeting conductive requirements. Wedge type connectors will not be allowed.

A2 Polyvinyl Chloride (PVC) Pressure Pipe and Fittings

Polyvinyl chloride (PVC) pressure pipe shall be manufactured with compounds conforming to ASTM D1784 and shall conform to the requirements of AWWA C-900, C-905, Fusible C-900, and Fusible C905, for the size, grade, and pressure class indicated on the Plans, Specifications, and Special Provisions. Fittings shall be the same pressure class as the pipe and shall conform to AWWA C907 and C908. PVC pressure pipe and fittings shall have a pressure rating of one hundred sixty (160) psi or greater, unless otherwise provided in the special provisions. The grade used shall be resistant to aggressive soils or corrosive substances in accordance with the requirements of ASTM D-543. Unless otherwise specified, the dimensions and tolerances of the pipe barrel should conform to ductile iron or cast iron pipe equivalent outside diameters.

A3 Polyethylene (PE) Pressure Pipe and Fittings

Polyethylene pressure pipe and fittings shall be manufactured with compounds conforming to ASTM D3350 and shall conform to ASTM D3035 and AWWA C-901 (for 0.5" to 3" diameters) and ASTM F714 and AWWA C906 (for 4" to 65" diameters) for the size, grade and pressure class indicated on the plans, specifications and special provisions. Polyethylene pipe and fittings shall be PE 3608 or PE 4710 for potable water transmission and pressure rating of one hundred sixty (160) psi or greater, unless otherwise provided in the special provisions. The pipe and fittings shall be manufactured from the same resin type, grade, and cell classification. Unless otherwise specified, the dimensions and tolerances of the pipe barrel should conform to Ductile Iron pipe equivalent outside diameters for pipe diameters greater than three inches (3"). The method of joining material shall be by the Thermal Butt- Fusion Method in accordance with ASTM 3261.

The minimum "quick-burst" strength of the fittings shall not be less than that of the pipe with which the fitting is to be used.

B Fire Hydrants

Fire hydrants shall be of the type, size, and construction specified in the Plans and shall conform to the applicable requirements of AWWA C-502.

Unless otherwise specified in the Plans, Specifications, and Special Provisions, hydrants shall be furnished in conformance with the following supplementary requirements:

- (1) Hydrants shall have a five inch (5") (nominal diameter) main valve opening of the type that opens against water pressure.
- (2) Hydrant barrels shall be two (2) piece, non-jacket type, with flanged joint above finished grade line and with mechanical joint connection at the hub end for joining a six inch (6") ductile iron branch pipe.
- (3) Hydrant operating rod shall be equipped with a breakable joint coinciding with the flange joint above the grade line.
- (4) Hydrant bury length shall be measured from the bottom of the branch pipe connection to the finished ground line at the hydrant.
- (5) Hydrants shall have two (2) outlet nozzles for two and one half inch (2-1/2") (I.D.) hose connection and one outlet nozzle for four inch (4") (I.D.) steamer connection. All outlet nozzle threads shall be National Standard Fire-Hose Coupling Screw Threads (NFPA 1963).
- (6) Hydrant operating mechanisms shall be provided with "O" ring seals preventing entrance of moisture and shall be lubricated through an opening in the operating nut or bonnet.
- (7) Hydrants shall be provided with outlets for drainage in the base or barrel, or between the base and barrel, unless the Special Provisions require that drain outlets be omitted or plugged.

- (8) The hydrant operating nut shall be rotated counterclockwise to open.
- (9) Detailed drawings, catalog information, and maintenance data shall be furnished as requested by the Engineer.
- (10) Hydrant body bolts shall be corrosion resistant, stainless steel conforming to the requirements of ASTM F593 and F594, alloy group 1, 2, 3, suitable for exterior use above and below ground. Bolts shall conform to manufacturer recommendation for tensile strength and torque.

C Valves and Valve Housing

C1 Valve Housings

Valve housings shall be of ductile or cast iron, High Density Polyethylene or masonry construction as specified in the Plans, Specifications, and Special Provisions for the particular valve size or installation. Masonry manhole or vault type units shall be constructed in accordance with the provisions of MnDOT Specification 2506. Precast Concrete Manholes shall conform to ASTM Specification C-478 suitable for HS 20 traffic loading for all units located in driving areas. Ductile or cast iron valve boxes and all castings for manhole or vault type units shall conform to the requirements of MnDOT Specification 3321.

C2 Gate Valves

Gate Valves shall conform to all applicable requirements of AWWA C-500 or AWWA C-509 or AWWA C-515, together with such supplementary requirements as may be covered in the Plans, Specifications, and Special Provisions. Unless otherwise specified gate valves shall comply with the following supplementary requirements:

- (1) Gate valves meeting the requirements of AWWA C-500 shall be two-faced, double disc type, with parallel seats. Gate valves meeting the requirements of AWWA C-509 and C-515 shall be single disc type with resilient seat bonded or mechanically attached to either the gate or valve body, and the wedge shall be ductile iron fully encapsulated with EPDM rubber, shall be symmetrical and seal equally well with flow in either direction without misalignment. All valves shall be provided with a two-inch square operating nut opening counterclockwise and mechanical joint ends.
- (2) All gate valves shall be non-rising stem (NRS) type furnished with O-Ring stem seals.
- (3) All gate valves sixteen inches (16") or larger in size shall be arranged for operation in the horizontal position and shall be equipped with bypass valves.
- (4) All gears on gate valves shall be cut tooth steel gears, housed in heavy ductile or cast iron extended type grease cases of approved design.
- (5) All gate valves shall have an open indicating arrow, the manufacturer's name, pressure rating and year of manufacture cast on the valve bodies.
- (6) All internal and external surfaces of the valve body and bonnet shall have an epoxy coating, complying with ANSI/AWWA C550.

- (7) All gate valves shall have stainless steel body bolts unless otherwise specified.

C3 Butterfly Valves

Butterfly valves shall be manufactured in conformance with all applicable requirements of AWWA C-504 for 150 p.s.i. working pressure minimum, together with such supplementary requirements as may be covered in the Plans, Specifications, and Special Provisions. Unless otherwise specified, the butterfly valves furnished shall comply with the following supplementary requirements.

- (1) The butterfly valves shall be short body of ductile or cast iron with mechanical joint ends.
- (2) The butterfly valves shall be rubber seated with ductile or cast disc, non-rising stem type furnished with O-ring stem seals.
- (3) The butterfly valves shall be equipped with a two-inch square operating nut opening counterclockwise.
- (4) The butterfly valves shall be designed for direct burial installation.
- (5) All butterfly valves shall have an open indicating arrow, the manufacturer's name, pressure rating and year of manufacture on the valve bodies.
- (6) All internal and external surfaces of the valve body and bonnet shall have an epoxy coating, complying with ANSI/AWWA C550.
- (7) All butterfly valves shall have stainless steel body bolts unless otherwise specified.

D Water Service Pipe and Fittings

Water service pipe of 3 inches or larger inside diameter shall conform to the requirements as set forth under the provisions of 2611.2.

Water service pipe of less than three inches (3") in inside diameter shall conform to the requirements of ASTM B 88 for Seamless Copper Water Tube, Type K, Soft Annealed temper; Polyethylene Pipe as per AWWA C901 and ASTM D3350, or Polyvinyl Chloride Pipe and fittings as per a ASTM D1785, D2241, D2466, D2467 and D2740, or Cross-linked Polyethylene (PEX) pipe as per ASTM F876, ASTM F877, and AWWA C904, NSF/ANSI Standard 61 for potable water distribution, as specified on the Proposal or in the Special Provisions. Water service piping supplied shall include markings indicating the type, pressure class, testing certification, and use for potable water systems.

Corporation stops, saddles, curb stops, and curb stop service boxes shall conform to the requirements of AWWA C800 be as detailed in the Plans, Specifications, and Special Provisions or approved designations.

Saddles for Polyethylene Pipe shall conform to the requirements of AWWA C800, and shall be thermal fusion polyethylene type; ductile iron with dual stainless steel straps, spring washers, bolts and washers; or stainless steel sleeve type, with stainless steel bolts, nuts, and spring

washers. Stainless steel bolts, nuts, and washers. Spring washers shall be manufactured from type 304 stainless steel, special "spring grade". Saddles shall include threaded outlet tapping sleeves and Nitrile Butadiene Rubber (NBR) gaskets.

All fittings for copper tubing shall be cast brass, having uniformity in wall thickness and strength, and shall be free of defects affecting serviceability. All copper pipe fittings shall be flared or compression type. All threads for underground service line fittings shall conform to the requirements of AWWA C-800. Each fitting shall be permanently and plainly marked with the name or trademark of the manufacturer. Fittings for thermoplastic pipe types shall be of the same material and pressure class as the piping.

Curb stop service boxes shall be gray iron conforming to the requirements of ASTM A 48 for Class 20 or higher tensile strength and shall have at least twelve inches (12") of vertical adjustment for the cover depth specified in the Plans, Specifications, and Special Provisions.

E Polyethylene Encasement Material

Polyethylene encasement material shall conform to the requirements of AWWA C-105 for tube type installation and 8 mil nominal film thickness.

F Mechanical Joint Restraints

Mechanical joint restraints shall be ductile iron conforming to the requirements of ASTM A536 and AWWA C-600. Joint restraints shall be American, US Pipe, Star Pipe Products, or EBBA Iron Mega-Lug type, and be designed to withstand the design pressures indicated in the Plans, Specifications, and Special Provisions. Mechanical joint restraints shall be fusion bonded epoxy coated meeting the requirements of AWWA C-116.

All nuts, bolts, and tie rod type restraints shall be stainless steel, corrosion-resistant coating, or coated with an owner approved rustproofing material.

G Mortar

Mortar for use in masonry construction shall meet the requirements of MNDOT 2506.2B and ASTM C270.

H Concrete

Concrete used for cast-in-place masonry construction shall be produced and furnished in accordance with the provisions of MnDOT Specification 2461 for the mix design indicated in the Plans, Specifications, or Special Provisions. The requirements for Grade B concrete shall be met where a higher grade is not specified. Type 3, air-entrained, concrete shall be furnished and used in all structures having weather exposure.

I Tracer Wire for Non-Conductive Pipe

Tracer wire for use with all thermoplastic pipe types shall be Underwriters Laboratories (UL) listed for use in direct burial applications. Tracer wire shall be a minimum 12 AWG copper clad steel rated to 30 volts, High Molecular Weight Polyethylene (HMWPE) meeting ASTM D-1248, with designation identified on the outside of the wire casing.

2611.3 CONSTRUCTION REQUIREMENTS

A Installation of Pipe and Fittings

Installation of ductile iron watermain and their appurtenances shall conform to the requirements of AWWA C-600, the Plans, Specifications and Special Provisions.

Installation of Polyvinyl Chloride (PVC) pipe and their appurtenances shall conform to the requirements of AWWA C605, and the bedding and backfill conditions specified by the Manufacturer, Plans, Specifications, and Special Provisions.

Installation of Polyethylene Pipe and their appurtenances shall conform to the requirements of AWWA M55 and to the bedding and backfill conditions specified by the Manufacturer, Plans, Specifications, and Special Provisions.

No existing valves or hydrants shall be operated by individuals other than personnel from the City Public Works Department. Only under emergency conditions or after specific authorization is given by the City Public Works Department shall the Contractor operate valves or hydrants.

Installation of pipe and fittings shall also conform to the following general guidelines:

A1 Inspection and Handling

Proper and adequate implements, tools, and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient prosecution of the work.

During the process of unloading delivered materials, all pipe and accessories shall be inspected by the Contractor for damage. The Contractor shall notify the Engineer of all material found to have cracks, flaws or other defects. The Engineer shall inspect the damaged material and have the right to reject any materials found to be unsatisfactory. The Contractor shall promptly remove all rejected material from the site.

All materials shall be handled carefully, as will prevent damage to protective coatings, linings, and joint fittings; preclude contamination of interior areas; and avoid jolting contact, dropping, or dumping.

During pipe laying operations each pipe section shall be inspected by the Contractor. The Contractor shall inform the Engineer of any defects discovered and the Engineer will prescribe the required corrective actions or order rejection.

Immediately before placement, the joint surfaces of each pipe section and fitting shall be inspected for the presence of foreign matter, coating blisters, rough edges or projections, and any imperfections so detected shall be corrected by cleaning, trimming, or repair.

A2 Pipe Laying Operations

Trench excavation and bedding preparations shall proceed ahead of pipe placement as will permit proper placement and joining of the pipe and fittings at the prescribed grade and alignment without unnecessary hindrance. All foreign matter or dirt shall be removed from the inside of the pipe and fittings before they are lowered into position in the trench, and they shall

be kept clean. The watermain materials shall be carefully lowered into laying position by the use of suitable restraining devices. Under no circumstances shall the pipe be dropped or dumped into the trench.

As each length of bell and spigot pipe is placed in laying position, the spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade. The pipe shall be secured in place with approved encasement and backfill materials.

When pipe laying is not in progress, all open ends of the pipe line shall be closed by watertight plugs or other means approved by the Engineer. If water is present in the trench, the plugs shall remain in-place until the trench is pumped completely dry.

When connecting to existing stubs, the Contractor shall prevent dirt or debris from entering the existing pipe.

A3 Aligning and Fitting of Pipe

The cutting of pipe for inserting valves, fittings, or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe and so as to leave a smooth square-cut end. Pipe shall be cut with approved mechanical tools. Flame cutting will not be allowed under any conditions. All rough edges shall be removed from the cut ends of pipe and, where rubber gasket joints are used, the outer edge shall be rounded or beveled by grinding or filing to produce a smooth fit.

When necessary to deflect pipe from a straight line either in the vertical or horizontal plane, to avoid obstructions, plumb stems, or produce a long radius curve when permitted, the amount of deflection allowed at each joint shall not exceed the limits to maintain a satisfactory joint seal in conformance with AWWA C-600 for ductile iron pipe mechanical and push-on joints, AWWA C-605 for PVC pipe and AWWA M55 for PE pipe. The maximum angular deflection at any joint for other pipe materials and joints shall not exceed the manufacturer's recommendations. If the specified alignment requires angular deflections greater than recommended or allowed, the Contractor shall provide appropriate bends or shorter pipes such that the maximum angular deflection is not exceeded.

A4 Blocking and Anchoring of Pipe

All plugs, caps, tees, bends, and other thrust points shall be provided with reaction backing, or movement shall be prevented by attachment of suitable restraining devices or tie rods, in accordance with the requirements of the Plans, Specifications, and Special Provisions.

In the absence of other specified requirements for reaction backing or restraining devices, the following provisions shall apply:

- (1) All horizontal bends exceeding twenty (20) degrees deflection, and all caps, plugs, and branch tees shall be provided with concrete buttress blocking.
- (2) All vertical bends exceeding twenty (20) degrees deflection shall be provided with concrete buttress blocking at the low points and with metal tie rod or strapping restraints at the high points.
- (3) Offset bends made with standard offset fittings need not be strapped or buttressed.

(4) Hardwood blocking shall not be used.

Concrete buttresses shall be poured against firm, undisturbed ground and shall be formed in such a way that the joints will be kept free of concrete and remain accessible for repairs. The concrete mix used in buttress construction shall meet the requirements for Grade B concrete in conformance with MnDOT Specification Section 2461. Buttress dimensions shall be a minimum of twelve inches (12") in thickness, and the minimum area, in square feet shall be as follows.

PIPE SIZE	TEE OR PLUG	1/4 BEND	1/8 BEND	1/32 BEND 1/16 BEND
6"	2.9	3.1	1.6	0.8
8"	3.7	5.3	2.9	1.4
10"	5.7	8.1	4.4	2.2
12"	8.1	13.4	6.6	3.2
16"	15.1	21.4	11.6	5.9
20"	23.2	30.2	18.1	9.3
24"	33.6	48.5	26.1	13.3

Contractors are instructed to size concrete buttress blocking on fittings and dead ends where the blocking must withstand the pressure of larger main line fittings equipped with reducers, for the larger sized main line thrust and not for smaller fitting size only. This is of particular importance on tees and crosses where the main size is reduced on the run from large to small size by use of reducers.

All metal parts of tie rod or strap type restraints shall be galvanized or coated with other approved asphaltic type rustproofing.

All necessary fittings, bands, tie rods, nuts, and washers, and all labor and excavation required for installation of reaction restraints shall be incidental to the installation of the pipe, unless a specific payment item is provided in the bid proposal.

A5 Polyethylene Encasement of Pipeline

Wherever so required by the Plans, Specifications, or Special Provisions the pipeline, including valves, fittings, and appurtenances, shall be fully encased in polyethylene film meeting the requirements of these Specifications. The film shall be furnished in tube form for installation on pipe and all pipe-shaped appurtenances such as bends, reducers, off-sets, etc. Sheet film shall be provided and used for encasing all odd-shaped appurtenances such as valves, tees, crosses, etc.

The polyethylene tubing shall be installed on the pipe prior to being lowered into the trench. Tubing length shall be sufficient to provide a minimum overlap at all joints of one foot or more. Overlap may be accomplished with a separate sleeve tube placed over one end of the pipe prior to connecting another section of pipe, or by bunching extra overlap material at the pipe ends in accordion fashion. After completing the pipe jointing and positioning the overlap material, the overlap shall be secured in place with plastic adhesive tape wrapped circumferentially around the pipe not less than three (3) turns.

After encasement, the circumferential slack in the tubing film shall be folded over at the top of the pipe to provide a snug fit along the barrel of the pipe. The fold shall be held in place with

plastic adhesive tape applied at intervals of approximately three feet (3') along the pipe length. Also, any rips, punctures, or other damage to the tubing shall be repaired as they are detected. These repairs shall be made with adhesive tape and overlapping patches cut from sheet or tubing material.

At odd-shaped appurtenances such as gate valves, the tubing shall overlap the joint and be secured with tape, after which the appurtenant piece shall be wrapped with a flat film sheet or split length of tubing by passing the sheet under the appurtenance and bringing it up around the body. Seams shall be made by bringing the edges together, folding over twice, and taping down. Wherever encasement is terminated, it shall extend for at least two feet (2') beyond the joint area.

Openings in the tubing for branches, service taps, air valves and similar appurtenances shall be made by cutting an X-shaped slit and temporarily folding back the film. After installing the appurtenance, the cut tabs shall be secured with tape and the encasement shall be completed as necessary for an odd-shaped appurtenance.

Unless otherwise specified in the Plans, Specifications, and Special Provisions, hydrants encased in polyethylene tubing shall have plugged drain outlets.

B Connection and Assembly of Joints

Where rubber gasket joints are specified, care shall be taken during the laying and setting of piping materials to insure that the units being joined have the same nominal dimension of the spigot outside diameter and the socket inside diameter. A special adaptor shall be provided to make the connection when variations in nominal dimension might cause unsatisfactory joint sealing.

Immediately before making the connection, the inside of the bell or socket and the outer surface of the spigot ends shall be thoroughly cleaned to remove oil, grit, excess coating, and other foreign matter. Insertion of spigot ends into the socket or bell ends shall be accomplished in a manner that will assure proper centering and insertion to full depth. The joint seal and securing requirements shall be as prescribed below for the applicable pipe and joint type.

B1 Ductile Iron Pressure Pipe and Fitting Joints

B1a Push-On Joints

The circular rubber gasket shall be kept in a warm, flexible condition at all times, and for purposes of placement shall be flexed inward and inserted in the gasket recess of the bell socket. A thin film of approved gasket lubricant shall be applied to either the inside surface of the gasket or the outside surface of the spigot end, or to both. Care shall be taken while inserting the spigot end to prevent introduction of contaminants. The joint shall be completed by forcing the spigot end to the bottom of the socket by the use of suitable pry-bar or jack type equipment. Spigot ends which do not have depth marks shall be marked before assembly to insure full insertion. The use of the bucket on the excavation equipment to force the pipe into the socket shall not be permitted.

B1b Mechanical Joints

The last eight inches (8") of the outside spigot surface and the inside bell surface of each pipe and appurtenance joint shall be painted with a thin film of approved gasket lubricant after being thoroughly cleaned. The gland shall then be slipped on the spigot end with the lip extension toward the socket or bell end. The rubber gasket shall be kept in a warm, flexible condition at all times, and for purposes of placement shall be painted with a thin film of approved gasket lubricant and be placed on the spigot end with the thick edge toward the gland

After the spigot end is inserted into the socket to full depth and centered, the gasket shall be pressed into place within the bell evenly around the entire joint. After the gland is positioned behind the gasket, all bolts shall be installed and the nuts tightened alternately to the specified torque, such as to produce equal pressure on all parts of the gland.

Unless otherwise specified, the bolts shall be tightened by means of a suitable torque-limiting wrench to within a foot-pound range of: 45 to 60 for 5/8 inch bolts; 75 to 90 for 3/4 inch bolts; 85 to 100 for 1 inch bolts; and 105 to 120 for 1-1/4 inch bolts. After tightening, all exposed parts of the bolts and nuts shall be completely coated with an approved asphaltic type rust preventive material.

B1c Flanged Joints

Flanged joints shall be installed only in above grade or exposed locations and shall conform to the requirements of AWWA C115 Specifications, the Plans, Specifications and Special Provisions. Flanged joints shall have full face gaskets.

B2 Polyvinyl Chloride Pipe Joints

B2a Push-On Joints

The circular rubber gasket shall be bonded to the inner wall of the gasket recess of the bell socket. Installation of pipe spigot into the bell socket shall conform to the requirements for Ductile Iron Push-On Joints as set forth under the provisions of 2611.3B1a.

B3 Polyethylene Pipe Joints

Polyethylene pipe joints shall conform to the requirements of AWWA C-906, and shall be made by the Thermal Butt-Fusion Method, Mechanical Flange Adaptor Method, Mechanical Joint Adaptor Method and Mechanical Transition Fittings. Mechanical joints shall include stainless steel pipe stiffeners. Compression fittings are not allowed for pipe diameters greater than two inches (2") in diameter.

B4 Tracer Wire for Non-conductive Pipe

Tracer wire shall be installed along the length of all non-conductive mainline pipes, laterals, and services with vertical riser to the surface, at gate valve boxes, hydrants, curb boxes, and/or utility location boxes as required by the Special Provisions. Tracer wire shall be taped, clamped or affixed to the pipe in another manner as approved by the Engineer.

Splicing tracer wire shall be by mechanical split bolt type or a crimp type compression fitting fully encased in approved electrical insulation putty. A twelve inch (12") tracer wire loop shall be provided on each side of a spliced connection.

C Water Service Installations

Water service facilities consisting of Tap Service Lines and Branch Service Lines, complete with all required appurtenances, shall be installed as required by in the Plans, Specifications, and Special Provisions, in accordance with all pertinent requirements for main line installations together with the provisions hereof.

It shall be the responsibility of the Contractor to keep an accurate record of the location, depth and size of each service connection and other pertinent data such as the location of curb stops and pipe endings. Tap locations shall be recorded in reference to survey line stationing. Curb stops shall be tied to definable land marks such as building corners, lot corner markers, hydrants, gate valves, etc. Pipe terminals at the property line shall be marked to the ground surface with a suitable wood timber four by four inch (4"x4"), eight feet (8') long set vertically into the ground with the top two feet (2') painted blue. Approved record keeping forms will be furnished by the Engineer and the completed records shall be submitted by the Contractor upon completion of the work.

Water service lines shall normally be installed by trenching and be subject to the same requirements as prescribed for the main pipeline installation, except for those which may not be pertinent or applicable. Where water service lines are installed alongside of sanitary service lines, installation shall be such as to maintain the minimum specified clearances between pipelines and provide proper and adequate bearing for all pipes and appurtenances.

Water service lines shall be installed to provide a minimum of six inches (6") of clearance shall be maintained in crossing over or under other structures. Where the service pipe may be exposed to freezing due to insufficient cover or exposure from other underground structures, the water pipe shall be insulated as directed by the Engineer.

C1 Tee Branch Service Lines

Tee branch service piping shall be of the type, size, and wall thickness specified. The pipe and appurtenances shall have rubber gasketed push-on or mechanical joints. Tee branch service lines shall be provided as required by the Plans.

Installation of tee branch service facilities shall be in accordance with all applicable requirements of these specifications as pertain to the mainline installations.

C2 Tapped Service Lines

Service piping shall be of the size and type specified. Unless otherwise specified, minimum pipe size for tap service installations shall be one inch (1") nominal inside diameter. Larger size pipe may be specified for commercial and industrial uses or for some domestic service as specifically identified.

Installation of service facilities shall be in accordance with all applicable requirements of these specifications as pertain to the mainline installations, subject to the exceptions and supplementary provisions set forth hereinafter.

Installation of tapped service lines shall be performed while the mainline watermain is at system operating pressure. Dry tapping watermain pipe will not be allowed.

Unless otherwise indicated, service piping may be laid directly on any solid foundation soil that is free of stones and hard lumps. However, when specified or ordered, aggregate materials shall be furnished and placed as necessary to secure proper foundation drainage, pipe covering, or backfill support.

Tapped service piping of three quarters inch (3/4") to and including one and one quarter inches (1 1/4") in diameter shall be installed in one piece without intermediate joint couplings between the corporation stop and the curb stop. Service pipe of one and one half inches (1-1/2") in diameter and larger shall be furnished in standard roll lengths to eliminate any intermediate joints. When full roll lengths are less than the service length the rolls may be joined with approved couplings.

Unless otherwise specified, connection of tapped service lines to the watermain shall be made at an angle of not more than twenty two (22) degrees from the horizontal. A double wrap of Teflon tape shall be placed on the corporation stop threads prior to installation in the main.

Unless otherwise indicated, tap service lines shall be installed on a straight line at right angles to the watermain or property line as directed by the Engineer. In the absence of specific requirements, the service line shall be terminated at the property line, where it shall be connected to an existing line or, in the case of undeveloped property, it shall be capped, plugged, or peened as approved by the Engineer.

The flaring of new copper tubing ends shall be accomplished only with the use of the proper size and type of tools as designed for the purpose. Tubing shall be cut squarely and all edge roughness shall be removed prior to flaring. All couplings shall be tightened securely, so the flared end fits snugly against the bevel of the fitting without leakage. The flared joint couplings shall be made up without the use of jointing compounds.

The service pipe and curb stop coupling depth shall be such as to maintain not less than the specified minimum cover. The service box shall be connected to or centered over the curb stop and be firmly supported on concrete blocking as required by the Plans, Specifications, and Special Provisions. Clearance shall be provided so the service box does not rest on the water pipe. Service boxes shall be installed plumb.

The service boxes shall be brought to proper surface grade when the final ground surface has been established.

D Setting Valves, Hydrants, Fittings and Specials

Valves, hydrants, fittings, and specials shall be provided and installed as required by the Plans, Specifications, and Special Provisions with the exact locations and setting as directed by the Engineer, and with each installation accomplished in accordance with the requirements for installation of mainline pipe to the extent applicable. Support blocking, reaction backing, and anchorage devices shall be provided as required by the Plans, Specifications, and Special Provisions or as otherwise ordered by the Engineer.

Hydrants shall be installed plumb, with the height and orientation of nozzles as shown in the Plans or as directed by the Engineer. Unless otherwise specified, the hydrants shall be connected to the mainline pipe with six inch (6") diameter pipe, controlled by an independent valve.

When a hydrant with an open drain outlet is set in clay or other impervious soil, a drainage pit of at least one cubic yard shall be excavated below and around the hydrant base and the pit shall be filled with Foundation Material to a level six inches (6") above the drain outlet. MnDOT 3733 geotextile Type V, or other material approved by the Engineer, shall be carefully placed over the rock to prevent backfill material from entering voids in the rock drain. Hydrants located where the groundwater table is above the drain outlet shall have the outlet drain hole plugged or the drain tube cut off to prevent draining, and shall be equipped with a tag stating, "Pump After Use".

Valve boxes shall be centered over the valve wrench nut and be installed plumb, with the box cover flush with the surface of the finished pavement or at such other level as may be directed.

Valve box adaptors for use to stabilize the valve box in a centered position over the valve wrench nut shall include a rubber gasket between the adaptor plate and valve body. The adaptor shall be epoxy coated conforming to the requirements for fittings in section 02611.2A1, or as otherwise allowed by the plans, specifications and special provisions. Gate valve box adaptors shall be incidental to the valve box unless otherwise provided in the bid proposal.

Masonry valve pit structures, for valves with exposed gearing or operating mechanisms, shall be constructed in accordance with the details shown in the Plans and with the applicable provisions of these Specifications.

Drainage blow-offs, air vents, and other special appurtenances shall be provided and installed as required by the Plans, Specifications, and Special Provisions.

All dead ends shall be closed with approved plugs or caps and shall be equipped with suitable blow-off facilities.

E Disinfection of Watermains

Before being placed in service, the completed water main shall be disinfected. Disinfection materials and procedures, and the collection and testing of water samples, shall be in accordance with the provisions of AWWA C-651. After the final flushing of watermain, the water shall be tested for bacteriologic quality and found to meet the standards prescribed by the Minnesota Department of Health.

Where an existing watermain is cut for the installation of any fitting, the pipe and fittings proposed to be installed shall be disinfected prior to installation as follows:

- (1) The interior of the pipe and fittings shall be cleaned of all dirt and foreign material.
- (2) The interior of the pipe and fittings shall be thoroughly swabbed or sprayed with a one percent (1%) minimum hypochlorite solution.

Unless otherwise indicated in the Plans, Specifications, and Special Provisions, the Contractor shall furnish all materials and perform the disinfecting, flushing, and testing as necessary for meeting the water quality requirements.

The flushing operations and the form of chlorine and method of application to be used shall be subject to approval by the Engineer.

F Electrical Conductivity Test

The Contractor shall perform a conductivity test within one week after completion of pressure testing of the main on all watermains to ensure continuous conductivity for the purpose of tracing watermain for utility location. Sufficient conductivity shall be provided to allow for the location of watermain, services, hydrant leads, and laterals for mainline segments at least one thousand two hundred (1,200) linear feet in length

G Hydrostatic Testing of Watermains

After the pipe has been laid, including fittings and valves and blocking, all newly-laid pipe or any section between valves thereof, unless directed otherwise by the Engineer, shall be subject to hydrostatic pressure of one hundred fifty (150) pounds per square inch. The duration of each such test shall be at least two (2) hours.

Each section of pipe to be tested shall be filled with water and all air expelled at the highest point. The required taps to expel air or to fill the watermain shall be supplied and installed by the Contractor and shall be three quarters inch (3/4") and shall include an approved service saddle when required.

The test apparatus shall be applied at the lowest elevation on the section to be tested. The apparatus shall be connected to the main at a service tap or special tap location.

The pressure gauge shall be a standard pressure gauge. The dial shall register from 0 - 200 psi and have a dial size of four and one half inches (4 ½") with one (1) psi increments.

The hydrostatic test, pressure requirement for an acceptable test shall be a maximum pressure drop of two (2) psi during the last hour of the two (2) hour pressure test.

If this test requirement cannot be met, the Contractor shall investigate the cause, make corrections, and retest until the pressure drop requirement can be met.

Only if several consecutive tests indicate a consistent pressure drop and only after the Contractor has made numerous attempts to resolve the problem, acceptable to the Engineer, may the Contractor request in writing and the Engineer consider the use of the leakage test. The leakage test may be performed by the Contractor to determine the magnitude of the leak, however, meeting the leakage allowance shall not automatically be considered acceptance, in lieu of the pressure test, for the section being tested. Final acceptance shall be at the discretion of the Engineer.

When allowed, the leakage test shall be performed in accordance with AWWA C-600, Section 4.1.5, 4.1.6 and the line will be accepted as per Section 4.1.7.

H Operational Inspection

At the completion of the project and in the presence of the Engineer and the Contractor, representatives of the Owner shall operate all valves, hydrants, and water services to ascertain that the entire facility is in good working order; that all valve boxes are centered and valves are opened; that all hydrants operate and drain properly; that all curb boxes are plumb and centered; and that water is available at all curb stops.

2611.4 METHOD OF MEASUREMENT

All items will be measured separately according to design designation as indicated in the Pay Item name and as may be detailed and defined in the Plans, Specifications, or Special Provisions. Pipe will generally be designated by size (inside diameter or span), strength class, kind or type, and laying condition. Payment shall include all component parts thereof as described or required to complete the unit, but excluding any item covered by a separate pay item. Lineal measurement of piping will include the running length of any special fittings (tees, wyes, bends, gates, etc.) installed within the line of measure between specified terminal points.

A Water Pipe

Mainline pipe and service pipe of each kind and size will be measured separately by the overall length along the axis of the pipeline, from beginning to end of each installation and without regard to intervening valves or specials. Terminal points of measure will be the spigot or cut end, base of hub or bell end, center of valves or hydrants, intersecting centers of tee or wye branch service connections, and center of corporation stop or curb stop couplings.

B Valves

Valves of each size and type will be measured separately as complete units, including the required manhole or valve box setting.

C Corporation Stops

Corporation stops of each size and type will be measured separately by the number of units installed, including the watermain tap and saddle.

D Curb Stops

Curb stops of each size and type will be measured separately by the number of units installed, including the required curb box.

E Hydrants

Hydrants will be measured by the number of units installed.

F Air Vents

Air vents of each type and size will be measured separately by the number of complete units installed, including the required manhole or valve box setting.

G Polyethylene Encasement

Polyethylene encasement of pipe will be measured by the linear foot of pipe encased of each specified size.

H Ductile and Gray Iron Fittings

Ductile Iron and Gray Iron fittings shall be measured by the pound without joint accessories or on an each basis as specified on the Proposal or in the Special Provisions. Joint accessories including tie rods, joint restraints, nuts and bolts shall be incidental to the watermain unless otherwise provided on the Proposal or in the Special Provisions.

The standard weight of Ductile Iron and Gray Iron fittings, for payment basis, shall be as published in AWWA C-153 and C-110, respectively.

I Polyvinyl Chloride or Polyethylene

Polyvinyl Chloride or Polyethylene fittings shall be measured on an each basis as specified and shown on the Proposal or in the Special Provisions.

J Access Structures

Access structures, such as valve boxes, service boxes, manholes and vaults, will be measured for payment only when and to the extent that the Proposal contains specific items therefore. Otherwise, the required structures are included for payment as part of the pipe appurtenance (Gate Valve, Curb Stop, Air Vent, etc.) item which is served. When applicable, measurement will be by the number of individual units installed of each type and design.

2611.5 BASIS OF PAYMENT

Payment for construction of water distribution facilities will be made as detailed in the method of measurement and as shown on the Bid Proposal or detailed in the Special Provisions. Payment shall include all costs of furnishing and installing the complete facility as required by the Plans, Specifications, and Special Provisions.

Payment shall be made for Watermain Pipe, Service Pipe, and Tapped Service Pipe, of each size and kind at the appropriate Contract prices per linear foot installed. All costs of pipeline disinfection, leakage testing, pipe jointing materials, dead end plugs and caps, making connections to existing facilities, blocking and anchorage materials, and other work necessary for proper installation of pipe as specified shall be included for payment as part of the pipe item, without any direct compensation being made therefore unless specific pay items are included on the Proposal.

Payment shall be made for Valves, Corporation Stops, Curb Stops, Hydrants, Air Vents, Polyethylene Encasement, Insulation, and other specially identified appurtenant items, at the appropriate Contract prices per unit of measure for each size and type or kind installed.

Access structures such as Valve Boxes, Service Boxes, Manholes, and Vaults will be paid for as separate items only when separate pay items are included on the Proposal.

Payment for rearrangement of in-place facilities or vertical offset of proposed facilities shall be made under specially named items at the appropriate Contract prices per unit of measure and shall be compensation in full for all costs of performing the work as specified.

All costs of excavating to foundation grade, preparing the foundation, placing and compacting backfill materials, restoring surface improvements, and other work necessary for prosecution and completion of the work as specified, shall be included for payment as part of the pipe and pipe appurtenance items without any direct compensation being made therefore, unless specific pay items are included on the Proposal.

Watermain connections shall be paid per each connection to new watermain. All necessary labor, materials, and work required to make the connection shall be included in the price per each as provided in the bid proposal.

Installation of tracer wire for thermoplastic and other non-conductive pipe materials shall be considered incidental with no direct compensation made thereto, except where noted otherwise.

SECTION 2621 – STANDARD SPECIFICATIONS FOR SANITARY SEWER AND STORM SEWER INSTALLATION

2621.1 DESCRIPTION

This work shall consist of the construction of pipe sewers utilizing plant fabricated pipe and other appurtenant materials, installed for conveyance of sewage, industrial wastes, or storm water. The work includes construction of manhole and catch basin structures and other related items as specified.

The use of the term "Plans, Specifications and Special Provisions" within this specification shall be construed to mean those documents which compliment, modify, or clarify these specifications and are an enforceable component of the Contract Documents.

All references to MnDOT Specifications shall mean the latest published edition of the Minnesota Department of Transportation "Standard Specifications for Construction", and all supplements and amendments thereto published prior to the date of advertisement for bids.

All references to other Specifications of AASHTO, ASTM, ANSI, AWWA, etc. shall mean the latest published edition available on the date of advertisement for bids.

The following specifications have been referenced in this Specification:

AASHTO M198 Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants

AASHTO M294 Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter

ASTM A48 Standard Specification for Gray Iron Castings

ASTM A74 Standard Specification for Cast Iron Soil Pipe and Fittings

ASTM A798 Standard Practice for Installing Factory Made Corrugated Steel Pipe for Sewers and Other Applications

ASTM C12 Standard Practice for Installing Vitrified Clay Pipe Lines

ASTM C76 Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

ASTM C270 Standard Specification for Mortar for Unit Masonry

ASTM C301 Standard Test Methods for Vitrified Clay Pipe

ASTM C361 Standard Specification for Reinforced Concrete Low Head Pressure Pipe

ASTM C425 Standard Specification for Compression Joints for VCP and Fittings

ASTM C443 Standard Specification for Joints Concrete Pipe and Manholes Using Rubber Gaskets

ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections

ASTM D543 Standard Practice for Evaluating the Resistance of Plastics to Chemical Reagents

ASTM C564 Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings

ASTM C700 Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated

ASTM C969 Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines

ASTM D2321 Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications

ASTM D2751 Standard Specification for ABS Pipe and Fittings

ASTM D3034 Standard Specification for PVC Sewer Pipe and Fittings

ASTM D3212 Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
 ASTM D3262 Standard Specification for "Fiberglass" (Glass Fiber Reinforced Thermosetting Resin) Sewer Pipe
 ASTM D3839 Standard Guide for Underground Installation of "Fiberglass" (Glass Fiber Reinforced Thermosetting Resin) Pipe
 ASTM D4161 Standard Specification for Fiberglass (Glass Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
 ASTM F477 Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
 ASTM F679 Specification for Large-Diameter PVC Sewer Pipe and Fittings
 ASTM F949 Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
 ASTM F1417 Standard Practice for Installation Acceptance of Plastic Non pressure Sewer Lines Using Low Pressure Air
 ASTM F2736 Standard Specification for 6 to 30 in. (152 To 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe And Double Wall Pipe
 ASTM F2764 Standard Specification for 30 to 60 in. [750 to 1500 mm] Polypropylene (PP) Triple Wall Pipe and Fittings for Non Pressure Sanitary Sewer Applications
 AWWA C104 American National Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
 AWWA C110 American National Standard for Ductile-Iron and Gray-Iron Fittings
 AWWA C111 American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
 AWWA C115 American National Standard for Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges
 AWWA C116 Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings
 AWWA C150 American National Standard for Thickness Design of Ductile-Iron Pipe
 AWWA C151 American National Standard for Ductile-Iron Pipe, Centrifugally Cast
 AWWA C153 American National Standard for Ductile-Iron Compact Fittings for Water Service
 AWWA C550 Standard for Protective Interior Coatings for Valves and Hydrants

2621.2 MATERIALS

All materials required for this work shall be new material conforming to requirements of the referenced specifications for the class, kind, type, size, grade, and other details indicated in the Contract. Unless otherwise indicated, all required materials shall be furnished by the Contractor. If any options are provided for, as to type, grade, or design of the material, the choice shall be limited as may be stipulated in the Plans, Specifications, or Special Provisions.

All manufactured products shall conform in detail to such standard design drawings as may be referenced or furnished in the Plans. Otherwise, the Owner may require advance approval of material suppliers, product design, or other unspecified details as it deems desirable for maintaining adopted standards.

At the request of the Engineer, the Contractor shall submit in writing a list of materials and suppliers for approval. Suppliers shall submit a Certificate of Compliance that the materials furnished have been tested and are in compliance with the specifications.

A Sewer Pipe and Service Line Materials

All pipe furnished for main sewer and service line installations shall be as indicated for each particular line segment as shown in the Plans and designated in the Contract Items. Wherever connection of dissimilar materials or designs is required, the method of joining and any special fittings employed shall be products specifically manufactured for this purpose and subject to approval by the Engineer.

A1 Vitrified Clay Pipe and Fittings

Vitrified clay extra strength pipe and fittings shall conform to the requirements of ASTM M-65 for the size and type and class specified, subject to the following supplementary provisions:

- (1) Unless otherwise specified, the pipe and fittings shall be non-perforated, full circular type, either glazed or unglazed.
- (2) All pipe and fittings manufactured with bell-and-spigot ends shall be furnished with factory fabricated compression joints conforming to the requirements of ASTM C-425.
- (3) In lieu of the bell-and-spigot jointing requirements, the pipe and fittings may be furnished with plain ends, in which case the jointing shall be by means of compression couplings conforming to the requirements of ASTM C-425, Type B.
- (4) All clay pipe fittings (wyes, tees, bends, plugs, etc.) shall be of the same pipe class and joint design as the pipe to which they are to be attached.
- (5) Pipe and fittings manufactured to the standards of AASHTO 52;65 may be accepted by prior approval of the Engineer.

A2 Ductile Iron Pipe and Ductile Iron and Gray Iron and Fittings

The pipe furnished shall be Ductile Iron pipe and pipe fittings furnished shall be of the Ductile Iron or Gray Iron type as specified for each particular use of installation. When Gray Iron is specified, either type may be furnished. Gray Iron may not be substituted for Ductile Iron unless specifically authorized in the Special Provisions.

Ductile iron pipe shall conform to the requirements of AWWA C115 or C151 for water, and thickness design shall conform to AWWA C 150. In addition, the pipe shall comply with the following supplementary provisions:

- (1) Fittings shall conform to the requirements of AWWA C110 (Gray Iron and Ductile Iron Fittings) or AWWA C153 (Ductile Iron Compact Fittings) for the joint type specified.
- (2) Unless otherwise specified all pipe and fittings shall be furnished with cement mortar lining meeting the requirements of AWWA C104 for standard thickness lining. All exterior surfaces of the pipe and fittings shall have an asphaltic coating at least one mil thick. Spotty or thin seal coating, or poor coating adhesion, shall be cause for rejection.

Fittings specified to be furnished with fusion bonded epoxy external coating and/or interior lining shall conform to the requirements of AWWA C550 and C116/A21.16, with 6-8 mil nominal thickness.

- (3) Rubber gasket joints for Ductile Iron Pressure Pipe and fittings shall conform to AWWA C111.
- (4) The nuts and bolts shall be constructed of corrosion resistant, high-strength, low-alloy steel with a ceramic filled, baked on fluorocarbon resin. The nuts and bolts shall be in compliance with ANSI/AWWA C111/A21.11 (Current Revision).
- (5) Conductivity, when required by the Special Provisions, shall be maintained through pipe and fittings with an external copper jumper wire or specialty gaskets which are capable of meeting conductive requirements. Wedge type connectors will not be allowed.

A3 Reinforced Concrete Pipe and Fittings

Reinforced concrete pipe, fittings and specials shall conform to the requirements of ASTM C-76 (Reinforced Concrete Pipe) with rubber O-ring or profile joints for the type, size, and strength class specified, subject to the following supplementary provisions:

- (1) All branch fittings such as tees, wyes, etc. shall be cast as integral parts of the pipe. All fittings and specials shall be of the same strength class as the pipe to which they are attached.
- (2) Joints shall meet the requirements of ASTM C-361, and ASTM C443.
- (3) Lift holes will not be permitted unless specifically authorized in the Plans, Specifications, and Special Provisions

A4 Corrugated Steel Pipe and Fittings

Corrugated Steel (CS) Pipe and fittings shall conform to the requirements of MnDOT 2501, 2503, and 3226 (CS) Pipe for the application, type, size and sheet thickness specified. Joints for joining CS Pipe shall be the band type or bell/spigot type, soil-tight and watertight, with preformed gasket seals meeting MnDOT 3726. Fittings and bands for joining pipe sections shall be of the same material and thicknesses as the mainline pipe.

Specialty coatings for the pipe shall be as indicated in the Plans, Specifications, and Special Provisions.

A5 Polyvinyl Chloride Pipe and Fittings

Smooth walled polyvinyl chloride pipe and fittings shall conform to the requirements of ASTM D-3034 and ASTM F-679 for the size, standard dimension ratio (SDR), and strength requirements indicated on the Plans, Specifications, and Special Provisions. The grade used shall be resistant to aggressive soils or corrosive substances in accordance with the requirements of ASTM D-543.

Pipe fittings shall be of the same class and grade as specified for the pipe, unless otherwise specified in the special provisions.

Unless otherwise specified, all pipe and fittings shall be SDR 35 and connections shall be push-on with elastomeric gasket joints which are bonded to the inner wall of the gasket recess of the bell socket.

PVC pipe and fittings for pressure sewer and forcemains shall meet the requirements of 2611.2 A3 for watermain class pipe.

Corrugated polyvinyl chloride pipe and fittings with smooth interior shall conform to the requirements of ASTM F-949 for the size and wall thickness indicated on the Plans, Specifications, and Special Provisions. Unless otherwise specified, all pipe and fittings shall be push-on with snug fit elastomeric joints meeting tightness requirements of ASTM D-3212 and ASTM F477.

A6 Cast Iron Soil Pipe

Unless otherwise specified in the Plans, Specifications, and Special Provisions, cast iron soil pipe shall be service weight pipe meeting the requirements of ASTM A-74 and the Plans, Specifications, and Special Provisions. Unless otherwise specified, pipe joints shall be push-on, sealed with elastomeric gaskets, meeting the requirements of ASTM C-564.

A7 Acrylonitrile-Butadiene-Styrene Pipe

Acrylonitrile-Butadiene-Styrene (ABS) solid wall pipe and fittings shall conform to the requirements of ASTM D-2751 and shall be gasket seal joints, assembled as recommended by the pipe manufacturer. Unless otherwise specified, all pipe and fittings shall be push-on with snug fit elastomeric joints meeting tightness requirements of ASTM D-3212 and ASTM F477. Solvent cemented joints, assembled as recommended by the pipe manufacturer, shall be provided only where specifically indicated in the Plans, Specifications, and Special Provisions.

A8 Corrugated Polyethylene Pipe

Dual-Wall and Triple-Wall Corrugated Polyethylene Pipe (PE/HDPE) for gravity sewers shall conform to the requirements of AASHTO M-294 and Section 18 of the AASHTO Standard Specifications for Highway Bridges for storm sewer pipe sizes twelve inch (12") through sixty inch (60"). Joints shall be bell and spigot push-on type, soil-tight and watertight joints in accordance with ASTM D3212 and ASTM F477. Pipe manufacture, watertight joint testing, and installation shall conform to current MnDOT requirements, ASTM C969, and as indicated in the Plans, Specifications, and Special Provisions.

A9 Solid Wall High Density Polyethylene Pipe

Solid wall HDPE for pressure and gravity sewer pipes shall meet the requirements of 2611.2A4.

A10 Fiberglass Reinforced Pipe

Fiberglass Reinforced Pipe (FRP/GRP) for gravity sewers shall meet requirements of ASTM D3262 for Glass-Fiber-Reinforced Thermosetting Resin pipe, such as reinforced thermosetting-resin pipe (RTRP) and reinforced polymer mortar pipe (RPMP; natural polymers not included) for use in gravity-flow systems. The pipe shall be manufactured with polyester resin systems with a proven history of performance in this application.

The reinforcing glass fibers used to manufacture the components shall be of highest quality commercial grade E-glass filaments with binder and sizing compatible with impregnating resins.

Sand used to manufacture the pipe and fittings shall be minimum ninety eight percent (98%) silica sand with a maximum moisture content of two tenths of a percent (0.2%).

Pipe resin additives, such as curing agents, pigments, dyes, fillers, thixotropic agents, etc., when used, shall not detrimentally effect the performance of the products.

Gaskets shall be supplied by approved gasket manufacturers and be suitable for the service intended. Minimum pressure rating of gaskets shall be two hundred fifty (250) psi.

Unless otherwise specified, the pipe shall be field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets made of EPDM rubber compound to provide watertight joints meeting the requirements of ASTM D4161. Joints at tie-ins, when needed, may utilize fiberglass, gasket-sealed closure couplings.

Fittings shall be capable of withstanding all operating conditions when installed. They may be contact molded or manufactured from mitered sections of pipe joined by glass-fiber-reinforced overlays. Properly protected standard ductile iron, fusion-bonded epoxy-coated steel and stainless steel fittings are allowed unless otherwise stated in the Special Provisions.

The actual outside diameter (eighteen inch (18") to forty eight inch (48")) of the pipes shall be in accordance with ASTM D3262. Other pipe diameter OD's shall be per manufacturer's literature.

Pipe shall be supplied in nominal lengths of twenty feet (20') except where noted otherwise on the drawings. Actual laying length shall be nominal $\pm 1/4$ inches. At least ninety percent (90%) of the total footage of each size and class of pipe, excluding special order lengths, shall be furnished in nominal length sections.

Pipe ends shall be square to the longitudinal pipe axis with a maximum tolerance of eight inch (1/8").

Pipe shall be marked identifying each pipe with the name of manufacturer, plant location, code date of manufacturer, nominal pipe size, pipe stiffness designation and ASTM D3262.

Service lateral connections (wye, tee, bend) to the sanitary sewer shall be as recommended by the main line sewer pipe manufacturer recommendation.

A11 Polypropylene Pipe

Corrugated Polypropylene Pipe (PP) for gravity sewers shall be Dual-Wall (six inch (6") to thirty inch (30") diameter) pipe conforming to ASTM F2736 and Triple Wall (thirty inch (30") to sixty inch (60") diameter) pipe conforming to ASTM F2764. Pipe joints shall be bell and spigot push-on type, soil-tight and watertight joints in accordance with ASTM D3212 and ASTM F477., and shall conform to the requirements of AASHTO M-294 and Section 18 of the AASHTO Standard Specifications for Highway Bridges for storm sewer pipe sizes twelve inch (12") through sixty inch (60"). Pipe manufacture, watertight joint testing, and installation shall conform to current MnDOT requirements, ASTM C969, and as indicated in the Plans, Specifications, and Special Provisions.

A12 Tracer Wire for Non-conductive Pipe

Tracer wire shall be installed along the length of all non-conductive mainline pipe, laterals, and services with vertical riser to the surface, at manholes, catch basins, stubs, laterals, services, and/or utility location boxes as required by the Special Provisions. Tracer wire shall be taped, clamped or affixed to the pipe in another manner as approved by the Engineer.

Splicing tracer wire shall be by mechanical split bolt type or a crimp type compression fitting fully encased in approved electrical insulation putty. A twelve inch (12") tracer wire loop shall be provided on each side of a spliced connection.

B Metal Sewer Castings

Metal castings for sewer structures such as manhole frames and covers, catch basin frames, grates and curb boxes, shall conform to the requirements of ASTM A-48 (Gray Iron Castings), subject to the following supplementary provisions:

- (1) Casting assemblies or dimensions, details, weights, and class shall be as indicated in the detailed drawings for the design designation specified. Unless otherwise specified, the castings shall be Class 30 or better.
- (2) Lid-to-frame surfaces on round casting assemblies shall be machine milled to provide true bearing around the entire circumference.
- (3) Casting weight shall be not less than ninety five percent (95%) of theoretical weight for a unit cast to exact dimensions, based on four hundred forty two (442) pounds per cubic foot.
- (4) A Certificate of Compliance shall be furnished with each shipment of castings stating that the materials furnished have been tested and are in compliance with the specification requirements.
- (5) Unless otherwise specified, sanitary sewer manholes shall have self-sealing lids and concealed pick holes.

C Precast Concrete Manhole and Catch Basin Sections

Precast concrete riser sections and appurtenant units (grade rings, top and base slabs, special sections, etc.) used in the construction of manhole and catch basin structures shall conform with the requirements of ASTM C-478, MnDOT 2506 and the following supplementary provisions:

- (1) The precast sections and appurtenant units shall conform to all requirements as shown on the detailed drawings.
- (2) Joints of manhole riser sections shall be tongue and groove with rubber "O" ring or profile gaskets.
- (3) Sanitary sewer inlet and outlet pipes shall be joined to the manhole with a gasketed, flexible, watertight connection, watertight boot, or any watertight connection arrangement approved by the Engineer that allows differential settlement of the pipe and manhole wall to take place.

- (4) Air-entrained concrete shall be used in the production of all units. Air content shall be maintained within the range of five (5) to seven (7) percent (%).
- (5) A Certificate of Compliance shall be furnished with each shipment of precast manhole and catch basin sections stating that the materials furnished have been tested and are in compliance with the specification requirements.
- (6) Lift holes will not be permitted in precast manholes.

D Mortar

Mortar for use in masonry construction shall meet the requirements of MNDOT 2506.2B and ASTM C270.

E Concrete

Concrete used for cast-in-place masonry construction shall be produced and furnished in accordance with the provisions of MnDOT Specification 2461 for the mix design indicated in the Plans, Specifications, or Special Provisions. The requirements for Grade B concrete shall be met where a higher grade is not specified. Type 3, air-entrained, concrete shall be furnished and used in all structures having weather exposure.

2621.3 CONSTRUCTION REQUIREMENTS

A Installation of Pipe and Fittings

The Contractor shall take all necessary precautions to handle and install all pipe and appurtenances as recommended by the manufacturer, Engineer, Plans, Specifications, and the Special Provisions.

Installation of PVC pipe and fittings for pressure sewer and forcemains shall meet the requirements of 2611.3 for watermain class pipe.

A1 Inspection and Handling

Proper and adequate implements, tools, and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient prosecution of the work. During the process of unloading, all pipe and accessories shall be inspected by the Contractor for damage. The Contractor shall notify the Engineer of all material found to have cracks, flaws or other defects. The Engineer shall inspect the damaged materials and have the right to reject any materials found to be unsatisfactory. The Contractor shall promptly remove all rejected material from the site. All materials shall be handled carefully, as will prevent damage to protective coatings, linings, and joint fillings; preclude contamination of interior areas; and avoid jolting contact, dropping, or dumping.

All work and materials are subject to tests by the Owner at such frequency as may be determined by the Engineer.

While suspended and before being lowered into laying position, each pipe section and appurtenant unit shall be inspected by the Contractor to detect damage or unsound conditions

that may need corrective action or be cause for rejection. The Contractor shall inform the Engineer of any defects discovered and the Engineer will prescribe the required corrective actions or order rejection.

Immediately before placement, the joint surfaces of each pipe section and fitting shall be inspected for the presence of foreign matter, coating blisters, rough edges or projections, and any imperfections so detected shall be corrected by cleaning, trimming, or repair as needed.

A2 Pipe Laying Operations

Trench excavation and bedding preparations shall proceed ahead of pipe placement as will permit proper laying and joining of the units at the prescribed grade and alignment without unnecessary deviation or hindrance.

All foreign matter or dirt shall be removed from the inside of the pipe and fittings before they are lowered into position in the trench and they shall be kept clean. The sewer materials shall be carefully lowered into laying position by the use of suitable restraining devices. Under no circumstances shall the pipe be dropped into the trench.

Unless otherwise permitted by the Engineer, bell and spigot pipe shall be laid with the bell ends facing upgrade and the laying shall start on the downgrade end and proceed upgrade. As each length of bell and spigot pipe is placed in laying position, the spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade. The pipe shall be secured in place with approved backfill material.

Connection of pipe to existing lines or previously constructed manholes or catch basins shall be accomplished as shown in the Plans or as otherwise approved by the Engineer. Where necessary to make satisfactory closure or produce the required curvature, grade or alignment, deflections at joints shall not exceed that which will assure watertight joints and shall comply with the pipe manufacturer recommendations.

Entrance of foreign matter into pipeline openings shall be prevented at all times to the extent that suitable plugs or covering can be kept in place over the openings without interfering with the installation operations.

Installation of thermoplastic pipe shall conform to ASTM D-2321; FRP/GRP pipe to ASTM D3839, and the manufacturers' recommendations; ASTM A798 for CS pipe.

A3 Connection and Assembly of Joints

All pipe and fitting joints shall fit tightly and be fully closed. Spigot ends shall be marked as necessary to indicate the point of complete closure. All joints shall be soil tight and watertight in all sanitary sewer and storm sewer pipe.

A4 Bulkheading Open Pipe Ends

All pipe and fitting ends left open for future connection shall be bulkheaded by approved methods prior to backfilling. Unless otherwise specified or approved, all openings of twenty four inches (24") in diameter or less shall be closed off with prefabricated plugs or caps and all openings larger than twenty four inches (24") in diameter shall be closed off with masonry bulkheads.

Prefabricated plugs and caps shall be of the same material as the pipe material, or an approved alternate material, and they shall be installed with watertight seal as required for the pipeline joints. Masonry bulkheads shall be constructed with clay or concrete brick to a wall thickness of eight inches (8").

Bulkheads installed for temporary service during construction may be constructed with two inch (2") timber planking securely fastened together and adequately braced, as an alternate to the masonry construction.

B Appurtenance Installations

Appurtenance items such as aprons, trash guards, gates and castings shall be installed where and as required by the Plans and in accordance with such standard detail drawings or supplementary requirements as may be specified.

Casting assemblies installed on manhole or catch basin structures shall be set in a full mortar bed and be adjusted to the specified elevation without the use of shims or blocking.

Sewer aprons shall be subject to all applicable requirements for installation of pipe. All aprons and outfall end sections shall have the last three (3) sections tied. Two (2) tie bolt fasteners shall be placed in each of the last three joints, one on each side of top center at the sixty (60) degree point (from vertical). Tie bolt diameter shall be: 1/2 inch for 12" to and including 21" pipe; 5/8 inch for 24" to and including 36" pipe; 3/4 inch for 42" to and including 54" pipe; and 1" for 60" and larger pipe. The tie bolts shall be of a design approved by the Engineer.

C Sewer Service Installations

Main sewer service connections and building service sewer pipe shall be installed as provided for in the Contract and as may be directed by the Engineer. The sewer service connections and pipe lines shall be installed in conformance with all applicable requirements of the main sewer installation and as more specifically provided for herein.

The Engineer, with the assistance of the Contractor, shall keep accurate records of all service installations as to type, location, elevation, point of connection and termination, etc. This service record shall be maintained jointly by the Contractor and Engineer on forms provided by the Engineer. The service installations shall not be backfilled until all required information has been obtained and recorded.

The main sewer service connection shall consist of installing a Branch Tee or Wye section in the main sewer line at designated locations or providing an insert type Saddle Tee or Wye fitting in a pipe cut-out where specified. Orientation of service connection fitting shall be as shown in the standard drawings unless otherwise directed by the Engineer.

Where the depth of cover over the main sewer invert is greater than fifteen (15) feet (or such other maximum as may be indicated), the service connection shall be extended upward by means of a Service Riser Section.

Unless otherwise specified, service pipe shall be installed at right angles to the main sewer and at a straight line grade to the property line. The standard and minimum grades shall be a uniform rise of one inch (1") in four feet (4') (two percent (2%)) for sanitary service lines and one

inch (1") in eight feet (8') (one percent (1%)) for storm sewer service lines. These minimum grades may be reduced (by not more than one-half (1/2) pitch) where the Engineer so approves in the case of restrictive elevation differences.

Building service pipe lines shall generally be kept as deep as required to serve the building elevation and maintain the specified minimum pipe grades. Pipe bends shall be provided as necessary to bring the service lines to proper location and grade. Pipe bends shall not exceed twenty two and one half (22-1/2) degrees without approval of the Engineer.

Unless otherwise indicated, service pipe installation shall terminate at property line or as designated on the Plans, with a gasketed plug placed in the end, at which point the Contractor shall furnish and set a four inch by four inch (4" x 4") wooden timber six feet (6') to eight feet (8') in length embedded four feet (4') below grade, or approved steel post to mark the exact end of pipe. The timber or post shall be set vertically, with the top two feet (2') painted green.

Wherever service line connections to the main sewer are permitted or required to be made by the open cut-out method in the absence of a built-in Tee or Wye fitting, the connection shall be made by using an approved type of Saddle Tee or Wye fitting. The pipe cut-out shall be made with an approved type coring machine or by other approved methods producing a uniform, smooth circular cut-out as required for proper fit. The cut-out discs shall be retrieved and shall not be allowed to remain within the main sewer pipe. The Saddle Tee shall be securely fastened to the main sewer pipe by means of epoxy resin or other approved adhesive. The entire connection fitting shall be encased in concrete to a minimum thickness of six inches (6") and as may be shown in the standard drawings.

Wherever service line connections to the main sewer are required to be made by means of built-in Branch Tee or Wye fittings, the Contractor shall, in the absence of such fitting, remove a section of the main sewer pipe and replace it with the required Branch Tee or Wye section connected by means of an approved sleeve coupling.

Sanitary sewer service lines shall not be connected to a manhole at an elevation more than twenty four inches (24") above the crown of the outgoing sewer. Where the elevation difference is greater than twenty four inches (24"), the connection shall be made by means of an Outside Drop Connection in accordance with the details shown in the standard drawings.

All pipe and fitting openings at temporary terminal points shall be fitted with suitable plugs or shall be bulkheaded as required for the main sewer pipe.

D Manhole and Catch Basin Structures

Manholes, catch basins, and other special access structures shall be constructed at designated locations as required by the Plans and in accordance with any standard detail drawings or special design requirements given therefor.

Unless otherwise specified or approved, storm sewer manholes and catch basins shall be constructed on a precast or cast-in-place concrete base and the barrel riser sections, and cone section shall all be of precast concrete. Sanitary sewer manholes shall be constructed with precast concrete integral base with pre-formed invert barrel section and with watertight boots at all pipe locations. All units shall be properly fitted and sealed to form a completely watertight structure. Manholes and catch basin structures shall be fabricated to provide a twelve inch (12") or sixteen inch (16") barrel section immediately below the cone or top slab whenever possible.

Barrel and cone height shall be such as to permit placement of at least two (2) and not more than six (6) standard two-inch (2") precast concrete or high density polyethylene adjusting immediately below the casting assembly. Sanitary manhole adjustment rings and casting flange shall be fitted with specified method/materials as indicated in the Special Provisions to reduce inflow and infiltration. Storm sewer manhole and drainage structure adjustment rings and casting flange shall be wrapped with a Type 2 Geotextile fabric meeting MnDOT 3733.

Unless otherwise specified or approved, manholes and catch basins shall have an inside barrel diameter at the bottom of forty eight inches (48") minimum and the inside diameter at the top of the cone section and all adjusting rings shall be of the same size and shape as the casting frame. Casting assemblies shall be as specified in the Plans

Concrete cast-in-place base shall be poured on undisturbed or firmly compacted foundation material which shall be trimmed to proper elevation. The bottom riser section shall be set in fresh concrete or mortar and all other riser section joints of the tongue and groove design shall be sealed with rubber gaskets. The concrete base under an outside drop connection shall be monolithic with the manhole base.

Wherever special designs so require or permit, and as may be approved by the Engineer, a precast concrete base may be used or the structure may be constructed with solid sewer brick or block units or with cast-in-place concrete. Any combination of cast-in-place concrete and brick or block mortar construction will be allowed and may be required where it is impossible to complete the construction with standard precast manhole sections.

All manhole and catch basin structure doghouses shall be completely filled with mortar, concrete masonry, or concrete to completely seal the pipes into the structure wall. When formed inverts are specified, the inside bottom of each manhole and catch basin shall be shaped with fresh concrete to form free flow invert troughs.

When connecting to an existing sanitary sewer manhole without an existing opening for sewer pipe, the Contractor shall be required to core-drill an opening of the correct size and elevation for the proposed sanitary sewer facility. The Contractor shall set the connecting pipe through the full thickness of the wall flush with the inner face of the wall. Connection to the structure shall be made with a watertight joint, by means of a rubberized boot. The Contractor shall ensure the flow line of the manhole is constructed in a manner to provide steady flow from the new sanitary line to the existing sanitary line. The flow line and the core-drilled hole are to be grouted smooth. The Contractor shall install a plug in the connecting pipe once the connection is complete and construction has advanced to the next manhole to prevent rainwater or sediment from entering the existing system. The plug shall be removed once all the proposed sanitary sewer mains on the project have been installed, tested, inspected, and approved.

E Sanitary Sewer Leakage Testing

All sanitary sewer lines, including service connections, shall be substantially watertight and shall be tested for excessive leakage upon completion and before connections are made to the service by Others. Each test section of the sewer shall be subjected to exfiltration testing, either by hydrostatic or air test method as described below and at the Contractor's option. The requirements set forth for maximum leakage shall be met as a condition for acceptance of the sewer section represented by the test.

If the ground water level is greater than three feet above the invert elevation of the upper manhole and the Engineer so approves, infiltration testing may be allowed in lieu of the exfiltration testing, in which case the allowable leakage shall be the same as would be allowed for the Hydrostatic Test.

All testing shall be performed by the Contractor without any direct compensation being made therefore, and the Contractor shall furnish all necessary equipment and materials, including plugs and standpipes as required.

E1 Air Test Method

E1a Gravity Sewers

All gravity sanitary sewer lines, including service connections, shall be substantially watertight and shall be tested for excessive leakage upon completion and before connections are made to the service by Others. Each test section of the sewer shall be subjected to exfiltration testing by the ASTM F1417 (low pressure air) test method regardless of pipe material.

The requirements set forth for maximum leakage shall be met as a condition for acceptance of the sewer section represented by the test. All testing shall be performed by the Contractor without any direct compensation being made therefore, and the Contractor shall furnish all necessary equipment and materials, including plugs and standpipes as required.

The sewer pipe section under test shall be clean at the time of testing but the pipe may be wetted. Pneumatic balls shall be used to plug the pipe ends at manholes. Low pressure air shall be introduced to the plugged line until the internal air pressure reaches three and one half (3.5) psi greater than the average back pressure of any ground water pressure that may submerge the pipe. At least two (2) minutes shall be allowed for the air temperature to stabilize before readings are taken and the timing started. During this time the Contractor shall check all plugs to detect plug leakage. If plugs are found to leak, air shall be bled off, the plugs shall be retightened, and the air shall be reintroduced into the line.

The sewer section under test will be accepted as having passed the air leakage test when the rate of air loss as measured by pressure drop, does not exceed a specified amount in a specified time. Pressure drop may be determined by using the table below, or calculated by use of the formulas provided below.

TABLE
Minimum Specified Time Required for a 0.5 psig Pressure Drop for Size and Length of
Pipe Indicated for Q = 0.0015 CFM/SF

Pipe Diameter (Inches)	Minimum Time (Min:Sec)	Length for Min. Time (Feet)	Time for increased Length (Sec)	Specification Time for Length (L) Shown (Min:Sec)							
				100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	350 Ft.	400 Ft.	450 Ft.
4	1:53	597	0.190 L	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53
6	2:50	398	0.427 L	2:50	2:50	2:50	2:50	2:50	2:50	2:51	3:12
8	3:47	298	0.760 L	3:47	3:47	3:47	3:47	3:48	4:26	5:04	5:42
10	4:43	239	1.187 L	4:43	4:43	4:43	4:57	5:56	6:55	7:54	8:54
12	5:40	199	1.709 L	5:40	5:40	5:42	7:08	8:33	9:58	11:24	12:50
15	7:05	159	2.671 L	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20:02
18	8:30	133	3.846 L	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28:51
21	9:55	114	5.235 L	9:55	13:05	17:27	21:49	28:11	30:32	34:54	39:16
24	11:20	99	6.837 L	11:24	17:57	22:48	28:30	34:11	39:53	45:35	51:17
*27	12:45	88	8.653 L	14:25	21:38	28:51	36:04	43:18	50:30	57:42	64:54
*30	14:10	80	10.683 L	17:48	26:43	35:37	44:31	53:25	62:19	71:13	80:07
*33	15:35	72	12.926 L	21:33	32:19	43:56	53:52	64:38	75:24	86:10	96:57
*36	17:00	66	15.384 L	25:39	38:28	51:17	64:06	76:55	89:44	102:34	115:23

*NOTE - Consult with pipe and appurtenance manufacturer for maximum test pressure for pipe size greater than twenty four inches (24") in diameter.

FORMULA

The formula below calculates the specified minimum time required for a **1.00 psig pressure drop** from a starting pressure of 3.5 psig to a final pressure of 2.5 psig using a leakage rate of 0.0015 cubic feet/minute/square foot of internal surface.

Calculate all test times by the following formula:

$$T = 0.085 DK/Q$$

where:

T = shortest time allowed for the **air pressure to drop 1.0 psig**, sec.

K = 0.000419 DL but not less than 1.0,

Q = leak rate = 0.0015 CFM/SF,

D = measured average inside diameter of sewer pipe, in., and

L = length of test section, ft.

E2 Hydrostatic Test Method

E2a Gravity Sewers

After bulkheading the test section, the pipe shall be subjected to a hydrostatic pressure produced by a head of water at a depth of three feet (3') above the invert elevation of the sewer at the upstream manhole of the test section. In areas where ground water exists, this head of water shall be three feet (3') above the existing water table.

The water head shall be maintained for a period of one (1) hour during which time it will be presumed that full absorption of the pipe body has taken place, and thereafter for an extended period of one (1) hour the water head shall be maintained as the test period. During the test

period, the measured water loss within the test section, including service stubs, shall not exceed an infiltration / exfiltration rate of thirty five (35) gallons / inch diameter / mile / day.

If measurements indicate exfiltration within a test action section is not greater than the allowable maximum, the section will be accepted as passing the test.

E2b Pressure Sewers

For sewers designated as pressure pipe sewers, the sewer shall be subjected to hydrostatic testing under 2611.3G Hydrostatic Testing of Watermains, except the hydrostatic testing pressure shall be two (2) times the maximum design operating pressure, but not less than one hundred (100) psig and the duration of the test shall be one hour.

E3 Test Failure and Remedy

In the event of test failure on any test section, testing shall be continued until all leakage has been detected and corrected to meet the requirements. All repair work shall be subject to approval of the Engineer. Introduction of sealant substances by means of the test water will not be permitted.

Unsatisfactory repairs or test results may result in an order to remove and replace pipe as the Engineer considers necessary for test conformance. All repair and replacement work shall be at the Contractor's expense.

F Deflection Test

Deflection tests shall be performed on all plastic gravity sewer pipes. The test shall be conducted after the sewer trench has been backfilled to the desired finished grade and has been in place for thirty (30) days.

The deflection test shall be performed by pulling a rigid ball or nine-point mandrel (MnDOT Technical Memorandum 98-24-B-01 or latest revision) through the pipe without the aid of mechanical pulling devices. The ball or mandrel shall have a minimum diameter equal to ninety five percent (95%) of the actual inside diameter of the pipe. The maximum allowable deflection shall not exceed five percent (5%) of the pipe's internal diameter. The line will be considered acceptable if the mandrel can progress through the line without binding. The time of the test, method of testing, and the equipment to be used for the test shall be subject to the approval of the Engineer.

All testing shall be performed by the Contractor at his expense without any direct compensation being made therefore, and he shall furnish all necessary equipment and materials required.

F1 Test Failure and Remedy

In the event of test failure on any test section, the section shall be replaced, with all repair work subject to approval of the Engineer. The replaced section shall be retested for leakage and deflection in conformance with the specifications contained herein. All repairs, replacement, and retesting shall be at the Contractor's expense.

G Televising

Sewer line televising may be required by the Engineer, at the cost of the Contractor, if visual inspection, leakage testing, or deflection testing indicate the sewer has not been constructed in accordance with these specifications and the requirements of the Plans, Specifications, and Special Provisions.

2621.4 METHOD OF MEASUREMENT

All items will be measured separately according to design designation as indicated in the Pay Item name and as may be detailed and defined in the Plans, Specifications, or Special Provisions.

Complete-in-place items shall include all component parts thereof as described or required to complete the unit, but excluding any excesses covered by separate Pay Items. Linear measurement of piping will include the running length of any special fittings (tees, wyes, elbows, gates, etc.) installed within the line of measure between specified terminal points.

A Sewer Pipe

Sewer pipe of each design designation will be measured by length in linear feet along the line of pipe. Terminal points of measurement will be the pipe end at free outlets; the point of connection with in-place pipe; the center of manholes or catch basins; the point of centerline intersections at branch fittings; or the point of juncture with other appurtenances or units as defined.

Separation of quantities according to "depth zone classification", when so designated in the Pay Item, will be determined by depth of pipe invert below the ground surface profile.

B Manholes

Manholes of each design designation will be measured by number of each constructed complete-in-place, including the base and castings as required, but excluding any excess depth greater than eight feet (8') measured from top of manhole cover to invert elevation of lowest pipe.

Excess manhole depth of each design designation will be measured by the linear foot difference in depth between the eight feet (8') allowed as standard and the actual increased depth as constructed.

C Catch Basins

Catch basins of each design designation will be measured by number of each constructed complete-in-place, including the base and castings as required, but excluding any excess depth greater than five feet (5') measured from top of grate (low point) to invert elevation of lowest outlet pipe.

Excess catch basin depth of each design designation will be measured by the linear foot difference in depth between the five feet (5') allowed as standard and the actual increased depth as constructed.

D Outside Drop Connection

Outside drop connections of each design will be measured by linear foot constructed complete-in-place, and shall include granular encasement, fittings, any special piping required, including coring holes and watertight boots for existing manholes for the drop connection. Measurement shall be made vertically from the invert of the lower outside drop invert to the upper outside drop invert.

E Service Connection

Service Connections of each design will be measured by number of each constructed complete-in-place as specified.

F Service Pipe

Service pipe of each design will be measured separately by length in linear feet, horizontally along the line of installation, between the service end and the point of juncture with the main pipe connection fitting.

G Special Pipe Fittings

Special pipe fittings (wyes, tees, bends, etc.) of each design designation will be measured by number of each installed complete-in-place as specified, but excluding any such fittings required to be installed as a component part of any other Work Unit.

H Appurtenant Items

Appurtenant items such as aprons, trash guards, gates and other prefabricated units or assemblies as identified by Pay Item name will be measured separately by number of each installed complete-in-place as specified.

2621.5 BASIS OF PAYMENT

Payment for sewer pipe and service pipe items at the Contract prices per linear foot of pipe of each design shall be compensation in full for all costs of providing a complete-in-place pipeline, including excavation, foundation preparation, backfilling, leakage testing, restoration of surface improvements, disposal of surplus or waste materials, final cleanup, and such other work as may be specified, but excluding the construction of other structures or special sections and the placement of special fittings, appurtenances or materials specifically designated for payment under other Contract Items.

Payment for manhole, catch basin, outside drop connection, service connection, and other structures as specified, at the Contract prices per structure, shall be compensation in full for all costs of constructing each unit complete-in-place as specified, including all required castings, special fittings, base or encasement, and appurtenant materials as specified for the complete structure or section, but excluding such additional work as may be designated for payment under other Contract Items.

Where the specified standard manhole, catch basin, or outside drop connection depths are exceeded, the excess depth of each design will be paid for separately as linear footage items

and payment at the Contract prices therefor shall be compensation in full for all costs of providing the extra depth.

Special pipe fittings such as wyes, tees and bends will be paid for as separate Contract Items to the extent they are required to be installed in the sewer pipe and service pipe lines and not as a component part of a complete-in-place structure (outside drop connections, service connections, etc.)

Appurtenant items such as aprons, trash guards, drainage gates, and other prefabricated units or assemblies and specials as designated will be paid for as separate Contract Items to the extent they are not included as a component part of any complete-in-place structure.

SECTION 2631 CIPPS – STANDARD SPECIFICATIONS FOR SEWER PIPE REHABILITATION WITH CURED IN-PLACE PIPE SYSTEMS (CIPPS)

2631.1 CIPPS DESCRIPTION

A General

This work shall consist of the rehabilitation of pipelines and conduits by the installation of a resin-impregnated flexible tube Cured-In-Place Pipe System (CIPPS). The rehabilitation of pipelines shall be constructed by the installation of a resin-impregnated flexible tube which, when cured, shall be continuous and tight-fitting throughout the entire length of the original pipe. The CIPP shall extend the full length of the original pipe and provide a structurally sound, joint less and watertight new pipe within the existing pipe. The Contractor is responsible for proper, accurate and complete installation of the CIPP using the system selected by the Contractor.

Neither the CIPP system, nor its installation, shall cause adverse effects to any downstream facilities. The use of the product shall not result in the formation or production of any detrimental compounds or by-products that may affect downstream structures, pups, pipe, equipment and wastewater treatment facilities. The Contractor shall notify the Engineer and identify any by-products produced as a result of the installation operations, test and monitor the levels, and comply with any and all local waste discharge requirements. The Contractor shall cleanup, restore existing surface conditions and structures, and repair any of the CIPP system determined to be defective. The Contractor shall conduct installation operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians, businesses, and residents.

The use of the term "Plans, Specifications, and Special Provisions" within this specification shall be construed to mean those documents which compliment, modify, or clarify these specifications and are an enforceable component of the Contract Documents.

All references to MnDOT Specifications shall mean the latest published edition of the Minnesota Department of Transportation "Standard Specifications for Construction", and all supplements and amendments thereto, published prior to the date of advertisement for bids.

All references to other Specifications of AASHTO, ASTM, ANSI, AWWA, etc. shall mean the latest published edition available on the date of advertisement for bids.

The following specifications have been referenced in this Specification:

ASTM - F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

ASTM - F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull in and inflate and Curing of a Resin-Impregnated Tube

ASTM - D543 Standard and Practice for Evaluating the Resistance of Plastics to Chemical Reagents

ASTM - D638 Standard Test Method for Tensile Properties of Plastics

ASTM - D790 Standard Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials

ASTM - D792 Standard Test Methods for Density and Specific Gravity of Plastics by displacement.

ASTM - F2019-03 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP)

ASTM - D2122-98(2004) Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings

ASTM - D2990 Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics

ASTM - D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe

B Qualifications

The Contractor shall be responsible for all aspects of the design of the liner pipe. The Contractor shall guarantee that the installed liner is capable of sustaining outside loads, resist chemical attack that normally occurs in sanitary and storm sewer systems, and will maintain hydraulic characteristics over a fifty (50) year design life.

Unless provided otherwise in the plans or Special Provisions, the existing sewer pipe shall be considered to be in a fully deteriorated condition, is not structurally sound, and cannot support soil and live loads. The cured-in-place pipe shall be designed to support hydraulic, soil, and live loads.

The sewer products are intended to have a fifty (50) year or greater design life, and in order to minimize the Owner's risk, only proven products with substantial successful long term track records will be approved.

B1 Manufactured Products and Installation

Contractors must meet all of the following criteria:

- a. For a Product to be considered acceptable, a minimum of 100,000 linear feet or two hundred fifty (250) manhole-to-manhole line sections of successful wastewater collection system installations in the U.S. must be documented to the satisfaction of the Engineer. In addition, at least 50,000 linear feet of the product shall have been in successful service within the State for a minimum of five (5) years.
- b. The Contractor's personnel must satisfy all insurance, financial, and bonding requirements of the Owner, and must have had at least 5 (five) years active experience in the commercial installation of the product bid. In addition, the Contractor's personnel must have successfully installed at least 100,000 feet of the same product bid. The Field Supervisor/Foreman shall have a minimum five (5) years as a foreman/superintendent for a cured-in-place lining crew (installing actual

product included with this bid/proposal), and a minimum of 100,000 lineal feet of cured-in-place lining, diameters up to and including twenty-four inches (24") installed under his/her supervision. Such experience shall include the actual product, by trade name, Contractor proposes to install. Acceptable documentation of these minimum installations must be submitted to the Engineer.

- c. Sewer rehabilitation products submitted for approval must provide Third Party Test Results supporting the long term performance and structural strength of the product and such data shall be satisfactory to the Engineer. Test samples shall be prepared so as to simulate installation methods and trauma of the product. No product will be approved without independent third party testing verification.

2631.2 CIPPS MATERIALS

A General

All materials required for this work shall be new material conforming to requirements of the referenced specifications for the class, kind, type, size, grade, and other details indicated in the Contract. Unless otherwise indicated, all required materials shall be furnished by the Contractor. If any options are provided for, as to type, grade, or design of the material, the choice shall be limited as may be stipulated in the Plans, Specifications, or Special Provisions.

All manufactured products shall conform in detail to such standard design drawings as may be referenced or furnished in the Plans. Otherwise, the Owner may require advance approval of material suppliers, product design, or other unspecified details as it deems desirable for maintaining adopted standards.

All materials shipped to the project site shall be accompanied by test reports certifying that the material conforms to the ASTM standards listed herein. Materials shall be shipped, stored, and handled in a manner consistent with written recommendations of the CIPP manufacturer to avoid damage. Damage includes but is not limited to, gouging, abrasion, flattening, cutting, puncturing, and ultra-violet (UV) degradation. All damaged materials shall be promptly removed from the project site at no cost to the Owner. On site material storage locations shall be approved by the Engineer.

A1 CIPPS Fabric Tube

The CIPPS fabric "Tube" shall consist of one or more layers of absorbent non-woven felt fabric, felt/fiberglass or fiberglass and meet the requirements of ASTM F 1216, ASTM F 1743, ASTM D 5813 & ASTM F2019. The fabric Tube shall be capable of absorbing and carrying resins, manufactured to withstand installation pressures and curing temperatures, have sufficient strength to bridge missing pipe segments, and stretch to fit irregular pipe sections.

The fabric Tubes shall have a uniform thickness that when compressed at installation pressures will equal the specified nominal tube thickness.

The wet-out fabric tube shall have a uniform thickness and excess resin distribution that when compressed at installation pressures will meet or exceed the design thickness after cure.

The fabric tube shall be manufactured to a size and length that when installed will tightly fit the internal circumference and length of the original pipe. Allowance shall be made for

circumferential stretching during installation. The tube shall be properly sized to the diameter of the existing pipe and the length to be rehabilitated and be able to stretch to fit irregular pipe sections and negotiate bends. The Contractor shall determine the minimum tube length necessary to effectively span the designated run between manholes. The Contractor shall verify the lengths in the field prior to ordering and prior to impregnation of the tube with resin, to ensure that the tube will have sufficient length to extend the entire length of the run. The Contractor shall also measure the inside diameter of the existing pipelines in the field prior to ordering liner so that the liner can be installed in a tight-fitted condition. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be allowed.

The minimum length of the fabric tube shall be that deemed necessary by the installer to effectively span the distance from the starting manhole to the terminating manhole or access point, plus that amount required to run-in and run-out for the installation process.

The outside and/or inside layer of the fabric tube (before inversion/pull-in, as applicable) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate, if applicable, vacuum impregnation and monitoring of the resin saturation during the resin impregnation (wet-out) procedure.

No material shall be included in the fabric tube that may cause de-lamination in the cured CIPP. No dry or unsaturated layers shall be acceptable upon visual inspection as evident by color contrast between the felt fabric and the activated resin containing a colorant. The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No materials shall be included in the tube that is subject to delamination in the CIPPS.

The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made. The hue of the color shall be dark enough to distinguish a contrast between the fully resin saturated felt fabric and dry or resin lean areas.

Seams in the fabric tube, if applicable, shall meet the requirements of ASTM D5813. The outside of the fabric tube shall be marked every five feet (5') with the name of the manufacturer or CIPP system, manufacturing lot and production footage.

The nominal fabric tube wall thickness shall be constructed to the nearest 0.5 mm increment, rounded up from the design thickness for that section of installed CIPP. Wall thickness transitions, in 0.5 mm increments or greater as appropriate, may be fabricated into the fabric tube between installation entrance and exit access points. The quantity of resin used in the impregnation shall be sufficient to fill all of the felt voids for the nominal felt thickness.

The resin shall be a corrosion resistant polyester or vinyl ester resin and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216, ASTM F1743 or F2019, the physical properties herein, and those, which are to be utilized in the design of the CIPP for this application. The resin shall produce CIPP which will comply with or exceed the structural and chemical resistance requirements of this specification.

A2 CIPPS Structural Requirements

The physical properties and characteristics of the finished liner will vary considerably, depending on the types and mixing proportions of the materials used, and the degree of cure executed. It shall be the responsibility of the Contractor to control these variables and to provide a CIPP system which meets or exceeds the minimum properties specified herein:

1. The CIPP shall be designed as per ASTM standards. The CIPP design shall assume no bonding to the original pipe wall.
2. The design engineer shall set the long term (fifty (50) year extrapolated) Creep Retention Factor at thirty three percent (33%) of the initial design flexural modulus as determined by ASTM D-790 test method. This value shall be used unless the Contractor submits long term test data (ASTM D2990) to substantiate a higher retention factor.
3. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two (2) layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occurs during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

Minimum Physical Properties: The cured pipe material (CIPP) shall, at a minimum, meet or exceed the structural properties, as listed in the table below.

Property	Test Method	Cured Composite Per ASTM F1216	Cured Composite Per Design
Flexural Modulus Of Elasticity (Short Term)	ASTM D-790	250,000 Psi	Contractor Value
Flexural Strength (Short Term)	ASTM D-790	4,500 Psi	Contractor Value

The required structural CIPP wall thickness shall be based as a minimum, on the physical properties listed above and in accordance with the Design Equations in the appendix of ASTM F 1216, and the following design parameters:

Design Safety Factor	2.0 (1.5 For Pipes 36" Or Larger)
Creep Retention Factor	33%
Ovality	2% Or As Measured By Field Inspection
Constrained Soil Modulus	Per AASHTO LRFD Section 12 And AWWA Manual M45
Groundwater Depth	As Specified Or Indicated On The Plans
Soil Depth (Above The Crown)	As Specified Or Indicated On The Plans
Live Load	H20 Highway
Soil Load (Assumed)	120 Lb/Cu. Ft.
Minimum Service Life	50 Years

The Contractor shall submit, prior to installation of the lining materials, certification of compliance with these specifications and/or the requirements of the pre-approved CIPP system.

Certified material test results shall be included that confirm that all materials conform to these specifications. Materials not complying with these requirements will be rejected.

CIPP Short-Liners or segmental liners shall be of the same materials and meet the structural requirements of the full CIPP Tube liner.

A3 Material Testing Requirements

1. Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.
2. Hydraulic Capacity - Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.
3. CIPP Field Samples - When requested by the Owner, the Contractor shall submit test results from field installations in the USA of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in above have been achieved in previous field applications. Samples for this project shall be made and tested as described herein.

2631.3 CIPPS CONSTRUCTION REQUIREMENTS

The Contractor shall clean the interior of the existing host pipe prior to installation of the CIPP liner. All debris and obstructions that will affect the installation and the final CIPP product shall be removed and disposed of. The CIPP liner shall be constructed of materials and methods, that when installed, shall provide a joint less and continuous structurally sound liner able to withstand all imposed static and dynamic loads on a long-term basis.

A Installation of CIPPS

A1 Access

It will be the responsibility of the Owner to locate and designate all manhole access points open and accessible for the work, and provide rights of access to these points. If a street must be closed to traffic because of the orientation of the sewer, the Contractor shall institute the actions necessary to do this for the mutually agreed time period. Traffic Control shall be the responsibility of the Contractor and shall conform to the latest revision of the MMUTCD and other provisions of this specification herein. The Contractor shall keep the roadway open to traffic at all times unless given prior approval by the Engineer.

A2 Water Usage

Water is available from the City at designated locations for cleaning, inversion, and other work items requiring water. Use of an approved double check backflow assembly shall be required. The Contractor shall provide his own approved assembly. The Contractor may use City water

but shall inform the Public Works Department of such use and obtain a meter for documenting water usage. No fees will be charged for water.

A3 Cleaning of Sewer Lines

The Contractor shall remove all internal debris from the pipe line that will interfere with the installation and the final product delivery of the CIPP as required in these specifications. Solid debris and deposits shall be removed from the system and disposed of properly by the Contractor. Moving material from manhole section to manhole section shall not be allowed. As applicable the contractor shall either plug or install a flow bypass pumping system to properly clean the pipe lines. The Contractor shall ensure that no debris is transferred downstream during cleaning operations. The Contractor shall use a vacuum vehicle or similar means to remove debris during cleaning operations. Precaution shall be taken, by the Contractor in the use of cleaning equipment to avoid damage to the existing pipe. The repair of any damage, caused by the cleaning equipment, shall be the responsibility of the Contractor. Disposal of the cleaning debris shall be in accordance with local, State and Federal Law and shall be incidental to the CIPPS.

A4 Bypassing Wastewater

The Contractor shall provide a by-pass for the flow of existing mainline and service connection effluent around the section or sections of pipe designated for CIPP installation. Installation of the liner shall not begin until the Contractor has installed a sewage by-pass system and all pumping facilities have been installed and tested under full operating conditions including the bypass of mainline and side sewer flows. Once the lining process has begun, existing sewage flows shall be maintained, until the resin/felt tube composite is fully cured, cooled down, fully televised and the CIPP ends finished. The Contractor shall coordinate sewer bypass and flow interruptions with the Engineer at least fourteen (14) days in advance and with the property owners and businesses at least three (3) business days in advance. The pump and bypass lines shall be of adequate capacity and size to handle peak flows. The Contractor shall submit a detail of the bypass plan and design to the Engineer prior to proceeding with any CIPP installation. Compensation for by-pass pumping and all associated plans and approvals shall be included in the price bid for CIPPS Installation.

A5 Inspection of Pipelines

Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of the CIPPS into the pipelines and it shall be noted so that these conditions can be corrected. A videotape and suitable log shall be kept for later reference by the Owner. The Owner has copies of a video inspection of the sewers to be relined, and these are available for prospective bidders. However, since the deterioration of sewer is an ongoing process, and roots, solids, and deposits can accumulate over time, the Contractor shall base the design of the liner on inspections made immediately prior to installation.

A6 Line Obstructions

It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the

inversion process, that was not evident on the pre-bid video and it cannot be removed by conventional sewer cleaning equipment, if directed by the Owner, the Contractor shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.

A7 Public Notification

The Contractor shall make every effort to maintain service usage throughout the duration of the project. In the event that a service will be out of service, the maximum amount of time of no service shall be eight (8) hours for any property served by the sewer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. The Contractor shall also provide the following:

1. Written notice to be delivered to each home or business the day prior to the beginning of work being conducted on the section, and a local telephone number of the Contractor they can call to discuss the project or any problem which could arise.
2. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing and curing the CIPP.

A8 Liner Installation

CIPP installation shall be in accordance with the applicable ASTM standards with the following modifications:

1. The wet-out tube shall be positioned in the pipeline using the method specified by the manufacturer. Care should be exercised not to damage the tube as a result of installation. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point. If pulled into place, a power winch should be utilized and care should be exercised not to damage the tube as a result of pull-in friction.
2. Prior to installation and as recommended by the manufacturer remote temperature gauges or sensors shall be placed inside the host pipe to monitor the temperatures during the cure cycle. Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner.
3. Curing shall be accomplished by utilizing the appropriate medium in accordance with the manufacturer's recommended cure schedule. The curing source or in and output temperatures shall be monitored and logged during the cure cycles. The manufacturer's recommended cure schedule shall be used for each line segment installed, and the liner wall thickness and the existing ground conditions with regard to temperature, moisture level, and thermal conductivity of soil, per ASTM as applicable, shall be taken into account by the Contractor.

4. The Contractor shall remove protruding taps to the inside wall of the pipe. In no case shall the pipe be less than ninety five percent (95%) open to flow.

A9 Resin Impregnation

The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. To insure a through wet-out, the point of vacuum shall be no further than twenty five feet (25') from the point of initial resin introductions. After vacuum in the tube is established, the vacuum points shall be no further than seventy five feet (75') from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular to the longitudinal axis of the tube as possible. A roller system shall be used to uniformly distribute tie resin throughout the tube. If the Installer proposes an alternate method of resin impregnation, the method must produce the same results and the method approved by the Engineer.

A10 Cool Down

The Contractor shall cool the CIPP in accordance with the manufacturer's recommendations. Temperatures and curing data shall be monitored and recorded, by the Contractor, throughout the installation process to ensure that each phase of the process is achieved as approved in accordance with the CIPP System manufacturer's recommendations.

A11 Finishing Operations

The installed CIPP shall be continuous over the entire length of a sewer line section and be free from visual defects such as foreign inclusions, dry spots, pinholes, major wrinkles and delamination. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to inside the lined pipe. Any defect, which will or could affect the structural integrity or strength of the linings, shall be repaired at the Contractor's expense. The beginning and end of the CIPP shall be sealed to the existing host pipe. The sealing material shall be compatible with the pipe end and shall provide a watertight seal. If any of the service connections leak water between the host pipe and the installed liner, the connection mainline interface shall be sealed to provide a watertight connection. If the wall of the CIPP leaks, it shall be repaired or removed and replaced with a watertight pipe as recommended by the manufacture of the CIPP system.

At all points where the liner pipe has been exposed (such as service connection fittings, or other points where the old pipe must be removed), the liner pipe and fittings shall be encased in cement-stabilized sand or other high density material as specified by the Engineer to prevent deflection due to difference in subsidence. After the encasement material is in place and accepted by the Engineer, backfill is placed and compacted to require finish grade in accordance with the specifications. Particular care should be taken to ensure compaction of earth beneath the lateral/service pipe in order to reduce subsidence and resultant bending at the lateral connection at the sewer main.

A12 Manhole Connections

A seal, consisting of a resin mixture or hydrophilic seal compatible with the installed CIPP shall be applied at manhole walls in accordance with the CIPP System manufacturer's recommendations.

A13 Reconnections of Existing Services

Services shall be identified by the Contractor prior to lining work. After the pipe has been reconstructed and tested, the service connections shall be reconnected. It is the Contractor's responsibility to make sure that all service connections are reconnected, unless otherwise directed by the Engineer. A CCTV camera and remote cutting tool shall be used for internal reconnections. The machined opening shall be at least ninety five percent (95%) of the service connection opening and the bottom of both openings must match. The opening shall not be more than one hundred percent (100%) of the service connection opening.

The edges of the opening shall not have pipe fragments or liner fragments, which may obstruct flow or snag debris. In the event that service reinstatements result in openings that are greater than one hundred percent (100%) of the service connection opening, the Contractor shall install a CIPP type repair, sufficiently in size to completely cover the over-cut service connection. No additional compensation will be paid for the repair of over-cut service connections. Discs of pipe material resulting from service tap cutting shall be collected at the next manhole downstream of the pipe rehabilitation operation prior to leaving the site. Discs shall not be allowed to pass through the system.

A14 CIPP Short-Liner

The CIPP short-liner shall meet the requirements of the full length CIPP liner and the following:

1. The Short-Liner shall be inserted into the existing sewer line with a power winch and steel cable attached to the end of the liner by use of an appropriate pulling head. Length of the liner to be inserted at any one time shall be governed by the length of the section in need of repair or the maximum length of the installation equipment considering the size and condition of the sewer.
2. A mobile installation unit shall be brought to the site ready to process the liner. The installation unit shall contain heat generating equipment, CCTV facility and other auxiliary miscellaneous equipment necessary for controlling processing of the Short-Liner pipe. The equipment shall be positioned next to the point of entry with minimum obstruction to the other side activities and shall be operated by trained personnel only.
3. The pressure shall be increased to compensate for the heating-cooling transition and it shall be maintained until the temperature at the lowest critical point is 100° F (38° C). This shall constitute completion of the Short-Liner pipe processing. The pipe within the pipe shall be tight fitting and adapted to the existing sewer pipe.

B TESTING AND INSPECTION

B1 Testing

CIPP samples shall be prepared and tested in accordance with ASTM F1216, Section 8.1, using either method proposed. Leakage testing of the CIPP shall be accomplished during cure while under a positive head. CIPP products in which the pipe wall is cured while not in direct contact with the pressurizing fluid (e.g., a removable bladder) must be tested by an alternative method approved by the Engineer.

B2 Inspection

Visual inspection of the CIPP shall be in accordance with ASTM F1216, Section 8.4. The relined pipe shall be continuous without joints through the entire pipe length. The liner shall be free of all visible defects except those resulting from pre-lined conditions which the Contractor has noted prior to lining. There shall be no pits, pinholes, cracks, or crazing, and the surface shall be smooth and free of waviness throughout the pipe. Any defects shall be repaired by the Contractor with no expense to the Owner. Where leakage is observed through the wall of the pipe, the contractor shall institute additional testing including but not limited to air testing, localized testing and any other testing that will verify the leak proof integrity of the installed CIPP to the satisfaction of the Owner.

B3 Televising

Prior to final acceptance of any sanitary sewer relining including short-liners, the Contractor shall inspect by means of remote closed circuit television equipment the entire segment of sanitary sewer, manhole-to manhole. Sewer shall be cleaned prior to inspection. A videotape of the inspection shall be furnished to the City. The following conditions shall apply to the sewer acceptance TV inspection:

1. The videotape shall be in a format to be decided by the Owner, that creates high quality picture and sound and shall be recorded in color.
2. The TV camera shall be pulled through the sewer at a maximum rate of thirty five feet (35') per minute.
3. The camera shall be pulled downstream in all cases.
4. The lens of the camera shall be cleaned at each manhole or when directed by the Owner.
5. The recording shall have an on-screen display showing the following:
 - a. Upstream and downstream manhole numbers
 - b. Footage from the upstream manhole
 - c. Inspection date
6. Sewers shall not be televised within forty eight (48) hours of a rainfall event greater than one half inch ($\frac{1}{2}$ ").
7. The CIPPS shall be re-televised one (1) month prior to expiration of the one-year warranty. A videotape and written report shall be supplied to the City.

2631.4 CIPPS METHOD OF MEASUREMENT

Measurement for CIPP Lining shall be on a linear foot basis, to the nearest whole foot, measured from center of manhole to center of manhole.

2631.5 CIPPS BASIS OF PAYMENT

The proposal form shall cover all work shown on the contract drawings, specifications, and Special Provisions. All costs associated with the work including furnishing of all materials, providing all construction and equipment, and performing all necessary labor, coordination, supervision, and management to fully complete the work, shall be included in the unit or lump sum prices quoted in the proposal form. This work shall include restoration of all surfaces to their original condition or better. Reconnection of all existing services shall be considered incidental to the CIPPS. All work not specifically set forth as a pay item in the proposal form shall be considered a subsidiary obligation of the Contractor and all costs in connection therewith shall be included in the amounts and prices submitted in the proposal form.

The following methods of measurement for payment will be used to derive the quantities installed:

1. Site Protection and Restoration
 - a) No separate payment will be made for protection and restoration of roadway surfaces, curb and gutter, landscaping, and other site features unless otherwise specified.
2. Spot Repair to existing pipe
 - a) Bid items have been provided in the proposal for removal and replacement of pipe as Spot or Point Repairs. No additional compensation will be granted for repairs.
3. Cured-in-Place Pipe System (CIPPS)
 - a) Payment shall be made at the unit price as listed on the proposal. All work related to the cleaning, installation and acceptance of the system as a whole shall be considered incidental to CIPPS installation.
 - b) Payment for re-instatement of services shall be at the unit price listed on the proposal per each service, and shall be compensation in full for all materials, labor, equipment, and maintenance necessary to complete the work as required by the plans or required by the Engineer.
 - c) Payment for Short-Liner installations shall be made at the unit price listed on the proposal and shall be compensation in full for all materials, labor, equipment, and maintenance necessary to complete the work as required by the plans or required by the Engineer.

SECTION 2641 – STANDARD SPECIFICATIONS FOR PIPELINE REHABILITATION BY PIPE BURSTING

2641.1 DESCRIPTION

A General

All references to MnDOT Specifications shall mean the latest published edition of the Minnesota Department of Transportation “Standard Specifications for Construction”, and all supplements and amendments thereto, published prior to the date of advertisement for bids.

This specification shall cover the rehabilitation of existing gravity and pressure utility pipelines using pipe bursting methods. Pipe bursting is a process by which the bursting unit fractures the existing pipe while simultaneously installing a new pipe of the same size or larger size pipe in the place of the existing pipe. Existing lateral and service connections are disconnected prior to mainline pipe bursting to reduce lateral pipe/service pipe damage, then reconnected after testing and disinfection of the new pipe as applicable is approved, television inspection of the new pipe is performed, and the installation is completed in accordance with the contract documents.

2641.2 QUALIFICATIONS

The Contractor shall be certified by the particular Pipe Bursting System Manufacturer as a fully trained installer of the pipe bursting system. The Contractor shall provide certifications of training and proficiency in the use of the equipment. Only the Contractor’s employees that are trained and certified shall operate the equipment.

The Contractor shall have a minimum of five (5) years' experience using the pipe-bursting method proposed and shall have installed no less than 50,000 feet by this method.

2641.3 MATERIALS

Pipe materials meet the requirements described in Sections 2611.2 and 2621.2 of these specifications, and as provided in the Special Provisions and the following:

1. Sizes of the new pipe insertions shall be such to renew the pipe mainline to greater than the original flow capacity.
2. All pipe and fittings shall be made of virgin material. No rework except that obtained from the manufacturer’s own production of the same formulation shall be used.
3. The pipe shall be homogenous throughout and shall be free of visible cracks, holes, foreign material, blisters, or other deleterious faults.
4. Tensile strength of the pipe shall be in accordance with manufacturer’s recommendation for the specified purpose and method of installation.
5. Material color shall be as specified with interior of pipe having a light reflective color to allow for viewing for television inspection. The fused pipe joints shall be de-beaded to reduce collection of sediment and allow a camera to pass during inspection.

6. The Contractor shall consult with the selected pipe bursting equipment manufacturer regarding recommendations for the installation of pipe materials specified.

2641.4 SUBMITTALS

The Contractor shall submit the following:

1. Tests for compliance with this specification shall be made as specified herein and in accordance with the applicable ASTM Specification. A certificate from the manufacturer indicating the materials furnished meet the requirements of these specifications.
2. Shop drawings, catalog data, and manufacturer's technical data showing complete information on material composition, physical properties, and dimensions of new pipe and fittings. Include manufacturer's recommendations for handling, storage, and repair of pipe and fittings damaged.
3. Certification of Contractor and assigned personnel training for installing pipe.
4. Detailed submittal of the procedures and method proposed by the Contractor to burst the existing pipe and insert the new pipe.
5. Television inspection reports and video made of the existing pipe and after new pipe installation.

2641.5 DELIVERY, STORAGE, AND HANDLING

The Contractor shall transport, handle, and store pipe and fittings as recommended by the manufacturer. If new pipe and fittings become damaged before or during installation, it shall be repaired as recommended by the manufacturer or replaced as required by the Engineer at the Contractor's expense, before proceeding further. Deliver, store and handle other materials as required to prevent damage.

2641.6 LICENSE AGREEMENTS

The Contractor shall submit evidence acceptable to the Owner, such as a certified copy of a license or agreement that it has the authority to use the proposed method from the patent holder and licensed manufacturer. The Contractor agrees to defend, indemnify, and hold harmless the Owner and the Engineer against all claims, suits, and actions or other damages as a result of negligence of any person or property arising out of patent infringement by the Contractor or the Contractor's employee's, agents, the suppliers, or any tier of subcontractors involved in the work.

2641.7 CONSTRUCTION REQUIREMENTS

Before excavation is started, it will be the responsibility of the Contractor to check with the various utility companies and determine the location and depth of the existing utilities in the vicinity of the work area.

Damage to utilities and the resulting repair, temporary service cost, etc., shall be borne by the Contractor. Access pits shall be backfilled in accordance with Section 2600, Trench Excavation and Backfill.

All excavations shall be properly sheeted/shored in accordance with relevant specifications for trench safety systems. Any damage resulting from improperly shored excavations shall be corrected to the satisfaction of the Engineer with no compensation to the Contractor.

All open excavations shall be kept secure at all times by the use of barricades and fencing with appropriate lights and signs, construction tape, covering with steel plates, etc., or as directed by the Engineer.

All lateral and service connections shall be identified, located and excavated prior to the pipe insertion to expedite reconnection. The Contractor shall use excavation methods that will not create a rise or sag at the service or lateral connection for gravity sewers. A rise or sag in the sewer will be repaired by the contractor at no expense to the Owner, in a manner approved by the Engineer.

The location and number of insertion and receiving excavations shall be planned by the Contractor and submitted in writing for approval by the Engineer at least ten (10) days prior to excavation.

One (1) or more receiving pits shall be excavated at the end(s) of the pipe to be replaced or at appropriate points within the length of the existing pipe. Pit shall be centered over the existing pipe. The number of pits for machine and pipe insertion shall be the minimum necessary to most efficiently accomplish the work. The Contractor shall give consideration to the use of excavation required for other purposes such as for sanitary sewer service reconnections and manhole replacement.

Where manholes are used as machine or new pipe insertion pits, the Contractor shall identify such manholes and replace them at no additional cost to the Owner if damaged. Any manhole modification or replacement required shall be considered incidental to the installation of the new pipe. Equipment used to perform the work shall be located away from buildings so as not to create noise impact. Provide a silent engine compartment to reduce machine noise as required to meet local requirements.

The Contractor shall install all pulleys, rollers, bumpers, alignment control devices, and other equipment required to protect existing manholes and pipe components not intended for removal/replacement, and to protect the new pipe from damage during installation. Lubrication may be used as recommended by the manufacturer. If lubrication is used for insertion, the Contractor shall ensure that the lubricant does not backfill existing services. Under no circumstances will the pipe be stressed beyond eighty percent (80%) of its elastic limit as published and recommended by the manufacturer.

Pipe insertion shall be continuous and without interruption from manhole to manhole for sewers, or junction to junction for watermain, except as approved by the Engineer. Upon completion of insertion of the new pipe, and after the relaxation period, the Contractor shall expedite the reconnection of laterals and services so as to minimize any inconvenience to customers. Connection of services shall be in accordance with Sections 2611 and 2621 of these specifications and as provided in the Special Provisions.

The installed pipe shall be allowed the manufacturer's recommended amount of time, but not less than four (4) hours, for cooling and relaxation due to tensile stressing prior to any reconnection of service lines, sealing of the annulus or backfilling of the insertion pit. Sufficient

excess length of new pipe, but not less than four inches (4"), shall be allowed to protrude into manholes. Restraint of pipe ends shall be achieved by means of electrofusion couplings. The electrofusion couplings shall be slipped over pipe ends against manhole wall and fused in place. Installation of electrofusion couplings shall be done in accordance with the manufacturers recommended procedures.

Following the relaxation period, the annular space at the manhole shall be sealed. Sealing shall be made with material approved by the Engineer and shall extend a minimum of eight inches (8") into the manhole wall in such a manner as to form a smooth, uniform, watertight joint.

Fused pipe joints shall be de-beaded to create a smooth flow line. There shall be no ridges or burrs from the fusion method exposed on the interior of the pipe following installation.

Tracer wire shall be installed with the pipe in accordance with 2611 and 2621.

Equipment: The pipe bursting tool shall increase the external dimensions sufficiently, causing breakage of the existing pipe at the same time expanding the surrounding ground. Simultaneously, the new pipe, directly attached to the expander, shall also move forward. See manufacturer's specifications for what size tool should be used in what diameter of pipe, as well as parameters of what size tool for percentage of upsize allowed.

The bursting head shall incorporate a shield/expander to prevent collapse of the hole ahead of the pipe insertion.

Bypass Pumping: The Contractor, when and where required for sanitary sewer replacement, shall provide diversion for the pipe bursting/replacement process. The pumps and by-pass lines shall be of adequate capacity and size to handle all flows. All costs for by-pass pumping required during installation of the pipe shall be incidental to the installation of the pipe, unless otherwise provided in the Special Provisions.

Temporary Water: The Contractor when and where required for watermain replacement, shall provide all labor, materials, and equipment associated with managing, constructing, and maintaining a temporary potable water distribution system for all existing water users which must be taken out of service for a period exceeding eight (8) hours, or as required at the discretion of the Engineer. All costs to provide temporary water required during installation of the pipe shall be incidental to the installation of the pipe, unless otherwise provided in the Special Provisions.

2641.8 TESTING AND INSPECTION

Testing: Tests for compliance with this specification shall be made as described herein and in accordance with the applicable ASTM Specification. A certificate with this specification shall be furnished, upon request, by the manufacturer for all material furnished under this specification.

Inspection: Video inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit color television. Video inspection shall include the following:

- Two (2) copies of the DVD's in mpeg4 format (post) to be submitted to the Owner before final invoice.

- DVD's are to remain property of the Owner; Contractor to retain second copy.
- All flows tributary to reach of sewer being inspected are to be completely by-passed around the reach during inspection if necessary and required by the Owner.
- Pre-construction video of the existing pipe and post construction video inspection upon completion of reconstruction of each reach of pipe, with the voice description, with stationing of services indicated. Data and stationing to be on video.
- Should any portion of the video inspection be of inadequate quality or coverage, as determined by the Owner the Contractor will have the portion re-inspected and video recorded at no additional expense to the Owner.

2641.9 METHOD OF MEASUREMENT

Measurement for pipe bursting shall be on a linear foot basis, to the nearest whole foot, measured from center of manhole to center of manhole or junction point to junction point as indicated on the plans.

2641.10 BASIS OF PAYMENT

Pipe Bursting: The work performed as prescribed by this item will be paid for by the linear foot at the unit price bid for the pipe bursting/replacement at the specified pipe diameter and location which price shall be full compensation for the installation of the new pipe, furnishing and placing of all materials, labor, tools, equipment, cleaning, and preparation of the existing pipe to receive the new pipe, tracer wire, pipe bedding, backfill material, annulus sealing material and launching pits, and video inspection of final installed pipe, bypass pumping, temporary water distribution, traffic control, sealing at manholes, locating, excavating, disconnecting, testing in accordance with the Contract Documents, and all else incidental thereto for which separate payment is not provided under other Items in the Bid Form.

APPENDIX B

CITY OF NORTH BRANCH STANDARD DETAIL PLATES

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STANDARD DETAIL PLATES

Erosion Control

ERO-001	Placement and Construction of Silt Fence
ERO-002	Placement and Construction of Bale Checks
ERO-003	Storm Sewer Inlet Protection
ERO-004	Pond Outlet Skimmer
ERO-005	Outlet Screen
ERO-006	Erosion Control Blanket
ERO-007	Bioroll Ditch Check Temporary Sediment Control
ERO-008	Flotation Silt Curtain Work Area and Still Water
ERO-009	Bio-Filtration Basin
ERO-010	Rock Weeper & Rock Ditch Check

Miscellaneous

MISC-001	Standard MnDOT Plates
MISC-002	Placement of Insulation
MISC-003	Conservation Signs

Roadway

RDW-001	Typical Residential Urban Street
RDW-002	Typical Residential Rural Street
RDW-003	Concrete Curb and Gutter
RDW-004	Surmountable Curb and Gutter at Catch Basin
RDW-005	Street Radius for Concrete Curb and Gutter
RDW-006	Typical Residential Concrete Driveway Apron
RDW-007	Rural Section Driveway & Culvert Installation
RDW-008	Typical Commercial Driveway Entrance
RDW-009	Residential Driveway Entrance Without Apron
RDW-010	Typical Street Sign
RDW-011	Typical Bituminous Trail
RDW-012	Typical Concrete Walk
RDW-013	Mail Box Installation Detail
RDW-014	Concrete Valley Gutter Detail

Sanitary Sewer

SAN-001	Sanitary Sewer Service Detail
SAN-002	Standard Manhole for Sanitary Sewer
SAN-003	Sanitary Sewer Main to Clay Pipe Connection Detail
SAN-004	Standard Sanitary & Storm Sewer Frame & Cover for Manhole
SAN-005	Casting Adjustment for Sanitary and Storm Sewer
SAN-006	Typical Trench Compacting and Class B Bedding
SAN-007	Outside Drop Section for Sanitary Sewer
SAN-008	Sanitary Sewer Service Cleanout
SAN-009	Go, No-Go 5% Deflection Testing Mandrel for Flexible Sewer Pipe
SAN-010	Inside Drop Manhole for Sanitary Sewer

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STANDARD DETAIL PLATES

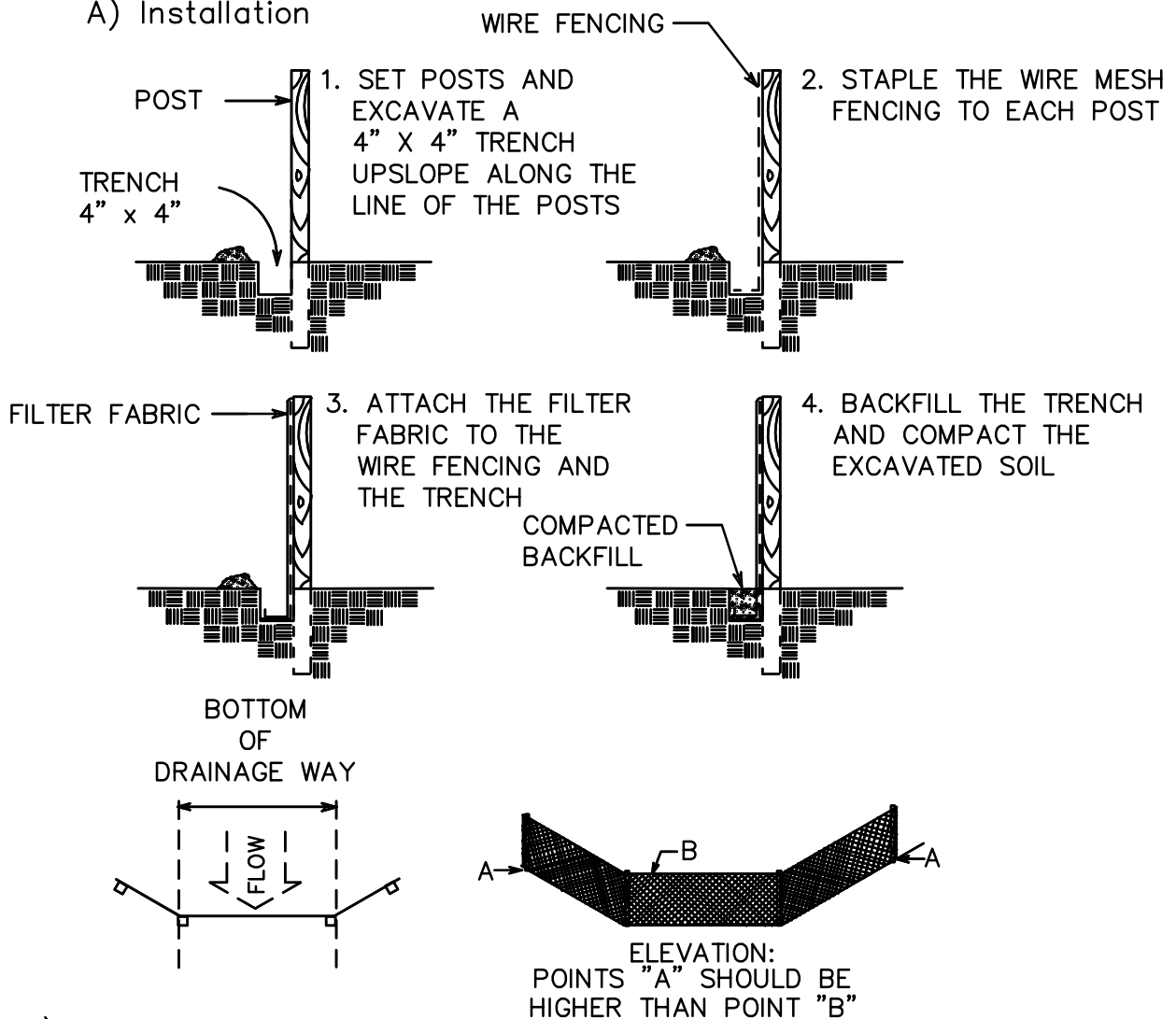
Storm Sewer

STM-001	Standard Storm Sewer Manhole, MnDOT 4020 Manhole
STM-002	Standard Storm Sewer Catch Basin Manhole
STM-003	Concrete Collar for Catch Basin Casting
STM-004	Beehive Manhole Grate
STM-005	Flared End Sections and Trash Guard Detail
STM-006	Piling for Flared End Sections – 24" Pipe and Larger
STM-007	Hand Placed Rip Rap at RCP Outlets
STM-008	Drain Tile Installation

Watermain

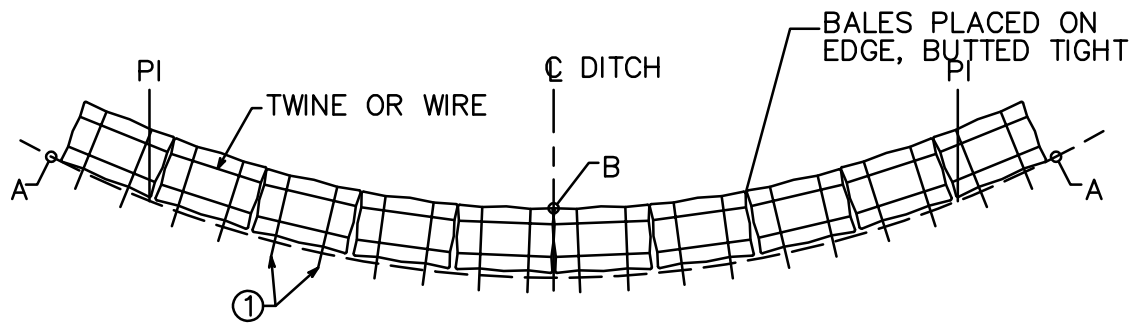
WM-001	Typical Hydrant Assembly Installation
WM-002	Typical Water Service
WM-003	Valve Box Installation
WM-004	Butterfly Valve Installation
WM-005	Thrust Blocking
WM-006	Watermain Lowering and Insulation Details
WM-007	Air Bleed Installation Detail
WM-008	Irrigation Detail

A) Installation

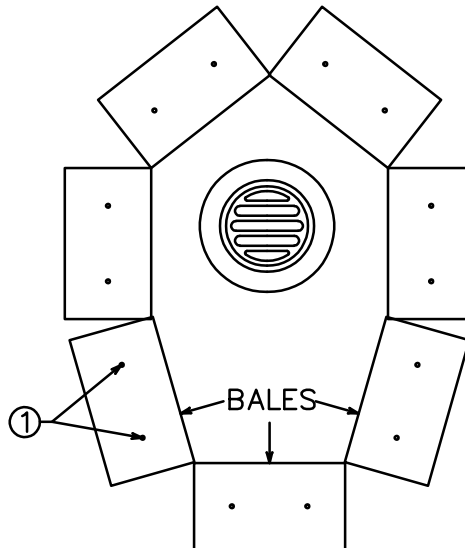


B) Maintenance

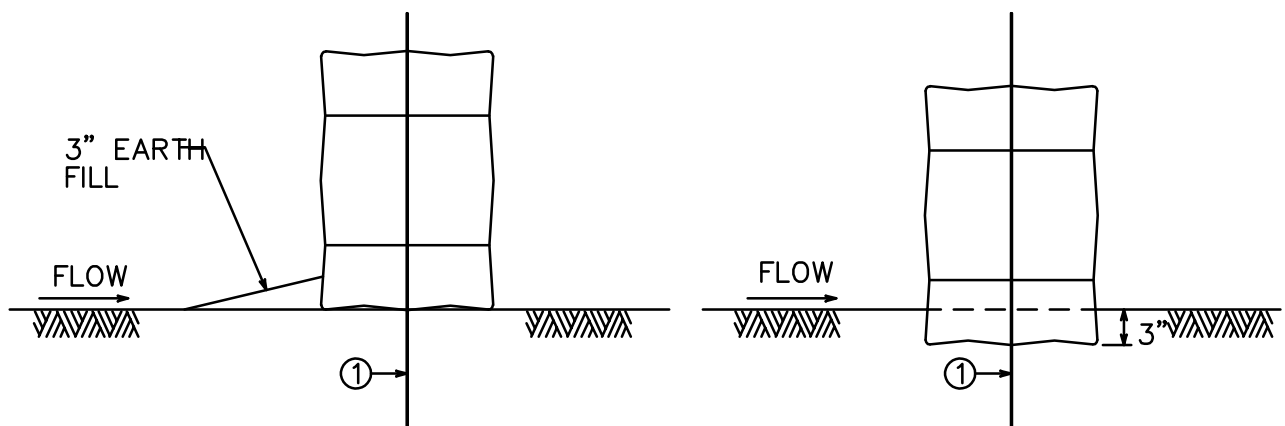
1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USEABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDING, OR REMOVED



NOTE: POINT A MUST BE HIGHER, THAN POINT B
BALE DITCH CHECK



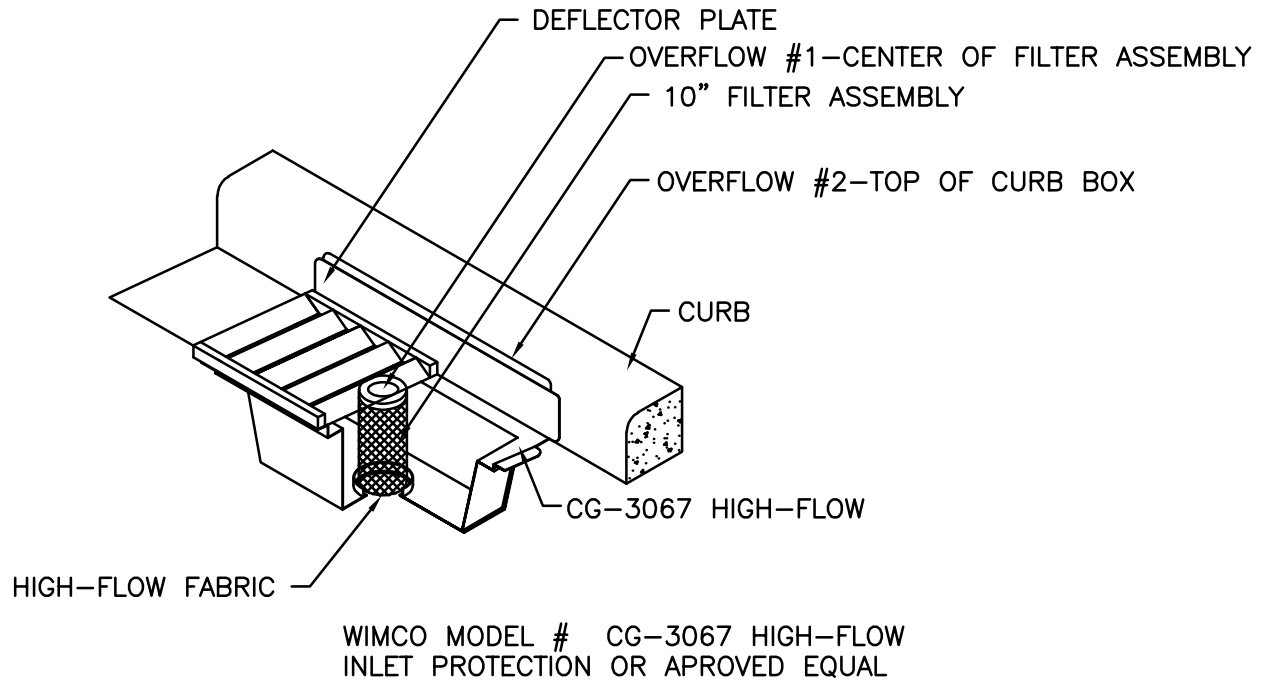
BALE CHECK
TO PROTECT STORM SEWER INLETS



NOTE: OPTION 1

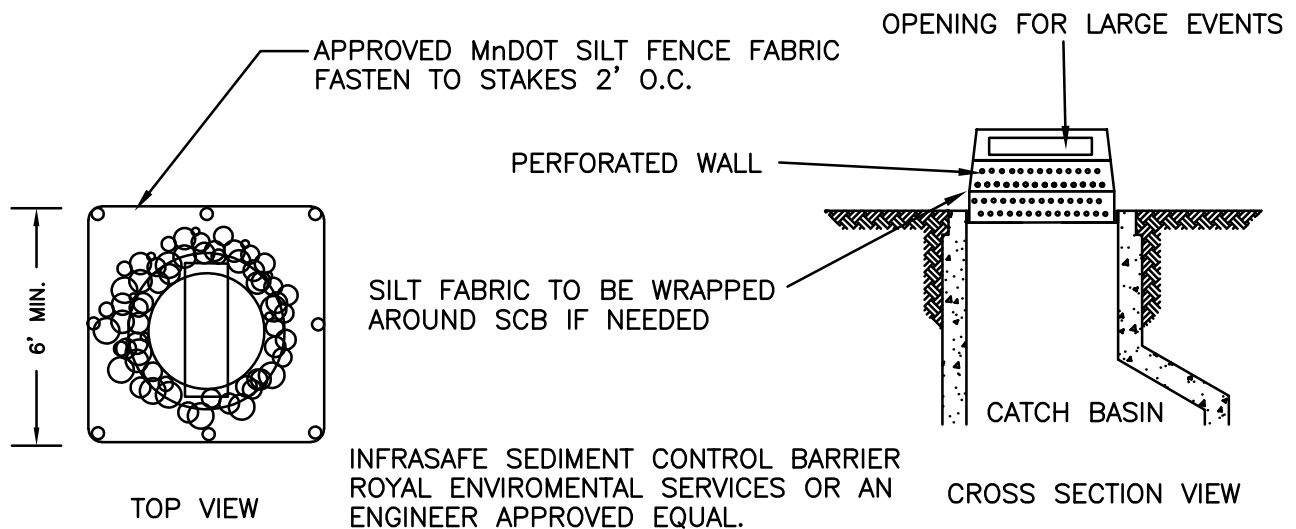
OPTION 2

① TWO 2"x 2" WOOD STAKES OR STEEL REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10" MINIMUM.



CURB AND GUTTER INLET PROTECTION

NO SCALE



REAR YARD INLET PROTECTION

NO SCALE



CITY OF NORTH BRANCH

STORM SEWER
INLET PROTECTION

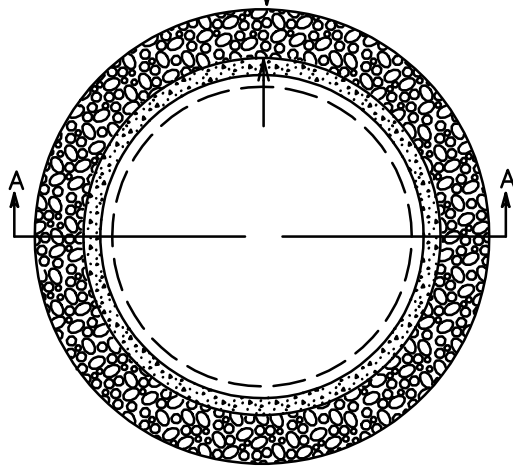
NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

ERO-003

4' CONCRETE COLLAR

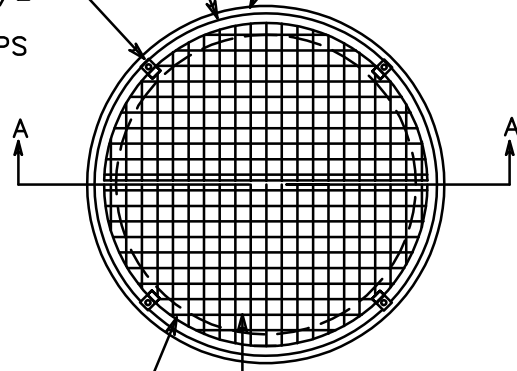


PLAN

OUTSIDE MANHOLE WALL TO FLAT BAR = 1"

PROVIDE 4-1/2" SS ANCHOR BOLTS W/CLIPS

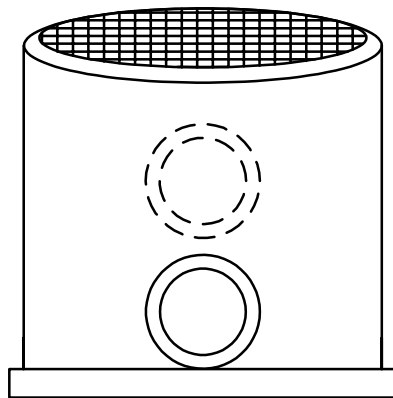
1/4" X 1" FLAT BAR (ROLLED TO PROVIDE OUTER RING)



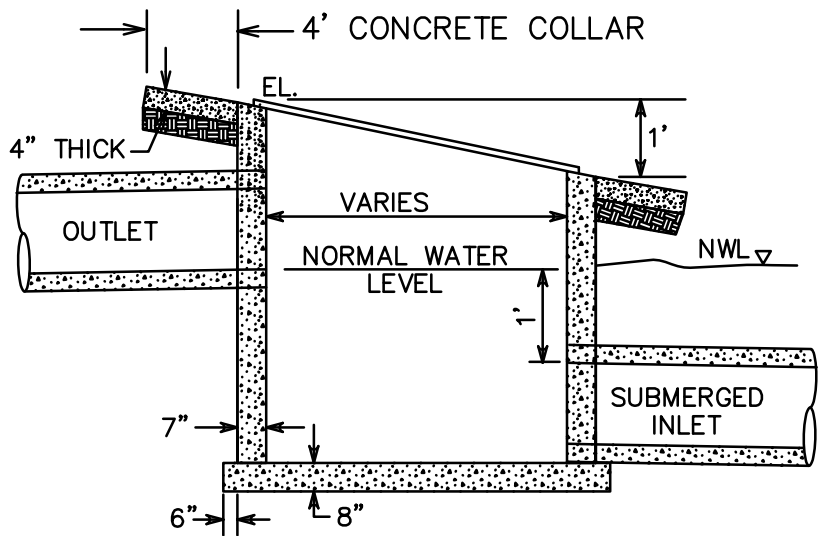
HOT DIPPED GALVANIZED GRATE IN 2 SECTIONS (SEE ERO-004 FOR SCREEN DETAIL)

#5 SMOOTH BAR @ 4" O.C. EACH WAY (PROVIDE 3-1/4" X 3-1/4" OPENING)

PLAN



ELEVATION



SECTION A-A



CITY OF NORTH BRANCH

POND OUTLET SKIMMER

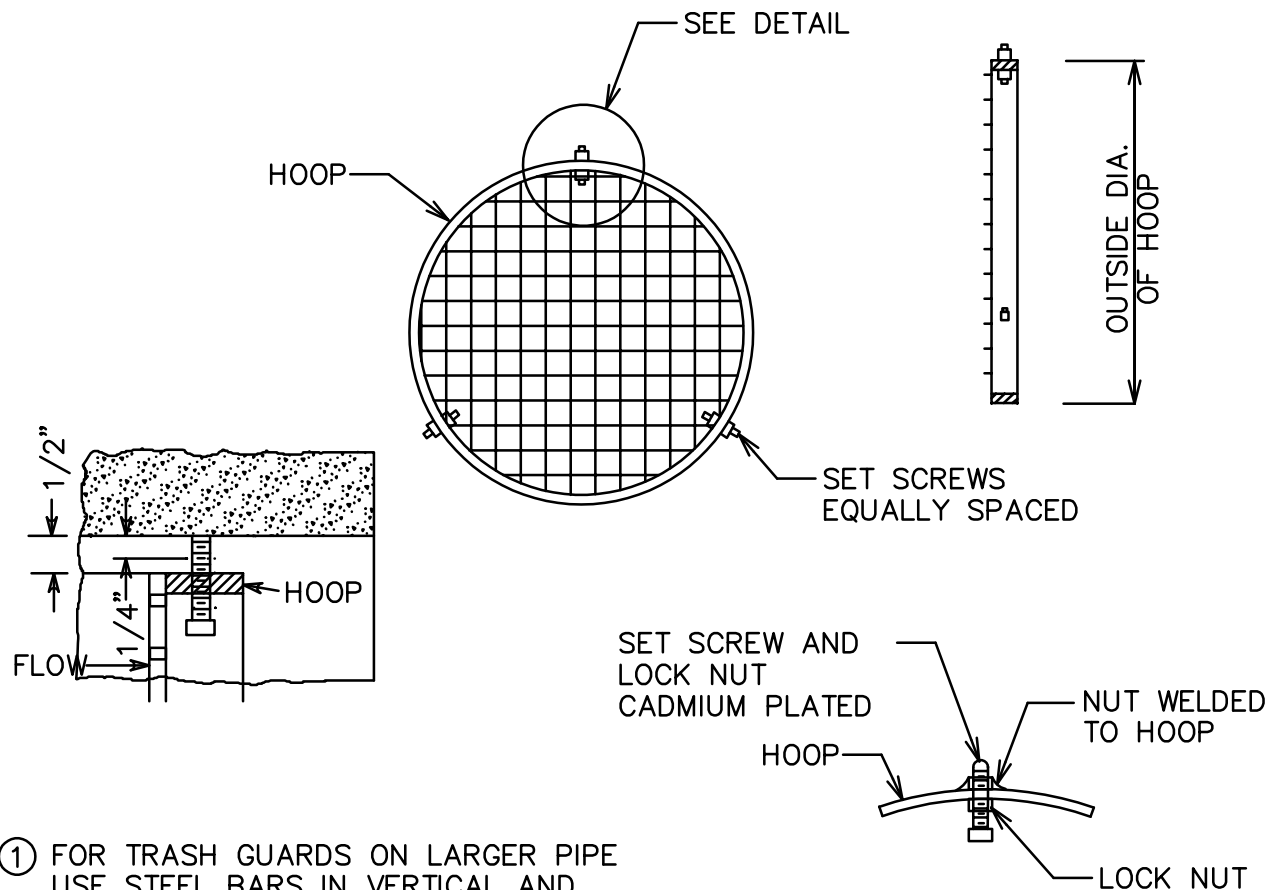
NO SCALE

2021 - STANDARD DETAIL

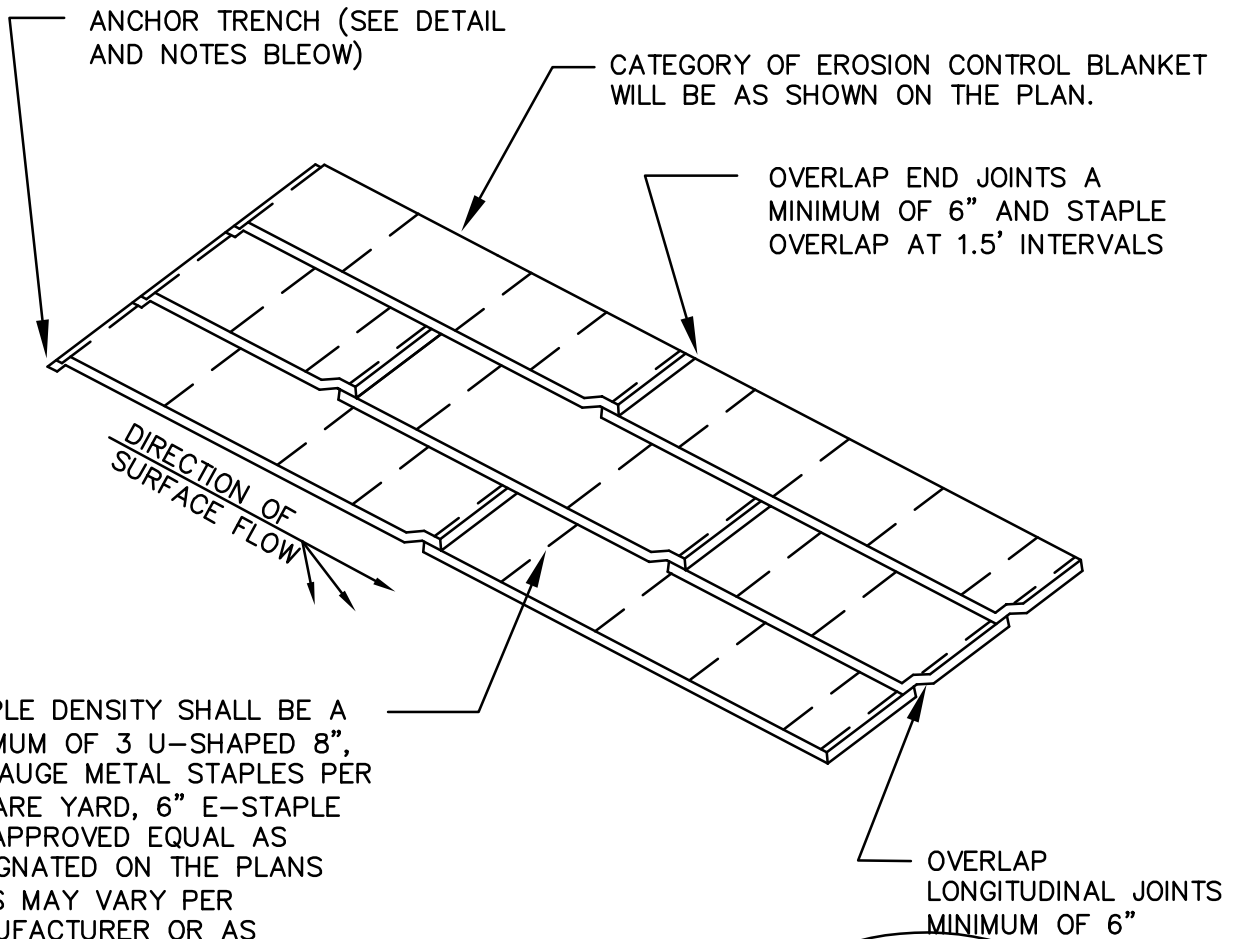
DETAIL NO.

ERO-004

PIPE SIZE	HOOP DIMENSIONS		WIRE CLOTH		SET SCREWS	
	OUTSIDE DIAM.	STOCK SIZE	MESH	WIRE GAUGE	SIZE	NO.
6"	5"	$\frac{3}{16}$ " x $1\frac{1}{2}$ "	$\frac{5}{8}$ "	16	$\frac{3}{8}$ " x $1\frac{3}{4}$ "	3
8"	7"	" "	"	16	" "	"
10"	9"	" "	"	16	" "	"
12"	11"	$\frac{1}{4}$ " x $1\frac{1}{2}$ "	"	14	" "	"
15"	14"	" "	"	14	" "	"
18"	17"	" "	1"	14	" "	"
24"	23"	" "	"	12	" "	"
30"	29"	" "	"	10	$\frac{1}{2}$ " x $1\frac{3}{4}$ "	4
36"	35"	$\frac{3}{8}$ " x $1\frac{1}{2}$ "	"	10	" "	4



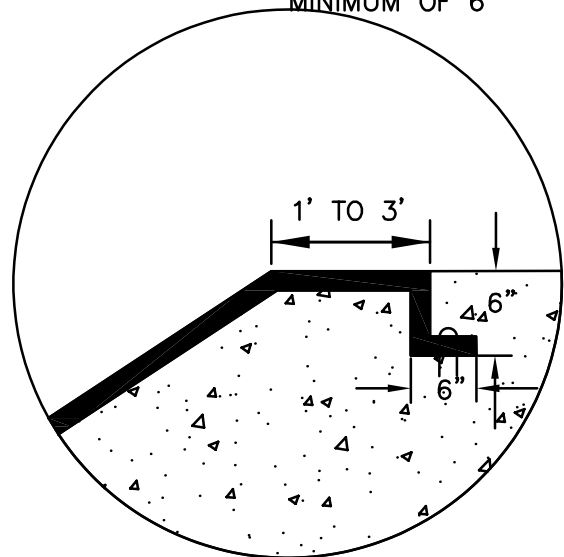
- ① FOR TRASH GUARDS ON LARGER PIPE USE STEEL BARS IN VERTICAL AND HORIZONTAL DIRECTION (BAR SIZE & SPACING AS REQUIRED.)
- ② ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH MN/DOT 3392 EXCEPT AS NOTED.
- ③ ALL STRUCTURAL SHAPES, PLATES AND BARS SHALL BE GALVANIZED IN ACCORDANCE WITH MN/DOT 3394 EXCEPT AS NOTED.



STAPLE DENSITY SHALL BE A MINIMUM OF 3 U-SHAPED 8", 11 GAUGE METAL STAPLES PER SQUARE YARD, 6" E-STAPLE OR APPROVED EQUAL AS DESIGNATED ON THE PLANS (THIS MAY VARY PER MANUFACTURER OR AS REQUIRED ON THE PLANS.)

ANCHOR TRENCH

1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS OR AS DIRECTED ON THE PLANS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. ANCHOR TRENCHES SHALL BE PLACED AT THE TOP OF SLOPE, AND EVERY 100 LINEAR FEET OF SLOPE



CITY OF NORTH BRANCH

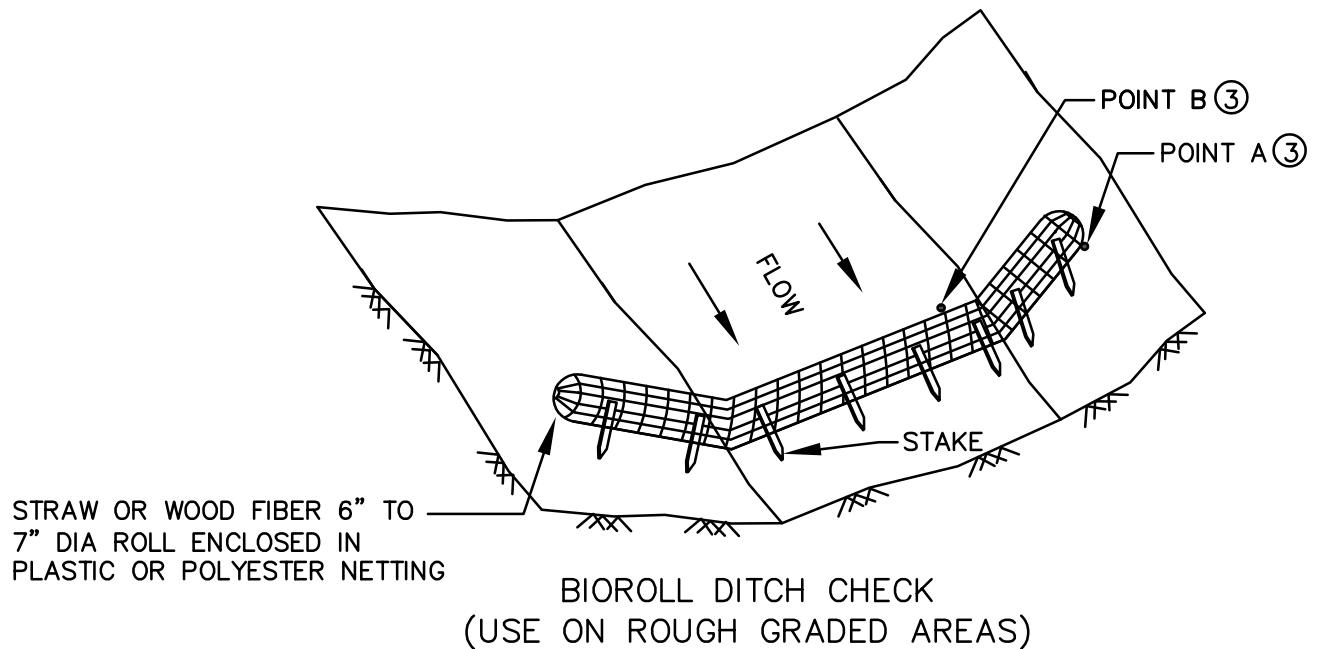
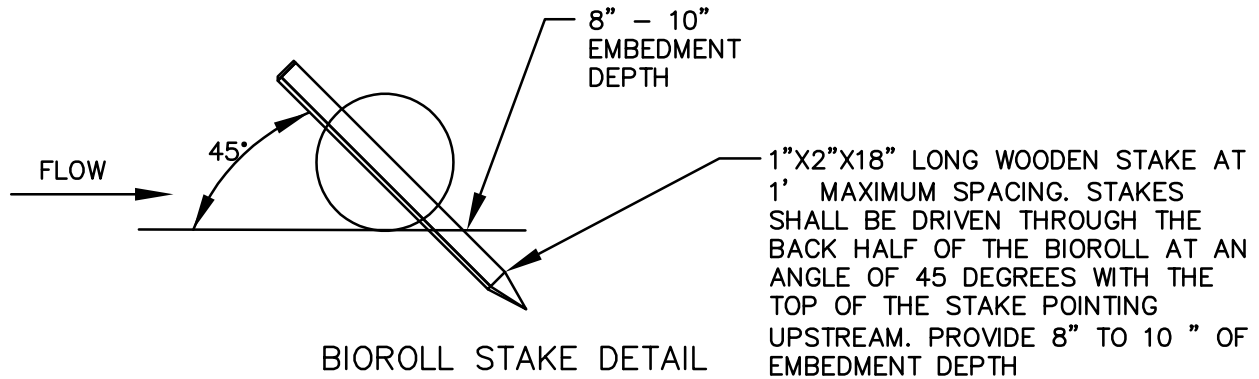
EROSION CONTROL BLANKET

NO SCALE

2021 - STANDARD DETAIL

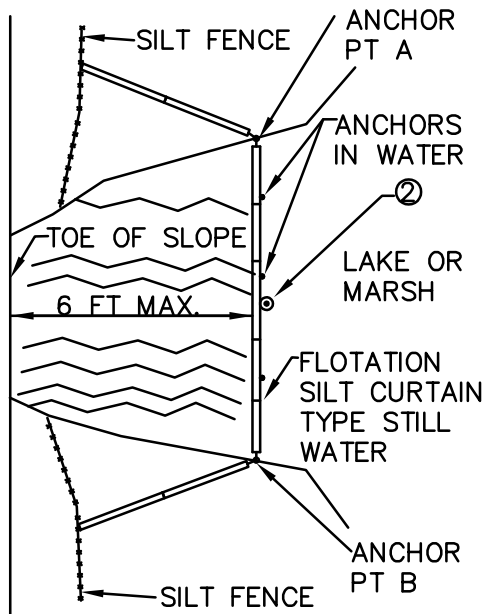
DETAIL NO.

ERO-006

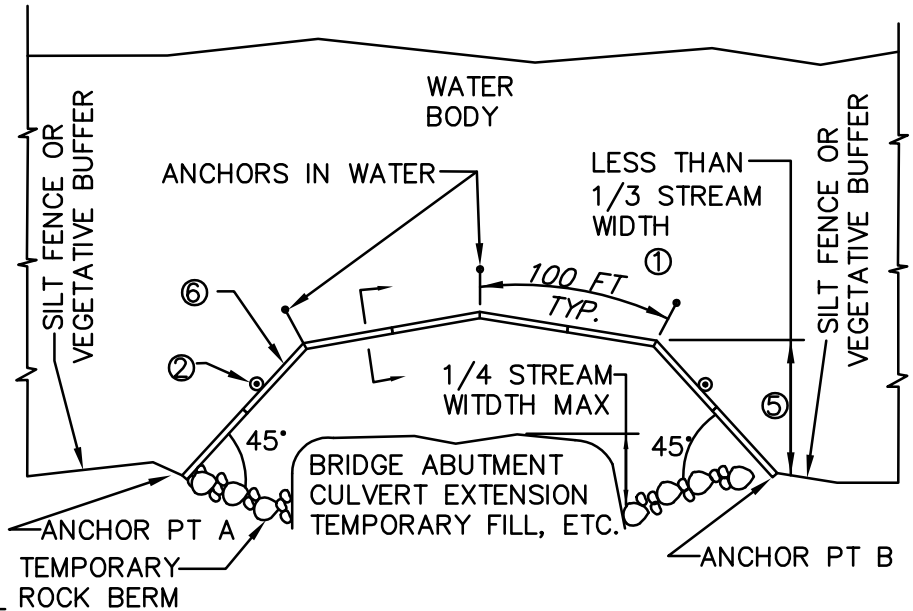


NOTES:

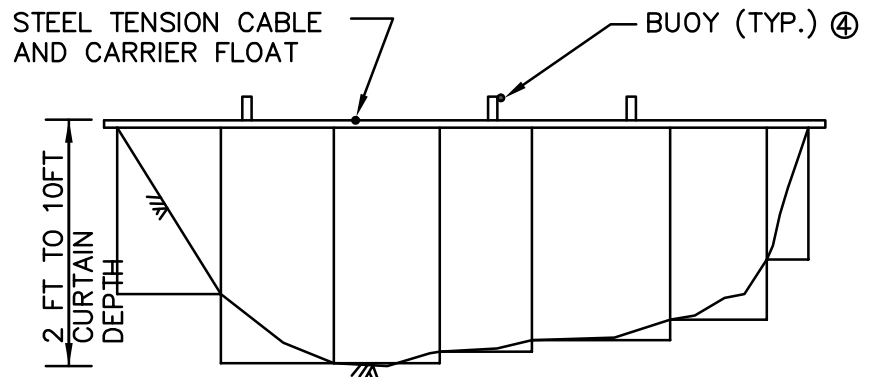
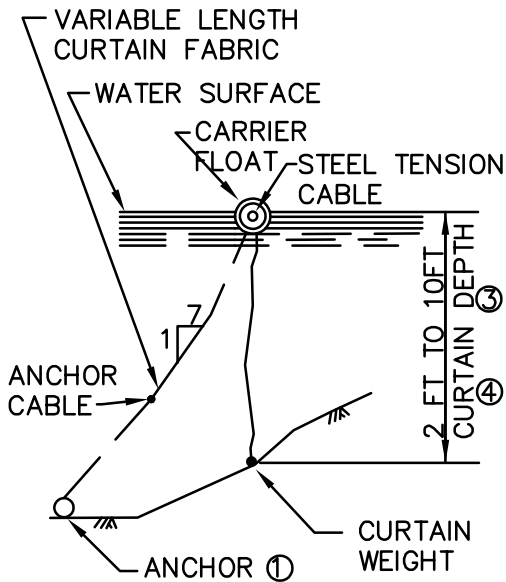
1. SEE MNDOT SPECS 2573, & 3889
2. APPROXIMATE SPACING OF DITCH CHECK (FT)= $Y = \frac{\text{DITCH CHECK HEIGHT (FT)}}{\% \text{ CHANNEL SLOPE}} \times 100$
3. POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.



PLAN VIEW (TYPE: STILL WATER)



PLAN VIEW (TYPE: WORK AREA)



NOTES:

SEE MNDOT SPEC. 2573 & 3887

1. FOR ANCHOR AND WEIGHT REQUIREMENTS, SEE MNDOT SPEC 2573
2. ON MOTORIZED WATER WAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.
3. WATER DEPTH CAN BE TO 10 FEET.
4. SILT CURTAIN HEIGHT INCLUDES MAXIMUM WAVE HEIGHT FOR WATER BODY.
5. KEEP AS CLOSE TO WORK AREA AS POSSIBLE
6. SILT CURTAIN, ROCK BERM OR SHEET PILE AS REQUIRED TO CONTROL THE INFILTRATION OF SILT.
7. IF 6 INCHES OR LESS OF WATER, USE BALE BARRIERS



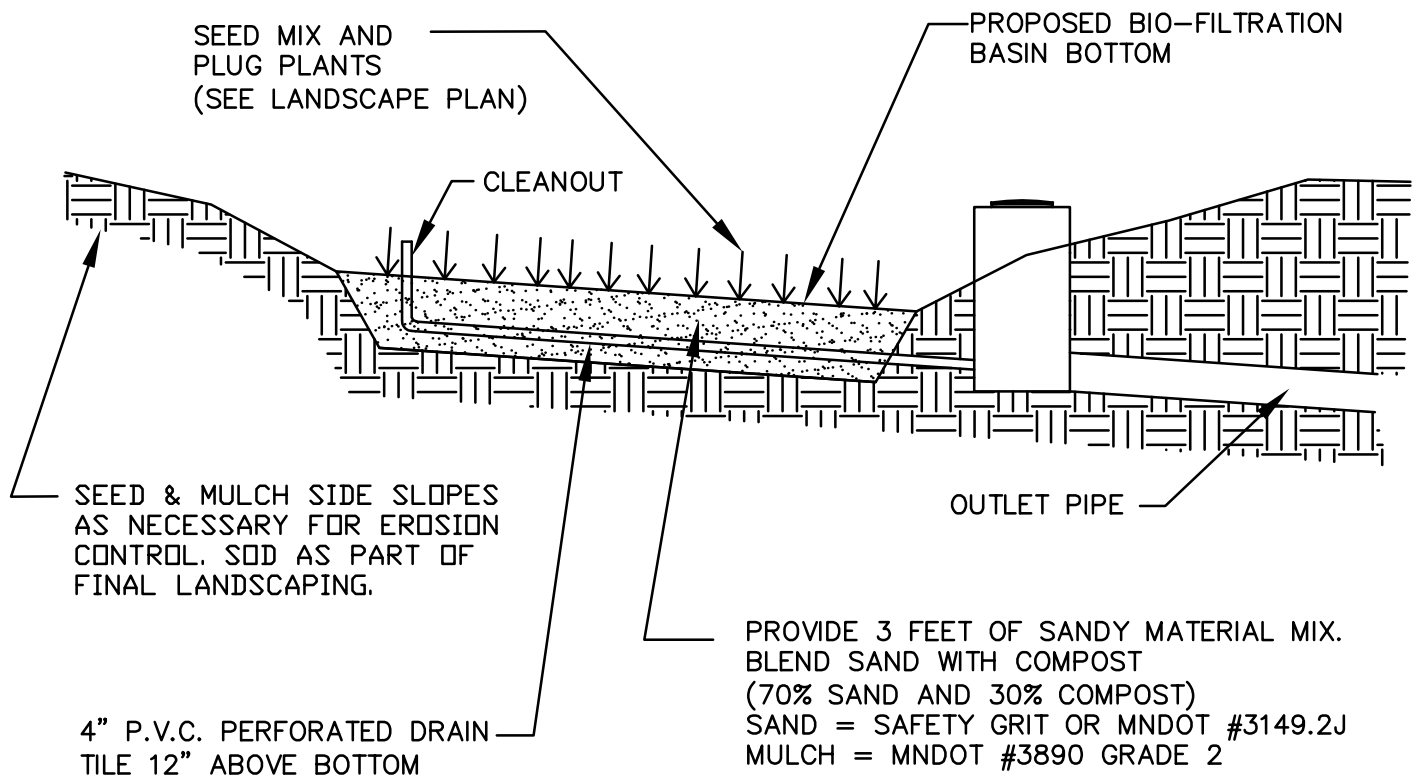
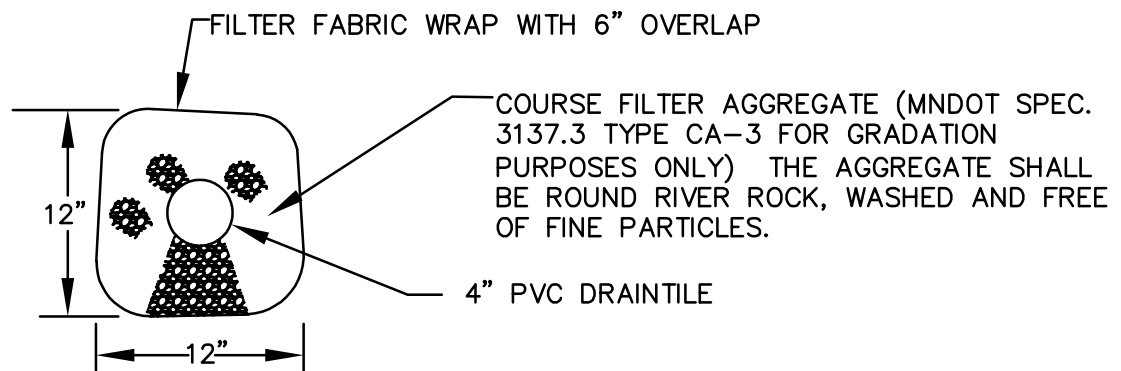
CITY OF NORTH BRANCH
FLOTATION SILT CURTAIN WORK
AREA AND STILL WATER

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

ERO - 008



NOTE:

1. 40" EXCAVATION REQUIRED TO PROVIDE FOR A TOTAL 36" OF SAND COMPOST MIXTURE WITH 4" DOUBLE-SHREDDED HARDWOOD MULCH ON TOP.
2. THE BOTTOM OF THE EXCAVATION SHALL BE SCARIFIED TO A 2' DEPTH WITH A FROST RIPPING TOOTH OR OTHER APPROVED METHOD.



CITY OF NORTH BRANCH

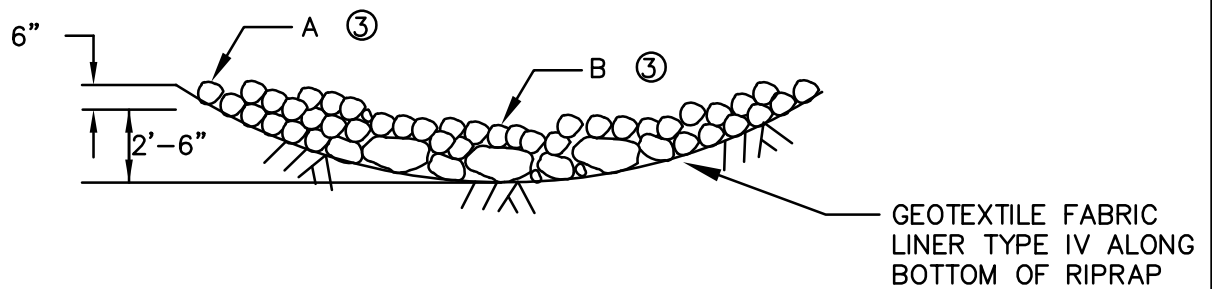
BIO-FILTRATION BASIN

NO SCALE

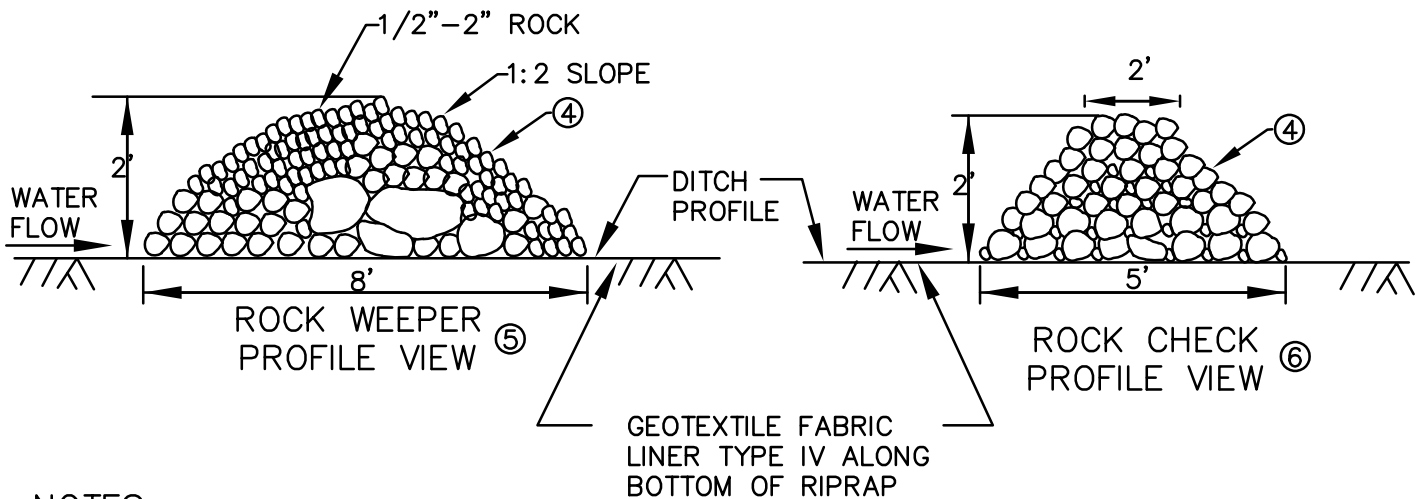
2021 - STANDARD DETAIL

DETAIL NO.

ERO - 009



CROSS SECTION (ROCK WEEPER AND ROCK CHECK)



NOTES:

1. SEE MNDOT SPECS 2573, 3601, 3733 & 3889
2. APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA

$$\text{APPROXIMATE SPACING OF DITCH CHECK (FT)} = Y = \frac{\text{DITCH CHECK HEIGHT (FT)}}{\% \text{ CHANNEL SLOPE}} \times 100$$

3. POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
4. CLASS I-IV RIPRAP (SPEC. 3601) WITH GEOTEXTILE FABRIC LINER, TYPE IV (SPEC 3733)
5. THE ROCK WEEPER FILTERS SEDIMENT OUT OF THE WATER BETTER THAN THE OTHER DITCH CHECKS. THE ROCK WEEPERS COULD BE USED AS A PERMANENT WATER FILTERING FEATURE.
6. PERMANENT ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE WILL NEED TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.



CITY OF NORTH BRANCH

ROCK WEEPER &
ROCK DITCH CHECK

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

ERO - 010

THE FOLLOWING STANDARD PLATES SHALL APPLY ON THIS PROJECT.

PLATE NO.		MnDOT STANDARD PLATES
3000	M	REINFORCED CONCRETE PIPE
3006	H	GASKET JOINT FOR R.C. PIPE
3007	F	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3040	F	CORREGATED METAL PIPE CULVERT
3100	G	CONCRETE APRON FOR R.C. PIPE
3123	J	METAL APRON FOR C.S. PIPE
3124	B	METAL APRON CONNECTION
3133	D	RIP RAP AT RCP OUTLETS
3145	G	CONCRETE PIPE TIES
3221	C	CORREGATED STEEL PIPE COUPLING BAND
4006	L	MANHOLE OR CATCH BASIN (DESIGN H)
4011	E	PRECAST CONCRETE BASE
4022	A	MANHOLE OR CATCH BASIN COVER (3' x 2' OPENING)
4026	A	ENCASED CONCRETE ADJUSTING RINGS
4101	D	RING CASTING FOR MANHOLE OR CATCH BASIN (NO. 700-7)
4108	F	ADJUSTING RINGS
4110	F	COVER CASTING FOR MANHOLE
4180	J	MANHOLE OR CATCH BASIN STEP
7100	H	CONCRETE CURB AND GUTTER (DESIGN B)
7102	K	CONCRETE CURB AND GUTTER (DESIGN D, DESIGN S)
7111	J	INSTALLATION OF CATCH BASIN CASTINGS
8000	J	STANDARD BARRICADE
8002	G	PERMANENT BARRICADE



CITY OF NORTH BRANCH

STANDARD MNDOT PLATES

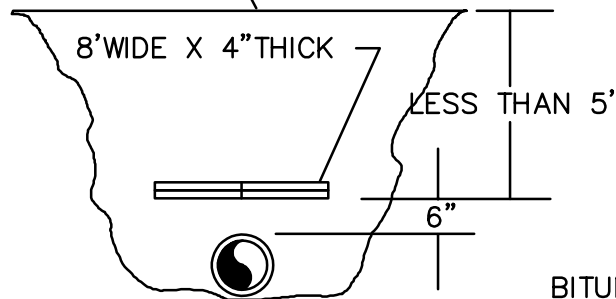
NO SCALE

2021 - STANDARD DETAIL

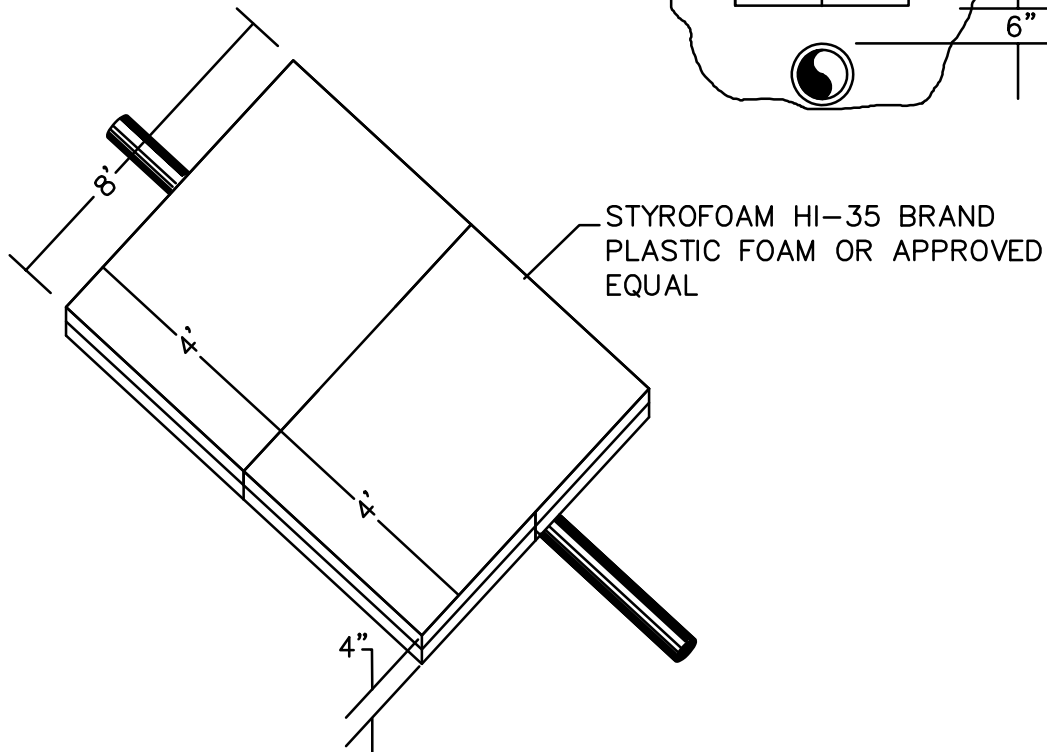
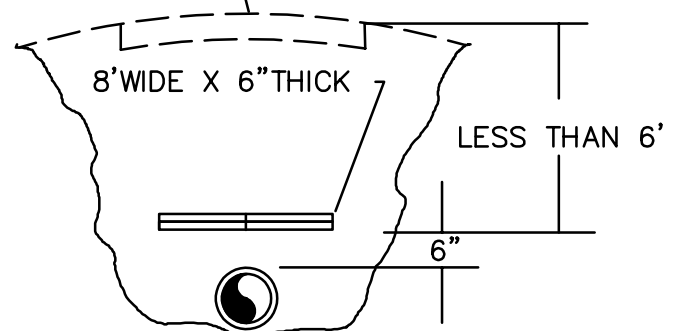
DETAIL NO.

MISC-001

GRASSY AREA



BITUMINOUS SURFACE



NOTE:
UNDERGROUND UTILITY PIPE CROSSING
8'X 8'X 4"THICK CENTERED OVER PIPE



CITY OF NORTH BRANCH

PLACEMENT OF INSULATION

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

MISC-002

Natural Area



This area's vegetation:

Stabilizes soil to prevent erosion

Filters out pollutants for clean water

Provides food & habitat for wildlife

PLEASE

No dumping, mowing or spraying!



CITY OF NORTH BRANCH

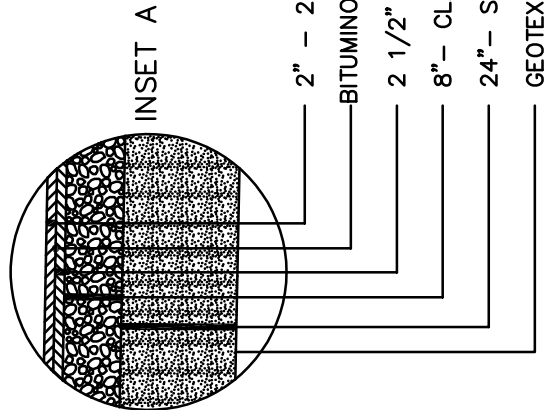
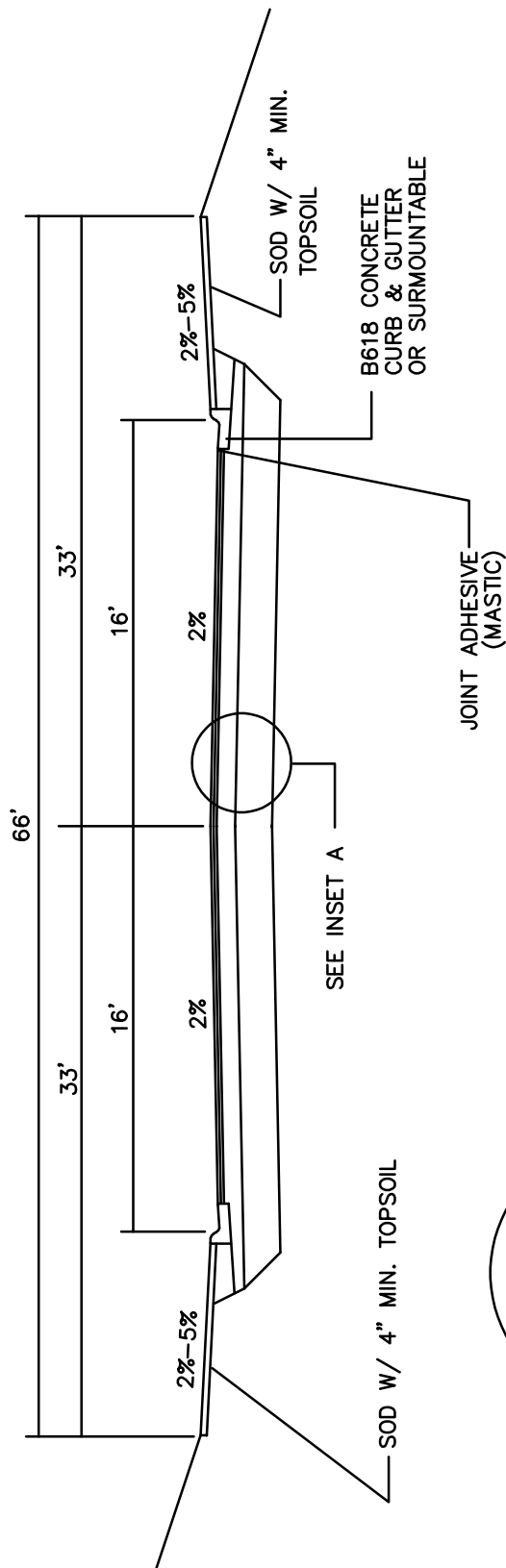
CONSERVATION SIGNS

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

MISC - 003



NOTES:

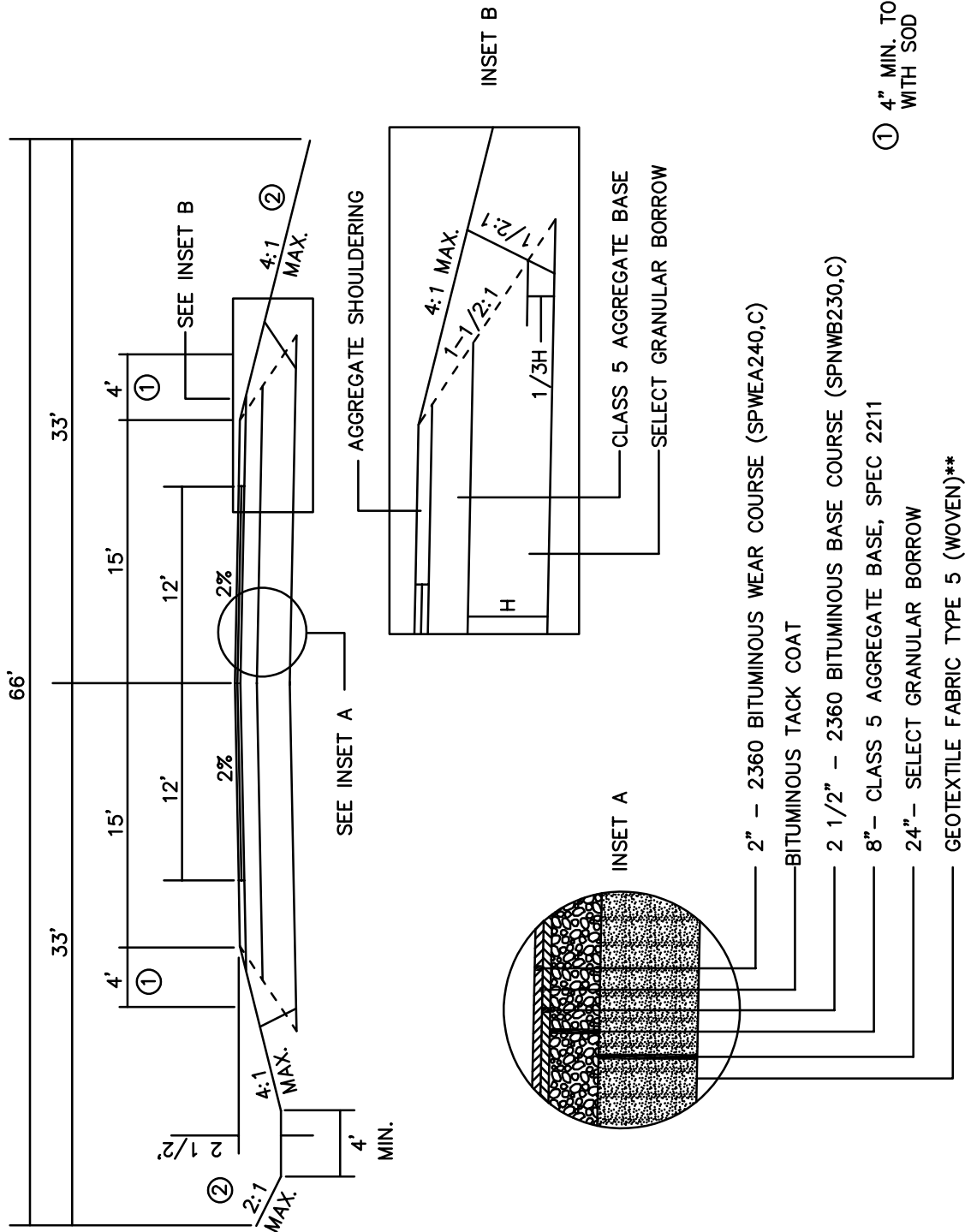
1. DESIGN MAY CHANGE UPON REVIEW OF THE SOIL CONDITIONS.
2. NO STREET CUTS ARE ALLOWED AFTER NOVEMBER 1. STREET CUT PERMIT IS VALID FOR 30 DAYS.
3. PAVEMENT SHALL BE LAID TO MINIMIZE SEAMS. PAVER SCREED SHALL BE 16' WIDE.

**WHERE UNSUITABLE MATERIALS EXIST, AS DIRECTED BY THE ENGINEER



CITY OF NORTH BRANCH
TYPICAL RESIDENTIAL URBAN
STREET
NO SCALE

2021 - STANDARD DETAIL
DETAIL NO.
RDW - 001



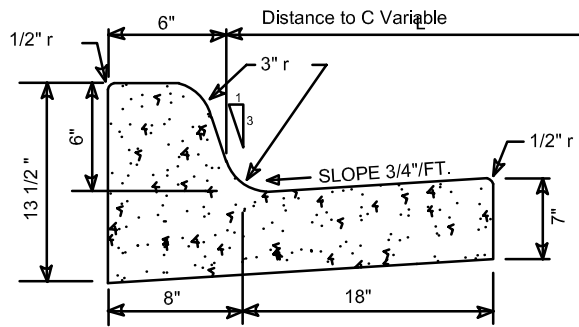
NOTES:

1. DESIGN MAY CHANGE UPON REVIEW OF THE SOIL CONDITIONS.
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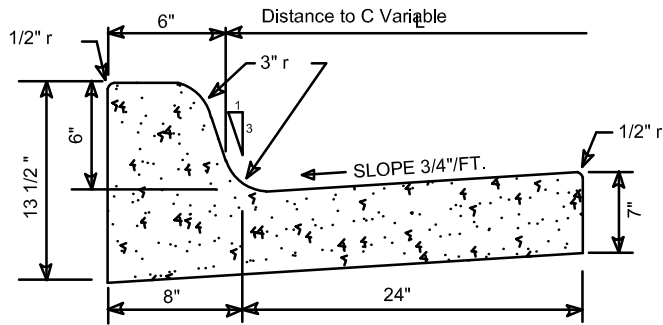
**WHERE UNSUITABLE MATERIALS EXIST, AS DIRECTED BY THE ENGINEER

① 4" MIN. TOPSOIL
WITH SOD

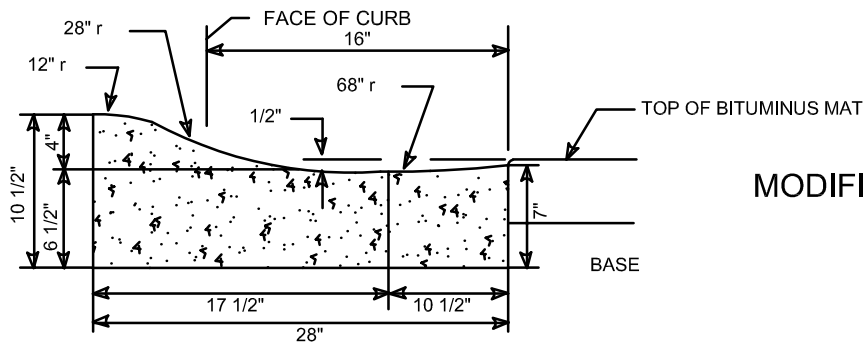
② 4" MIN. TOPSOIL
WITH SEED



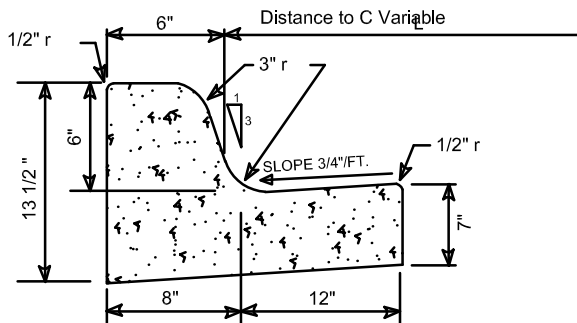
Mn/DOT B 618



Mn/DOT B 624



MODIFIED 'S' DESIGN



Mn/DOT B 612

NOTE: A MINIMUM OF 3" OF CLASS 5 AGGREGATE BASE SHALL BE USED UNDER ALL CURB AND GUTTER.

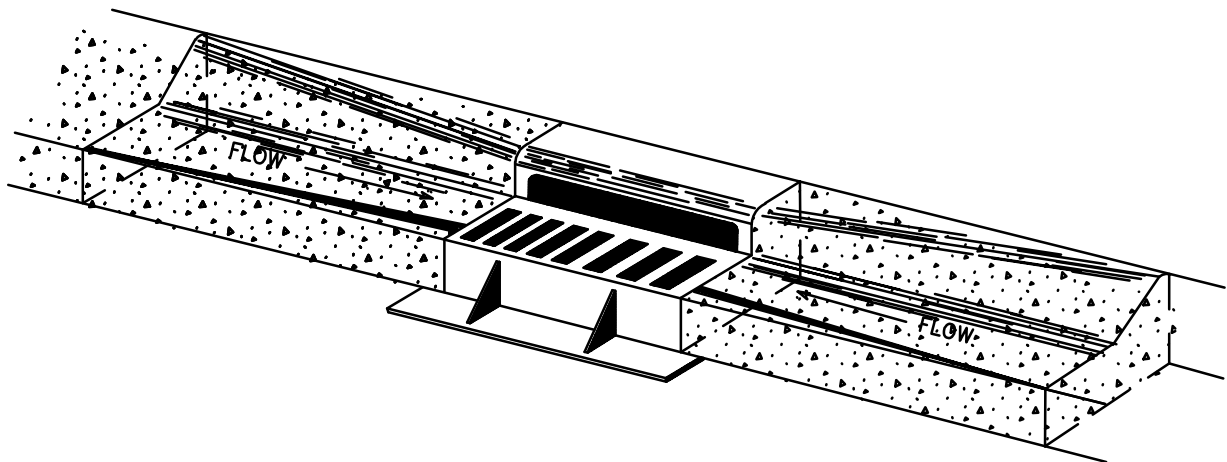
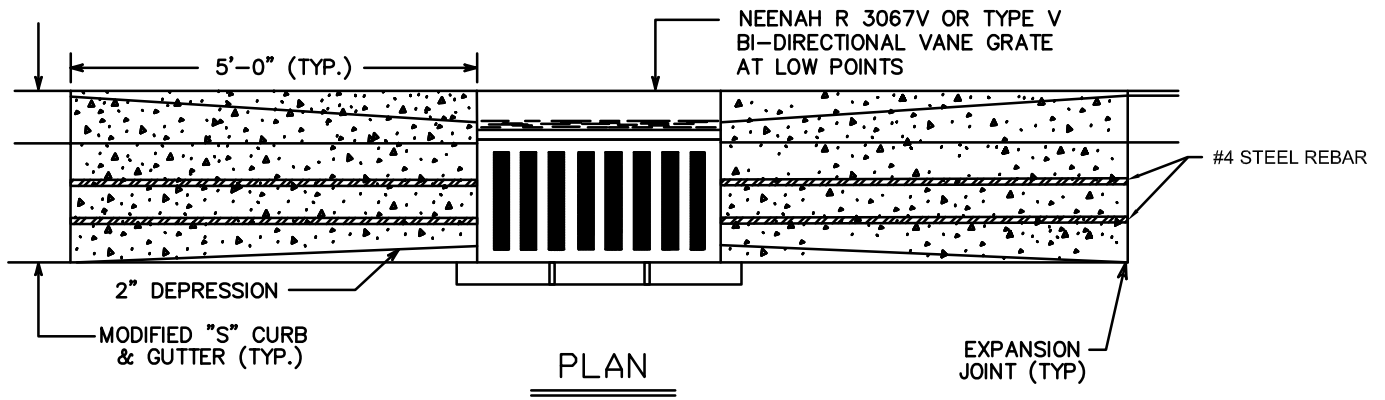


CITY OF NORTH BRANCH
CONCRETE CURB AND GUTTER
NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

RDW - 003



NOTE: MODIFIED "S" CURB & GUTTER TO BE FORMED INTO B618 TYPE CURB AT CATCH BASIN CASTING



CITY OF NORTH BRANCH

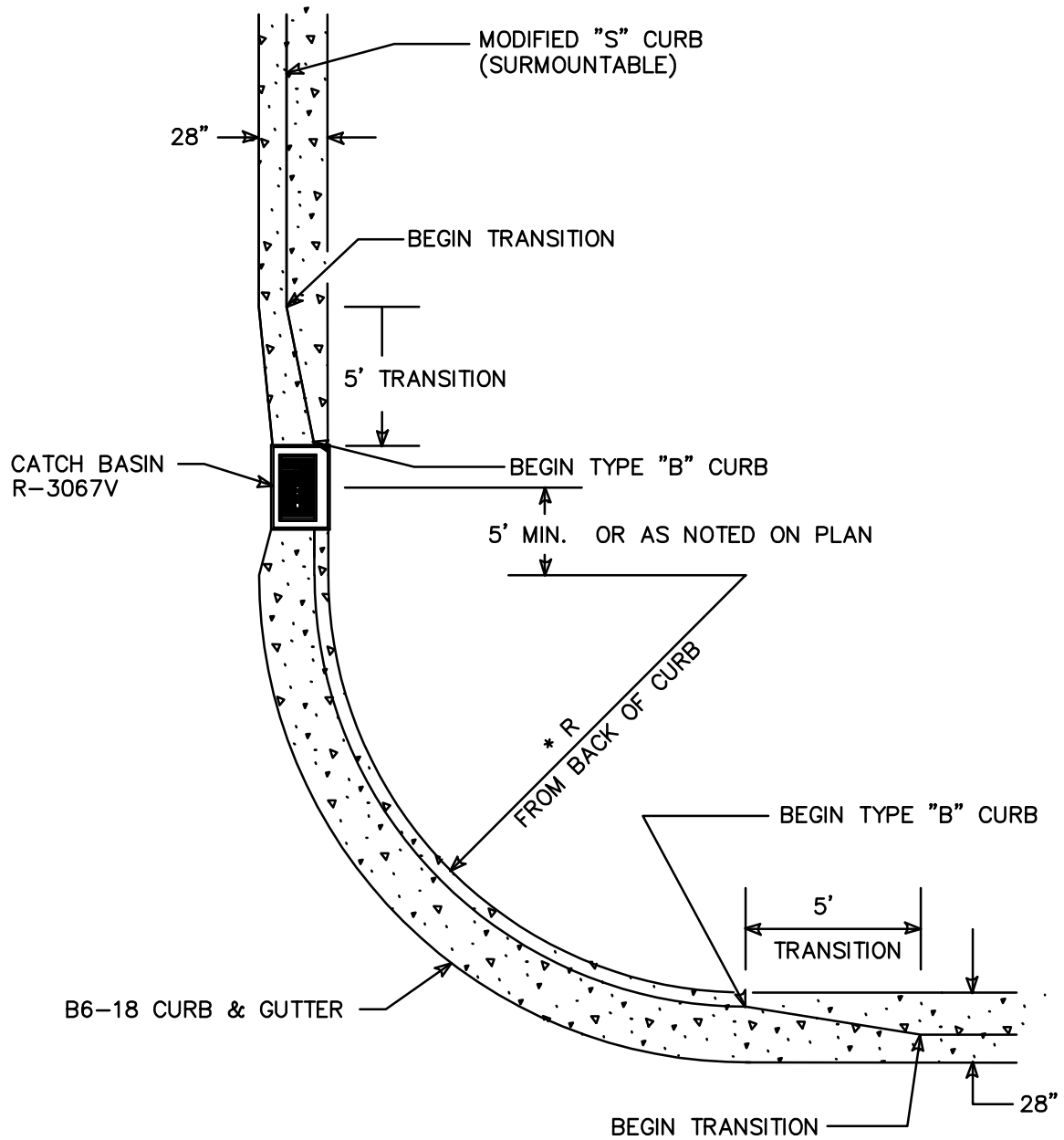
SURMOUNTABLE CURB AND
GUTTER AT CATCH BASIN

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

RDW - 004



NOTES:

1. SEE STANDARD DETAIL PLATE FOR CONCRETE CURB AND GUTTER DETAILS

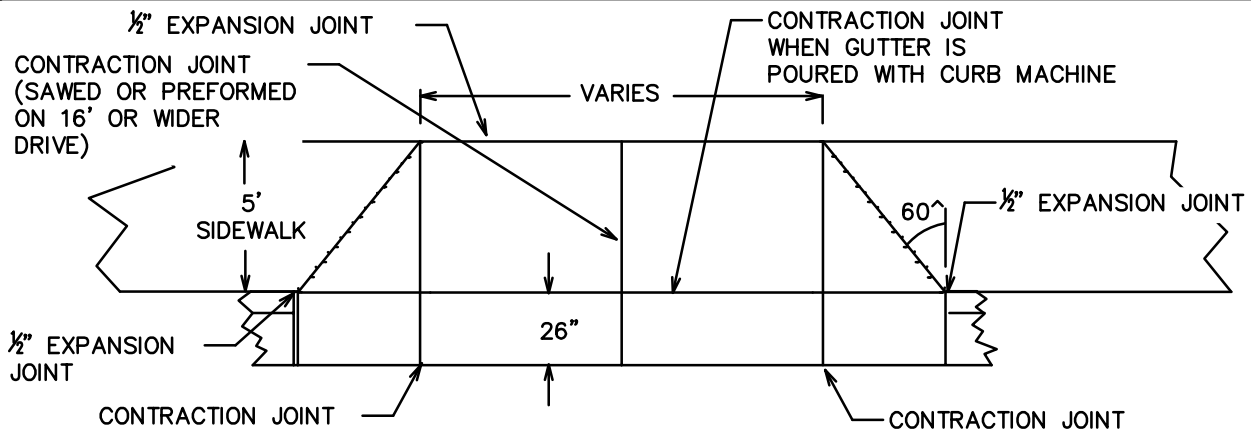


CITY OF NORTH BRANCH
STREET RADIUS FOR
CONCRETE CURB AND GUTTER
NO SCALE

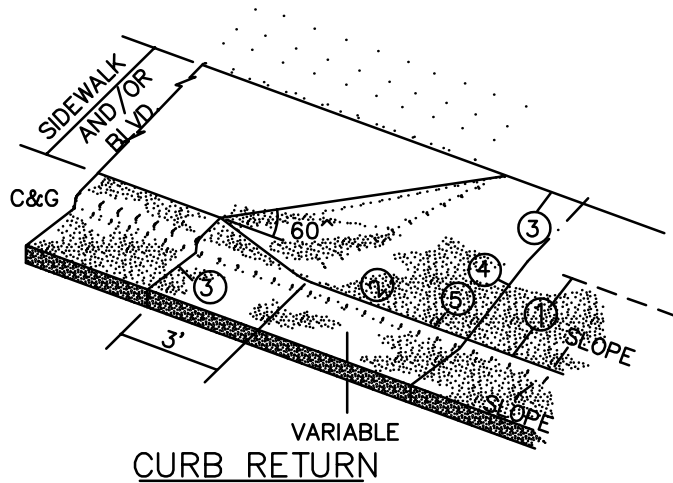
2021 - STANDARD DETAIL

DETAIL NO.

RDW - 005



PLAN

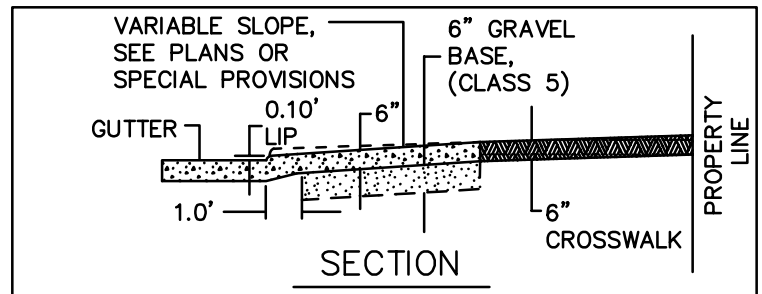


CURB RETURN

- ① WITHOUT SIDEWALK PAVEMENT ONLY TO END OF CURB RETURN WHEN ENTRANCE IS UNSURFACED OR CONSTRUCTION IS NOT NEEDED BEYOND THIS POINT.
- ② WITH SIDEWALK PAVEMENT TO BACK EDGE OF SIDEWALK PAID FOR AS CONCRETE DRIVEWAY PAVEMENT
- ③ 1/2" EXPANSION JOINT
- ④ CONTRACTION JOINT (FORMED OR SAWED)
- ⑤ DRIVEWAY NEED NOT BE POURED MONOLITHICALLY WITH CURB & GUTTER

NOTE:

- 1 PAYMENT SHALL BE FROM BACK OF CURB
- 2 WHERE SIDEWALKS EXIST OR ARE PROPOSED THE DRIVEWAY APRON SHALL EXTEND TO THE BACK OF SIDEWALK
- 3 #4 STEEL AT 2' OC TO BE USED WHEN DRIVEWAY SLAB IS NOT POURED INTEGRAL WITH GUTTER



SECTION

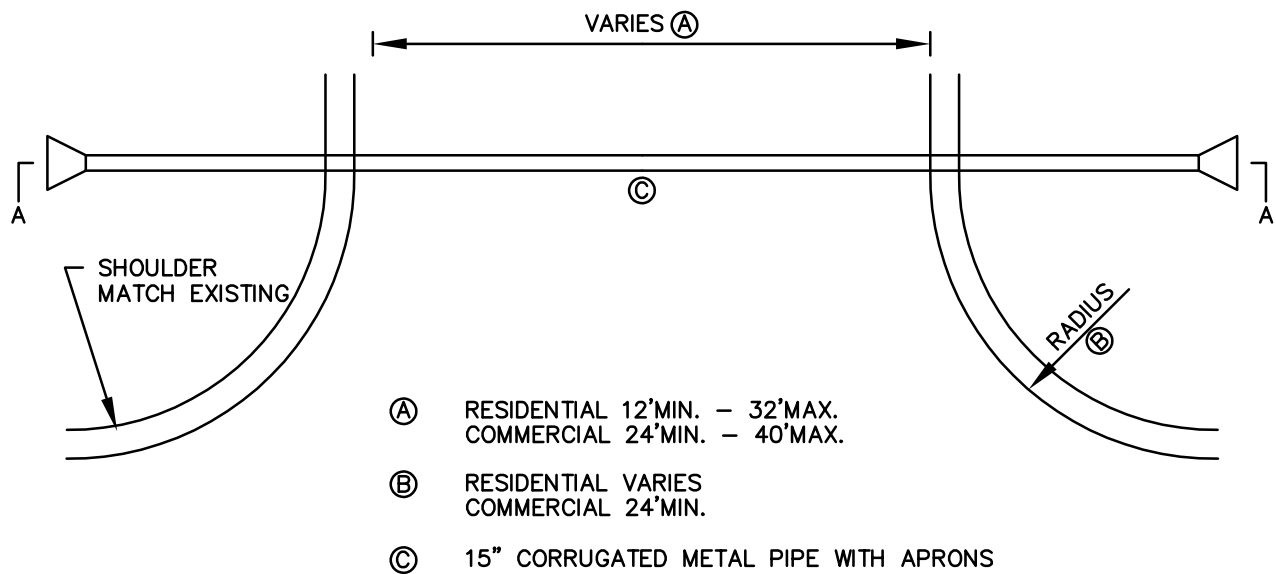


CITY OF NORTH BRANCH
TYPICAL RESIDENTIAL
CONCRETE DRIVEWAY APRON
NO SCALE

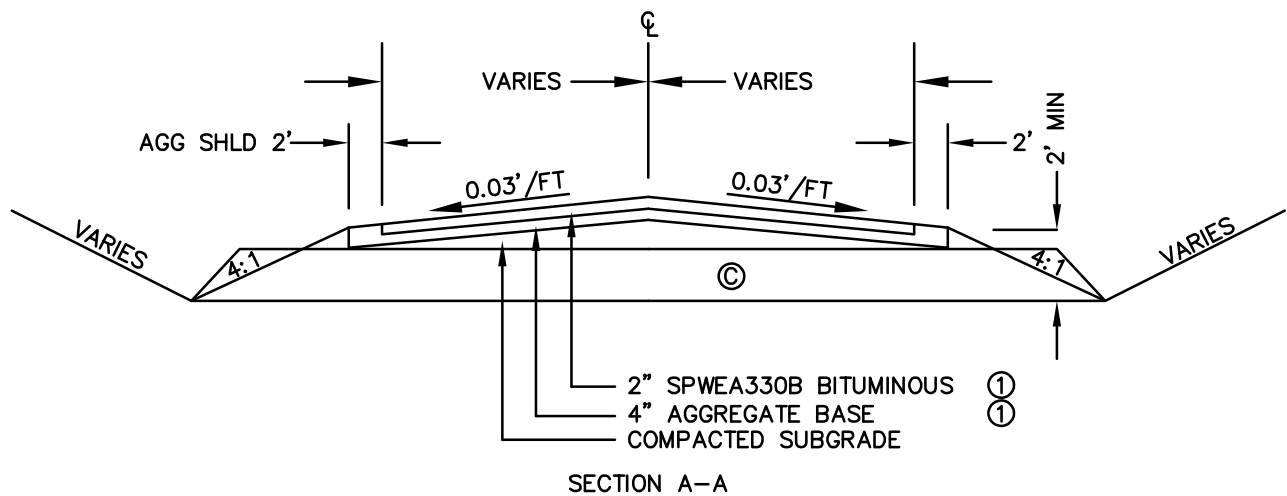
2021 - STANDARD DETAIL

DETAIL NO.

RDW - 006



NOTES: ELEVATE CULVERT FOR POSITIVE DRAINAGE.
CORRUGATED METAL PIPE SHALL CONFORM
TO MNDOT SPECIFICATION.



① WHEN APPROVED IN RURAL RESIDENTIAL
OR AGRICULTURAL ZONING, 6" AGGREGATE
BASE MAY BE SUBSTITUTED IN LIEU OF 2"
BITUMINOUS/4" AGGREGATE BASE.

NOTES: A MINIMUM OF 35' DIRECTLY ADJACENT TO
A PAVED PUBLIC STREET MUST HAVE A
BITUMINOUS SURFACE.

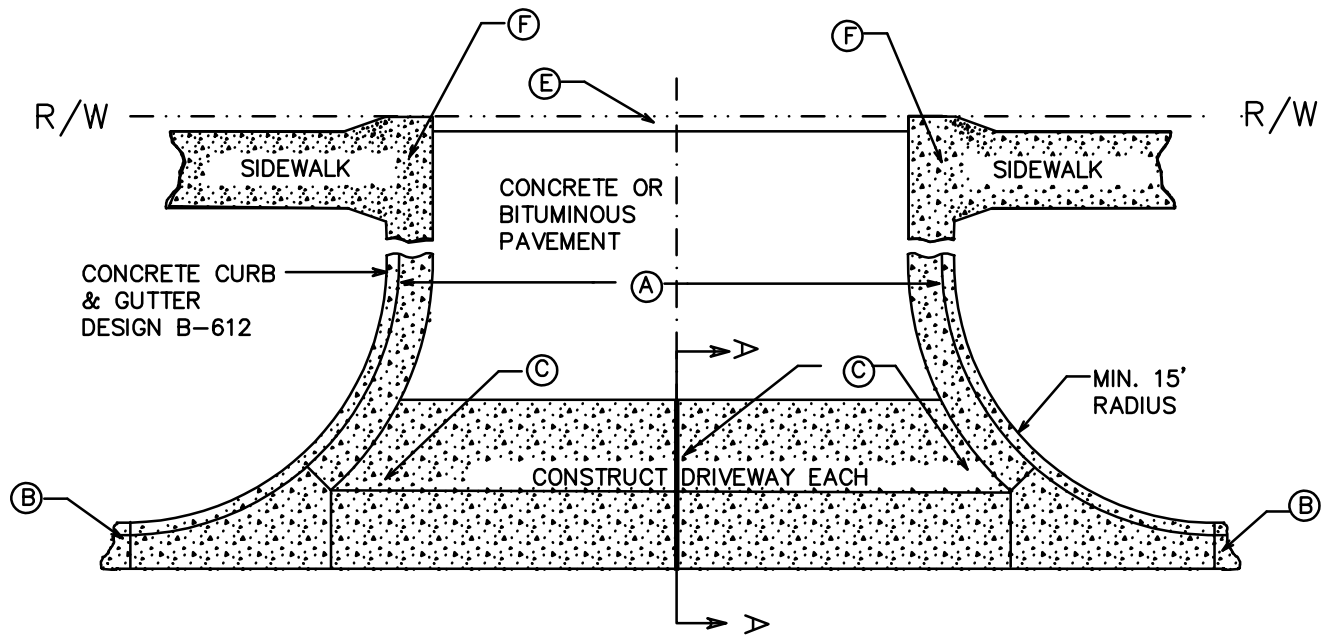


CITY OF NORTH BRANCH
RURAL SECTION DRIVEWAY &
CULVERT INSTALLATION
NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

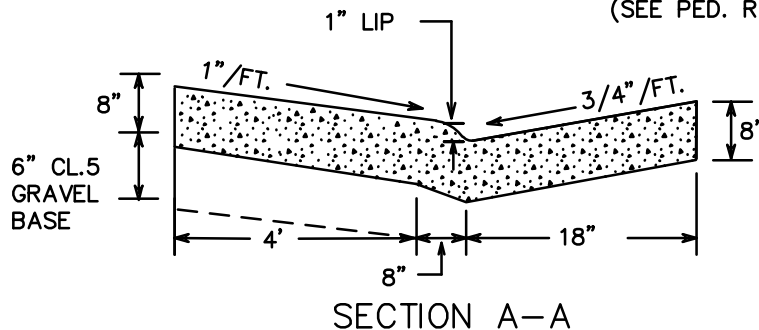
RDW - 007



NOTES:

- 1 WHERE THERE IS NO EXISTING CURB AND GUTTER, END PROPOSED CURB AND GUTTER TO END RADIUS WITH "BEAVER TAIL".
- 2 PAYMENT FOR CONCRETE DRIVEWAY SHALL BE FROM BACK OF CURB.
- 3 CONCRETE MIX DESIGNATION SHALL CONFORM TO THE CURRENT MnDOT STANDARD SPECIFICATIONS.

- (A) TYPICAL 28' F-F DRIVEWAY WIDTH IN EXISTING CONDITIONS MIN 24' MAX. 40' F-F DRIVEWAY WIDTH
- (B) 1/2" EXPANSION JOINT
- (C) CONTRACTION JOINT
- (D) IF DRIVEWAY NOT POURED MONOLITHICALLY WITH CURB AND GUTTER, INSTALL #4 X 2'-6" DEFORMED TIE BARS (EPOXY COATED) AT 2'-6" O.C., PLACED AT MID-DEPTH SLAB.
- (E) WHERE THERE ARE EXISTING OR PROPOSED CONCRETE WALKS, THE CONCRETE DRIVEWAY SHALL EXTEND TO THE BACK OF THE WALK
- (F) IF EXISTING OR PROPOSED CURB AND GUTTER EXTENDS THROUGH SIDEWALK, PEDESTRIAN RAMPS SHALL BE INSTALLED (SEE PED. RAMP DETAIL)



CITY OF NORTH BRANCH

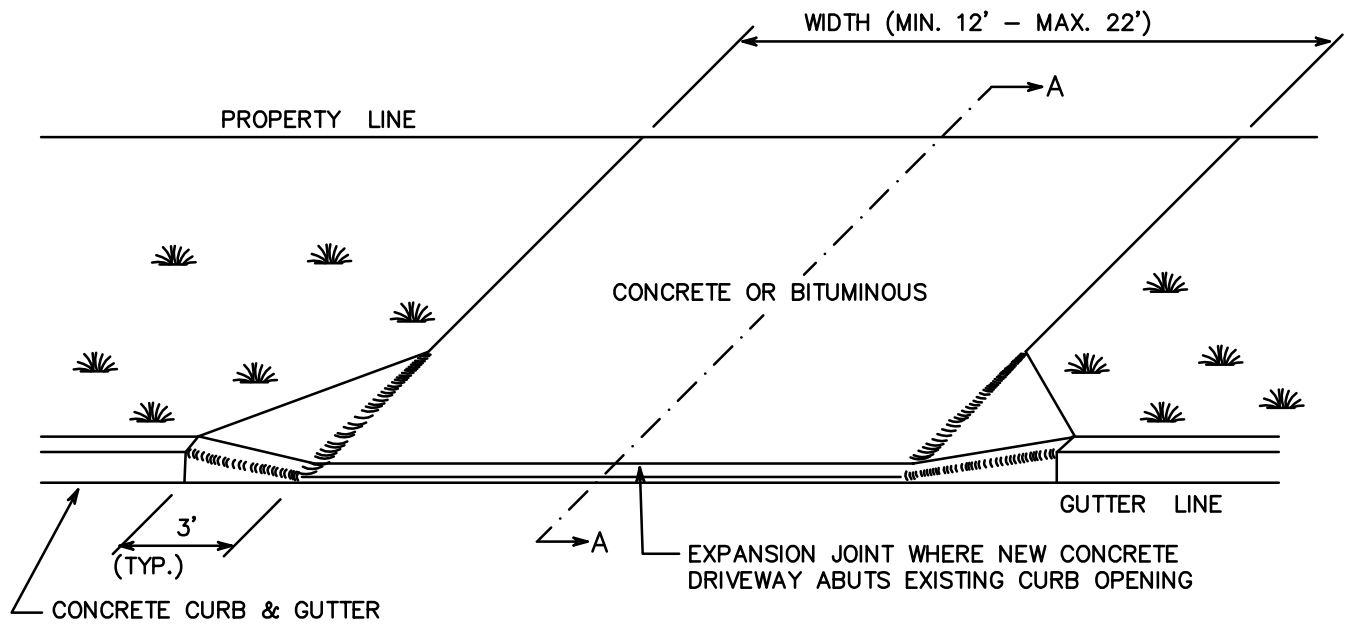
**TYPICAL COMMERCIAL
DRIVEWAY ENTRANCE**

NO SCALE

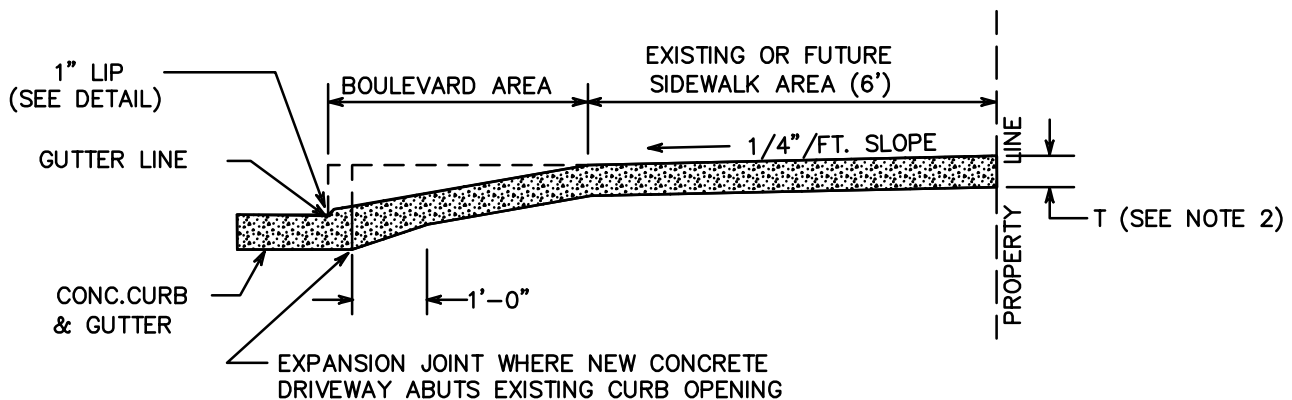
2021 - STANDARD DETAIL

DETAIL NO.

RDW-008



PLAN



SECTION A-A



CURB DETAIL

NOTES:

1. WHERE EXISTING CURB, CURB & GUTTER OR SIDEWALK SECTIONS ARE REMOVED TO FACILITATE CONSTRUCTION OF NEW DRIVEWAY, SAID SECTIONS SHALL BE REMOVED TO THE NEAREST JOINT. WHERE SAID NEAREST JOINT IS MORE THAN THREE (3) FEET BEYOND THE PROJECTED EDGE OF THE NEW DRIVE, A CLEAN SAW-CUT WILL BE PERMITTED, A BONDING AGENT APPLIED TO THE CUT FACE, AND THE NEW SECTIONS POURED.
2. DRIVEWAY THICKNESS (T) SHALL BE 6" FOR CONCRETE AND 3" FOR BITUMINOUS.
3. EXPANSION/CONTRACTION JOINT REQUIRED ON DRIVEWAY > WHEN WIDTH EXCEEDS 16 FEET.



CITY OF NORTH BRANCH

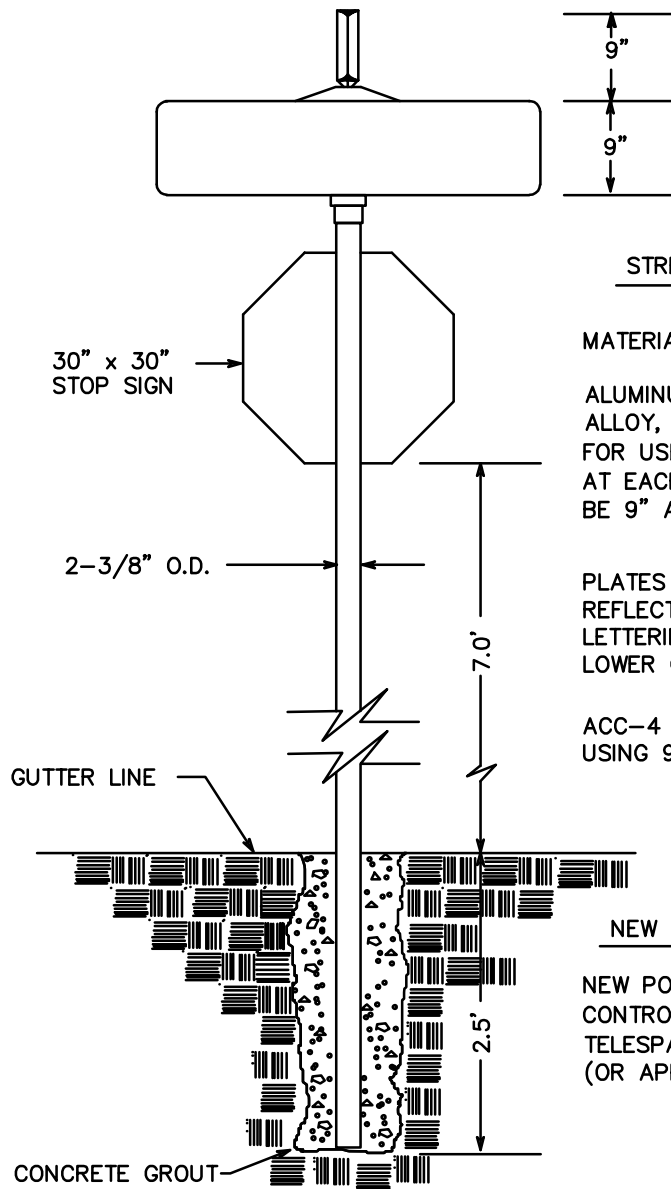
RESIDENTIAL DRIVEWAY
ENTRANCE WITHOUT APRON

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

RDW - 009



STREET SIGN SPECIFICATIONS

MATERIAL:

ALUMINUM BLANKS SHALL BE CONSTRUCTED OF 5052-H38 ALLOY, HAVE A GAUGE OF .080, BE NOTCHED FOR USE WITH ACC-4 BRACKETS, HAVE HOLES PUNCHED AT EACH END FOR BOLTING TOGETHER AND BE 9" AS REQUIRED.

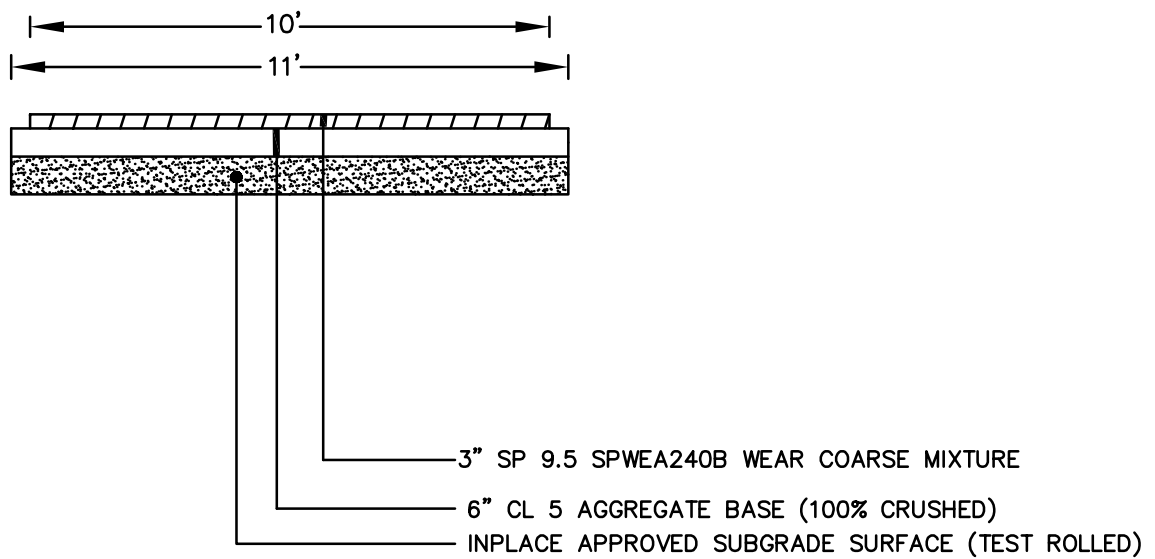
PLATES SHALL BE COVERED WITH HIGH INTENSITY REFLECTIVE SHEETING, SCREENED GREEN WITH MARGIN. LETTERING SHALL BE 6" SERIES C, ALL U.C. LOWER CASE LETTERING SHALL BE 4"

ACC-4 BRACKETS ARE TO BE ALUMINUM DESIGNED FOR USING 9" PLATES AS REQUIRED.

NEW POSTS SPECIFICATIONS

NEW POSTS USED FOR MOUNTING STREET NAME/TRAFFIC CONTROL SIGNS, SHALL VARY IN LENGTH, SHALL BE TELESAR 2"x2"x14 GAUGE OR 3LB GALVANIZED CHANNEL (OR APPROVED EQUAL)

<u>NAME</u>	<u>ABBREVIATION</u>
AVENUE	Ave
BOULEVARD	Bld
CIRCLE	Cir
COURT	Ct
DRIVE	Dr
EAST	E
PARKWAY	Pkwy
PLACE	Pl
STREET	St
TERRACE	Ter
TRAIL	Trl
WEST	W



10' WIDE TRAIL TYPICAL SECTION



CITY OF NORTH BRANCH

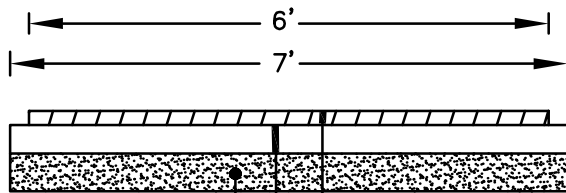
TYPICAL BITUMINOUS TRAIL

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

RDW - 011



CONCRETE MIX DESIGN
SHALL BE CONSISTENT WITH
THE MOST CURRENT VERSION
OF THE MnDOT STANDARD
SPECIFICATIONS

4" CONCRETE MINIMUM; 6" MINIMUM IN DRIVEWAYS
4" SELECT GRANULAR
INPLACE APPROVED SUBGRADE SURFACE

6' WIDE CONCRETE WALK
TYPICAL SECTION



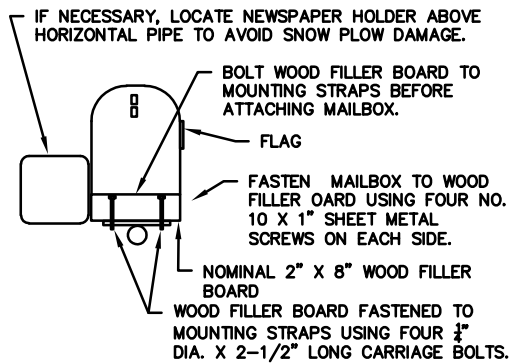
CITY OF NORTH BRANCH

TYPICAL CONCRETE WALK
NO SCALE

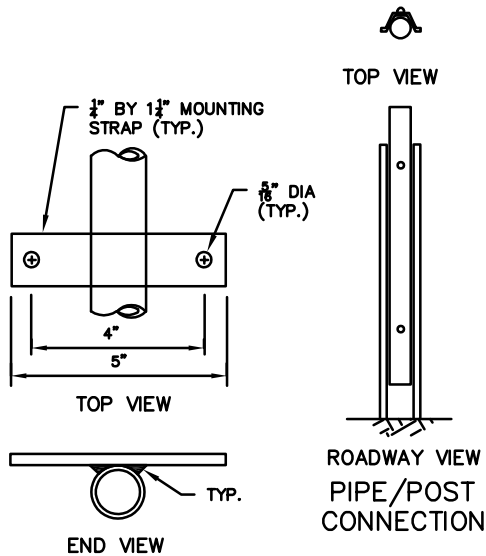
2021 - STANDARD DETAIL

DETAIL NO.

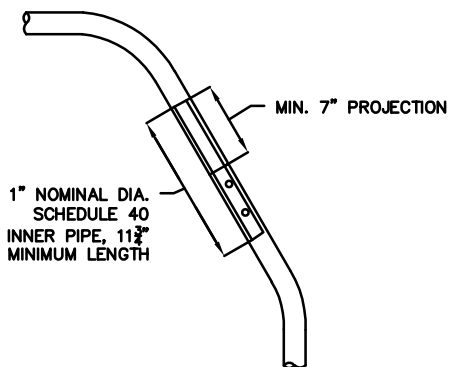
RDW - 012



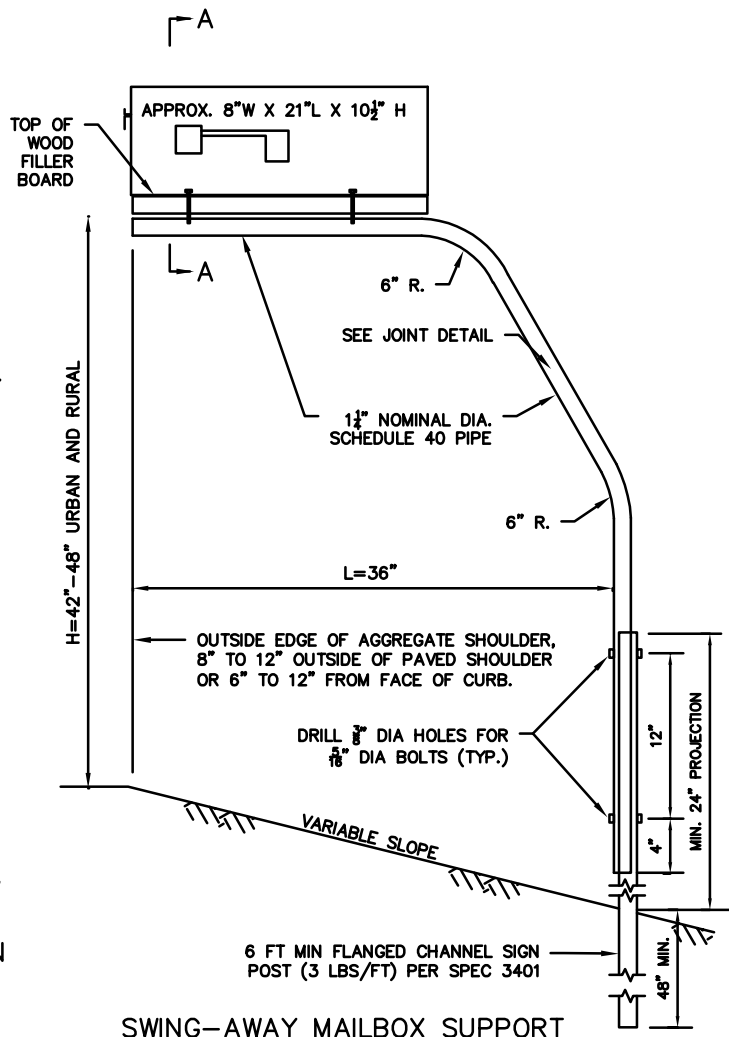
SECTION A-A



MOUNTING STRAP DETAIL



JOINT DETAIL



SWING-AWAY MAILBOX SUPPORT

NOTES:

MAILBOX LOCATIONS SHOULD BE STAKED BEFORE INSTALLATION FOR PROPER HEIGHT AND DISTANCE FROM ROADWAY. ONCE STAKED, THE INSTALLER MUST NOTIFY THE ENGINEER AND THE POST OFFICE. THE ENGINEER AND THE POSTMASTER SHALL APPROVE THE STAKED LOCATIONS PRIOR TO FINAL INSTALLATION.

THE MINIMUM SPACING (CENTER TO CENTER) BETWEEN MULTIPLE SUPPORTS SHALL BE EQUAL TO THE HEIGHT OF THE MAILBOX SUPPORT.

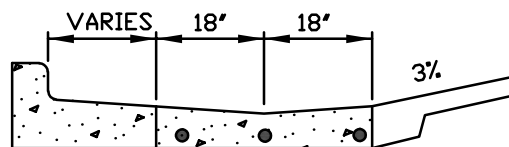
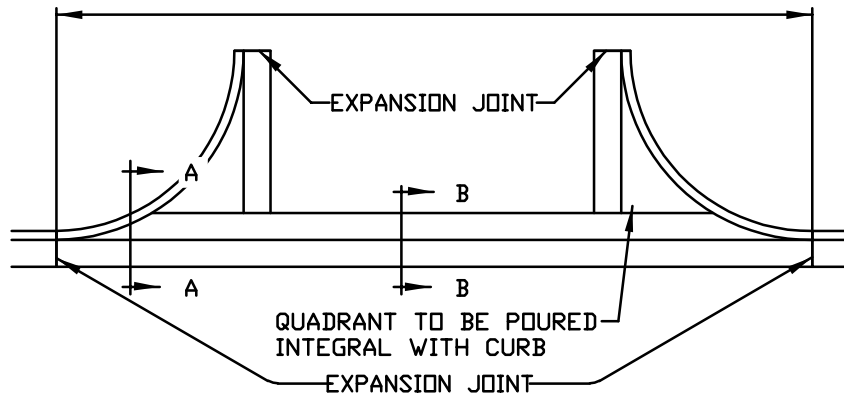


CITY OF NORTH BRANCH
MAIL BOX INSTALLATION
DETAIL
NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

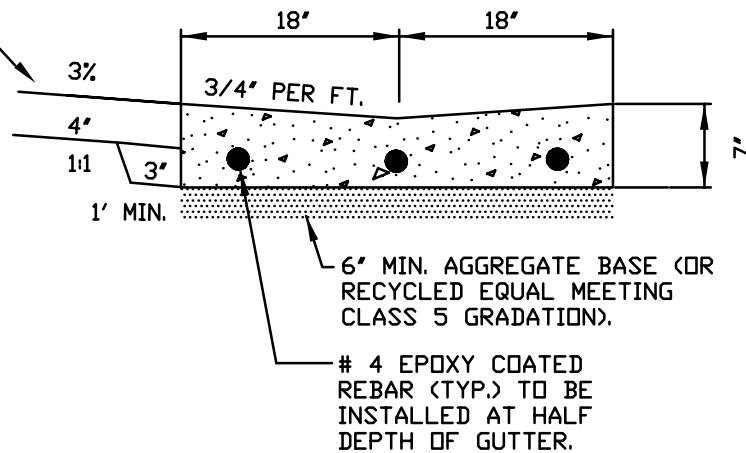
RDW - 013



SECTION A-A

THRU B618 C & G

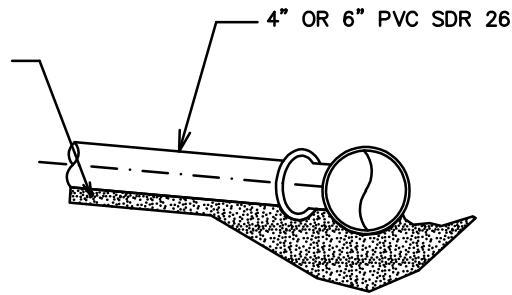
THIS DETAIL
IS THE SAME
FOR BOTH
SIDES OF THE
GUTTER



SECTION B-B

THRU CONCRETE GUTTER

PIPE SHALL BE COMPLETELY
ENTRENCHED AND SHALL
HAVE CLASS "B" BEDDING
WHERE DIRECTED BY THE
ENGINEER



TYPICAL SERVICE WHERE COVER OVER
TOP OF SEWER IS 14' OR LESS

4"x4" MARKER

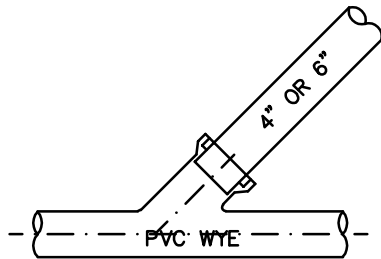
TRACER WIRE
ACCESS BOX
COPPERHEAD
#LD14*TP OR
CD14*TP

PLUG

ELEV TO BE
SET BY THE
ENGINEER

PIPE SHALL BE
COMPLETELY
ENTRENCHED
AND SHALL HAVE
CLASS "B" BEDDING
WHERE DIRECTED
BY THE ENGINEER

TRACER WIRE



JOINT DETAIL

NOTES:

- 1) ALL SERVICE CONNECTIONS INCLUDING NECESSARY BENDS AND SPECIAL FITTINGS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT OF 4" OR 6". NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR CONCRETE ENCASEMENT OR PIPE BEDDING.
- 2) ALL SERVICE CONNECTIONS SHALL TERMINATE 10' INSIDE PROPERTY LINE. UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 3) SERVICE STUB SHALL BE PLUGGED AND MARKED WITH A 4" x 4" TIMBER PROTRUDING 3' OUT OF GROUND. (PAINTED GREEN)
- 4) NO SADDLES WILL BE ALLOWED
- 5) RETRO-FIT INSTALLATIONS TO BE CONSTRUCTED BY CUTTING IN A PVC WYE AND PVC SLEEVE
- 6) SEWER SERVICES ARE TO BE LOCATED 3' DOWNSTREAM OF WATER SERVICE IF IN THE SAME TRENCH

TYPICAL SERVICE WHERE COVER OVER
TOP OF SEWER IS 14' OR MORE

WRAP ADJUSTING RINGS, EDGE OF CASTING FRAME, AND UPPER BARREL SECTION WITH CHIMNEY SEAL, INFI-SHIELD, OR APPROVED EQUAL FLEXIBLE SEALING PRODUCT PER MANUFACTURER'S SPECS.

POLYETHYLENE (PE) MANHOLE ADJUSTING RINGS, MIN 4" - MAX 12"

ALL MANHOLES WITH INSIDE DROP SECTION SHALL BE 5' DIA (I.D.)

MANHOLE SECTION TO BE ASTM C-478 CLASS II CIRCULAR REINF LATEST REVISION

USE R-2 JOINT FOR ALL MANHOLE JOINTS

"CRE-SEAL", "RESEAL", OR APPROVED EQUAL PRECAST GASKET CONNECTION SHALL BE USED FOR CONNECTION PIPE TO MANHOLE

PRECAST BOTTOM SECTION WITH INVERT

#5 AT 12" OC EACH WAY

VARIABLE

STANDARD NEENAH R-1733 MANHOLE FRAME AND COVER WITH TWO CONCEALED PICK SLOTS

HDPE ADJUSTING RINGS MIN 4" - MAX 1'

4' - 0"

1' - 4"

VARIABLE

VARIABLE

6" MIN

27" DIA

48" DIA

8"

8"

STEPS AT 16" OC

NOTES:

1. MANHOLE STEPS SHALL BE CAST IRON OR MA MODEL PS-I-PF (BY MA INDUSTRIAL INC.) CONFORMING TO ALL OSHA REGULATIONS AND SPACED 16" OC.
2. ALL MANHOLE JOINTS SHALL BE SEAL WRAPPED AS DESCRIBED IN THE SPECIFICATION (INCIDENTAL).



CITY OF NORTH BRANCH

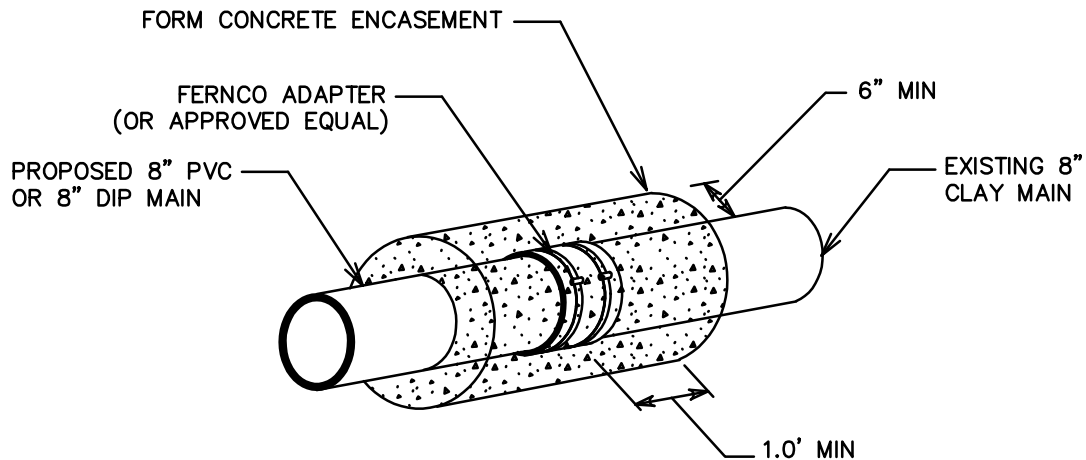
STANDARD MANHOLE FOR
SANITARY SEWER

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

SAN-002



FOR 8" PVC = FERNCO #1002-88 OR EQUAL
 FOR 8" DIP = FERNCO # 1003-85 OR EQUAL

NOTES:

- 1) ALL FERNCO ADAPTORS USED MUST BE MADE FOR CLAY TO PVC TRANSITIONS
- 2) FOR ABANDONED SEWER/WATER LINES, SEWER LINES SHALL BE REMOVED TO THE MAIN AND CAPPED AT WYE. WATERMAIN SERVICES SHALL BE REMOVED TO THE MAIN WITH THE CORPORATION STOP REMOVED AND CAPPED WITH A BRASS PLUG.



CITY OF NORTH BRANCH
 SANITARY SEWER MAIN TO CLAY
 PIPE CONNECTION DETAIL
 NO SCALE

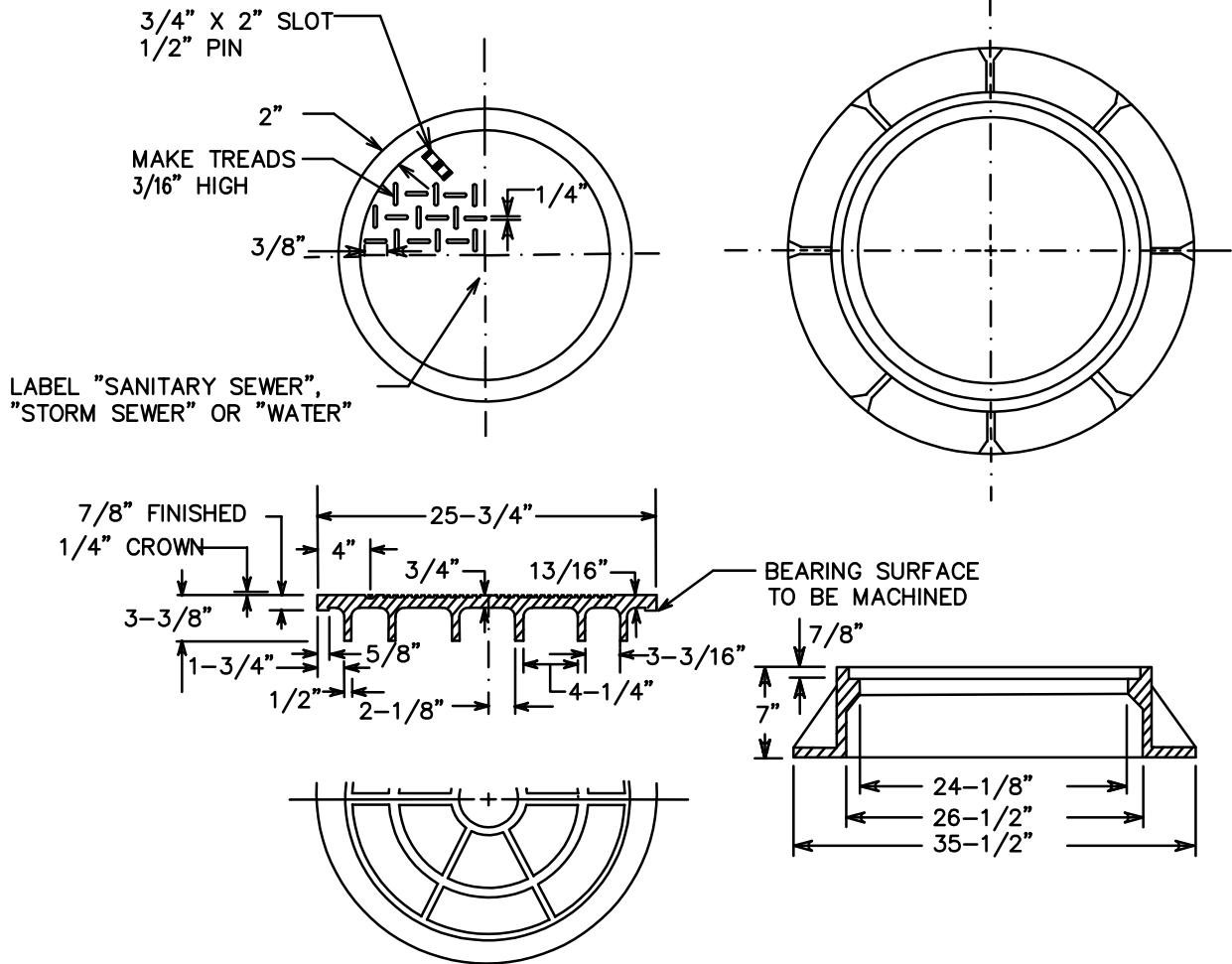
2021 - STANDARD DETAIL

DETAIL NO.

SAN - 003

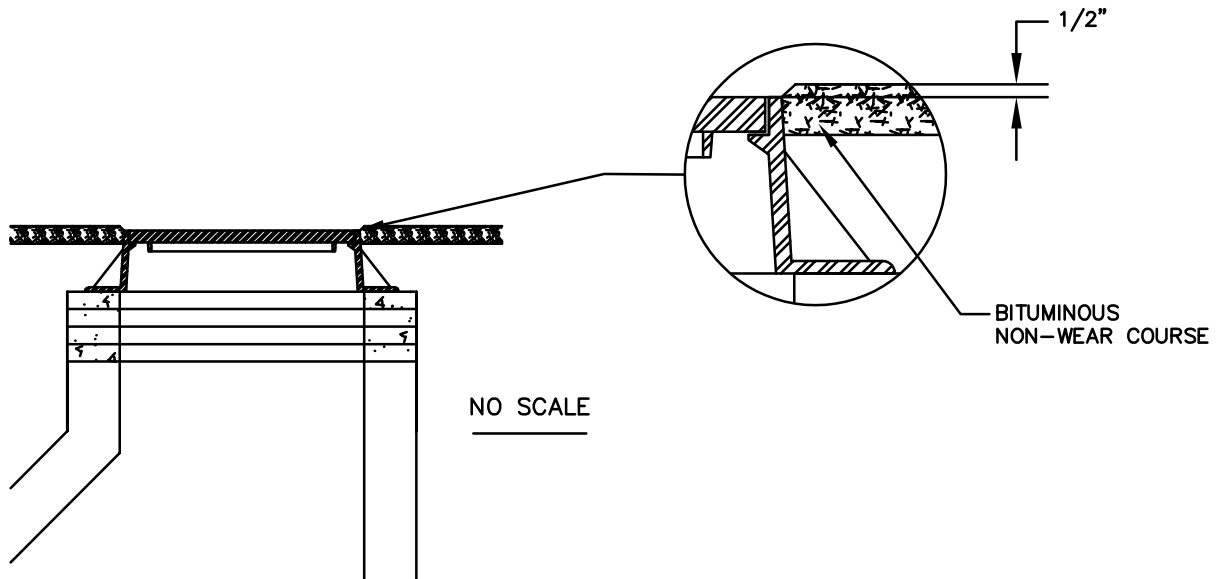
NOTE:

1. FRAME AND SOLID COVER TO BE NEENAH NO. R-1733 WITH NO.MF 25572 CONCEALED PICKHOLE OR APPROVED EQUAL.
2. USE NEENAH R-1755G FOR WATERTIGHT APPLICATIONS.



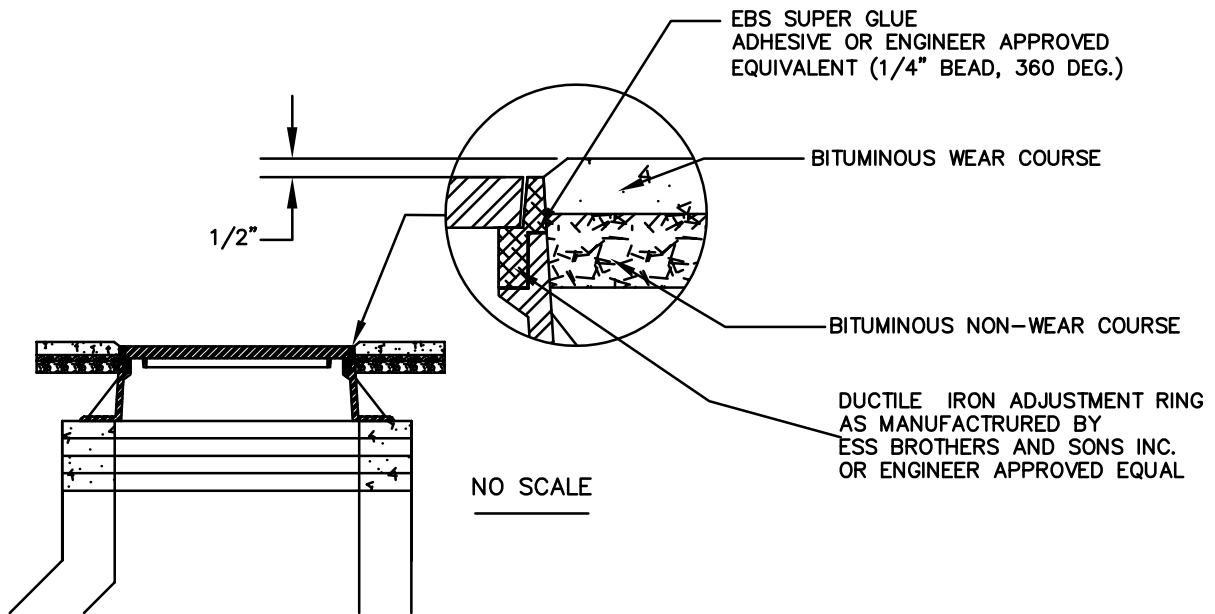
MANHOLE COVER

MANHOLE FRAME



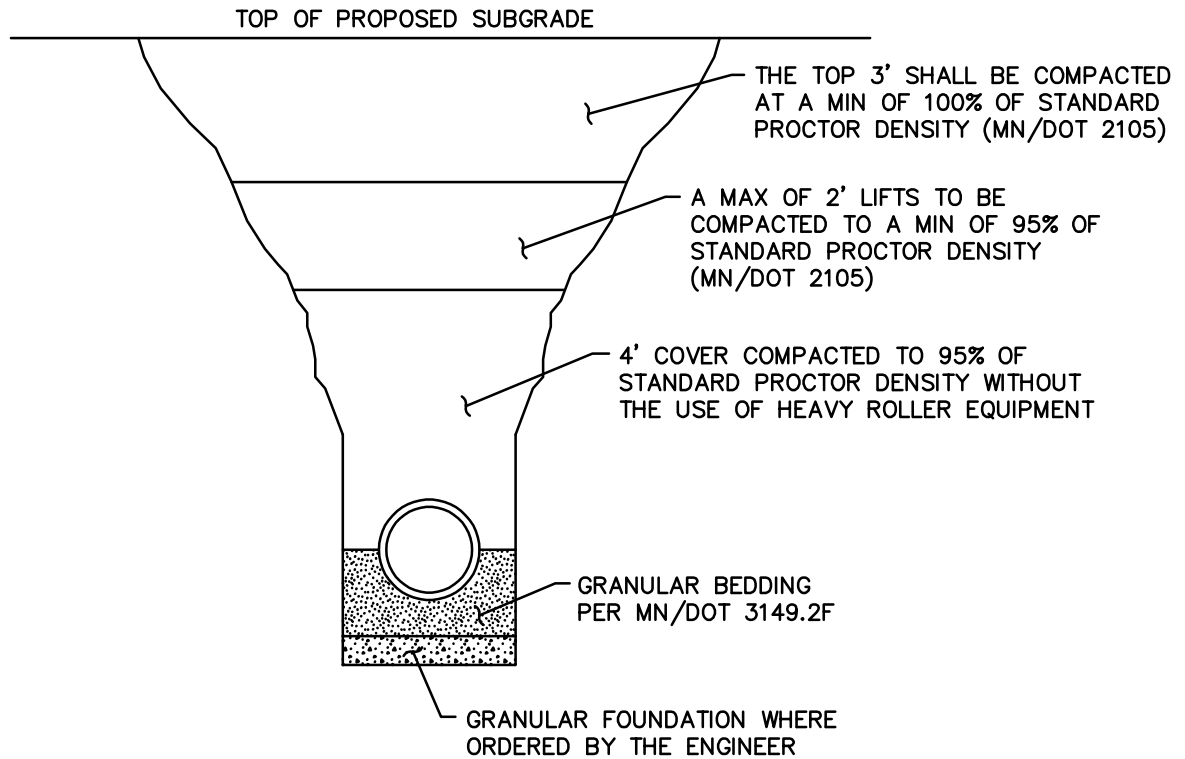
NOTE: SAWCUT SHALL BE TWICE THE DIAMETER OF THE CASTING.
PATCH SHALL BE PROPERLY COMPACTED USING JUMPING JACK.

BITUMINOUS BASE COURSE
ADJUSTMENT DETAIL



- NOTES:
1. THE HEIGHT OF THE DUCTILE IRON ADJUSTMENT RING IS DETERMINED BY THE THICKNESS OF THE OVERLAY.
 2. DUCTILE IRON ADJUSTMENT RINGS TO BE INSTALLED AS PER MANUFACTURE'S RECOMENDATION.
 3. 2- PIECE AND CAST IRON ADJUSTMENT RINGS ARE NOT ALLOWED

BITUMINOUS WEAR COURSE
ADJUSTMENT DETAIL

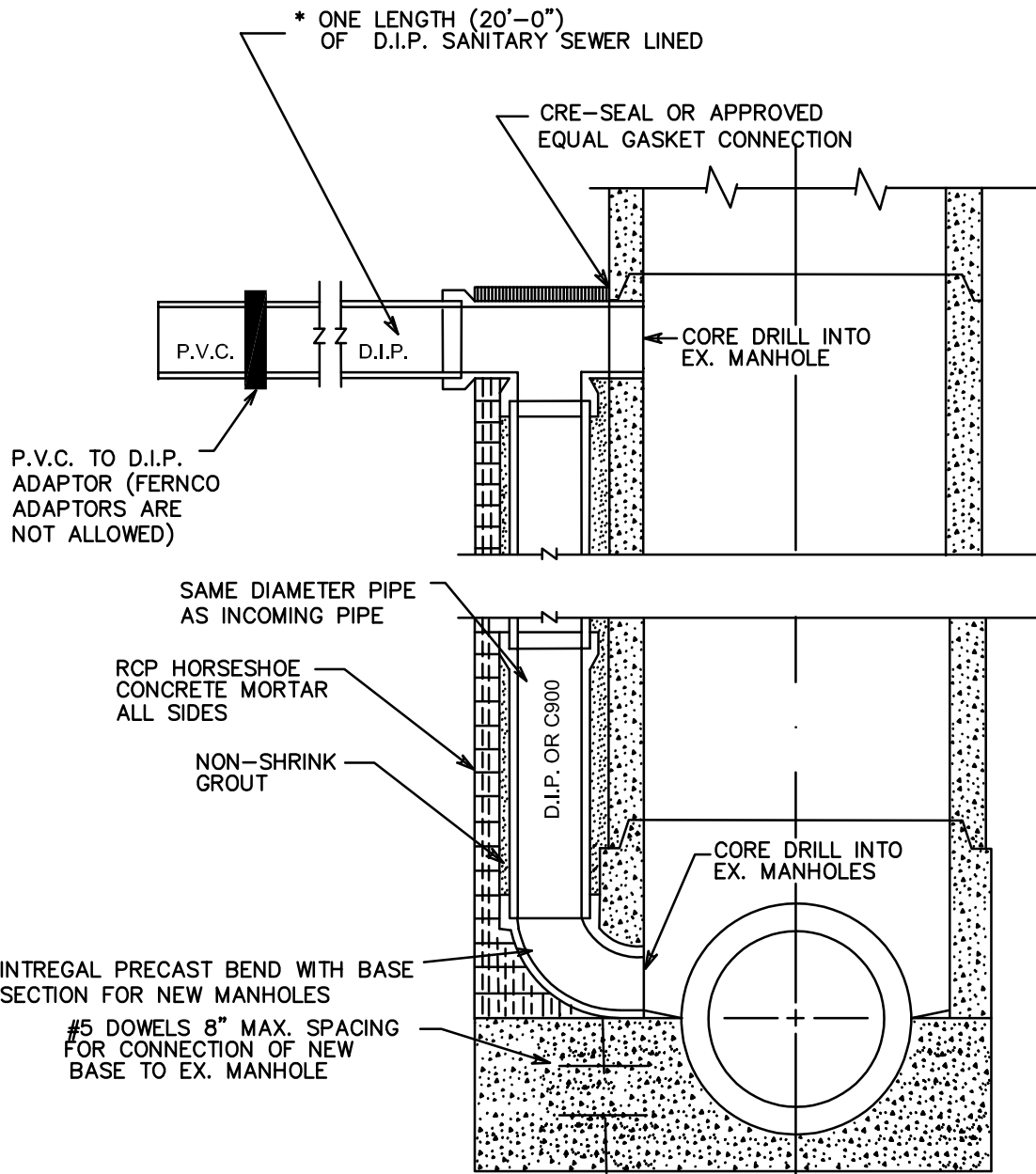


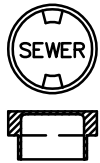
SHOVEL, PLACE, AND HAND COMPACT AROUND PIPE TO 12" ABOVE PIPE. VIBRATORY COMPACTION REQUIRED EACH SIDE OF PIPE, AS DIRECTED BY THE ENGINEER.



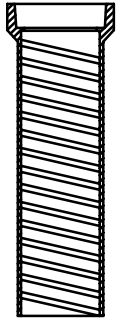
CITY OF NORTH BRANCH
TYPICAL TRENCH COMPACTING
AND CLASS B BEDDING
 NO SCALE

2021 - STANDARD DETAIL
 DETAIL NO.
 SAN-006

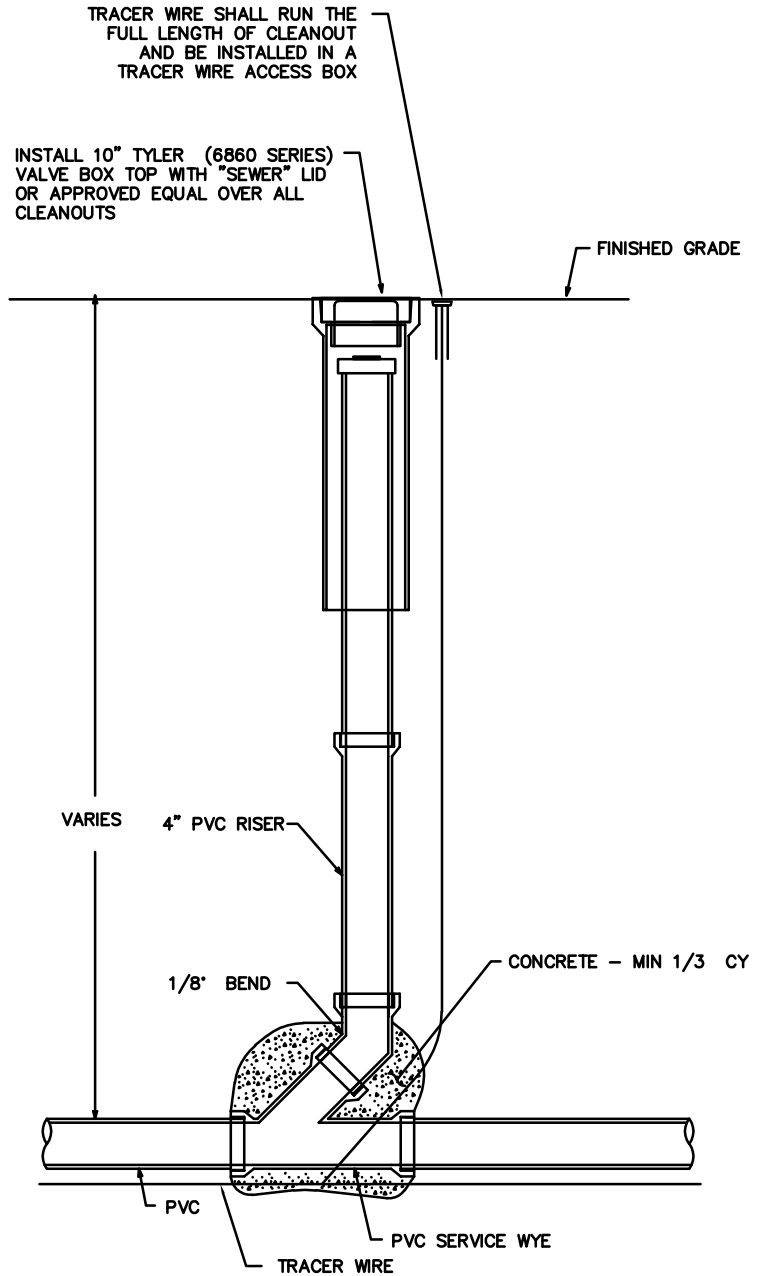




DROP LID
Tyler



TOP
Tyler 6860 SERIES



NOTES:

1. TRACER WIRE ACCESS BOX FOR NON-ROADWAY APPLICATIONS SHALL BE GRADE LEVEL COPPERHEAD LITE DUTY #LD14*TP.
2. TRACER WIRE ACCESS BOX FOR CONCRETE/DRIVEWAY APPLICATIONS SHALL BE COPPERHEAD #CD14*TP.
3. CLEANOUTS LOCATED IN DRIVEWAYS SHALL BE COVERED WITH A FORD A-1 METER BOX COVER.



CITY OF NORTH BRANCH

SANITARY SEWER
SERVICE CLEANOUT

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

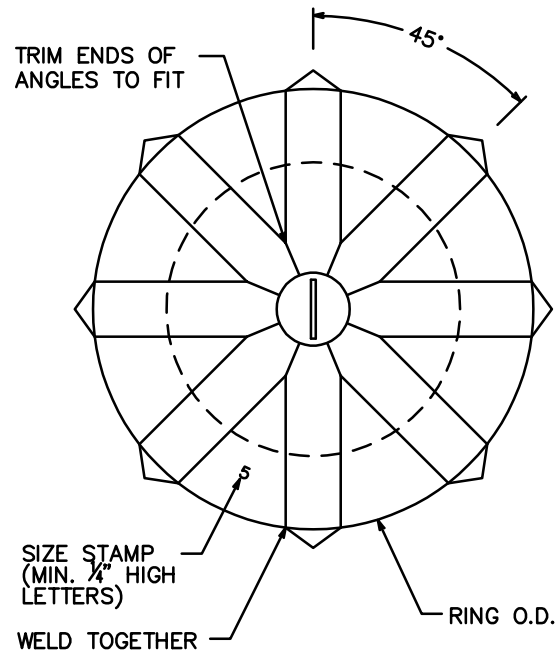
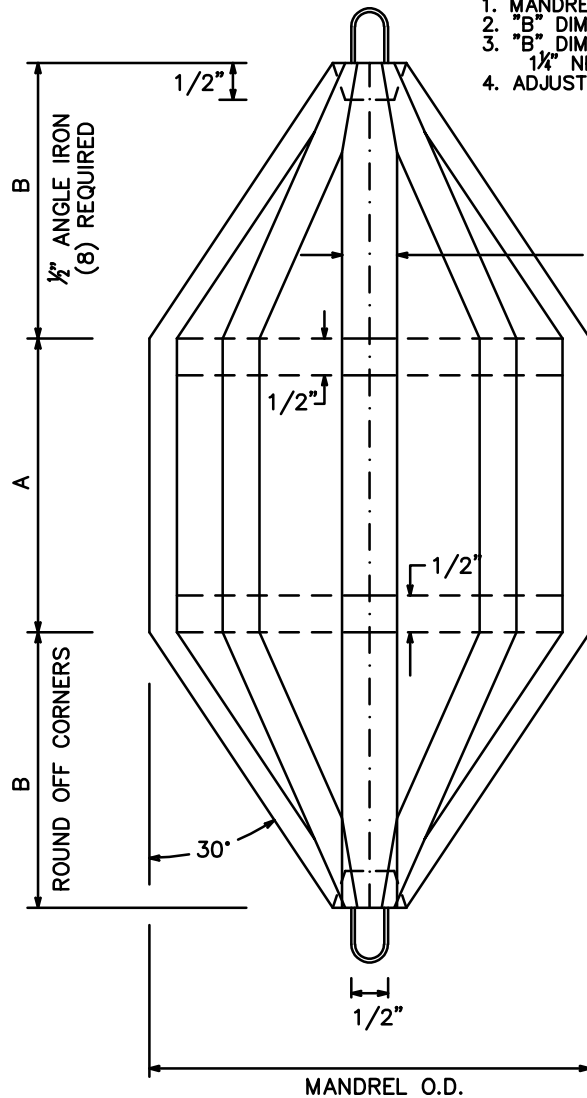
SAN - 008

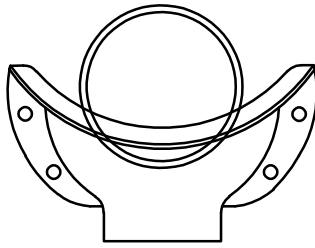
ASTM D3034

PIPE SIZE	A	BASE INSIDE DIAMETER	MANDREL OUTSIDE DIAMETER	RING OUTSIDE DIAMETER	B	BASE INSIDE DIAMETER	MANDREL OUTSIDE DIAMETER	RING OUTSIDE DIAMETER	B
INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES
6	4	5.742	5.46	4.74	3.6	5.612	5.33	4.62	3.5
8	6	7.665	7.28	6.57	4.9	7.488	7.11	6.40	4.7
10	6	9.563	9.08	8.37	6.4	9.342	8.87	8.16	6.2
12	8	11.361	10.79	10.08	7.9	11.102	10.55	9.84	7.7
15	9	13.898	13.20	12.49	10.0	13.575	12.90	12.19	9.7

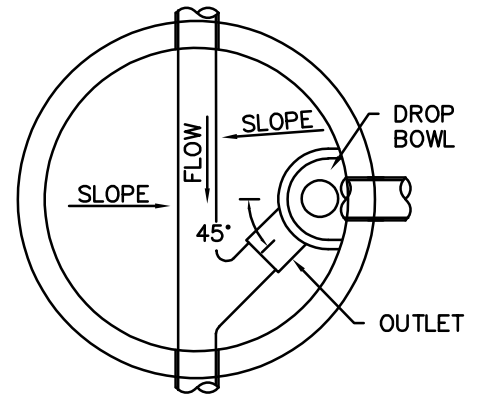
NOTES:

1. MANDREL OUTSIDE DIAMETER = BASE INSIDE DIAMETER X 0.95.
2. "B" DIMENSION FOR 6" PIPE IS FOR 1" NPS PIPE.
3. "B" DIMENSION FOR 8", 10", 12", 15" PIPE IS FOR 1 1/4" NPS PIPE.
4. ADJUST "B" DIMENSION AS REQUIRED FOR OTHER PIPE SIZES.

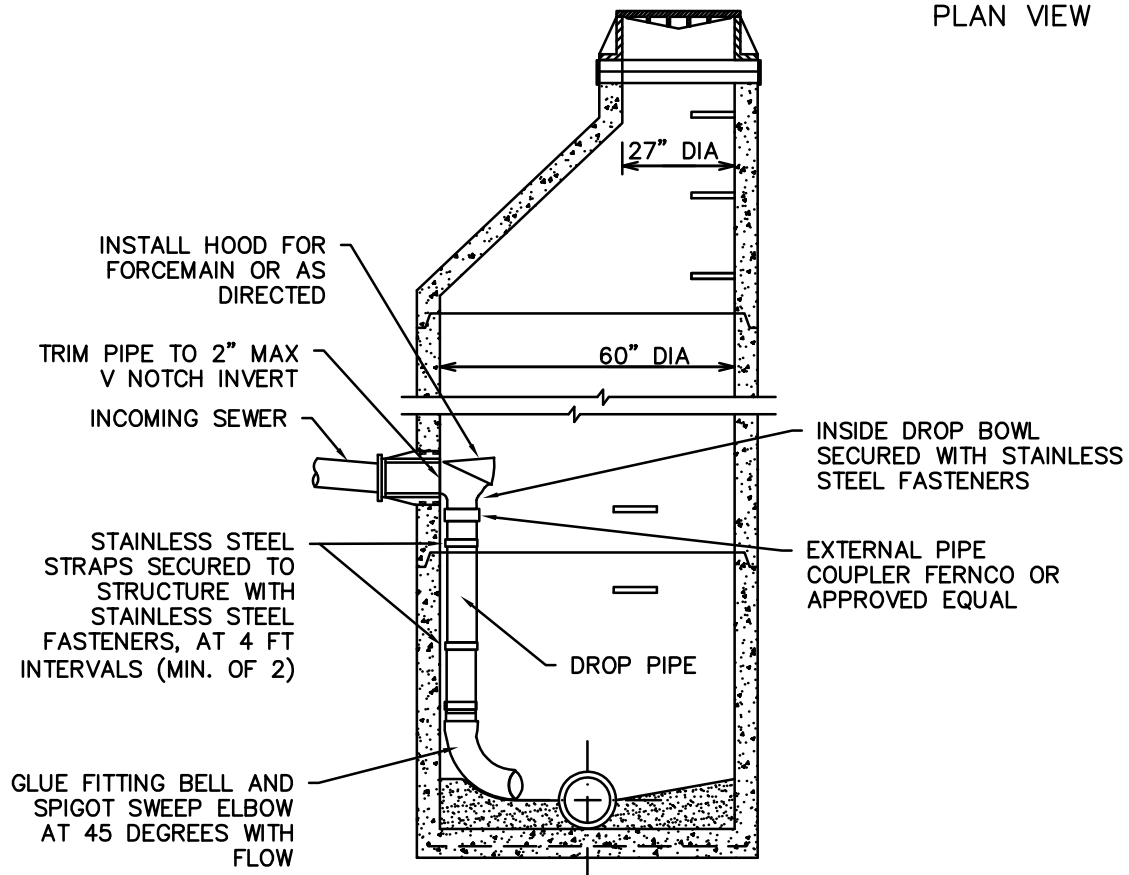




DROP BOWL
MOUNTING POSITION



INSIDE DROP
PLAN VIEW



NOTES:

1. INCREASE MANHOLE DIAMETER BY ONE FOOT FOR INSIDE DROP CONNECTIONS.
2. INSTALL DIP TO UNDISTURBED SOILS.
3. INSTALL PER MANUFACTURER'S REQUIREMENTS.
4. SECURE DROP PIPE TO MANHOLE WITH STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.



CITY OF NORTH BRANCH

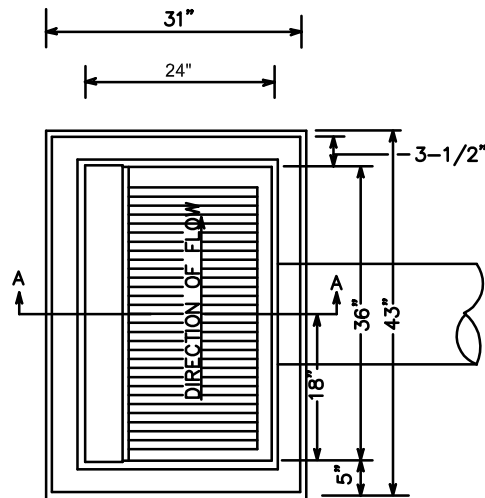
INSIDE DROP MANHOLE FOR
SANITARY SEWER

NO SCALE

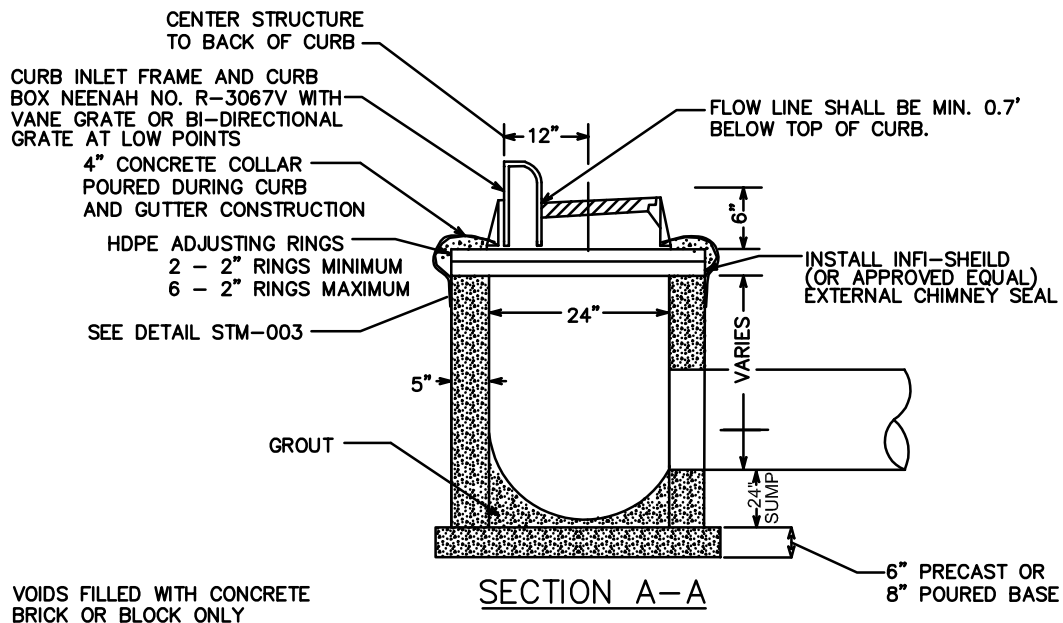
2021 - STANDARD DETAIL

DETAIL NO.

SAN-010



PLAN



NOTES:

1. REINFORCING TO CONSIST OF #4 BARS @ 8" O.C. BOTH WAYS
2. GROUT BOTTOM TO DRAIN TO CENTER
3. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED
4. ADJUSTING RINGS SHALL BE HDPE AND INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS.
5. WIMCO OR APPROVED EQUAL INLET PROTECTION SHALL BE MAINTAINED AND KEPT IN GOOD SHAPE UNTIL WEAR COURSE IS PAVED
6. SURMOUNTABLE CURB DRIVE OVER CASTING - NEENAH 3501-TB
7. B-618 CURB DRIVE OVER CASTING - NEENAH 3290A



CITY OF NORTH BRANCH

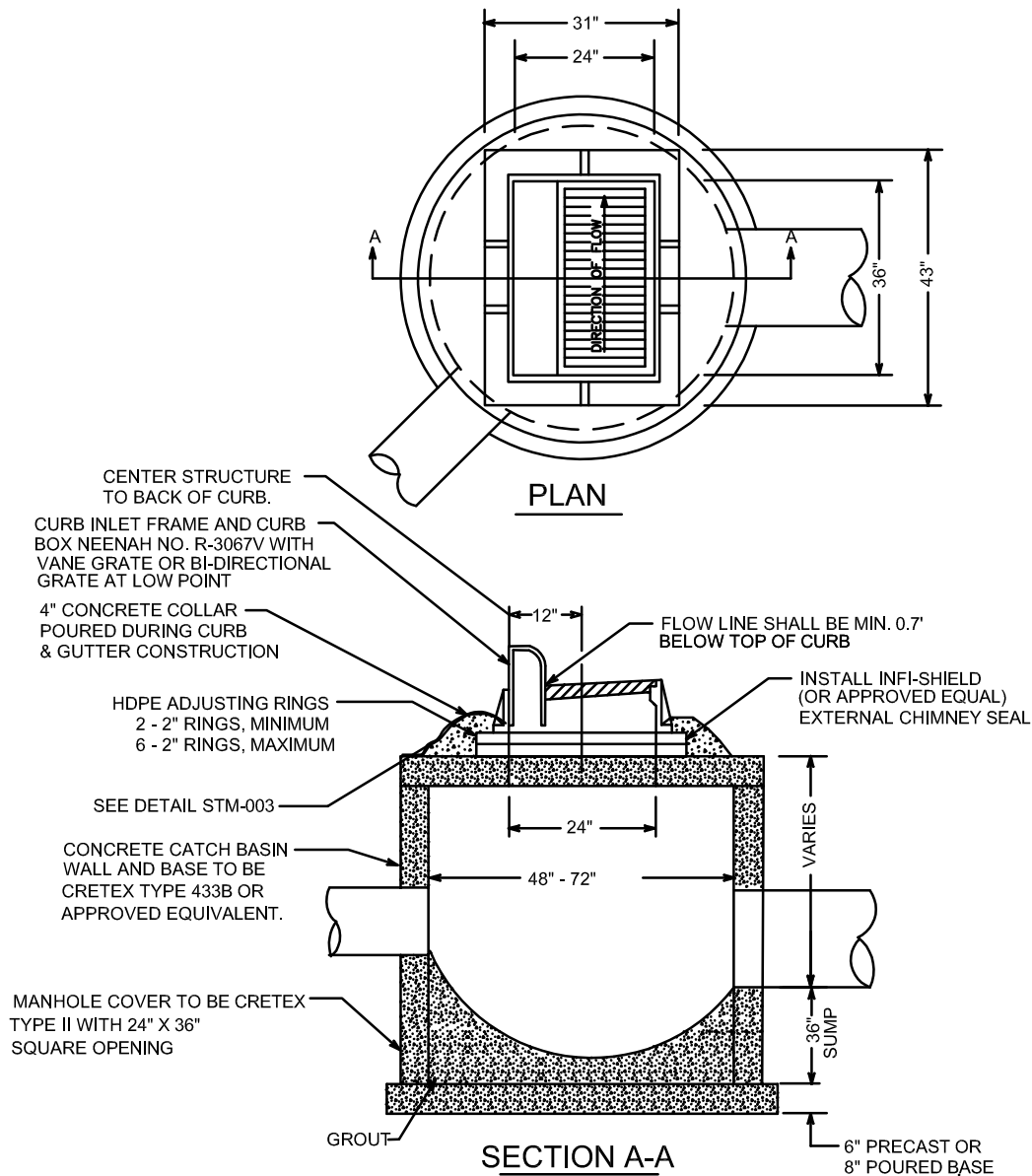
STANDARD STORM SEWER
MANHOLE, MNDOT 4020 MANHOLE

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

STM-001



NOTES:

1. REINFORCING TO CONSIST OF #4 BARS @ 8" O.C. BOTH WAYS
2. MANHOLE STEPS SHALL BE CAST ALUMINUM OR MA INDUSTRY WITH VINYL COATING OR APPROVED EQUIVALENT AND SHALL BE LOCATED @ 16" O.C. PARALLEL WITH THE CURB
3. GROUT BOTTOM TO DRAIN TO CENTER
4. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED
5. ADJUSTING RINGS SHALL BE HDPE INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS.
6. WIMCO OR APPROVED EQUAL INLET PROTECTION SHALL BE MAINTAINED AND KEPT IN GOOD SHAPE UNTIL WEAR COURSE IS PAVED
7. SURMOUNTABLE CURB DRIVE OVER CASTING - NEENAH 3501-TB
8. B-618 CURB DRIVE OVER CASTING - NEENAH 3290A



CITY OF NORTH BRANCH

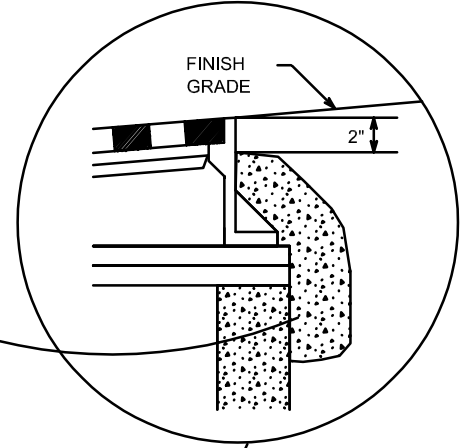
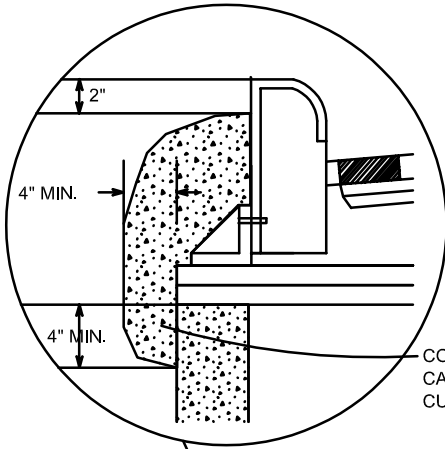
**STANDARD STORM SEWER
CATCH BASIN MANHOLE**

NO SCALE

2020 - STANDARD DETAIL

DETAIL NO.

STM-002



HDPE ADJUSTMENT RINGS
MIN. 2 & MAX. 6

CONCRETE COLLAR TO ENCASE
CASTING AND RINGS. USE CONCRETE
CURB MIX FOR COLLAR

NOTE: REINFORCING TO CONSIST OF
#4 BARS EMBEDDED IN CONCRETE
COLLAR AND CURB. EXTEND 10'
BEYOND EACH SIDE OF CASTING.

WRAP ADJUSTING RINGS, EDGE OF CASTING FRAME,
AND UPPER BARREL SECTION WITH INFI-SHIELD OR
APPROVED EQUAL FLEXIBLE SEALING PRODUCT PER
MANUFACTURES SPEC, UNDER CONCRETE COLLAR.



CITY OF NORTH BRANCH

CONCRETE COLLAR FOR
CATCH BASIN CASTING

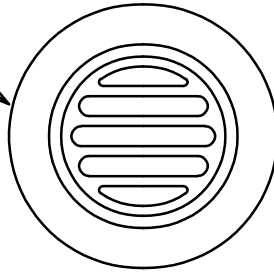
NO SCALE

2021 - STANDARD DETAIL

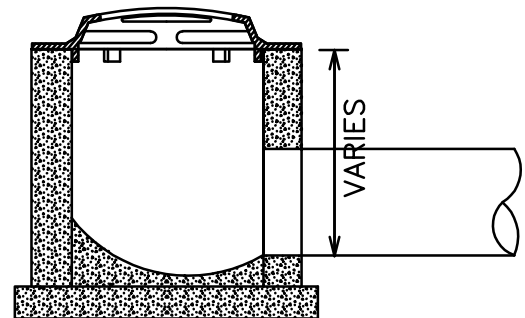
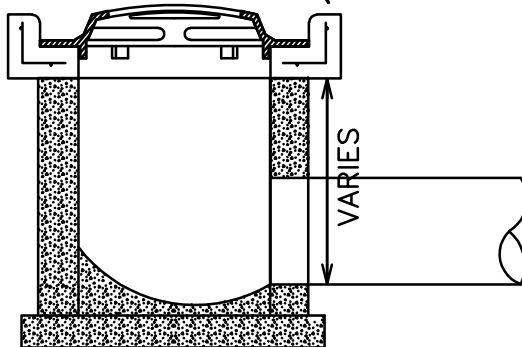
DETAIL NO.

STM-003

NEENAH R-4342
DITCH GRATE
STOOL TYPE



CONCRETE FRAME
MN/DOT PLATE 4143E



FOR MAINTAINED YARDS

FOR BOULEVARD AREAS



CITY OF NORTH BRANCH

BEEHIVE MANHOLE GRATE

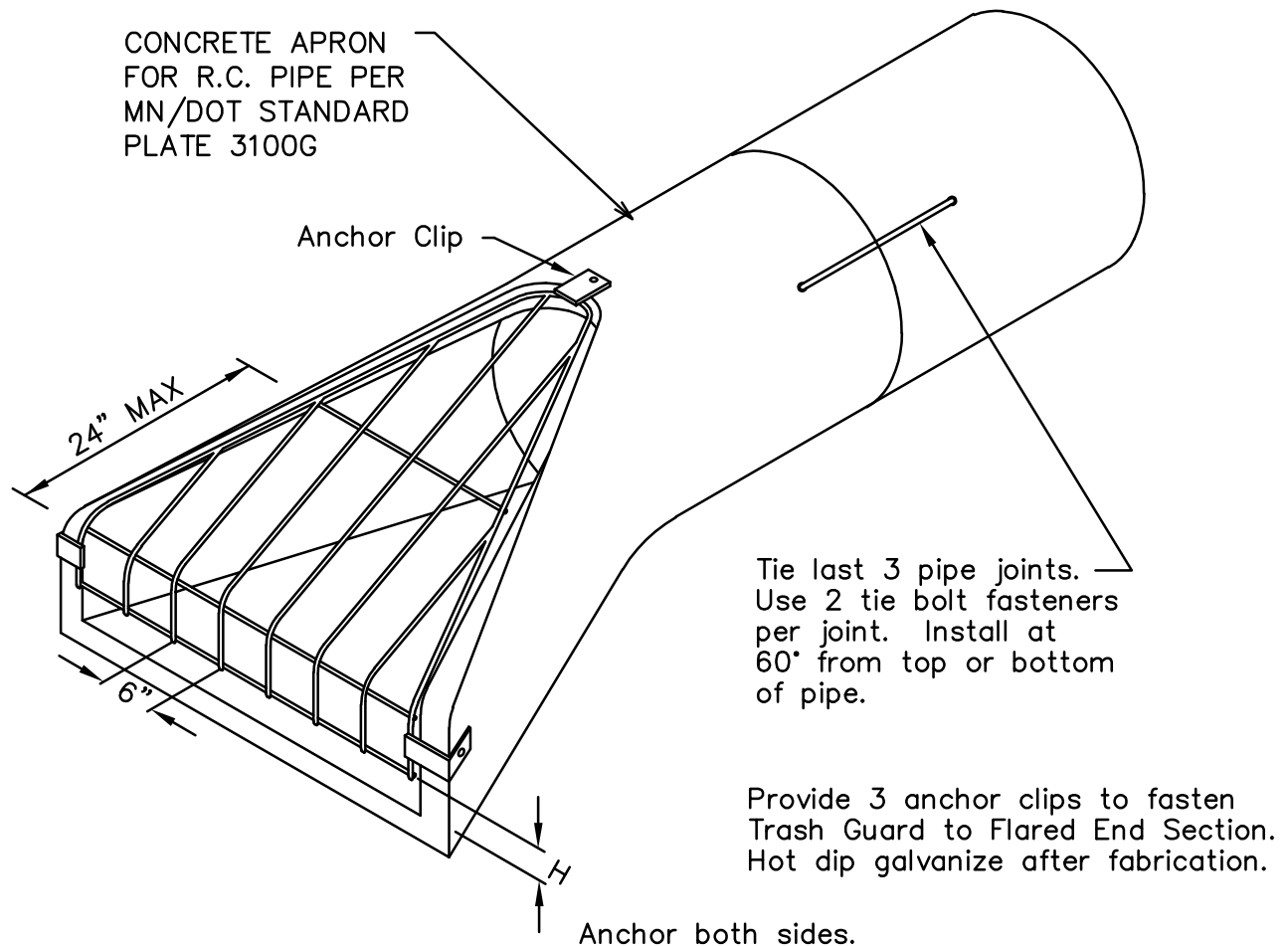
NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

STM-004

See City Detail No. STM-007 for riprap placement.



TRASH GUARD SIZING			
Pipe Size	Bars	'H'	Bolts
12"–18"	3/4"Ø	4"	5/8"
21"–42"	1"Ø	6"	3/4"
48"–72"	1 1/4"Ø	12"	1"

NOTES:

1. Entire Trash Guard assembly to be HOT-DIP galvanized after fabrication.
2. Size of Trash Guard variable dependent on size of Flared End Section.
3. Trash Guards required on all Aprons 21" and larger unless otherwise noted.
4. Galvanized metal apron per MN/DOT standard plate 3129A to be used with HDPE pipe in green areas.
5. Install 7 foot 3lb galvanized post with 360 degree reflector (X4-13) at all flared end sections.



CITY OF NORTH BRANCH

FLARED END SECTIONS AND
TRASH GUARD DETAIL

NO SCALE

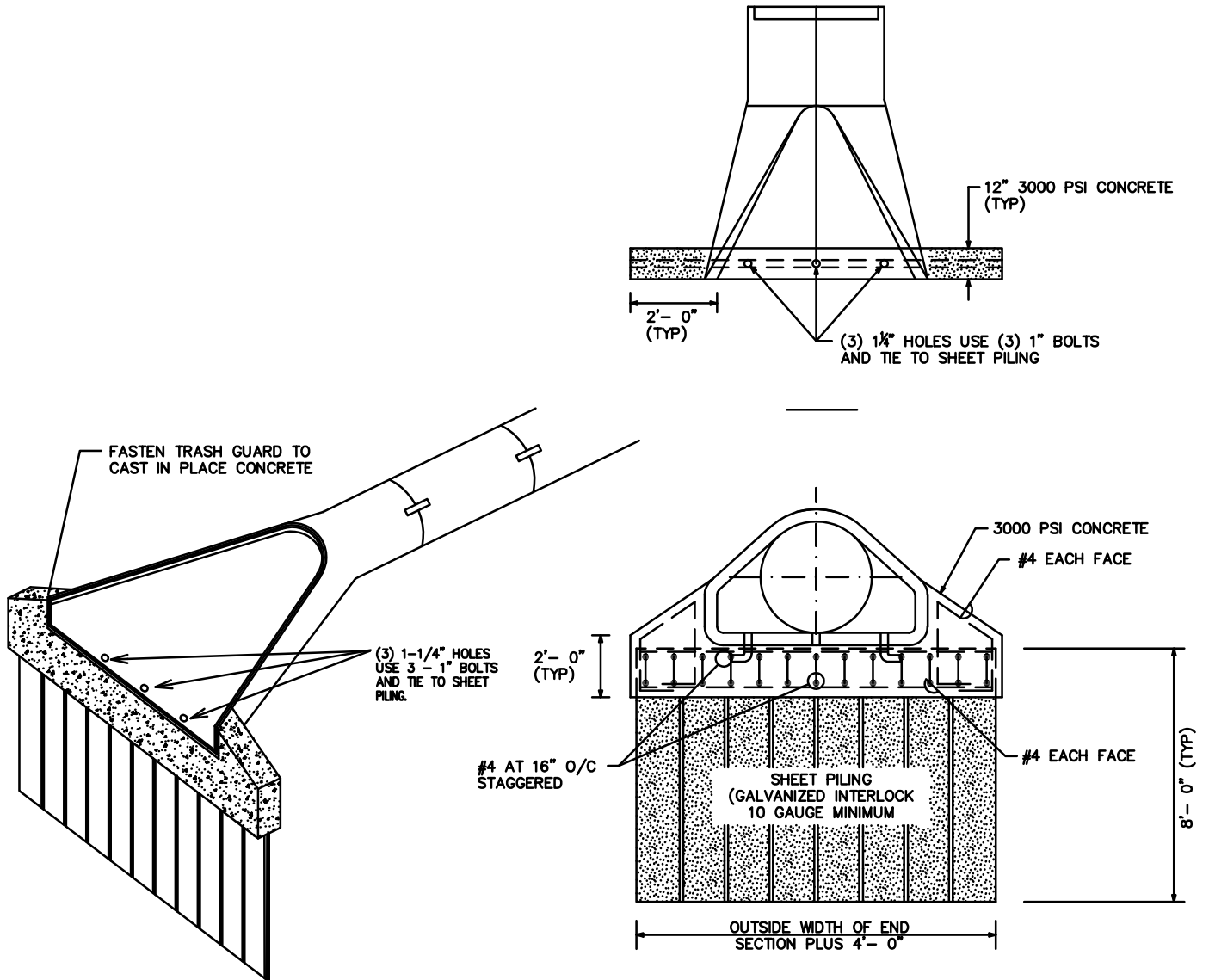
2021 - STANDARD DETAIL

DETAIL NO.

STM-005

NOTE:

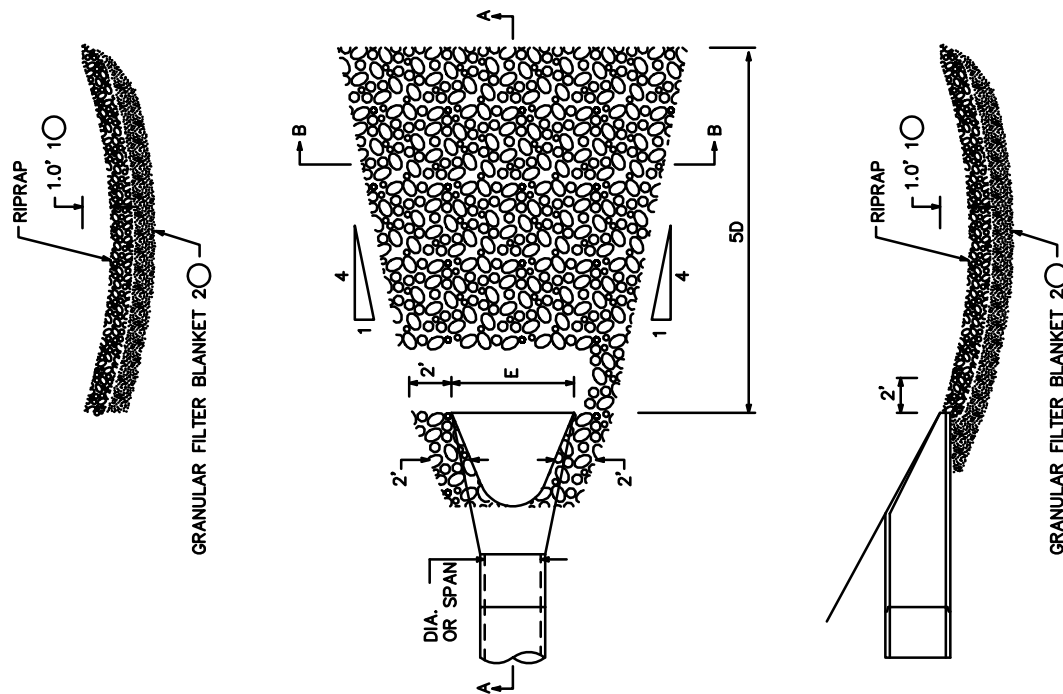
1. THIS DRAWING IS TYPICAL FOR ALL FLARED END SECTIONS ALL TRASH GUARDS WILL BE GALVANIZED.
2. TIE ALL PIPE JOINTS (INCIDENTAL).



DIA ROUND PIPE	CLASS III D ₅₀ = 9"			CLASS IV D ₅₀ = 12"			CLASS V D ₅₀ = 15"		
	15" DEPTH RIPRAP (CU YD)	7.5" DEPTH GRANULAR FILTER (CU YD)	18" DEPTH RIPRAP (CU YD)	9" DEPTH GRANULAR FILTER (CU YD)	24" DEPTH RIPRAP (CU YD)	12" DEPTH GRANULAR FILTER (CU YD)	24" DEPTH RIPRAP (CU YD)	12" DEPTH GRANULAR FILTER (CU YD)	24" DEPTH RIPRAP (CU YD)
12	2.1	1.1	2.6	1.3	3.4	1.7	3.4	1.7	3.4
15	2.9	1.4	3.5	1.7	4.6	2.3	4.6	2.3	4.6
18	3.6	1.8	4.4	2.2	5.8	2.9	5.8	2.9	5.8
21	4.6	2.3	5.6	2.8	7.4	3.7	7.4	3.7	7.4
24	5.8	2.9	6.9	3.5	9.2	4.6	9.2	4.6	9.2
27	6.9	3.4	8.3	4.1	11.0	5.5	11.0	5.5	11.0
30	8.3	4.1	9.9	5.0	13.2	6.6	13.2	6.6	13.2
36	11.0	5.5	13.2	6.6	17.6	8.8	17.6	8.8	17.6
42	13.6	6.8	16.4	8.2	21.8	10.9	21.8	10.9	21.8
48	16.8	8.4	20.1	10.1	26.8	13.4	26.8	13.4	26.8
54	19.8	9.9	23.7	11.9	31.6	15.8	31.6	15.8	31.6
60	23.0	11.5	27.6	13.8	36.8	18.4	36.8	18.4	36.8
66	27.0	13.5	32.4	16.2	43.2	21.6	43.2	21.6	43.2
72	31.1	15.6	37.4	18.7	49.8	24.9	49.8	24.9	49.8
84	40.0	20.0	48.0	24.0	64.0	32.0	64.0	32.0	64.0
90	45.5	22.8	54.6	27.3	72.8	36.4	72.8	36.4	72.8

SPAN ROUND PIPE	CLASS III D ₅₀ = 9"			CLASS IV D ₅₀ = 12"			CLASS V D ₅₀ = 15"		
	15" DEPTH RIPRAP (CU YD)	7.5" DEPTH GRANULAR FILTER (CU YD)	18" DEPTH RIPRAP (CU YD)	9" DEPTH GRANULAR FILTER (CU YD)	24" DEPTH RIPRAP (CU YD)	12" DEPTH GRANULAR FILTER (CU YD)	24" DEPTH RIPRAP (CU YD)	12" DEPTH GRANULAR FILTER (CU YD)	24" DEPTH RIPRAP (CU YD)
22	3.6	1.8	4.4	2.2	5.8	2.9	5.8	2.9	5.8
28	5.8	2.9	6.9	3.5	9.2	4.6	9.2	4.6	9.2
36	8.1	4.1	9.8	4.9	13.0	6.5	13.0	6.5	13.0
43	11.0	5.5	13.2	6.6	17.6	8.8	17.6	8.8	17.6
51	13.6	6.8	16.4	8.2	21.8	10.9	21.8	10.9	21.8
58	16.5	8.3	19.8	9.9	26.4	13.2	26.4	13.2	26.4
65	19.8	9.9	23.7	11.9	31.6	15.8	31.6	15.8	31.6
73	23.3	11.6	27.9	14.0	37.2	18.6	37.2	18.6	37.2
88	32.4	16.2	38.9	19.4	51.8	25.9	51.8	25.9	51.8
102	43.5	21.8	52.2	26.1	69.6	34.8	69.6	34.8	69.6
115	44.0	22.0	52.8	26.4	70.4	35.2	70.4	35.2	70.4
122	49.3	24.6	59.1	29.6	78.8	39.4	78.8	39.4	78.8
138	61.3	30.6	73.5	36.8	98.0	49.0	98.0	49.0	98.0
154	74.4	37.2	89.3	44.6	119.0	59.5	119.0	59.5	119.0

NOTE: REQUIREMENTS FOR RIPRAP SIZE, THICKNESS, AND FILTER BLANKET WILL BE DESIGNATED IN PLANS.



- ① FOR PIPES GREATER THAN OR EQUAL TO 48", USE 2.0'
- ② THE CONTRACTOR, AT HIS OPTION, MAY SUBSTITUTE A GEOTEXTILE FABRIC, SPEC 3601 FOR THE GRANULAR FILTER BLANKET UNLESS OTHERWISE SPECIFIED IN THE PLANS. THE FABRIC SHOULD COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FEET.

PVC PERFORATED UNDERDRAIN PIPE (PIPE AND FITTINGS SHALL BE PVC, MEETING ASTM F949 OR D3034 WITH MIN. PIPE STIFFNESS 46 P.S.I., RESIN 12454B (ASTM D1784) GASKETED JOINTS, SLOT, OR ROUND HOLE PERFORATIONS (1.9 IN²/L.F.) AT 5 AND 7 O'CLOCK POSITIONS OR APPROVED EQUAL.

6" DIA. FOR MAINLINE
4" DIA. FOR SERVICE LINE

FILTER FABRIC WRAP

3'-0" (TYP.)

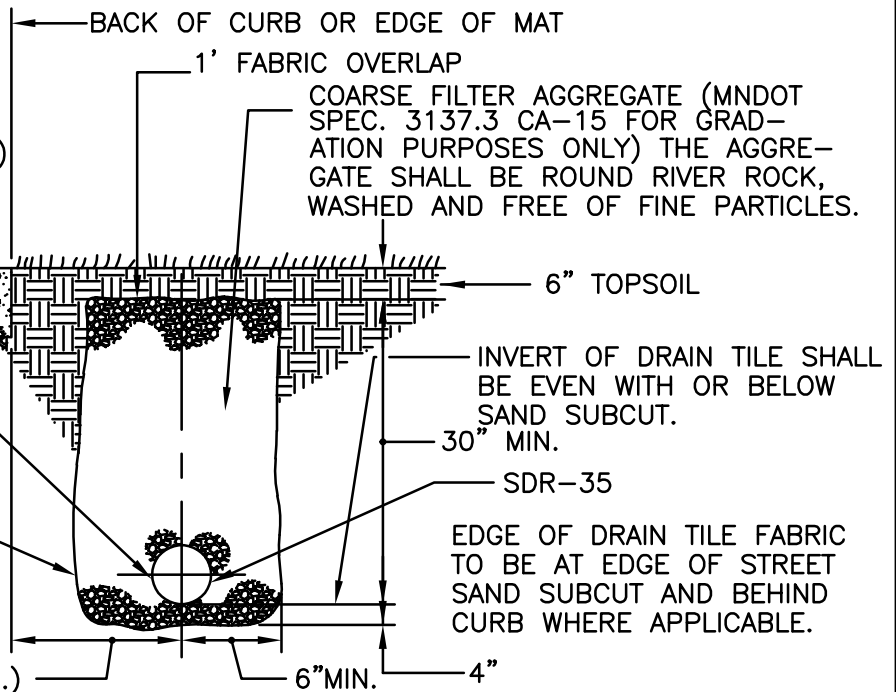
IN UNSTABLE SOILS FILTER FABRIC WRAP TYPE SHALL BE SELECTED BY THE SOILS ENGINEER FROM THE FOLLOWING.

GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF MNDOT 3733, TYPE 1

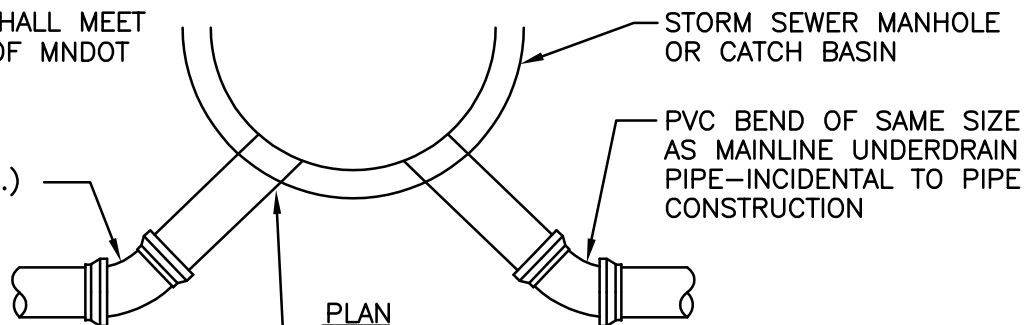
45° BEND (TYP.)

CONNECTION TO STORM SEWER STRUCTURE SHALL BE AT SPRING LINE OR 6" MIN. ABOVE INVERT
ALL GROUTING MUST BE AN APPROVED NON-SHRINKABLE GROUT.

NOTE: ALL DRAINTILE MUST HAVE TRACER WIRE INSTALLED WITHIN THE TRENCH. TRACER WIRE WILL BE 8 GAUGE AND SHALL BE TAPED TO THE TOP OF PIPE AND WILL BE BROUGHT TO THE SURFACE AT EACH STRUCTURE OR CLEAN OUT. FOLLOW U.S.E. GUIDELINES FOR UNDERGROUND BURY. FOLLOWING COMPLETION CONTRACTOR WILL BE REQUIRED TO PERFORM A LOW VOLTAGE CONDUCTIVITY TEST.



SECTIONAL VIEW



PLAN

INVERT OF DRAIN TILE TO BE DETERMINE INFIELD BY DEPTH OF SAND SUBCUT OR EXISTING GROUND WATER CONDITIONS.



CITY OF NORTH BRANCH

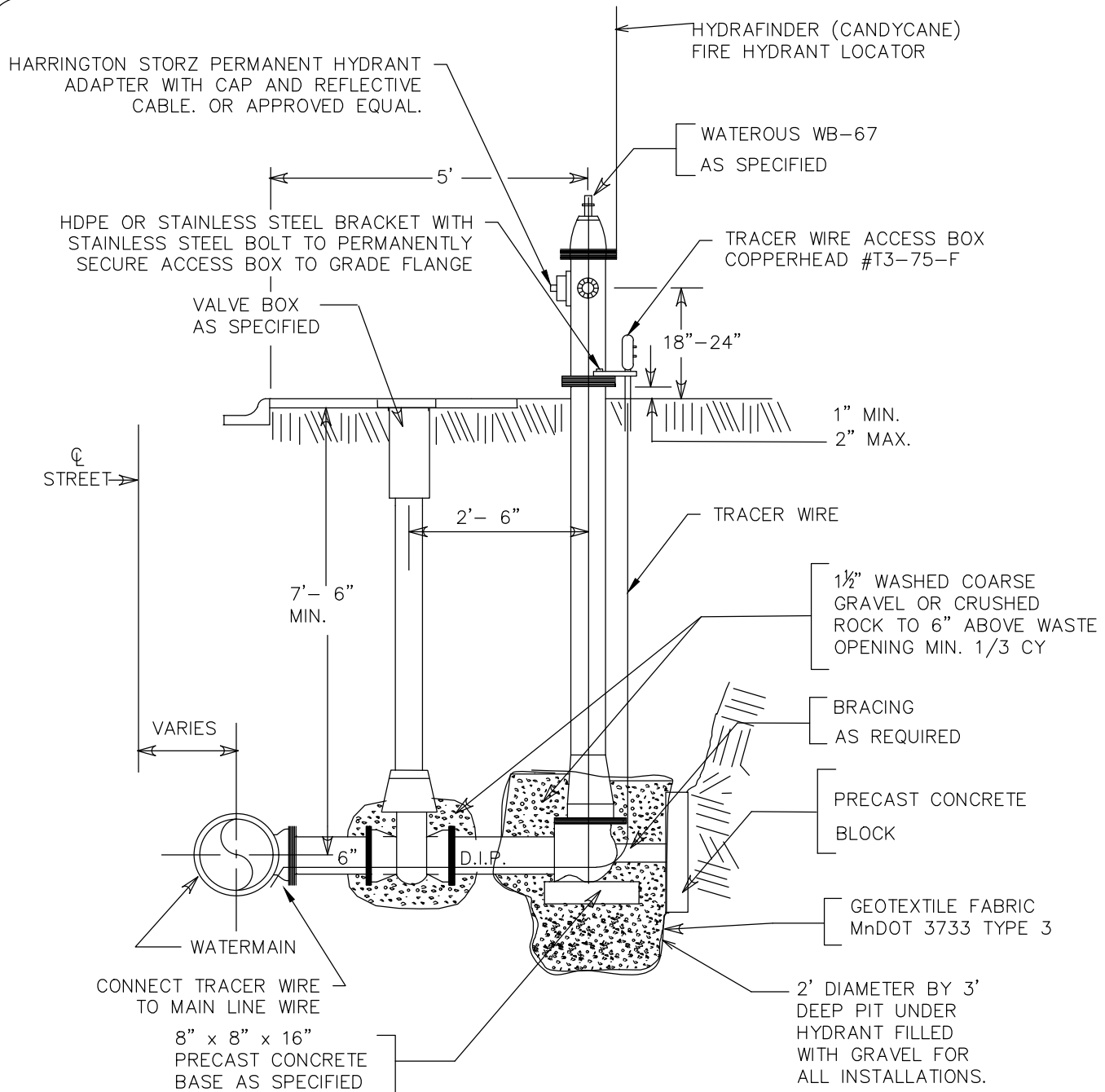
DRAINTILE INSTALLATION

NO SCALE

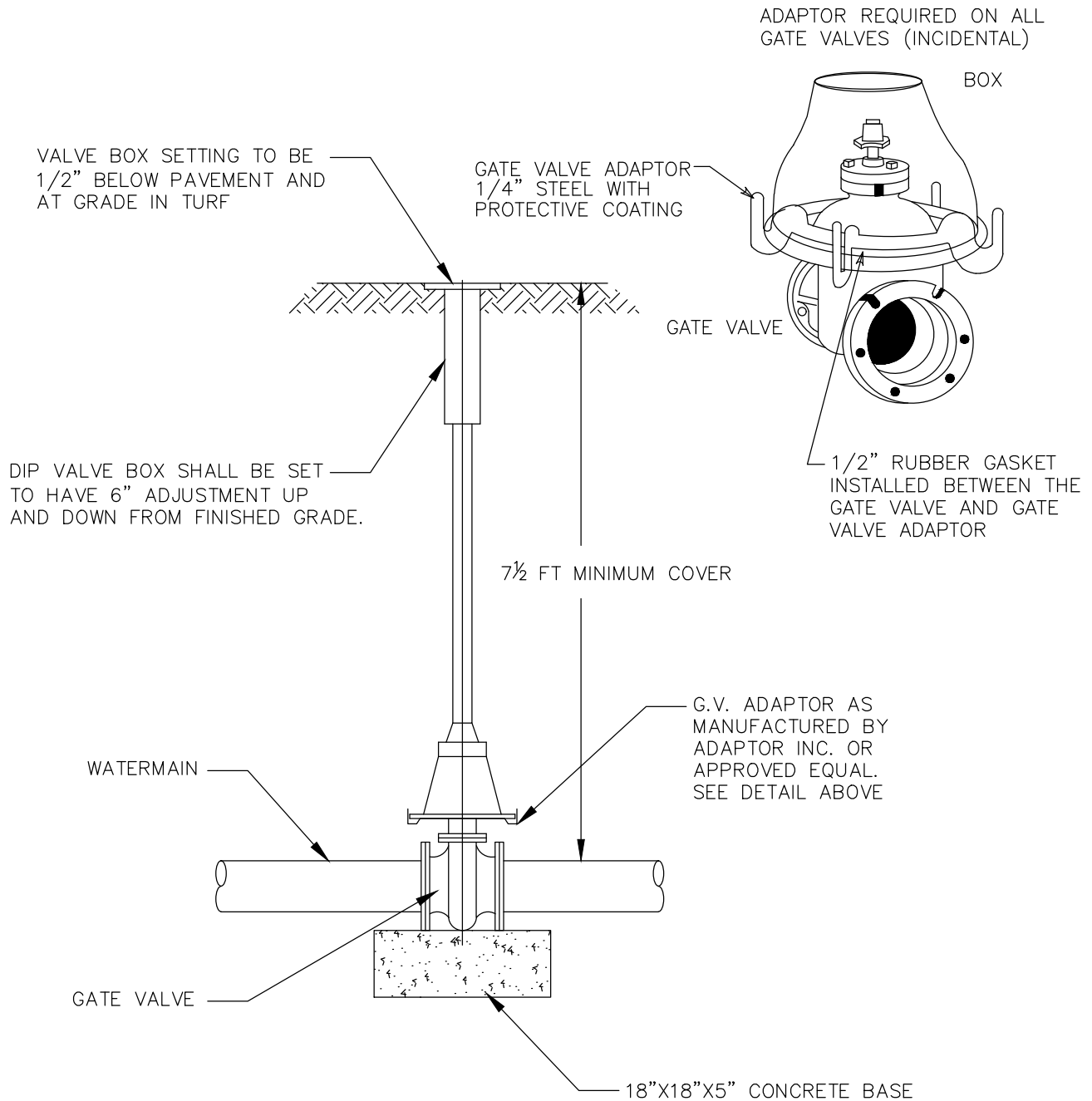
2021 - STANDARD DETAIL

DETAIL NO.

STM - 008



NOTE:
ALL HYDRANT LEADS SHALL BE TIED WITH 3/4" GALVANIZED STEEL TIE RODS, EXTENDING FROM TEE TO VALVE AND FROM VALVE TO HYDRANT OR MEGA-LUG BRAND THRUST RETAINER GLANDS AT JOINTS (INCIDENTAL).



NOTES:

1. VALVE BOX INSERTS ARE NOT ALLOWED UNLESS APPROVED BY THE ENGINEER.
2. VALVE BOXES SHALL BE INSTALLED PLUMB AND SHALL ALLOW A 4" P.V.C. PIPE TO PASS ENTIRELY OVER THE GATE VALVE NUT AFTER INSTALLATION IS COMPLETE.
3. ALL VALVES SHALL BE TIED WITH 3/4" THREADED TIE RODS TO THE MAIN. MEGA LUGS MAY BE USED IN LIEU OF TIE RODS.
4. THE INITIAL & FINAL RAISING OF VALVE BOXES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
5. ROCK BEDDING FOR DRAINAGE SHALL BE INSTALLED AT GATE VALVE, AS DIRECTED BY THE ENGINEER.



CITY OF NORTH BRANCH

VALVE BOX INSTALLATION

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

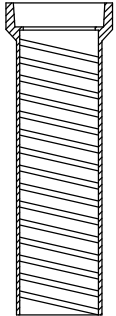
WM-003



DROP LID
Tyler

No. 6860

7.5' Minimum cover required
over top of water main.



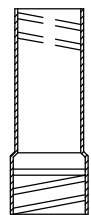
TOP
Tyler

No. 6860

26"

Grade

Adjust top to 1/2" below
grade. Box to be set to
provide 12" of adjustment.



EXTENSION
Tyler

No. 58

14"

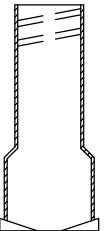
No. 59

18"

No. 60

24"

Tyler No. 6860
Gate valve box, screw type,
3 piece, 5 1/4" shaft, size
G box, 7'-6" extended,
#6 round base



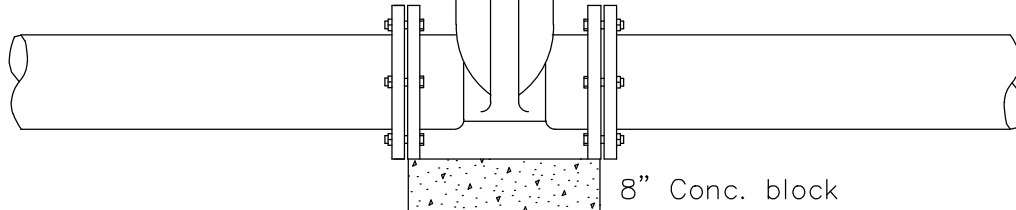
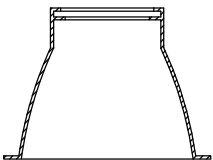
BOTTOM
Tyler

No. 6860

65"

Resilient Wedge Valve
Conforming to AWWA
C-509-80 standards

BASE



8" Conc. block



CITY OF NORTH BRANCH

BUTTERFLY VALVE
INSTALLATION

NO SCALE

2021 - STANDARD DETAIL

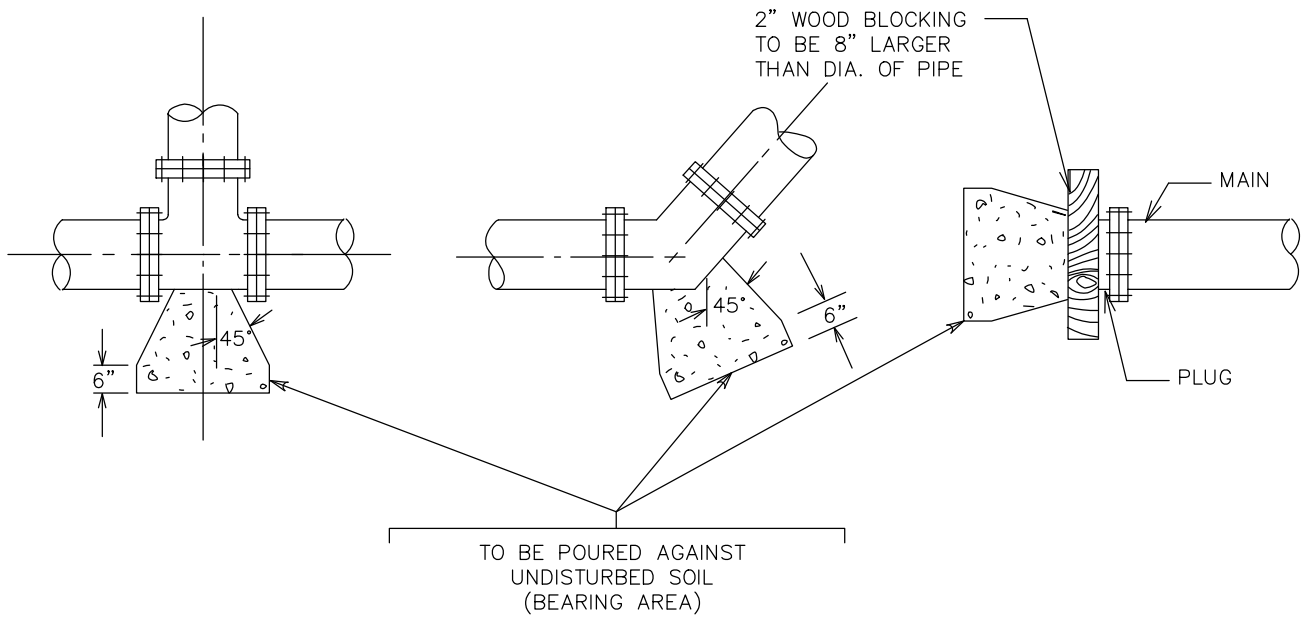
DETAIL NO.

WM - 004

TEE AND BEND

BEND

PLUG



PIPE SIZE	BEARING AREA
6"	4.0 SQ. FT.
8"	6.0 "
10" – 12"	12.0 "
16"	20.0 "

NOTE:

1. RETAINER GLANDS/MEGA LUGS ARE TO BE USED AS SPECIFIED AT ALL CHANGES IN DIRECTION, FITTINGS, AND VALVES.
2. THRUST BLOCKING TO BE USED FOR BENDS 22-1/2" AND OVER.
3. THRUST BLOCKING SHALL ONLY BE USED WHERE WORKING PRESSURES ARE LESS THAN 150 PSI.
4. COVER FITTINGS WITH POLYETHYLENE (4 MIL) PRIOR TO POURING CONCRETE.
5. CONCRETE SHALL HAVE 2500 PSI, 28 DAY STRENGTH.



CITY OF NORTH BRANCH

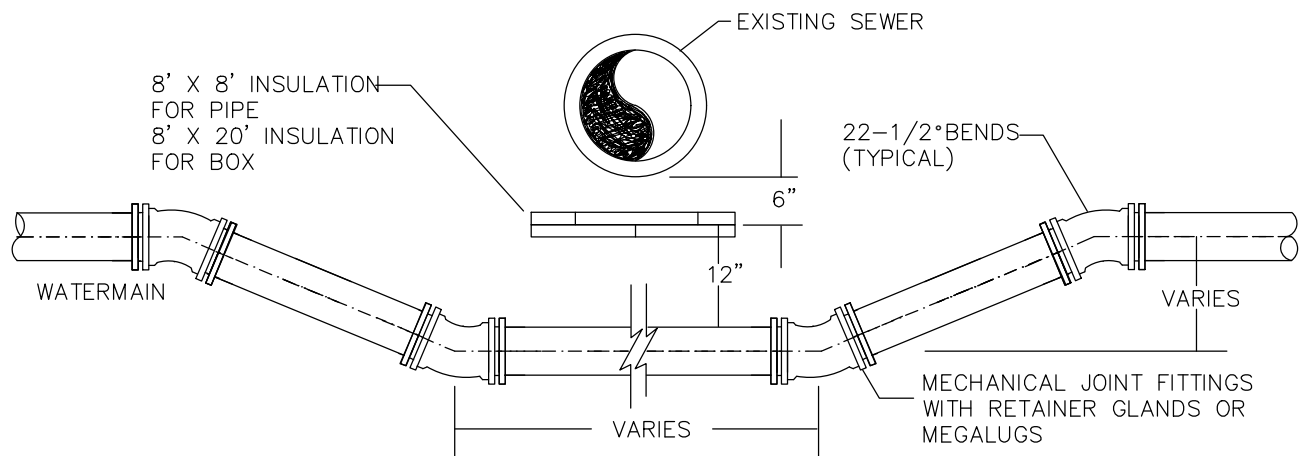
THRUST BLOCKING

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

WM-005



CITY OF NORTH BRANCH

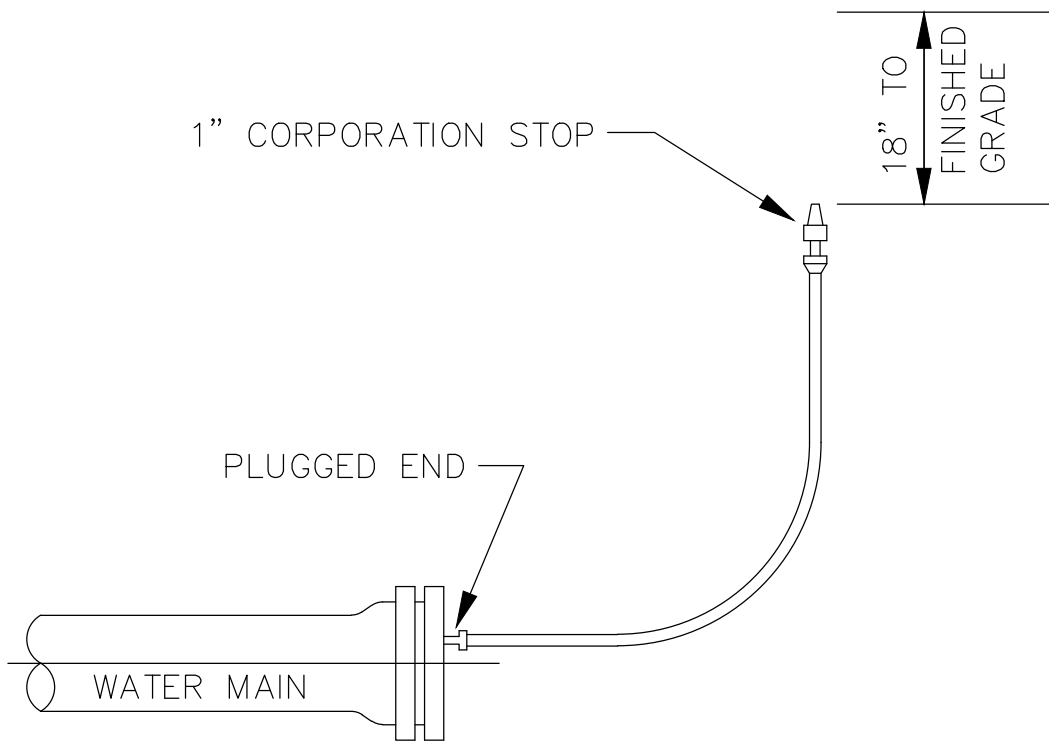
**WATERMAIN LOWERING AND
INSULATION DETAILS**

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

WM-006



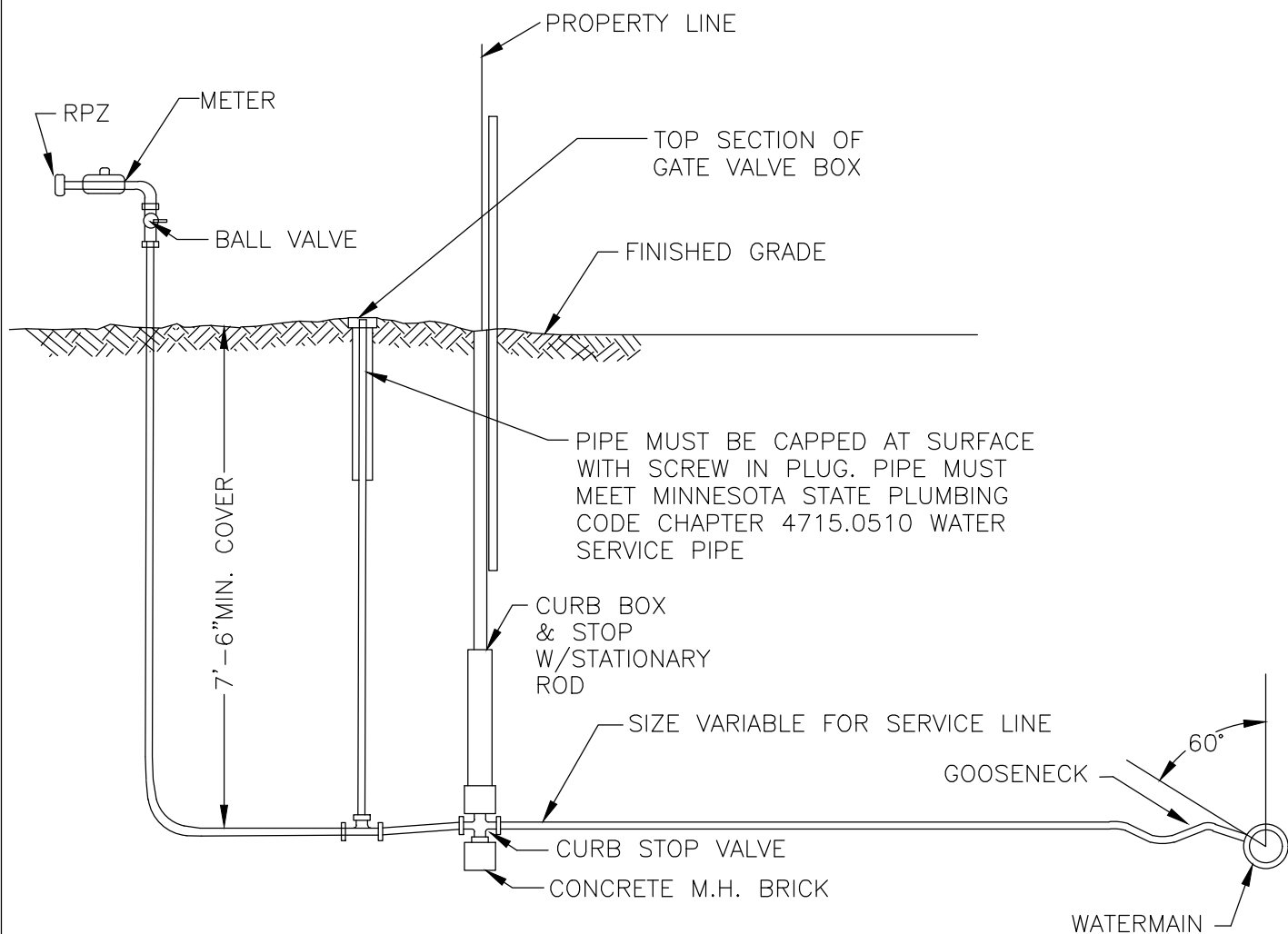
AFTER MEETING TEST REQUIREMENTS
THE AIR BLEED LINE SHALL BE
DISCONNECTED AT THE PLUG WITH
NO ADDITIONAL COMPENSATION.



CITY OF NORTH BRANCH
AIR BLEED INSTALLATION DETAIL
NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.
WM - 007



NOTE:
 SERVICE TAP TO BE MADE SLIGHTLY ABOVE SPRING LINE
 SO THAT COPPER LOOP SHALL NOT EXTEND ABOVE MAIN.
 MAINTAIN 7'-6" MINIMUM COVER FOR ALL SERVICE LINES.
 SADDLES SHALL BE USED FOR ALL CONNECTIONS TO
 6" OR SMALLER DIAMETER WATERMAINS.



CITY OF NORTH BRANCH

IRRIGATION DETAIL

NO SCALE

2021 - STANDARD DETAIL

DETAIL NO.

WM - 008

APPENDIX C

DUCTILE IRON MECHANICAL JOINT FITTINGS WEIGHTS (AWWA C110)

Ductile Iron Mechanical Joint Compact Fittings

Weight in Pounds per AWWA C153

BENDS (MJ-MJ)				
Size	90°	45°	22 1/2°	11 1/4°
4"	23	19	17	16
6"	44	37	33	31
8"	61	49	44	40
10"	94	74	64	57
12"	124	101	85	73
14"	220	164	148	129
16"	264	202	179	162
18"	410	289	292	196
20"	505	348	364	227
24"	586	475	385	345

NOTE:

DO NOT use 90° bends.

Use (2) 45° bends.

TEES (MJ-MJ)										
Size	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
4"	32									
6"	51	63								
8"	61	75	87							
10"	80	93	102	117						
12"	98	113	123	137	156					
14"		183	206	229	235	281				
16"		229	248	265	281	317	323			
18"		275	280	286	370	415	445	490		
20"		335	383	410	432	475	530	560	605	
24"		415	445	470	500	550	580	625	660	720

CROSSES (MJ-MJ)										
Size	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
4"	42									
6"	68	72								
8"	99	108	108							
10"	98	118	138	144						
12"	100	140	162	190	214					
14"		181	259	223	244	299				
16"		250	289	345	397	333	385			
18"		260	282	308		384		630		
20"		306	341	370	392	451	634	547	605	
24"		403	431	465	494	553	714		809	830

REDUCERS (MJ-MJ)										
Size	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
6"	22									
8"	29	32								
10"	40	42	45							
12"	52	53	55	57						
14"		112	108	100	100					
16"		144	136	128	119	138				
18"			195	190	190	190	210			
20"				210	205	220	290	335		
24"					290	335	310	315	307	

SOLID SLEEVES (MJ)		
Size	Short	Long
4"	17	20
6"	28	33
8"	38	46
10"	49	62
12"	56	76
14"	111	140
16"	130	170
18"	160	200
20"	195	255
24"	225	300

CAPS (MJ) FLAT	
Size	
4"	9
6"	15
8"	22
10"	32
12"	42
14"	66
16"	92
18"	114
20"	125
24"	166

PLUGS (MJ) FLAT	
Size	
4"	10
6"	16
8"	26
10"	36
12"	46
14"	75
16"	95
18"	121
20"	135
24"	175

APPENDIX D

RECORD DRAWINGS/AS-BUILT INFORMATION

CITY OF NORTH BRANCH CONSTRUCTION DRAWING “AS-BUILTS” – FORMAT STANDARDS

General Requirements:

1. 3 – Sets 11" x 17" paper drawings
 1 – Set 22" x 34" mylar drawings
 1 – Set 22" x 34" paper drawings
 1 – Set electronic .PDF files for all plan sheets (export each sheet from CAD file and name files corresponding sheet name and number).
 1 – Electronic file with x,y,z coordinates for all curb stops, hydrants, gate valves and manholes.
 1 – Utility, Drainage, Ponds and Grading As-Builts (CAD file)
2. All curb stop boxes, gate valves and manholes/catch basins outside the roadway shall be tied with at least two ties, under 100', using the following priority:
 - A. Fire hydrant
 - B. Storm or sanitary manhole
 - C. Catch basin
 - D. Gate valves
 - E. Corners of existing houses or buildings
 - F. Streetlight (get streetlight number)
 - G. Telephone or power pole
 - H. Electric, telephone or cable pedestal
3. Show service information by lot and block. Follow this example:

 Lot 4, Blk 5
 Curb Stop
 37.5' to SSMH 3005
 83.2' to HYD 5+46
 San. Serv. Inv. = 963.52
4. Show TNH elevations at **all hydrants visible** on every sheet.
5. All planned elevation and pipe lengths shall be crossed out and replaced with “as-built” elevations.
6. Show all sewer and water stub locations and elevations.
7. Include pavement section and street widths on all street plan and profile sheets.
8. Street names shall be clearly labeled on all sheets.
9. Show easements and widths where applicable.
10. Orientate all lot and block numbers to face viewer.
11. Remove all clutter from sheets (example: survey/topo coordinates, revision clouds, ghosted existing wetlands, removals).
12. Provide statement of verification from surveyor that proper monumentation has been set at all lot corners as required by state statute.

APPENDIX B

**PREVAILING WAGE
CERTIFIED PAYROLL FORM**

Minnesota Department of Labor and Industry Certified Payroll Form

This is a two part form consisting of Part 1 - Prevailing Wage Payroll Information listed below and the accompany Part 2 - Statement of Compliance. The contractor and subcontractor(s) shall furnish these completed forms every two weeks to the contracting authority. Copies of the Prevailing Wage Payroll Information form and the Statement of Compliance form are available at dli.mn.gov/business/employment-practices/prevailing-wage-contracting-agencies.

All payrolls must be certified by attaching to each report a completed and executed Statement of Compliance.

Name of contractor or subcontractor		Prime contractor name																				
Address & telephone number		Address & telephone number																				
Contract purchase order number		Pay period end date		Project name and location							Payroll #											
1	2	3	4	5 Day of Week & Date (xx/xx)							6	7	8	9	10			11				
Employee name, address, & identifying number (DO NOT provide Social Security No.)	# of Exemptions	Labor Code and Classification Title	OT & ST	Hours Worked Each Day							Total Hrs This Job	Hrly Rates of Pay This Job	Gross Amt. Earned This Job	Gross Amt Earned This Pay Period	FICA	Fed Tax	State Tax	Other (Specify)	Other (Specify)	Total Deductions	Total Net Wages Paid	
				Su	M	T	W	Th	F	S												
			OT																			
			ST																			
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Pursuant to the Minnesota Government Data Practices Act, all of the data collected, stored and maintained by government entities is presumed to be public data and accessible by the public for both inspection and copying unless a federal or state law or temporary classification of the data provides that it is not public. Minn. Stat. § 13.01, subd. 3. DO NOT provide any confidential data such as social security numbers, in part or whole, on this form. This data is collected pursuant to Minn. Stat. §§ 177.43, subd. 3 and 177.30. If you have any questions regarding the MN Prevailing Wage Act, Minn. Stat. §§ 177.41-44 or the Prevailing Wage Financial Assistance law Minn. Stat. § 116J.871, contact the Minnesota Department of Labor and Industry, 443 Lafayette Road N., St. Paul, MN.

MINNESOTA DEPARTMENT OF LABOR & INDUSTRY

Part 2 Statement of Compliance

Report number	State project name and location	Date	
Contracting authority	Project	General contractor	
Contractor/subcontractor	Phone number	Contract purchase order number	
Address	City	State	ZIP code
Type of work			

(Complete as described on solicitation documents.)

Statement with respect to compliance and waged paid

I, _____ do hereby state:
 (Name of signatory party) (Title-Owner or Officer)

(1) That I pay or supervise the payment of the persons employed by _____ on said Contract; that during the payroll period commencing on the _____ day of _____ of the year _____, and ending the _____ day of _____ of the year _____, there were _____ employees performing work on said Contract. That all persons performing work under said Contract are listed on the payroll and have been paid the full prevailing wages for all hours worked under said Contract, that no rebates and or deductions have or will be made either directly or indirectly to or on behalf of said _____ (Contractor or Subcontractor) from the full wages earned by any person, other than permissible deductions as defined in Minnesota Statutes 177.24, Subdivision 4, 181.06, and 181.79, issued by the Minnesota Commissioner of Labor and Industry and described below:

Describe legal deductions

(2) That the payroll submitted under said Contract is complete and accurate; that the wage rate(s) of the laborer(s), mechanic(s), and worker(s) performing work under said Contract is (are) paid according to the wage determination(s) and labor provisions incorporated in said Contract and according to applicable laws; that wages paid to laborer(s) mechanic(s), and worker(s) performing work under said Contract is at least the prevailing wage rate for the most similar classification of labor performed as defined under applicable law; and that the laborer(s), mechanic(s), and worker(s) performing work under said Contract is (are) paid for all hours in excess of the prevailing hours at a rate of at least one and one-half times the applicable base rate of pay.

(3) That any apprentices employed during said payroll period are duly registered in a bona fide apprenticeship program registered with the Minnesota Department of Labor and Industry, or are registered with the Bureau of Apprenticeship and Training; United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO ANY APPROVED PLANS, FUNDS, OR PROGRAMS

☐

- i. In addition to the basic hourly wage rates paid to each laborer, worker or mechanic listed on said payroll, payments to current, bona fide fringe benefit programs as set forth in paragraph 4(d), have been or will be made to the
- ii. program's administrators as set forth in paragraph 4(e) for the benefit of said employees, except as noted in Section 4(c).

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH TO ALL EMPLOYEES

☐

Each laborer, worker, or mechanic listed on said payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic rate plus the fringe rate as listed in the appropriate wage determination incorporated into said Contract.

NOTE- FRINGE BENEFIT SECTIONS C, D, E AND SIGNATURE BLOCK ARE ON NEXT PAGE

(c) EXCEPTIONS

Employee name	Classification/occupation	Explanation

(d) BENEFIT PROGRAM INFORMATION in DOLLARS CONTRIBUTED PER HOUR

(Must be completed if 4(a) is checked.)

Program title, classification title or individual employees	Health/welfare	Vacation/Holiday	Apprenticeship/training	Pension	Other Include title
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$

(e) BENEFIT PROGRAM INFORMATION (Must be completed if 4(a) is checked.)

Name & address of fringe benefit fund, plan or program administrator	Benefit account number	Third party trustee and/or contact person	Telephone number

The willful falsification of any of the above statements may subject the contractor or subcontractor to civil or criminal prosecution under federal and/or state law.

Name and title of owner or officer	Signature

As a representative of the contractor submitting the payroll identified above, I hereby certify that the payroll is true and correct to the best of my knowledge.

NOTE: For information regarding this form, submission of payroll records, or copies of the laws stated above, contact the Minnesota Department of Labor and Industry, 443 Lafayette Road N., St. Paul, MN 55155, Phone: 651-284-5091 or 1-800-DIAL-DLI (1-800-342-5354).

APPENDIX C

ONLINE BIDDING INSTRUCTIONS



Quest Construction Data Network
VirtuBid™ Online Bidding User Guide
Contact Support – 952-233-1632
Support@QuestCDN.com

Welcome to VirtuBid™ with the Quest Construction Data Network! VirtuBid™ (vBid™) is a state-of-the-art electronic bidding service that benefits the bidder by allowing more time for last minute price adjustments. Bidders can now submit their numbers and forms within seconds of bid closing to ensure the most competitive bids, simply by the push of a button.

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YOU MUST CREATE YOUR 'ONLINE BID ID CODE' BEFORE ACCESSING ONLINE BIDDING.

Prior to participating in Online Bidding, be sure to set up your company's 'Online Bid ID Code'. Your 'Online Bid ID Code' is your digital signature. You may also need to update your QuestCDN password to higher security if needed (*Online Bidding new password minimum is 8 characters with one uppercase, one lowercase and one numeral*).

Updating passwords and creating an 'Online Bid ID Code' can only be done by the main account holder.

What is the 'Online Bid ID Code' and **where can I find it on QuestCDN?**

The 'Online Bid ID Code' is a passcode required at bid submission and is the digital signature for the company. The code is created by the main account holder **before** account users can access VirtuBid™. The code can be accessed, viewed or updated by logging into QuestCDN with the main account holder username and password.

Make sure to write down the code or obtain the code from the main account holder before submitting a bid.

FINDING THE COMPANY ONLINE BID ID CODE

There are two ways to access the 'Online Bid ID Code'.

1. A link to access the code is located on the bid submission page. (*Illustration 1.*) Click **'My Account'** on the submission page of VirtuBid™. A new browser window will open. Sign into QuestCDN using the main account holder username and password. Under the 'User Info & Online Bid ID Code' tab, (*Illustration 2*) click the eye icon to view an existing code. Click the VirtuBid™ opened browser tab to go back to the online bid submission window. Enter the code, check 'I Agree' and click 'Submit'

Only the main account holder username and password can access the 'Online Bid ID Code'.

A link to access the code is located on the bid submission page.

Print

Illustration 1

QUESTCDN'S TERMS OF USE FOR BIDDERS

This Terms of Use for Bidders Agreement ("Agreement") is between Quest Construction Data Network, LLC, P.O. Box 412, Spring Park, Minnesota 55384-0412 ("QUESTCDN") and you (which may be identified in this agreement as "You," "Your," or "User"). By accepting this Agreement you are accepting its terms on behalf of both you personally and any entity for which you are an agent of or appear to represent as indicated by the information you provide in registering with the QUESTCDN Web site and the Quest VirtuBid (hereafter vBid) services, and the terms "You," "Your," and "User" shall include both you personally and that entity.

This Agreement is in addition to any other terms and conditions or other agreements QUESTCDN presents to You in writing either on QUESTCDN's Web site or as a part of the Quest vBid services and You agree to as a part of using its Web site or the Quest vBid services, including without limitation the Construction Data Network, LLC Web site Terms of Use, contain the terms and conditions that govern Your use of the QUESTCDN Web site and the Quest vBid services. These agreements constitute the entire agreement among the parties.

Enter your company's On-Line Bid ID code: This ID code is your company's On-Line Bid ID Code. If you do not remember your company's ON LINE BID ID Code, you may view or change it at QuestCDN.com. For quick login access to your account, click this link [My Account](#) info tab. Only the account administrator has access to this page.

☒ I Agree Check 'I Agree'

By clicking the I Agree checkbox and entering your On-Line Bid ID code you are agreeing to the terms displayed

[Submit the bid to Owner](#)

Click 'My Account' to access the 'Online Bid ID Code'

BID POSTINGS MESSAGE CENTER ONLINE BIDDING INDUSTRY DIRECTORY HELP MY ACCOUNT

Illustration 2

Company Info
User Info & Online Bid ID Code
Membership
Profile
Payment
Transactions & Receipts

Username

: test free

*

Password

:

*

Minimum eight characters including one uppercase, one lowercase, and one number.
Meets Quest requirements

Confirm Password

:

Confirm password

Online Bid ID Code (This code is used to publish or submit a vBid)

On-line Bid ID Code

: Password1

*

Minimum eight characters including one uppercase, one lowercase, and one number.
Meets Quest requirements

Confirm On-line Bid ID Code

:

Confirm Online Bid id Code

Display Code

Log into

- QuestCDN using the main account holder username and password, click 'My Account' at the top of the page. Select 'User Info & Online Bid ID Code' tab and click the eye icon to view or edit an existing code (*Illustration 2.*)

VirtuBid™ (vBid) Online Bidding

Create an Online Bid ID Code

Log into QuestCDN at <https://questcdn.com/auth/login>. Click 'My Account' at the top of the page. Click the 'User Info & Online Bid ID Code' tab. Add or update your 'Online Bid ID Code'. Click the eye icon symbol to view the code when black dots are populated in the fields. *(Only the QuestCDN main account holder can access 'My Account' and update/view the code).*

The screenshot shows the 'User Info & Online Bid ID Code' tab in the QuestCDN account management interface. The form contains the following fields:

- Username: Shelly Kahl
- Password: [Redacted]
- Confirm Password: [Redacted]
- Online Bid ID Code (This code is used to publish or submit a vBid): [Redacted]
- Confirm On-line Bid ID Code: [Redacted]

A red arrow points to the 'Online Bid ID Code' field, which is labeled 'Online Bid ID Code'.

Online Bid ID Code Explanation

The 'Online Bid ID Code' is a passcode and acts as your digital signature. It is required to submit an online bid through the QuestCDN online bidding system, VirtuBid™.

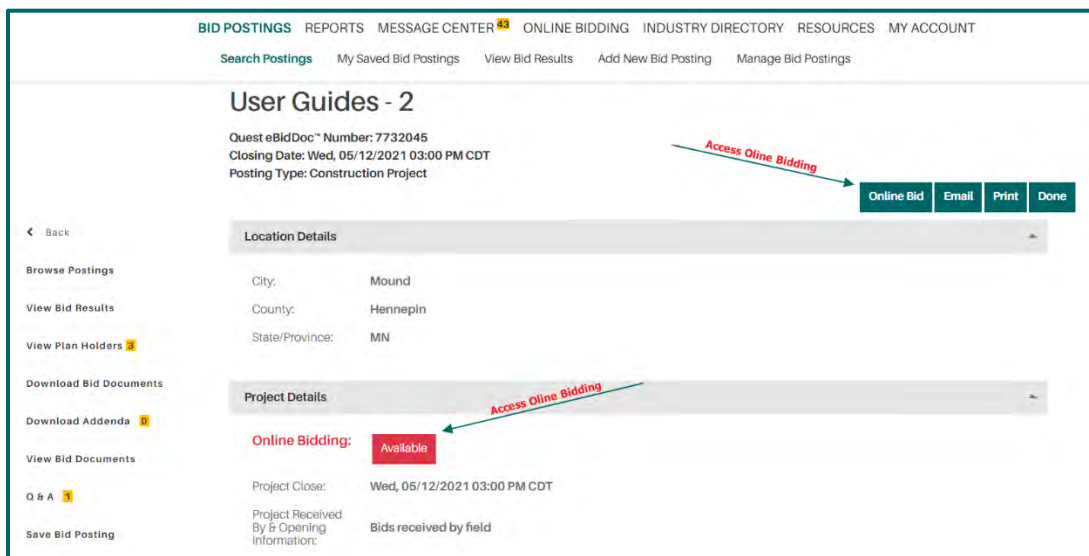
- An 'Online Bid ID Code' must be created before users can access VirtuBid™. The code is established, modified and viewable by QuestCDN main account holder.
- This code is the digital signature that allows submission of a bid on behalf of the company. QuestCDN does not have access to codes for security purposes.
- The code is found in 'My Account,' in the 'User Info & Online Bid ID Code' tab. QuestCDN also provides a link to 'My Account' located in the 'Submit Bid' page within VirtuBid™ to retrieve the 'Online Bid ID Code'.
- The VirtuBid™ login page may prompt to update the current QuestCDN password due to higher security. *(Online Bidding new password minimum is 8 characters with at least one uppercase, one lowercase and one numeral).*
- The VirtuBid™ login page will prompt a message if a code is not created.

Accessing Online Bidding

There are two ways to access QuestCDN online bidding:

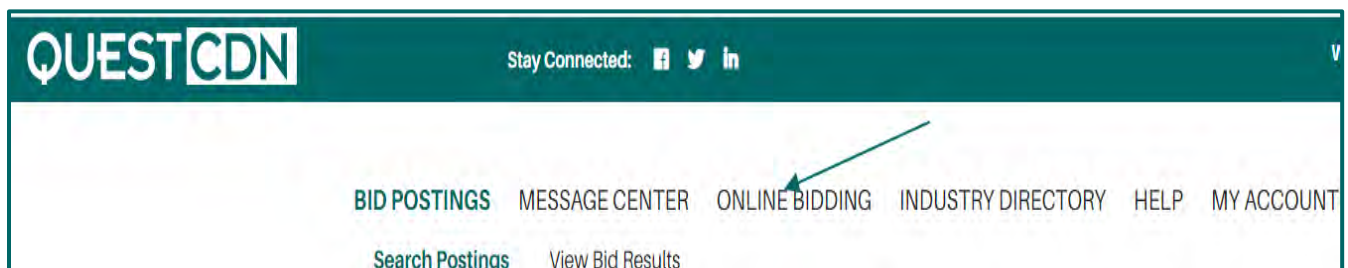
1. Online bidding through the bid posting page

Enter project number and click the search button. To submit an electronic bid and access the VirtuBid™ system, companies must be a plan holder. Download the eBidDoc™ from the bid posting page. On the 'Bid Posting' page, click the red Online Bidding 'Available' button under the 'Project Document Information' section or the 'Online Bid' button at the top of the page and log into VirtuBid™ (vBid) using your username and password. A password update may be required due to security requirements *(the password must contain a minimum of 8 characters with one uppercase, one lowercase and one numeral. If needed, go to 'My Account' and 'User Info & Online Bid ID Code' to update the password.)*



2. Online bidding through the VirtuBid home page

Current and past electronic bid postings (eBidDoc™ that has been downloaded) will display on this page. Click 'Online Bidding' from the main navigation to log into VirtuBid™ (vBid) home page to access online bids. Log in using the QuestCDN username and password. A password update may be required due to security requirements (*the password must contain a minimum of 8 characters with one uppercase, one lowercase and one numeral. If needed, go to 'My Account' and 'User Info & Online Bid ID Code' to update the password.*)



VirtuBid™ (vBid) Home Page

The VirtuBid™ (vBid) home page is grouped by searchable sections. Current and past bid opportunities are located on the page. Qualification and bid worksheet information is sorted and saved by section for future reference. Click the +/- to expand/contract the section lists. Click the underlined project name to access the qualification, bid worksheet and submit pages.

1. 'Bids Started'
2. 'Bids Available'
3. 'Bids Submitted'
4. 'Bids Closed (Bid submitted)'
5. 'Bids Closed (No bid submitted)'

QUEST vBID
[Contact Quest](#)
[Logout](#)

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[Home](#)
[QuestCDN Support](#)

Bids Started
(Click the +/- to expand/contract the list)

Name	City	County	State	Bid Date	Solicitor	Owner	Last Modified	User
BID VIEW BID-MEMBER	City	County	MN	12/31/2030 01:00:00 PM U		Project Owner	03/31/2020 08:43 A	QuestCDN Sup
V-Bid Training Demo - PUB	City	County	MN	12/20/2050 02:00:00 PM U		Project Owner	05/13/2021 12:19 A	QuestCDN Sup
Fairview Bridge Demo	Fairview	Denton	TX	05/19/2022 05:00:00 PM U		City of Fairvie	01/22/2021 02:39 F	Robert Morga
vBid Video	Watertown	Hennepin	MN	07/02/2021 12:00:00 PM U		Matt	02/17/2021 04:46 F	QuestCDN Sup

Bids Available
(Click the +/- to expand/contract the list)

No projects meet this criteria

Bids Submitted
(Click the +/- to expand/contract the list)

Name	City	County	State	Bid Date	Solicitor	Owner	Last Submitted	User
BID PUBLISHED	City	County	MN	12/31/2030 03:00:00 PM U		Project Owner	03/17/2021 09:19 A	QuestCDN Sup

Bids Closed (Bid submitted)
(Click the +/- to expand/contract the list)

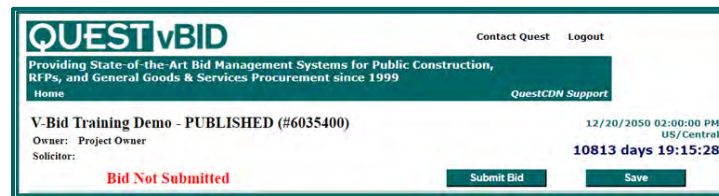
Name	City	County	State	Bid Date	Solicitor	Owner	Last Submitted	User
Mock Bid	Center City	Chisago	MN	12/10/2020 11:00:00 AM U		Chisago Count	12/09/2020 03:40 F	QuestCDN Sup
BID CLOSED EXAMPLE	City	County	MN	01/10/2020 12:00:00 PM U		Project Owner	01/09/2020 10:50 A	QuestCDN Sup
Test Solicitor Pays ALL	City	County	MN	01/06/2020 01:15:00 PM U		Test Owner	01/06/2020 02:02 F	QuestCDN Sup
TEST - Solicitor Pays vBid	City	County	MN	01/06/2020 12:30:00 PM U		Owner Test	01/06/2020 01:25 F	QuestCDN Sup
MOCK BID(TEST) - Not Act	County	Mississippi	MS	02/15/2018 01:30:00 PM U		Mississippi Co	02/13/2018 10:55 A	QuestCDN Sup
Dekalb Street Repair 5th th	Debalb	Dekalb	IL	06/20/2019 02:00:00 PM U		Dekalb IL, Cit	06/07/2019 08:12 A	QuestCDN Sup
CT Consultants Demo	Demo	Demo	OH	03/21/2018 12:00:00 PM U		CT Consultant	03/19/2018 05:14 F	QuestCDN Sup
ZN-19-XX - Test Project	Fargo	Cass	ND	11/15/2019 10:00:00 AM U		Fargo ND, Cit	11/14/2019 10:29 A	Robert Morga
DEMO 1 - Caribe Colony Co	Fort Wayne	Allen	IN	07/30/2019 02:00:00 PM U		Fort Wayne IN	06/25/2019 10:05 A	QuestCDN Sup
Test Fridley Bid One	Fridley	Anoka	MN	06/19/2020 10:03:00 AM U		City of Fridley	06/19/2020 10:00 A	QuestCDN Sup

Bids Closed (No bid submitted)
(Click the +/- to expand/contract the list)

Name	City	County	State	Bid Date	Solicitor	Owner	User
2018 County Wide Route C		Ward	ND	02/27/2018 02:00:00 PM U		Ward County,	QuestCDN Sup
503493 - Marston Treatme		Dnever	CO	07/31/2018 01:00:00 PM U		Denver Water	QuestCDN Sup
503196 - 2018 Aerial Cross		Arapahoe & D	CO	08/08/2018 10:00:00 AM U		Denver Water	QuestCDN Sup
2019 County Wide Culvert		Ward	ND	01/08/2019 02:00:00 PM U		Ward County,	QuestCDN Sup
2019 County Wide Culvert		Ward	ND	01/08/2019 02:00:00 PM U		Ward County,	QuestCDN Sup
2019 Gravel Hauling & Res		Ward	ND	03/07/2019 02:00:00 PM U		Ward County,	QuestCDN Sup
Replacement of 72		Ward	ND	04/30/2020 02:00:00 PM U		Ward County,	QuestCDN Sup
2021 Water Base Pavemen		Ward	ND	03/03/2021 02:00:00 PM U		Ward County,	QuestCDN Sup
Fueling Station Installation		Ward	ND	03/18/2021 02:00:00 PM U		Ward County,	QuestCDN Sup
DEMO -Grayson County Ro	Clarkson	Grayson	KY	06/04/2020 10:00:00 AM U		Kentucky Tran	QuestCDN Sup
DEMO - Jefferson County C	Louisville	Jefferson	KY	08/31/2020 10:00:00 AM U		Kentucky Tran	QuestCDN Sup
PLATTEVILLE WRRF - BLOV	Platteville	Grant County	WI	02/04/2021 02:00:00 PM U		City of Plattev	QuestCDN Sup
503037 Conduit No 16 W. S	--	Jefferson	CO	03/22/2018 10:00:00 AM U		Denver Water	QuestCDN Sup
Contract 503229 - Foothills	-----	Douglas	CO	08/23/2018 10:00:00 AM U		Denver Water	QuestCDN Sup
Abbotsford 2018 Street & U	Abbotsford	Marathon Cou	WI	04/02/2018 10:00:00 AM U		City of Abbbor	QuestCDN Sup

VirtuBid™ (vBid)

Bid title, QuestCDN eBidDoc™ number, owner, solicitor, bid closing date, time, time zone, a running bid countdown date/time clock and submitted/not submitted bid status are located at the top of VirtuBid™. The 'Home' tab returns to the VirtuBid™ home page. Click the save button periodically to save work and refresh the page. There is a 60-minute security time out. Information not saved will be lost. All uploaded and entered information will be saved. Log out of VirtuBid and re-enter as many times as needed to revise the work.



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Home QuestCDN Support

V-Bid Training Demo - PUBLISHED (#6035400)
Owner: Project Owner
Solicitor:
12/20/2050 02:00:00 PM
US/Central
10813 days 19:15:28

Bid Not Submitted Submit Bid Save

Qualification Information

Bid Bond Section

Upload a completed bid bond file and/or enter the Surety 2000 'Bond id' number to complete the bid bond information. (This information depends on the solicitor requirements.) Submit only one if both options are offered.

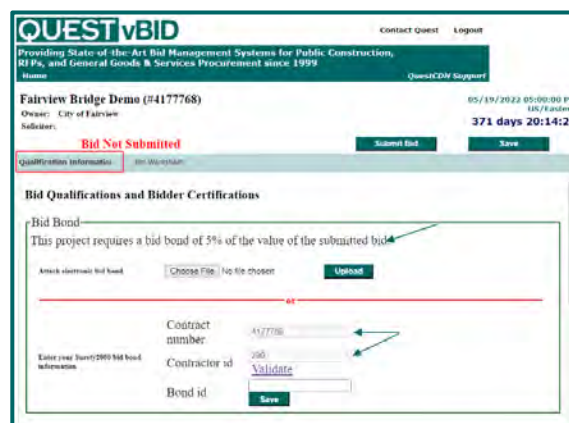
Electronic Bid Bond

- Upload file containing signed bid bond information

Surety2000 Bid Bond

- 'Contract Number' (QuestCDN eBidDoc™ number)
- 'Contractor ID' (QuestCDN member number)

Provide the 'Contract number' and 'Contractor id' to the insurance agency. The agent must use these two numbers when requesting a Surety2000 'Bond Id' validation number. The 'Contractor id' (Surety2000 refers to this as the "State vendor ID number") is the QuestCDN member number and will always stay the same. The 'Contract number' will change with each project and is the QuestCDN bid posting eBidDoc™ No. Both the 'Contract number' and 'Contractor id' are displayed in the Bid Bond fields. The contractor number can also be found in 'My Account' under the 'Company Info & Online Bid ID' tab.



QUESTvBID
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Home QuestCDN Support

Fairview Bridge Demo (#4177768)
Owner: City of Fairview
Solicitor:
05/19/2022 05:00:00 PM
US/Eastern
371 days 20:14:29

Bid Not Submitted Submit Bid Save

Qualification Information Bid Requirements

Bid Qualifications and Bidder Certifications

Bid Bond
This project requires a bid bond of 5% of the value of the submitted bid.

Attach electronic bid bond Choose File (No file chosen) Upload

Contract number: 4177768

Contractor id: 250 Validate

Bond id: Save

'Bidder must download the following files for bid submission' (DOWNLOAD ONLY)

Each required download has a file name and download link. Download all documents listed by clicking the 'download' link. Save the document. Click VirtuBid™ 'Save' button on the top or bottom right of the page to update and refresh the information. A red 'x' indicates the requirement is not complete. Files may be downloaded and saved multiple times.



The downloaded date of the file will display after downloading the documents and refreshing the page. A green check mark '✓' replaces the previous red x. The green check indicates the requirement has been completed.



'Bidder must download, complete, and submit (or replace) the following files for bid submission.'

Click the 'download' link to download each document. Save the document to the computer. A red 'x' indicates the requirement is not complete. Click the VirtuBid™ 'Save' button on the top or bottom right of the page to update the page with the downloaded date. If the file is in a fillable format, complete all information and save each document to your computer. If the file is not in a fillable format, print and complete the forms manually. Scan and save documents to the computer. Select '**Choose File/Browse**' button to retrieve each file from the computer. Select the '**Upload**' button to upload the file. Click the VirtuBid™ '**Save**' button. Exit VirtuBid™ after saving the completed work. All information will be saved upon return. **Note: If needed, click 'Choose File/Browse' to retrieve a new file that replaces the existing uploaded file.**

- **Completed Upload** - The name of the uploaded document is displayed on the right side of the 'Upload' button. A green check mark '✓' indicates the process has been successfully completed. (**Arrow A**)
- **Download File** – 'downloading required then click vBid Save' message indicates the file is not downloaded. Download, complete and upload the completed file before submitting a bid. A red x will indicate the process is incomplete. (**Arrow C**)
- **Downloaded Date** - Downloaded date of the documents is shown on the right side of the 'Upload' button. Upload the completed file before submitting a bid. A red x indicates the process is incomplete. (**Arrow B**)
- **Check or Replace File** – Click the uploaded underlined document name to review uploaded documents for accuracy and completion. Click '**Choose File/Browse**' to retrieve a new file that replaces the existing uploaded file. Select '**Upload**' to upload the replacement file and click '**Save**'. (**Arrow A**)

Bidder must download, complete, and submit (or replace) the following files for bid submission.

✓ Responsible Contractor Forms- complete and sign.pdf	download	Choose File No file chosen	Upload	Responsible Contractor Forms- complete and sign.pdf uploaded 21-May-2019	A
✗ Affidavit of Organization and Authority - complete and sign.pdf	download	downloading required then click vBid SAVE	C		
✗ Qualification Insurance - fillout and upload.pdf	download	Choose File No file chosen	Upload	downloaded 21-May-2019	B
✓ A. Document 004547 - Certification of compliance MN Statute.pdf	download	Choose File No file chosen	Upload	A. Verification of Compliance with MN Statue 16c.285.pdf uploaded 21-May-2019	A

Cancel Submit Bid Save

'Bidder must upload the following files for bid submission'

Select '**Choose File/Browse**' button to retrieve and attach a required file from the computer. Select the '**Upload**' button to upload the file. Click the VirtuBid™ '**Save**' button on the top or bottom right of the page. All information will be saved upon exiting the VirtuBid™ system. Click the uploaded underlined document to review the file for accuracy and completion. If needed, click 'Choose File/Browse' to retrieve a new file that **replaces** the existing uploaded file. Select '**Upload**' to upload a replacement file and click VirtuBid™ '**Save**'. A red '✗' indicates the requirement is not complete. . A green check mark '✓' indicates the requirement has been successfully completed.

Bidder must upload the following files for bid submission.

✓ 1. Introductory Letter	Choose File	Introductory Letter.pdf	Upload	Introductory Letter.pdf uploaded 06-Jan-2021
✗ 2. Narrative of Vendor's Approach	Choose File	No file chosen	Upload	
✗ 3. Qualifications Section	Choose File	No file chosen	Upload	
✗ 4. Project Approach	Choose File	No file chosen	Upload	
✗ 5. Demonstration of Ability	Choose File	No file chosen	Upload	
✗ 6. References	Choose File	No file chosen	Upload	
✗ 7. Consultant's Expectations	Choose File	No file chosen	Upload	
✗ 8. Cost Proposal	Choose File	No file chosen	Upload	

Post Letting Information

Post letting information allows submission of documents requested after the bid close and is similar to the sections above. There may be a post letting 'Deadline' date and time entered. All documents must be uploaded before the date/time expires. A red 'x' indicates the requirement is not complete. A green check mark '✓' indicates the requirement has been successfully completed. **There is no submit process required upon completion of the upload.** Documents are available to the solicitor/owner immediately. Submitting post letting documents after the bid close is not allowed if a successful bid was not submitted.

Post letting information submittals Deadline: 21-JUL-2021 12:00 PM

Download, complete, and submit (or replace) the following files.

A.Complete List of Subcontractors- complete and sign.pdf download Choose File No file chosen Upload downloaded 21-May-2019

Upload the following files.

Business Licence Choose File No file chosen Upload

Cancel Submit Bid Save

Download Addenda

Bids will not be submitted if all addenda are not downloaded from the **main QuestCDN** system. A field on the qualification page indicates 'There are (#) unread addenda for this project. Follow [this link](#) to download them on QuestCDN'. (opens new window)'.

There are 1 unread addenda for this project. Follow [this link](#) to download them on QuestCDN (opens new window).

- Click [this link](#) to open/return to the bid posting page and download any missed addenda.
- Download all addenda and review the information if unsure of missed addendum to download.
- Choose the VirtuBid™ open browser tab. May need to refresh/reload the page to update the addenda information. To refresh/reload the page, click the refresh icon symbol at the top of the browser or right click the mouse and choose 'reload'/'refresh' option from the drop-down box. The VirtuBid™ qualification page will update and read 'All Addenda have been downloaded'.

QUESTvBID

Contact Quest Logout

Providing State-of-the-Art Bid Management Systems for Public Construction, RFPs, and General Goods & Services Procurement since 1999

Home QuestCDN Support

V-Bid Training Demo - PUBLISHED (#6035400) 12/30/2020 02:00:00 PM

Owner: Project Owner US/Control

Solicitor: 10813 days 19:12:08

Bid Not Submitted Submit Bid Save

Qualification Information Bid Worksheet

Bid Qualifications and Bidder Certifications

Bid Bond

This project requires a bid bond of 5% of the value of the submitted bid.

Attach electronic bid bond Choose File No file chosen Upload Bid Bond.pdf

Saves2000 is not available in this project

All addenda have been downloaded. Addenda Requirement Complete

Bid Worksheet Page

Click the Bid Worksheet tab to access the electronic bid form.

Worksheet Sections

1. White colored sections are added to the base bid total, have a subsection total and require a unit price entry for each item before submitting.
2. Pink colored sections are optional, have a subsection total and completion may or may not be mandatory to submit a bid (please follow the instructions specified by the solicitor/owner). Items in this section will not add to the base bid total.
3. Peach colored sections are mandatory, have a subsection total and completion is required to submit a bid. Items in this section will not add to the base bid total.
4. Purple colored sections have a fixed unit price added by the solicitor/owner. Unit prices cannot be changed and are added to or subtracted from the base bid total.
5. Click the appropriate unit price field within the line item. Fill in the unit price excluding the dollar sign. The 'Unit Price' field will only display two digits after the decimal point. The 'Extension' field is calculated using the entered value (example - Qty 20 x unit price 2.558 = Extension = 51.16). Use the enter key, up/down arrows or click each unit price field to move to the next unit price field.
6. vBid will time out and log out after 60 minutes. Click the 'Save' button often to update and save the work.
7. Click 'Submit Bid' once the qualification requirements and bid worksheet page are complete. (The 'Online Bid ID Code' is required. Accept the terms on the submit page to submit the bid to the owner.)

Line Item	Item Code	Item Description	UoM	Quantity	Unit Price	Extension
1	100	Mobilization/ Prep. Work	LS	1		
3	102	Furnish & Install Piles	LS	320		
Carson Lane Bridge Total:						\$0.00
Litening Barn RD Bridge						
9	200	Mobilization/ Prep. Work	LS	1		
11	202	Furnish & Install Precast Concrete A	LS	1		
Litening Barn RD Bridge Total:						\$0.00
Clopton Lane Bridge						
16	300	Mobilization/ Prep. Work	LS	1		
18	302	Furnish & Install Precast Concrete A	LS	1		
Clopton Lane Bridge Total:						\$0.00
Deducts						
19	Labor	Work Estimated for Owner Labor	EA	1	\$10,000.00	\$10,000.00
Deducts Total:						\$10,000.00
Base Bid Total:						\$10,000.00

Callouts:

- White Section = Required Base Bid
- Peach Section = Mandatory. Does not add to the Base Bid Total.
- Pink Section = Optional Does not add to the Base Bid Total
- Purple Section = Fixed Unit Price – adds or subtracts from the Base Bid Total

Buttons: Import from CSV, Export to CSV, Cancel, Submit Bid, Save

Import & Export CSV

1. The 'Export to CSV' button is used to export the bid worksheet into an Excel CSV spreadsheet which can be helpful to configure additional calculations, formulas and percentage markups on unit prices.
2. The 'Import from CSV' button is used to import the Excel CSV spreadsheet into the bid worksheet.

**** Changes are allowed only to the 'Unit Price' field. DO NOT add or make changes to the header, descriptions or move/add/delete line items on the exported worksheet. The spreadsheet will fail to upload correctly if changes are made causing the system to error on bid submission or the bid may be incorrect.**

Bid Submission & On-Line Bid ID Code

Submit the Bid

Click the 'Submit Bid' button and enter the '**Online Bid ID Code**'. Check '**I Agree**' box to accept the 'QuestCDN Terms of Use for Bidders'. Click '**Submit**' button at the bottom of the page to submit the bid to the owner/solicitor.

QUESTCDN's TERMS OF USE FOR BIDDERS

This Terms of Use for Bidders Agreement ("Agreement") is between Quest Construction Data Network, LLC, P.O. Box 412, Spring Park, Minnesota 55364-0412 ("QUESTCDN") and you (which may be identified in this agreement as "You," "Your," or "User"). By accepting this Agreement you are accepting its terms on behalf of both you personally and any entity for which you are an agent of or appear to represent as indicated by the information you provide in registering with the QUESTCDN Web site and the Quest VirtuBid (hereafter vBid) services, and the terms "You," "Your," and "User" shall include both you personally and that entity.

This Agreement is in addition to any other terms and conditions or other agreements QUESTCDN presents to You in writing either on QUESTCDN's Web site or as a part of the Quest vBid services and You agree to as a part of using its Web site or the Quest vBid services, including without limitation the Construction Data Network, LLC Web site Terms of Use, contain the terms and conditions that govern Your use of the QUESTCDN Web site and the Quest vBid services. These agreements constitute the entire agreement among the parties relating to this subject matter, and these agreements supersede

Enter your company's On-Line Bid ID code: This ID code is your company's digital signature.

If you do not remember your company's ON LINE BID ID Code, you may view or change it by logging in at QuestCDN.com. For quick login access to your account, click this link [My Account](#) under User Info tab. Only the account administrator has access to this page.

☒ I Agree clicking the I Agree checkbox and entering your On-Line Bid ID code you are agreeing to the terms displayed

☐ I Disagree

1. There is an option to unsubmit or remove a bid in its entirety (all data will remain saved). Re-submit bid before the end of the bid closing.
2. Leave bid submitted, revise the bid worksheet and re-submit the revisions.

What is the 'Online Bid ID Code' and where can I find it on QuestCDN?

The 'Online Bid ID Code' is a passcode required at bid submission and is the digital signature for the company. The code is created by the main account holder before account users can access VirtuBid™. The code can be accessed, viewed or updated by logging into QuestCDN with the main account holder username and password. There are two ways to access the 'Online Bid ID Code'.

1. Only the main account holder username and password can access the 'Online Bid ID Code'. A link to access the code is located on the bid submission page. Click 'My Account' and a new browser window will open. Sign into QuestCDN using the main account holder username and password. Under the 'User Info & Online Bid ID Code' tab, click the eye icon to view an existing code. Click the VirtuBid™ open browser tab to go back to the online bid submission window. Enter the code, check 'I Agree' and click 'Submit' (*Illustration 1*.)
2. Log into QuestCDN using the main account holder username and password, click 'My Account' at the top of the page. Select 'User Info & Online Bid ID Code' tab and click the eye icon to view or edit an existing code (*Illustration 2*.)

Illustration 1 QUESTCDN'S TERMS OF USE FOR BIDDERS

This Terms of Use for Bidders Agreement ("Agreement") is between Quest Construction Data Network, LLC, P.O. Box 412, Spring Park, Minnesota 55384-0412 ("QUESTCDN") and you (which may be identified in this agreement as "You," "Your," or "User"). By accepting this Agreement you are accepting its terms on behalf of both you personally and any entity for which you are an agent of or appear to represent as indicated by the information you provide in registering with the QUESTCDN Web site and the Quest VirtuBid (hereafter vBid) services, and the terms "You," "Your," and "User" shall include both you personally and that entity.

This Agreement is in addition to any other terms and conditions or other agreements QUESTCDN presents to You in writing either on QUESTCDN's Web site or as a part of the Quest vBid services and You agree to as a part of using its Web site or the Quest vBid services, including without limitation the Construction Data Network, LLC Web site Terms of Use, contain the terms and conditions that govern Your use of the QUESTCDN Web site and the Quest vBid services. These agreements constitute the entire agreement among the parties

Enter your company's On-Line Bid ID code: [.....] This ID code is your company's digital signature.

If you do not remember your company's ON LINE BID ID Code, you may view or change it by logging in at QuestCDN.com. For quick login access to your account, click this link [My Account](#) under User Info tab. Only the account administrator has access to this page.

☒ I Agree Check 'I Agree'

By clicking the I Agree checkbox and entering your On-Line Bid ID code you are agreeing to the terms displayed

[Cancel](#) [Submit the bid to Owner](#) [Submit](#)

Illustration 2

BID POSTINGS MESSAGE CENTER ONLINE BIDDING INDUSTRY DIRECTORY HELP [MY ACCOUNT](#)

Company Info **User Info & Online Bid ID Code** Membership Profile Payment Transactions & Receipts

Username : test free *

Password : *
Minimum eight characters including one uppercase, one lowercase, and one number.
Meets Quest requirements

Confirm Password : Confirm password

Online Bid ID Code (This code is used to publish or submit a vBid)

On-line Bid ID Code : Password1234567890 *
Minimum eight characters including one uppercase, one lowercase, and one number.
Meets Quest requirements

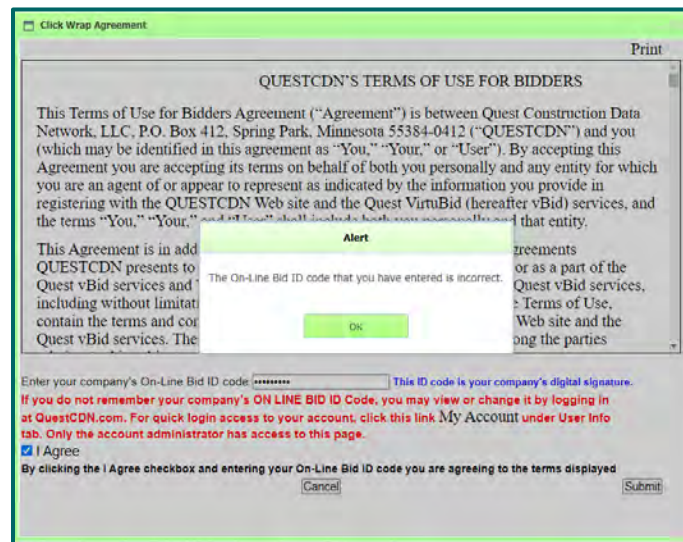
Confirm On-line Bid ID Code : Confirm On-line Bid ID Code

[Account Users](#)

[Previous](#) [Next](#) [Save](#)

Incorrect Online Bid ID Code

A correct 'Online Bid ID Code' must be entered before the VirtuBid™ system can verify completion of requirements. When a correct code is entered and required fields are complete, the bid will be submitted to the owner/solicitor. If an incorrect code is entered, an 'Alert' error window will display 'The Online Bid ID code that you have entered is incorrect'. Retype a correct code, click 'I Agree' and click 'Submit'. To retrieve the code, click '**My Account**' and a new browser window will open. Sign into QuestCDN using the main account holder username and password. Under the 'User Info & Online Bid ID Code' tab, click the eye icon to view an existing code. Click the VirtuBid™ open browser tab to go back to the online bid submission window. Enter the code, check 'I Agree' and click 'Submit' (*Illustration 1.*)



Unsuccessful Bid Submission Error Messages

The VirtuBid™ system verifies the completion of bid requirements after the 'Online Bid ID Code' is accepted. 'Bid Not Submitted' error message(s) will display if information is missing or incomplete.

Examples of Error Messages

- Required bid bond has not been entered
- Required addenda have not been downloaded
- Requirement has not been completed (qualification area not complete)
- Item unit price is missing

Required bid bond has not been entered.
Required addenda have not been downloaded.
Requirement has not been completed.
Item unit price is missing.

Training Plan Holders list (#6048674)

Owner: QuestCDN
Solicitor: QuestCDN

Bid Not Submitted

09/06/2019 03:00 PM EDT
107 days 5:19:43

Submit Bid **Save**

Qualification Information **Bid Worksheet**

Sections shown in this color are not included in the Base Bid Total - **Mandatory** completion
Sections shown in this color are not included in the Base Bid Total - **Optional** completion
Sections shown in this color are fixed and cannot be edited by the bidder

Line Item	Item Code	Item Description	UoM	Quantity	Unit Price	Extension
Richards Hall Restroom Renovation						
1	sum	Lump Sum	1.5	1		\$0.00
Richards Hall Restroom Renovation Total:						
Alternate deduct:						
2	2	Omit work to create new basement Bathroom 90, including all plumbing, HVAC, lighting, & finishes. Demo existing mechanical only.	Sq Ft	1		
3	3	Omit gyp. bd. ceiling & new lighting in kitchen. Paint exposed ducts.	Sq Ft	1		
4	4	All restroom walls to receive 4'-0" high tile wainscot in lieu of full wall tile. See Sheet A7.0.	Sq Ft	1		
5	5	Omit new windows - brick entire opening.	Sq Ft	1		
6	6	Omit pedestrian traffic coating & floor tile in restrooms. Provide epoxy coating at floors, including under shower receptors and provide an 8" covered wall base. See specification Section 09 93 23 Resin.	Sq Ft	1		
7	7	no work in Bathrooms 110 & 111. Existing to remain.	Sq Ft	1		
Alternate deduct Total:						

Bid Submitted

Successfully Submitted Bid

A message displaying '**Bid Submitted by**' (with date/ time and username stamp (shown in red) will display.

The screenshot shows the QUESTvBID web application interface. At the top, it says 'QUESTvBID' and 'Providing State-of-the-Art Bid Management Systems for Public Construction, RFPs, and General Goods & Services Procurement since 1999'. The main heading is 'V-Bid Training Demo - PUBLISHED (#6035400)'. Below this, it shows 'Owner: Project Owner' and 'Solicitor:'. A red message states 'Bid Submitted by QuestCDN Support 03/17/2021 03:46 AM CDT'. To the right, it shows the date and time '12/20/2050 02:00:00 PM US/Central' and '10813 days 19:58:44'. There are buttons for 'Edit Worksheet', 'Unsubmit Bid', and 'Save'. Below the message, there is a table with columns: Line Item, Item Code, Item Description, UoM, Quantity, Unit Price, and Extension. The table lists 12 items, including Mobilization, Remove Concrete Curbs and Gutter, Remove Concrete Pavement - Driveways, Remove Bituminous Pavement - Driveways, Remove Bituminous Pavement, Remove Concrete Valley Gutter, Sawing Concrete Pavement - Full Depth, Sawing Bituminous Pavement - Full Depth, Common Excavation (EV), Subgrade Preparation, Subgrade Excavation, Remove Unsuitable Material (EV), and Select Granular Borrow (CV). The 'Base Bid Total' is \$24,408.00. At the bottom, there are buttons for 'Import from CSV', 'Export to CSV', 'Cancel', 'Unsubmit Bid', and 'Save'.

Line Item	Item Code	Item Description	UoM	Quantity	Unit Price	Extension
1	2021.501	MOBILIZATION	LS	1	\$1.00	\$1.00
2	2104.501	REMOVE CONCRETE CURBS AND GUTTER	LF	900	\$1.00	\$900.00
3	2104.503	REMOVE CONCRETE PAVEMENT - DRIVEWAYS	SF	80	\$2.00	\$160.00
4	2104.505	REMOVE BITUMINOUS PAVEMENT - DRIVEWAYS	SY	15	\$1.00	\$15.00
5	2104.505	REMOVE BITUMINOUS PAVEMENT	SY	73	\$1.00	\$73.00
6	2104.505	REMOVE CONCRETE VALLEY GUTTER	SY	19	\$2.00	\$38.00
7	2104.511	SAWING CONCRETE PAVEMENT - FULL DEPTH	LF	292	\$1.00	\$292.00
8	2104.513	SAWING BITUMINOUS PAVEMENT - FULL DEPTH	LF	340	\$1.00	\$340.00
9	2105.501	COMMON EXCAVATION (EV)	CY	23	\$1.00	\$23.00
10	2112.501	SUBGRADE PREPARATION	RDST	34	\$1.00	\$34.00
11	2105.507	SUBGRADE EXCAVATION, REMOVE UNSUITABLE MATERIAL (EV)	CY	500	\$1.00	\$500.00
12	2105.522	SELECT GRANULAR BORROW (CV)	CY	600	\$1.00	\$600.00
Base Bid Total:						\$24,408.00

A bid submitted confirmation message receipt is sent to the individual's 'Message Center' on QuestCDN.

The screenshot shows a 'View Message' window. On the left, there is an 'Inbox' list with columns: Priority, Type, and From. The first message is 'Normal Bid Submission Administrator'. The main content area shows the details of the message: 'From: Administrator', 'Recipient: QuestCDN Support', 'Type: Bid Submission', 'Priority: Normal', 'Received: 01/02/2021 10:04:18 AM', and 'Subject: Protect Name and eBidDoc number'. Below this, the message body reads: 'Dear QuestCDN member, This message is sent to notify you that your bid QuestCDN ##### "Project Name" has been submitted at (date/time/time zone). Cordially, The QuestCDN team'.

View Message

Previous Next Reply Forward Print Delete

From: Administrator
Recipient: QuestCDN Support
Type: Bid Submission
Priority: Normal
Received: 01/02/2021 10:04:18 AM
Subject: Protect Name and eBidDoc number

Dear QuestCDN member,

This message is sent to notify you that your bid QuestCDN ##### "Project Name" has been submitted at (date/time/time zone).

Cordially,
The QuestCDN team

Making Changes After Successful Bid Submission

The owner/solicitor does not have access to the bid information until after the bid closes. Qualification requirements and the bid worksheet can be revised before the bid clock closes.

Changing Prices

Make changes while the original bid is submitted. Resubmit bid as many times as needed before the bid closes.

From the 'Bid Worksheet' tab select 'Edit Worksheet' button to revise unit prices. Enter revised unit prices under the populated 'Edited' column. When completed, select 'Submit Bid', enter Online Bid Id code, check 'I agree' and 'Submit'. The owner/solicitor of the project will receive the last bid submission with the revised unit prices. The changes will not be updated if the bid is not resubmitted.

QUESTvBID Contact Quest Logout

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Home Shelly Kahl - PREMIER

The bid was successfully submitted.

Arcadia-Sierra Madre Trunk Sewer Sections 2&5 (#7445524) 08/20/2021 09:54:00 AM US/Central
Owner: Los Angeles County Sanitation Dist. Engineering
Solicitor: Bid Submitted by Shelly Kahl - PREMIER 05/19/2021 04:38 PM CDT 92 days 17:15:12

Revise Unit Prices Edit Worksheet Unsubmit Bid Save

Qualification Information Bid Worksheet

Sections shown in this color are not included in the Base Bid Total - Mandatory completion
Sections shown in this color are not included in the Base Bid Total - Optional completion
Sections shown in this color are fixed and cannot be edited by the bidder

Line Item	Item Code	Item Description	UoM	Quantity	Unit Price	Extension	Submitted
Base bid							
1	1	Mobilization	LS	1	\$100,000.00	\$100,000.00	
2	2	"12" Cured-In-Place Pipe Liner"	LF	395	\$125.00	\$49,375.00	
3	3	"15" Cured-In-Place Pipe Liner"	LF	7255	\$93.00	\$674,715.00	
4	4	"15" Cured-In-Place Pipe Liner"	LF	8847	\$93.00	\$822,771.00	
5	5	House Connection - Re-Establishment to Sewer Ipe Liner	EA	307	\$115.00	\$35,305.00	
6	6	Manhole Rehabilitation - CAC	EA	109	\$3,000.00	\$327,000.00	
9	9	Cleanouts - Verify and Locate	EA	67	\$650.00	\$43,550.00	
10	10	Cleanout	EA	67	\$8,500.00	\$569,500.00	
11	11	Flow Bypass	LS	1	\$250,000.00	\$250,000.00	
12	12	Rain Events/Reinstall Flow Diversion/Bypass	ea	2	\$3,500.00	\$7,000.00	
13	13	Temporary AC	TN	24	\$55.00	\$1,320.00	
14	14	Asphalt Concrete Pavement	SF	6078	\$6.00	\$36,468.00	
Base Bid Total:						\$2,972,504.00	

Import from CSV Export to CSV Cancel Unsubmit Bid Save

QUESTvBID Contact Quest Logout

Providing State-of-the-Art Bid Management Systems for Public Construction, RFPs, and General Goods & Services Procurement since 1999

Home QuestCDN Support

V-Bid Training Demo - PUBLISHED (#6035400) 12/20/2020 02:00:00 PM US/Central
Owner: Project Owner
Solicitor: Bid Submitted by QuestCDN Support 03/17/2021 03:46 AM CDT 10813 days 19:56:15

Submit Changes Unsubmit Bid Save

Qualification Information Bid Worksheet

Sections shown in this color are not included in the Base Bid Total - Mandatory completion
Sections shown in this color are not included in the Base Bid Total - Optional completion
Sections shown in this color are fixed and cannot be edited by the bidder

Line Item	Item Code	Item Description	UoM	Quantity	Unit Price	Extension	Submitted
Base bid							
1	2021.501	MOBILIZATION	LS	1	\$1.00	\$1.00	\$1.00
2	2104.501	REMOVE CONCRETE CURB AND GUTTER	LF	900	\$2.00	\$1,800.00	\$1.00 \$900.00
3	2104.503	REMOVE CONCRETE PAVEMENT - DRIVEWAYS	SF	80	\$2.00	\$160.00	\$2.00 \$160.00
4	2104.505	REMOVE BITUMINOUS PAVEMENT - DRIVEWAYS	SY	15	\$1.00	\$15.00	\$2.00 \$15.00
5	2104.505	REMOVE BITUMINOUS PAVEMENT	SY	73	\$1.00	\$73.00	\$1.00 \$73.00
6	2104.505	REMOVE CONCRETE VALLEY GUTTER	SY	19	\$25.00	\$475.00	\$2.00 \$38.00
7	2304.511	SAWING CONCRETE PAVEMENT - FULL DEPTH	LF	292	\$1.00	\$292.00	\$1.00 \$292.00
8	2104.513	SAWING BITUMINOUS PAVEMENT - FULL DEPTH	LF	340	\$1.00	\$340.00	\$1.00 \$340.00
9	2105.501	COMMON EXCAVATION (EV)	CY	23	\$1,500.00	\$34,500.00	\$1.00 \$23.00
10	2112.501	SUBGRADE PREPARATION	RDST	34	\$61.00	\$2,074.00	\$1.00 \$34.00
11	2105.502	SUBGRADE EXCAVATION, REMOVE	RDST	120	\$8.00	\$960.00	\$1.00 \$120.00
Base Bid Total:						\$62,262.00	\$24,408.00

Import from CSV Export to CSV Cancel Unsubmit Bid Save

Qualification Information Bid Worksheet

Sections shown in this color are not included in the Base Bid Total - Mandatory completion
Sections shown in this color are not included in the Base Bid Total - Optional completion
Sections shown in this color are fixed and cannot be edited by the bidder

Edit Column

Line Item	Item Code	Item Description	UoM	Quantity	Unit Price	Extension	Unit Price	Extension
Base bid								
1	1	Mobilization	LS	1	\$15,000.00	\$15,000.00	\$100,000.00	\$100,000.00
2	2	"12" Cured-In-Place Pipe Liner"	LF	395	\$125.00	\$49,375.00	\$125.00	\$49,375.00
3	3	"15" Cured-In-Place Pipe Liner"	LF	7255	\$93.00	\$674,715.00	\$93.00	\$674,715.00
4	4	"15" Cured-In-Place Pipe Liner"	LF	8847	\$95.00	\$840,465.00	\$93.00	\$822,771.00
5	5	House Connection - Re-Establishment to Sewer Ipe Liner	EA	307	\$115.00	\$35,305.00	\$115.00	\$35,305.00
6	6	Manhole Rehabilitation - CAC	EA	109	\$3,000.00	\$327,000.00	\$3,000.00	\$327,000.00
9	9	Cleanouts - Verify and Locate	EA	67	\$650.00	\$43,550.00	\$650.00	\$43,550.00
10	10	Cleanout	EA	67	\$10,000.00	\$670,000.00	\$8,500.00	\$569,500.00
11	11	Flow Bypass	LS	1	\$25,000.00	\$25,000.00	\$250,000.00	\$250,000.00
12	12	Rain Events/Reinstall Flow Diversion/Bypass	ea	2	\$3,500.00	\$7,000.00	\$3,500.00	\$7,000.00
13	13	Temporary AC	TN	24	\$55.00	\$1,320.00	\$55.00	\$1,320.00
14	14	Asphalt Concrete Pavement	SF	6078	\$6.00	\$36,468.00	\$6.00	\$36,468.00
Base Bid Total:						\$2,780,698.00	\$2,972,504.00	

Import from CSV Export to CSV Cancel Unsubmit Bid Save

Unsubmit Bid

Click 'Unsubmit Bid' to remove bid in its entirety (all data entered will remain saved.) Make changes to the qualification and/or bid worksheet page. Re-submit bid before the end of the bid closing. The bid will not be received by the owner/solicitor if the bid is not resubmitted.

A 'Bid Unsubmitted' email is sent to the individual's email address and a confirmation message is sent to the individuals 'Message Center'.

Example Bid Unsubmitted by user.

BID UNSUBMITTED

Dear _____

This message is sent to notify you that you UNSUBMITTED your bid for 7638906 eBidDoc number vBid User Guides. at 5/18/21 2:33PM CDT

You must resubmit our bid before the bid close date for it to be available at the bid letting.

Transactions & Receipts

'Transactions & Receipts' contain a record of downloaded transactions and receipts. Click the highlighted column name to sort. Searchable fields include the 'Date', 'Amount', 'Reason', 'Quest eBidDoc™ No', 'Created By User', 'Status', 'Type' and 'Receipt'. Change the calendar 'Beginning Date' and 'Ending Date' to select a specific date range. Click the 'Print Page' button to print to pdf or save. Click on the highlighted transaction number to access and print detailed receipt and bid posting information.

Company Info User Info & Online Bid ID Code Membership Profile Payment Transactions & Receipts

Beginning Date: 05/01/2021 Ending Date: 07/28/2021

Show 25 entries Print Page

Date	Amount	Reason	Quest eBidDoc™ No	Created By User	Status	Type	Receipt
05/13/2021 08:57 AM	15.00	eBidDoc download fee 7732006.pdf	7732006	Robin Pinegar	auto void	download	63034332736

Showing 1 to 1 of 1 entries

Previous 1 Next

Previous Save

Resources

The resource tab contains frequently asked questions and answers, user guides and instructional videos. Click on the question name to open the field and view the answer. Click 'Support@QuestCDN' link to request assistance by sending an email to QuestCDN Customer Support team. Click on a guide or video link to access and download information.



Prepared By:
Jason Ziemer, Community Development Director
Presenter: Jason Ziemer, Community Development Director
Date: 01/18/2024

Board & Commission: City Council

Subject: Approve Revisions to Section 23, Paid Time Off (PTO), of the North Branch Personnel Policy.

Overview / Background

The Minnesota Legislature approved a new law, establishing minimum standards for employers to provide workers with paid time off. The new law, commonly referred to as Earned Sick and Safe Time (ESST), was created to allow employees time to care for themselves and family members, and to ensure their protection and wellbeing, as well as safeguard the public welfare, health and safety of employees. The new law took effect January 1, 2024 and is required of both private and public employers. In summary, the law grants time off to any full-time, part-time and temporary employee who works at least 80 hours in a year. Employees eligible and qualify for ESST receive one (1) hour of ESST for every 30 hours worked with the ability to accumulate at least 48 hours of ESST each year, up to a maximum ESST balance of 80 hours.

The City of North Branch currently provides its employees with Paid Time Off (PTO); this leave may be used for either sick and/or personal reasons (i.e. vacation). All North Branch employees are currently covered under Collective Bargaining Agreements (CBAs) through four (4) different union groups. Current PTO accrual rates, through those CBAs and the City's Personnel Policy, exceed the ESST thresholds as established by ESST. However, revisions to the North Branch Personnel Policy is required to ensure City policy aligns with state law. Interim City Administrator Jason Ziemer and Finance Director Sharon Wright worked with the City Attorney's office on those revisions, which were also reviewed by the City's Department Heads and provided to each union business agent as a courtesy. Revisions to the City's Personnel Policy is not subject to union negotiation.

Staff Recommendation

City staff recommend approval of the revisions to Section 23, Paid Time Off (PTO) as

presented.

Recommended City Council Action

Motion to revise Section 23, Paid Time Off (PTO), of the City of North Branch Personnel Policy to align with the new Earned Sick and Safe Time (ESST) state law.

Voting Requirements:

Voting Options Simple Majority

SECTION 23 Paid Time Off

PTO Eligibility

All employees who work at least 80 hours during a 12-month period are eligible to earn Paid Time Off (PTO).

Employees covered by a collective bargaining agreement will accrue Paid Time Off in accordance with the terms of their collective bargaining agreement. Non-covered full-time employees will accrue Paid Time Off in accordance with the Paid Time Off Schedule below. Part-time employees who work 20 hours per week will accrue Paid Time Off for that week in proportion to the average number of hours worked each pay period. PTO hours may be used as accrued.

Employees working less than 20 hours per week, but at least 80 hours in a calendar year, will accrue PTO at a rate of one (1) hour for every thirty (30) hours worked, up to 48 hours per year. Such employees can carryover unused PTO hours into the following year, but the total number of accrued PTO hours shall not exceed 80 hours at any given time.

The following chart provides information regarding Paid Time Off for full-time employees. Years of service are calculated from the date of hire.

Paid Time Off Schedule for Full-time Employees

Completed Years of Full Time Service	Paid Time
0-5	168 hours per year/6.46 hours per pay cycle
6-10	192 hours per year/7.38 hours per pay cycle
11-15	216 hours per year/8.31 hours per pay cycle
after 15	240 hours per year/9.23 hours per pay cycle

Benefit year for Paid Time Off is January 1st through December 31st. Full-time employees may carry over a maximum number of hours of PTO from benefit year to benefit year as set forth in their applicable collective bargaining agreement. Part-time employees' maximum carry-over will be prorated and based on their number of hours worked.

One (1) day of Paid Time Off shall equal eight (8) hours for full-time employees. Part-time employees will receive PTO based on normal hours worked per day/week not to exceed 29.99 hours per week.

When a paid holiday falls on a working day during an employee's Paid Time Off, the day of the holiday will not be counted as a day of Paid Time Off.

PTO Rate

Eligible employees using PTO will be compensated at their normal hourly rate which does not include tips, gratuity, overtime, premium pay, or other bonus compensation the employee might otherwise receive during work. Employees whose pay fluctuates depending on their job duties will be compensated at the hourly rate for the job during which PTO is taken.

Employees may use PTO for any use, including but not limited to the following reasons related to sick and safe leave:

1. Their own mental or physical illness, injury or other health condition, to seek a medical diagnosis, care, or treatment of a mental or physical illness, injury or health condition, or for preventative medical or health care
2. For the care of a family member who has a mental or physical illness, injury or other health condition; or who needs medical diagnosis, care or treatment of a mental or physical illness, injury, or other health condition; or who needs preventative medical or health care;
3. For absences due to domestic abuse, sexual assault, or stalking, to obtain services from a victim services organization, to obtain psychological or other counseling, to seek relocation or take steps to secure an existing home due to domestica abuse, sexual assault, or stalking, or to seek legal advice or take legal action including preparing for or participating in any civil criminal legal proceeding relating to or resulting from domestic abuse, sexual assault, or stalking;
4. Due to the City's closure due to a weather or other public emergency or an employee's need to care for a family member whose school or place of care has been closed due to weather or other public emergency;
5. For the employee's inability to work or telework because they are prohibited from working by the City due to health concerns related to the potential transmission of a communicable illness related to a public emergency, or seeking or awaiting the results of a diagnostic test for, or a medical diagnosis of, a communicable disease related to a public emergency and such employee has been exposed to a communicable disease or the City has requested a test or diagnosis; and
6. When a health authority or health care professional has determined that the employee or their family member in the community would jeopardize the health of others because of the exposure of the employee or family member of the employee to a communicable disease, whether or not the employee or family member has actually contacted the disease.

Notice

Where use of PTO is reasonably foreseeable, Eemployees are expected to provide as much advance notice as possible, or -when requesting time off, at least seven (7) days in advance of the absence. If an employee's use of PTO related to sick and safe reasons is unforeseeable or unplanned, the employee must advise their supervisor as soon as practicable. All use of Paid Time Off must be pre-approved by the Department Head with the exception of the unexpected time off due for to injury, illness (i.e. sick leave), funerals, sick and safe leave reasons, etc. in which case, notice of not working must be given before each shift begins or as soon thereafter as possible

If an employee uses PTO under this section for more than three (3) consecutive days of scheduled work for sick and safe reasons, the City may require the employee to submit reasonable documentation indicating the employee is taking PTO for a purpose covered by this section or applicable law.

-if prevented from making contact for reasons related to seeking medical care. In the case of injury, the employee will cooperate in authorizing the Department Head to obtain necessary medical, hospital or other records that establish that the employee may return to work without restrictions. If more than two (2) consecutive days of unscheduled Paid Time Off are used, the Department Head may make an inquiry into the employee's absence, and the employee shall cooperate in authorizing the Department Head to obtain any necessary medical, hospital or other records that validate the unscheduled absence. Whenever possible, all employees must receive permission from the Department Head at least ten (10) working days prior to taking scheduled Paid Time Off. No employee will be permitted to use Paid Time Off for the purposes of receiving double pay.

Once a schedule is made, should an employee need time off during their scheduled work day(s), employees will need prior approval from their supervisor and in the case of a scheduled liquor store employee, those employees will need to find coverage for their absence, unless their absence is for sick

and safe reasons. In the case of an emergency as defined by the applicable collective bargaining agreement, it will be up to the supervisor to find the necessary coverage. All scheduled employees will use their accrued PTO for requested time off from a scheduled shift unless it is for an extended leave of absence. In those cases, employees will seek approval from the City Administrator for unpaid leave or will follow state and federal laws. (See Section 21 for more information about work schedules)

~~Any employee leaving the service of the City in good standing will be compensated 100% for Paid Time Off accrued to the day of separation as required by law. Such pay for accumulated Paid Time Off will be at the same rate as the hourly rate of the employee's base salary. Paid Time Off may not be used to extend an employee's actual termination date.~~

Worker's Compensation

In the case of disability from a work-related disease or injury for which Worker's Compensation benefits are available, an employee may elect to use Paid Time Off benefits to supplement his/her Worker's Compensation benefits to the extent necessary to increase his or her income to their net wage prior to the injury or onset of the disease.

Retaliation Prohibited

The City is prohibited from retaliating against an employee for exercising or attempting to exercise any rights to use PTO for a reason related to sickness or safety as provided by applicable law. If an employee believes they were retaliated against for their legitimate use of PTO for a reason related to sickness or safety under this policy or applicable law, they may file a lawsuit in district court.

Complaint

An employee alleging a violation of the Minnesota Earned Sick & Safe Time Law may file a complaint with the Minnesota Department of Labor and Industry.

Payout of PTO

Any full-time or part-time employee that works at least 20 hours per week leaving the service of the City in good standing will be compensated 100% for Paid Time Off accrued to the day of separation as required by law. Such pay for accumulated Paid Time Off will be at the same rate as the hourly rate of the employee's base salary. Paid Time Off may not be used to extend an employee's actual termination date.

Employees working less than 20 hours per week are not eligible to receive pay out of accrued but unused PTO time upon separation from employment with the City.

~~When a paid holiday falls on a working day during an employee's Paid Time Off, the day of the holiday will not be counted as a day of Paid Time Off.~~

~~One (1) day of Paid Time Off shall equal eight (8) hours for full-time employees. Part time employees will receive PTO based on normal hours worked per day/week not to exceed 29.99 hours per week.~~

~~In the case of disability from a work-related disease or injury for which Worker's Compensation benefits are available, an employee may elect to use Paid Time Off benefits to supplement his/her Worker's Compensation benefits to the extent necessary to increase his or her income to their net wage prior to the injury or onset of the disease.~~

HISTORY

Amended by Policy. April 25 on 4/25/2023

~~When a paid holiday falls on a working day during an employee's Paid Time Off, the day of the holiday will not be counted as a day of Paid Time Off.~~

~~One (1) day of Paid Time Off shall equal eight (8) hours for full-time employees. Part-time employees will receive PTO based on normal hours worked per day/week not to exceed 29.99 hours per week.~~

~~In the case of disability from a work-related disease or injury for which Worker's Compensation benefits are available, an employee may elect to use Paid Time Off benefits to supplement his/her Worker's Compensation benefits to the extent necessary to increase his or her income to their net wage prior to the injury or onset of the disease.~~

~~HISTORY~~

~~Amended by Policy. April 25 on 4/25/2023~~



Prepared By:
Ragini Varma, City Clerk / IT Director
Presenter: Ragini Varma, City Clerk / IT Director
Date: 01/19/2024

Board & Commission: City Council

Subject: Approve Gambling LG220 Exempt Permit - Wild River Chapter MN Deer Hunter Association

Background Information:

Wild River Chapter MN Deer Hunter Association, will be holding a Bingo at Tailgaters, 6355 Elm Street, North Branch, MN 55056 on March 3rd, 2024. The clerk's office usually signs off on the application before they can send it to the Minnesota Alcohol & Gambling Enforcement office so that they can be issued a permit to carry out such an event as requested after council approval. Most of these applications need to be submitted to the Minnesota Gambling Control Board a few months in advance for the state to process it.

Staff Recommendation & Requested City Council Action:

Staff recommends council to approve the application for submission to the Minnesota Gambling Control Board by Wild River Chapter MN Deer Hunter Association.

Voting Requirements:

Voting Options Simple Majority



Prepared By:
Ragini Varma, City Clerk / IT Director
Presenter: Ragini Varma, City Clerk / IT Director
Date: 01/19/2024

Board & Commission: City Council

Subject: Approve the LG240B Application to Conduct Excluded Bingo - St. Gregory Knights of Columbus Council 10016

Background Information:

St. Gregory Knights of Columbus Council 10016, has held gambling events including bingo, raffle and others at different premises in the past within the city limits of North Branch. This year they will be holding a bingo event at St Gregory the Great Catholic Church on March 22, 2024, and November 15th, 2024. The clerk's office signs off on the application before they can send it to the Minnesota Alcohol & Gambling Enforcement office so that they can be issued a permit to carry out such an event as requested. Most of these applications need to be submitted to the Minnesota Gambling Control Board a few months in advance for the state to process it.

Deadline:

ASAP

Staff Recommendation and Requested City Council Action:

Staff recommends council approval of this application for submission to the Minnesota Gambling Control Board by Knights of Columbus.

Voting Requirements:

Voting Options Simple Majority



Prepared By:
Jason Ziemer, Community Development Director
Presenter: Jason Ziemer, Community Development Director
Date: 01/17/2024

Board & Commission: City Council

Subject: Approve a Resolution Vacating Certain Drainage & Utility Easements as Dedicated with Old Little Sweden Plat 2

Overview / Background

Kwik Trip, Inc. (Applicant) received Preliminary Plat approval for Kwik Trip 930 (Plat) on November 14, 2023, per Resolution No. 071-23-CC, and Final Plat approval on December 12, 2023, per Resolution No. 080-23-CC. Approval of said Plat resulted in the combination and subdivision of the 8.11-acre parcel, creating three (3) lots located at adjacent to Highway 95 and currently addressed 5435 St. Croix Trail (Subject Property). The parcel is the current location of a Kwik Trip gas station and convenience store. The Plat supports the development of 10,250-square foot automotive services and retail center, to be called Les Schwab Tire Center (Development).

Final Plat approval included a condition, requiring the vacation of certain Drainage and Utility Easements (Easements), dedicated with the Old Little Sweden Plat 2. Said Plat approval combined Lot 2, Block 1 of the Old Little Sweden Plat 2 into the new Lot 3, Block 1 of the Kwik Trip 930 Plat, which included the dedication of new drainage and utility easements. As a result, certain easements tied to Lot 2, Block 1 and Lot 3, Block 1 of Old Little Sweden Plat 2 are no longer necessary for public purpose, allowing them to be vacated.

Vacating these Easements will allow the Owner to complete the Final Plat and record all documents with Chisago County, and move to closing with the prospective buyer for the Development. Once complete, City staff will also be able to finalize the development plans.

Staff Recommendation

City staff recommend approval of the easement vacation.

Recommended City Council Action

Motion to approve a resolution, vacating drainage and utility easements of those parts of Lot 2, Block 1 and Lot 3, Block 1 as dedicated with Old Little Sweden Plat 2 as described and depicted in the attached exhibits.

Voting Requirements:

Voting Options Simple Majority

**CITY OF NORTH BRANCH
RESOLUTION NO. R-7-2024**

**RESOLUTION THE VACATION OF CERTAIN DRAINAGE AND UTILITY EASEMENTS
AS PREVIOUSLY DEDICATED WITH & PART OF LOT 2, BLOCK 1 AND LOT 3, BLOCK 1
OLD LITTLE SWEDEN PLAT 2**

WHEREAS, the Kwik Trip, Inc. ("Owner"), previously received Final Plat approval for Kwik Trip 930 ("Plat"), conditioned upon the vacation of certain Drainage and Utility Easements ("Easements") dedicated as part of Old Little Sweden Plat 2, as legally described in Exhibit A and depicted in Exhibits B and C; and,

WHEREAS, said Plat was approved on December 12, 2023, per Resolution No. 080-23-CC, which included the dedication of new Drainage and Utility Easements; and,

WHEREAS, the Owner applied for the vacation of those certain Easements as stated herein, and the City Engineer and Public Works Director have reviewed said request and have determined said Easements no longer serve any public purpose and may be vacated; and,

WHEREAS, pursuant to Minnesota Statute §412.851 ("State Statute") the City Council held a Public Hearing ("Hearing") on January 23, 2024 to consider and receive public comment regarding the proposed Easements to be vacated; and,

WHEREAS, notice of the Hearing was posted, published in the City's official newspaper, and mailed to any and all owners of affected properties, as required by State Statute; and,

WHEREAS, no verbal or written comments were received; and,

WHEREAS, following the Hearing, the City Council found the Easements, as legally described and depicted herein, no longer necessary and have no interest to the public.

NOW THEREFORE BE IT RESOLVED, BY THE CITY COUNCIL OF THE CITY OF NORTH BRANCH, MINNESOTA, the certain Drainage and Utility Easements of Lot 2, Block 1 and Lot 3, Block 1 of Old Little Sweden Plat 2, as legally described in Exhibit A and depicted in Exhibits B and C, are hereby declared vacated.

BE IT FURTHER RESOLVED, the City Clerk shall prepare a Notice of Completion of Vacation, which shall be signed by the Mayor and City Clerk, and recorded with this resolution in the land records office of Chisago County.

Moved by Councilmember _____. Seconded by Councilmember _____.

The following voted in favor of said resolution:

The following voted against the same:

The following abstained:

Whereupon said resolution was declared duly passed and adopted, and was signed by the Mayor and attested by the City Clerk dated this 23rd day of January, 2024.

Kevin Schieber, Mayor

ATTEST

Ragini Varma, City Clerk

EXHIBIT A

DRAINAGE & UTILITY EASEMENT VACATION LEGAL DESCRIPTIONS

Existing Legal Description(s)

The drainage and utility easements as dedicated on the plat of OLD LITTLE SWEDEN PLAT 2, Chisago County, Minnesota, which lie 5.00 feet on both sides of the following described centerline:

Commencing at the northeast corner of Lot 2, Block 1, said OLD LITTLE SWEDEN PLAT 2; thence on an assumed bearing of South 89 degrees 49 minutes 35 seconds West along the north line of said Lot 2 a distance of 10.00 feet to the point of beginning of said centerline to be described; thence continuing South 89 degrees 49 minutes 35 seconds West along said north line a distance of 274.00 feet to the northwest corner of said Lot 2; thence South 0 degrees 10 minutes 25 seconds East along the west line of said Lot 2 a distance of 148.00 feet to the southwest corner of said Lot 2; thence North 89 degrees 49 minutes 35 seconds East along the south line of said Lot 2 a distance of 46.00 feet and said centerline there terminating.

AND

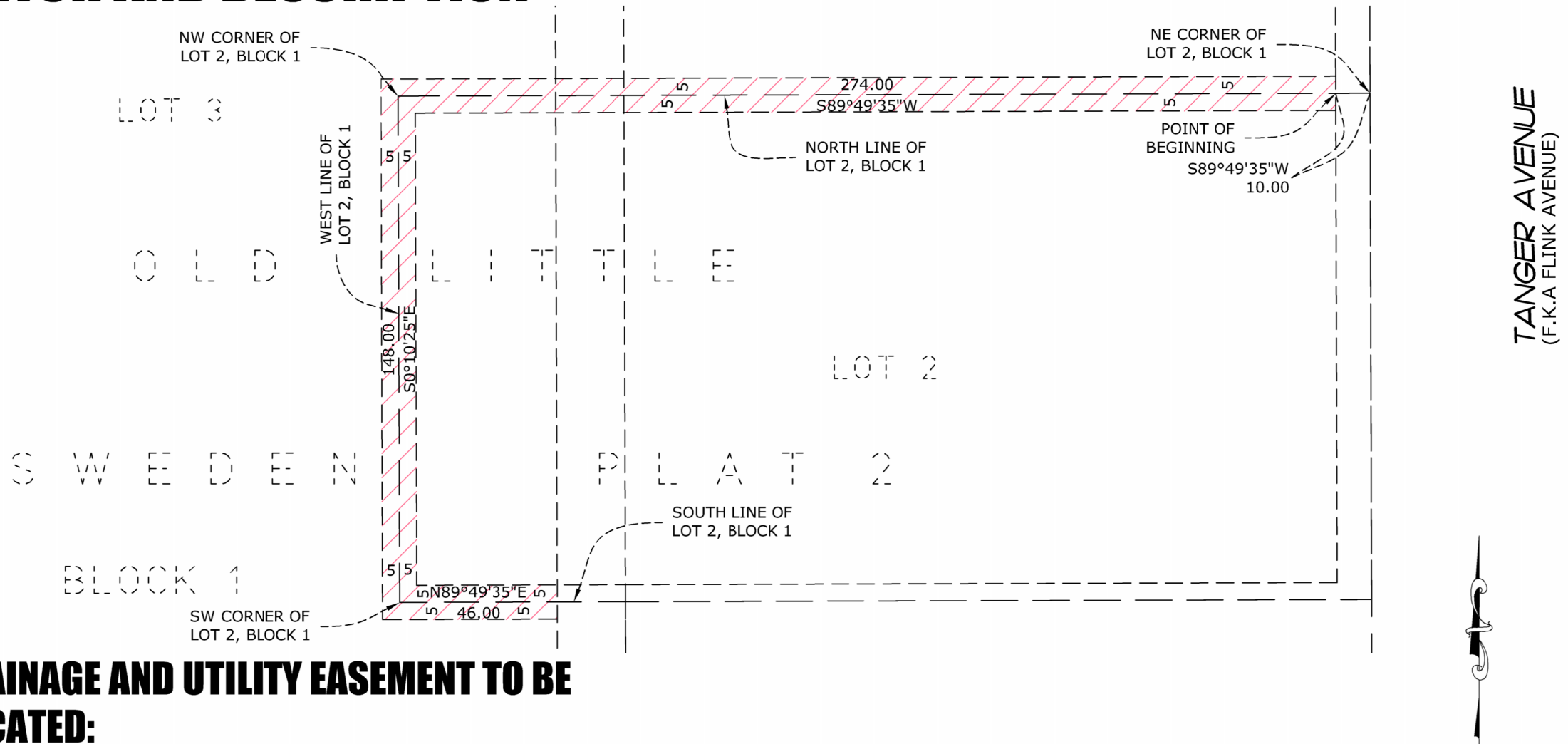
All of the drainage and utility easement lying over, under, and across that part of Lot 3, Block 1, OLD LITTLE SWEDEN PLAT 2, Chisago County, Minnesota, as created and described in Document Number 473502, which lies 20.00 feet to the right, as measured at right angles to the following described line:

Commencing at the southwest corner of Lot 1, Block 1, said OLD LITTLE SWEDEN PLAT 2; thence on an assumed bearing of North 89 degrees 49 minutes 35 second East along the south line of said Lot 1 a distance of 142,00 feet; thence South 0 degrees 10 minutes 25 seconds East a distance of 45,00 feet to the north line of Lot 2, Block 1, said OLD LITTLE SWEDEN PLAT 2 and the point of beginning of said line to be described; thence South 89 degrees 49 minutes 35 seconds West along said north line of Lot 2 a distance of 46,00 feet to the northwest corner of said Lot 2; thence South 0 degrees 10 minutes 25 seconds East along the west line of said Lot 2 a distance of 148,00 feet to the southwest corner of said Lot 2; thence North 89 degrees 49 minutes 35 seconds East along the south line of said Lot 2 a distance of 46,00 feet and said line there terminating.

EXHIBIT B

**SKETCH OF AREA TO BE VACATED
OF LOT 2, BLOCK 1 OF OLD LITTLE SWEDEN PLAT 2**

~for~ KWIK TRIP 930



DRAINAGE AND UTILITY EASEMENT TO BE VACATED:

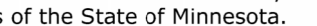
The drainage and utility easements as dedicated on the plat of OLD LITTLE SWEDEN PLAT 2, Chisago County, Minnesota, which lie 5.00 feet on both sides of the following described centerline:

Commencing at the northeast corner of Lot 2, Block 1, said OLD LITTLE SWEDEN PLAT 2; thence on an assumed bearing of South 89 degrees 49 minutes 35 seconds West along the north line of said Lot 2 a distance of 10.00 feet to the point of beginning of said centerline to be described; thence continuing South 89 degrees 49 minutes 35 seconds West along said north line a distance of 274.00 feet to the northwest corner of said Lot 2; thence South 0 degrees 10 minutes 25 seconds East along the west line of said Lot 2 a distance of 148.00 feet to the southwest corner of said Lot 2; thence North 89 degrees 49 minutes 35 seconds East along the south line of said Lot 2 a distance of 46.00 feet and said centerline there terminating.



DENOTES DRAINAGE AND UTILITY
EASEMENT TO BE VACATED
(4,680 SQ. FT.)

NORTH

SCALE: 1" = 40'	BEARING DATUM: Chisago County	JOB NO. 23.0477	DRAWN BY: BPN	CHECKED: JER	
I hereby certify that this plan, survey or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota. By:  Minnesota License No. 41578 Dated 8th day of December 2023.		DATE: 12/5/2023			
		REVISIONS			
		1			
		2			
		3			
		4			
		#	DATE	DESCRIPTION	BY



E. G. RUD & SONS, INC.

PROFESSIONAL LAND SURVEYORS

6776 LAKE DRIVE NE, SUITE 110

LINO LAKES, MINNESOTA 55014

TEL. (651) 361-8200

FAX (651) 361-8701

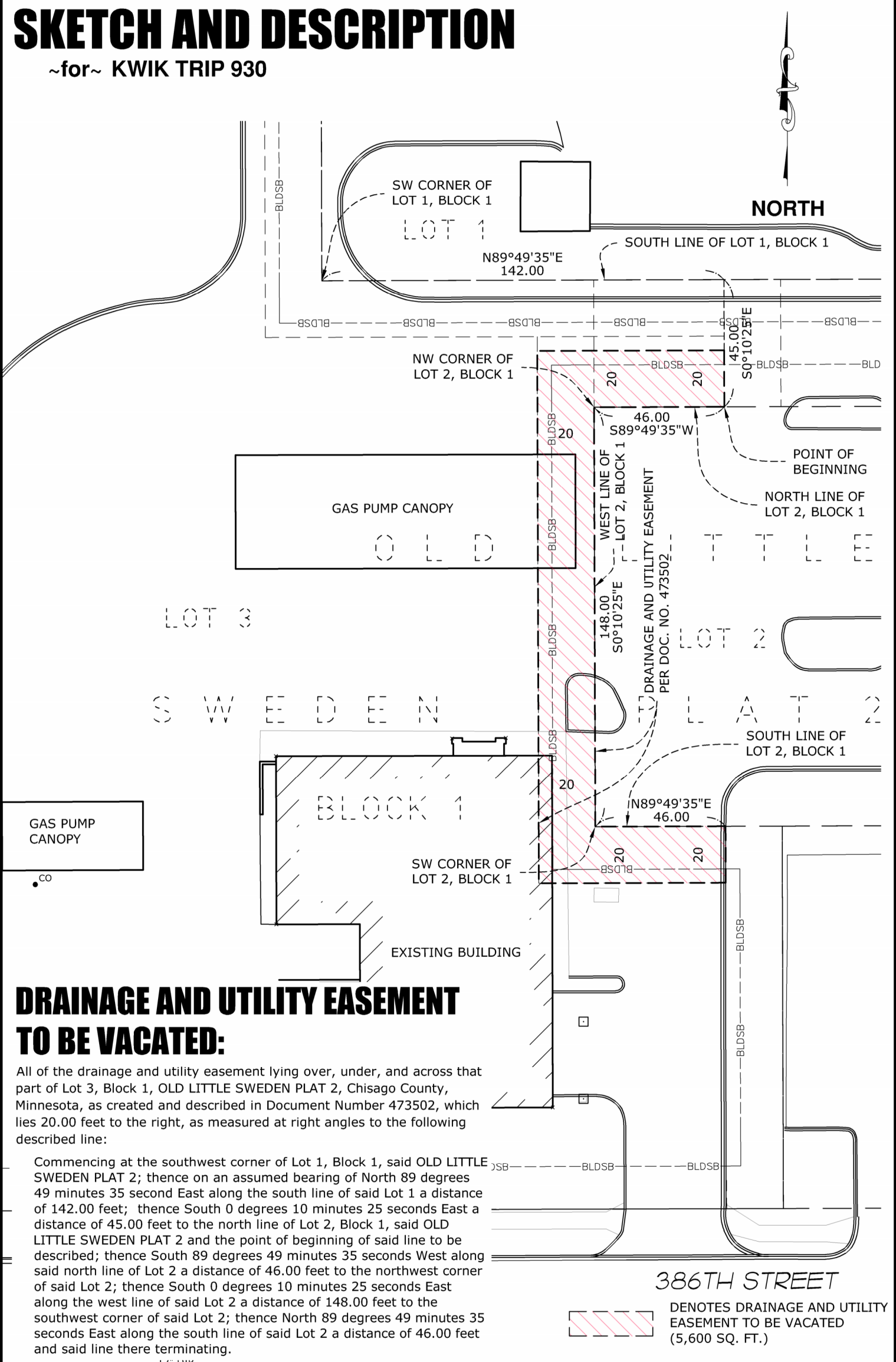
www.egrud.com

EXHIBIT C

**SKETCH OF AREA TO BE VACATED
OF LOT 3, BLOCK 1 OF OLD LITTLE SWEDEN PLAT 2**

SKETCH AND DESCRIPTION

~for~ KWIK TRIP 930

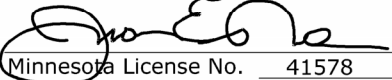


DRAINAGE AND UTILITY EASEMENT TO BE VACATED:

All of the drainage and utility easement lying over, under, and across that part of Lot 3, Block 1, OLD LITTLE SWEDEN PLAT 2, Chisago County, Minnesota, as created and described in Document Number 473502, which lies 20.00 feet to the right, as measured at right angles to the following described line:

Commencing at the southwest corner of Lot 1, Block 1, said OLD LITTLE SWEDEN PLAT 2; thence on an assumed bearing of North 89 degrees 49 minutes 35 second East along the south line of said Lot 1 a distance of 142.00 feet; thence South 0 degrees 10 minutes 25 seconds East a distance of 45.00 feet to the north line of Lot 2, Block 1, said OLD LITTLE SWEDEN PLAT 2 and the point of beginning of said line to be described; thence South 89 degrees 49 minutes 35 seconds West along said north line of Lot 2 a distance of 46.00 feet to the northwest corner of said Lot 2; thence South 0 degrees 10 minutes 25 seconds East along the west line of said Lot 2 a distance of 148.00 feet to the southwest corner of said Lot 2; thence North 89 degrees 49 minutes 35 seconds East along the south line of said Lot 2 a distance of 46.00 feet and said line there terminating.


DENOTES DRAINAGE AND UTILITY EASEMENT TO BE VACATED (5,600 SQ. FT.)

SCALE: 1" = 40'	BEARING DATUM: Chisago County	JOB NO. 23.0477AB	DRAWN BY: BPN		
I hereby certify that this plan, survey or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota. By:  Minnesota License No. 41578 Dated 8th day of December 2023.		DATE: 12/4/2023	 E. G. RUD & SONS, INC. PROFESSIONAL LAND SURVEYORS 6776 LAKE DRIVE NE, SUITE 110 LINO LAKES, MINNESOTA 55014 TEL. (651) 361-8200 FAX (651) 361-8701 www.egrud.com		
		REVISIONS			
		1			
		2			
		3			
4					
#	DATE	DESCRIPTION	BY		



Prepared By:
Dan Meyer, Police Chief
Presenter: Dan Meyer, Police Chief
Date: 01/23/2024

Board & Commission: City Council

Subject: 2023 Police Activity Report

Our police department provides 24/7 police coverage and currently consists of 14 sworn officers, including the police chief, two patrol sergeants, two investigators, a school resource officer, and eight patrol officers. In addition to our sworn staff, we have an office manager and an administrative assistant along with four volunteer police reserve officers. We hired four police officers during 2023; three were to fill vacant positions due to officer retirements and one was to fill a patrol officer position that was added in 2023.

Attached is an incident summary list of our police activity for the past six years. During 2023, the police department handled a total of 15,809 incidents/calls for service. Our department issued over 575 citations and made over 170 arrests during the calendar year.

Proactive enforcement and our commitment to community policing initiatives continue to be among our top priorities. As you can see, traffic stops and extra patrol initiatives such as area/park/business checks have increased. We believe that these initiatives directly contribute to the reductions that we saw this past year in categories such as burglaries, driving complaints, and motor vehicle crashes.

We also continue to expand and build upon our community engagement initiatives. We were involved with several community events during 2023, which include:

- **North Branch Area Chamber's Home and Garden Expo**
- **North Branch Area Chamber's Fall Harvest Festival**
- **North Branch High School Career Fairs**
- **Annual Night to Unite Event**
- **Chisago County Operation Community Connect**
- **Law Enforcement Special Olympics Torch Run**

- **Annual *Stuff the Squad* Event.**

In addition, we started our *Coffee with a Cop* Program which is funded through a grant we received from the MN Chiefs of Police Foundation, and we partnered with PDI Foods/McDonald's for our first ever *McHero Night*, where McDonald's raised just shy of \$1000 in donations for the department. During the upcoming year, we are looking to reestablish some of our past events, such as our annual *Bike Rodeo* and our annual *Day with Public Safety* event sponsored by the Rob Sanvik Agency/American Family Insurance.

Voting Requirements:

INFO

North Branch Police Department

Incident Summary List

6408 Elm St | North Branch, MN 55056 | Phone: (651) 674-8848

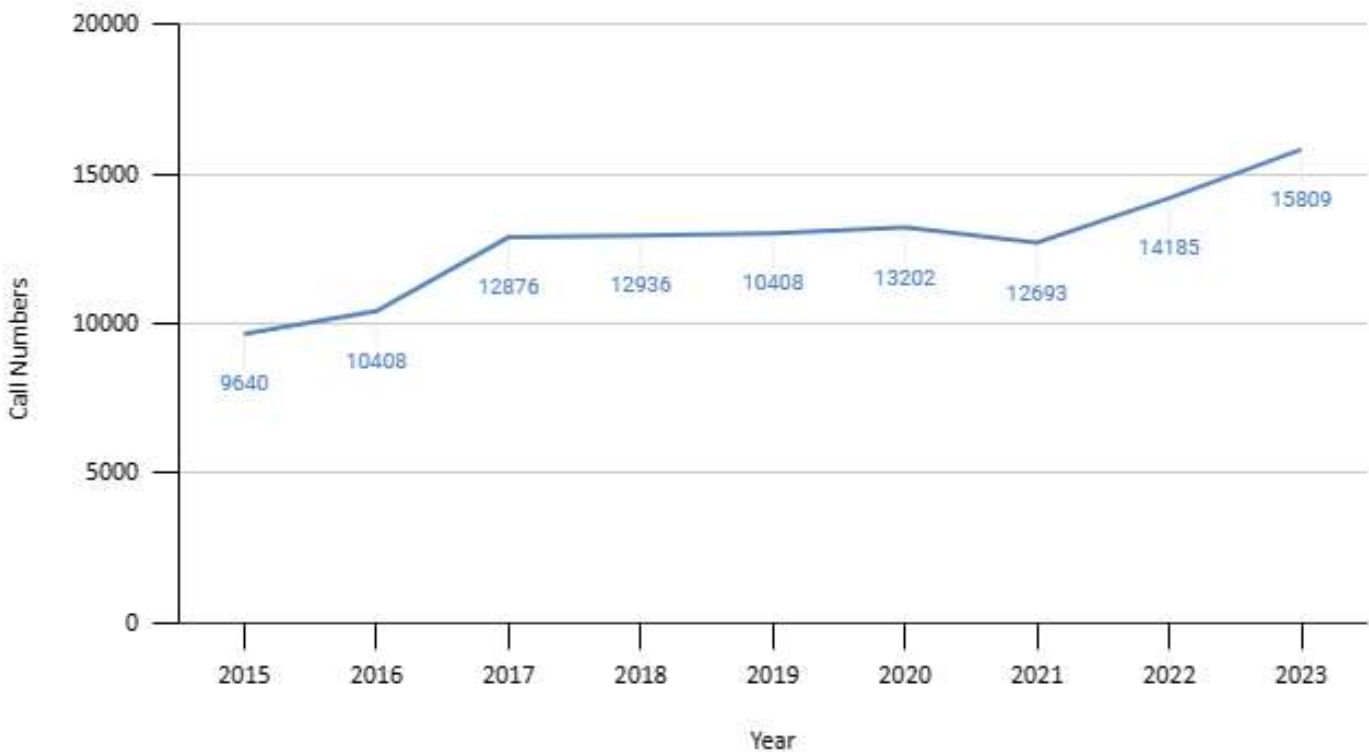
** For official use only **

	2018	2019	2020	2021	2022	2023
911 Text, Hangup, or Open Line	137	160	153	190	186	349
Abandoned Vehicle	23	24	27	21	23	9
Adult Protection/Neglect/Missing Person	91	82	58	69	88	85
Alarms	269	331	300	249	278	275
All Pedestrian Complaints	12	16	22	26	12	25
Animal Complaints	196	207	162	175	153	161
Assaults	41	49	37	51	42	62
Assist Other Agency	293	287	219	214	239	292
Attempt to Locate	8	10	17	14	24	10
ATV Permits	0	0	0	0	88	69
Backgrounds/Fingerprints	57	59	53	64	55	49
Burglary	30	30	32	21	22	12
Burning Complaint	19	41	30	19	16	30
Check the Welfare	186	178	196	220	266	238
Check the area, Business, Park, Residence	2858	2996	3240	2841	4336	5414
Child Dispute/Visitation	29	41	40	22	47	39
Child Protection/Neglect	296	258	217	179	210	210
Civil Complaint	54	51	54	62	72	55
Community Policing/Events	173	206	131	100	168	181
Crashes/Motor Vehicle Accidents	203	240	239	249	233	195
Criminal Damage to Property/Vandalism	73	57	81	92	75	58
Criminal Sexual Conduct	18	19	20	29	17	20
Death of Person	11	9	8	11	17	12
Deliver Emergency Message/Notification	2	3	4	9	2	5
Detail/Activities	265	128	92	69	102	89
Disorderly Conduct/Disturbance/Disputes	208	246	230	237	265	261
Dogbites	9	7	12	22	11	14
Dog Licenses	58	113	109	61	61	72
Domestic Disturbance/Domestic Assaults	121	114	146	156	136	137
Driving Complaint	234	354	376	321	266	240
Drug Activity	49	60	45	54	47	32
Dumping/Littering Complaint	18	14	31	16	17	30
Executive Order Violations	0	0	45	6	0	0
Extra Patrol/Radar Trailer	310	388	526	505	361	217
Financial Fraud-Check/Credit Card	77	56	63	85	59	65
Fire Call	55	55	34	38	39	44

Fireworks Complaint	51	24	53	36	30	17
Found Property	71	71	89	70	59	62
Funeral Escort	15	13	12	12	14	10
Gun Complaint/Shots Fired	19	20	38	17	14	19
Gun Permit	124	107	266	170	159	154
Harassment	76	74	69	77	69	79
HAZMAT Spill or Release	4	5	1	6	1	3
Homicide	0	0	0	0	0	0
Hunting/Fishing/Trapping Complaints	2	4	9	7	6	5
Informational ICR	197	121	114	108	102	121
Internal Affairs	1	1	0	0	1	4
Intoxicated Driver	31	22	38	44	30	36
Intoxicated person	23	31	27	31	16	20
Juvenile-Alcohol, Tobacco, Party, Etc.	105	123	95	53	84	98
Juvenile-Missing Person	29	46	36	35	40	25
Lift Assist	55	57	55	82	103	76
Lost Property	12	30	16	15	15	11
Mail Tampering	6	2	30	6	13	10
Medical Call	734	666	721	782	887	804
MI/Psych Issue	22	23	48	75	59	45
Miscellaneous/Other	298	311	253	215	183	163
Motorist Assist	73	120	85	93	62	71
Natural Gas/Propane Leak	14	20	25	22	19	16
Noise Complaint	69	44	43	68	71	101
OFP/HRO Service/Violations	35	18	38	36	35	46
Open Door/Window	7	10	6	22	15	5
Ordinance Violation/Peddler Complaint	6	17	10	9	10	15
Parking Complaint	146	204	114	178	240	192
Phone Fraud	13	12	4	5	4	3
Predatory Offender Reg	55	26	32	12	15	20
Probation Check/PBT	46	46	23	10	25	11
Public Assist	245	206	197	265	306	357
Pursuit-Vehicle	9	6	9	10	7	8
Recovered property/vehicles	1	5	9	10	6	2
Road Hazard	61	71	75	48	54	45
Robbery	1	2	2	1	4	2
School Related Complaints/Duties (SRO)	0	0	57	68	61	23
Squad Checks	361	633	790	1035	966	961
Stop arm Violation	15	19	14	15	18	15
Suicidal Person	72	57	90	79	63	40
Suicide	0	1	2	2	2	4
Suspicious Activity, Person, Vehicle	548	491	618	575	480	526
Theft	170	131	192	151	150	126

Theft-attempted	3	3	5	7	5	6
Theft-from Vehicle	20	28	24	40	28	19
Theft-of Gas	151	140	82	65	124	89
Theft-of Identity	5	7	4	9	10	17
Theft-of Vehicle	22	20	30	26	26	18
Threats	48	45	53	65	58	59
Traffic Stop	2155	1720	1317	1186	1197	1989
Trespass Complaint	20	26	29	53	49	51
Vehicle Off Road	54	92	86	82	45	31
Vehicle Repo	13	16	15	22	9	14
Walkaway from Facility	15	13	20	14	17	16
Warrant Arrest, Info, Attempt, Probation	125	118	83	72	86	93
Total	12936	13007	13202	12693	14185	15809

Police Calls and Activity 2015 - 2023





Prepared By:
Nathan Sondrol, GIS Specialist/Parks Director
Presenter: Nathan Sondrol, GIS Specialist/Parks Director
Date: 01/16/2024

Board & Commission: City Council

Subject: PTOS Commission Meeting Update - January 8, 2024

Below is an update from the January 8, 2024 PTOS Commission Meeting:

Carchedi Commons Plat II

The commission reviewed the Carchedi Commons II plat and recommended the acceptance of cash for park dedication as the increase in the number of residents will place additional demands on the city's parks, trails and open space system.

Happy Acres Morning Vista

The commission reviewed the Happy Acres Morning Vista plat and recommended the acceptance of cash for park dedication as the increase in the number of residents will place additional demands on the city's parks, trails and open space system.

Northwood Park Pickleball Court and Site Improvements

The commission recommended approval authorizing city staff to obtain bids for the Northwood Park Pickleball and Site Improvements project.

Strategic Plan - Splash Pad

The commission discussed the city hosting a community input meeting that would help identify what the community would want in a splash, whether it be one larger facility or multiple smaller facilities, and came to a consensus to recommend requesting a joint work session to be held with all the other city commissions and city council to discuss the goals and visions of the commissions and to invite a guest speaker to discuss the importance and role of parks, trails open space in the community.

Voting Requirements:

Voting Options Simple Majority



Prepared By:
Jason Ziemer, Community Development Director
Presenter: Jason Ziemer, Community Development Director
Date: 01/19/2024

Board & Commission: City Council

Subject: Consider a Resolution, Approving a Map Amendment to the 2018 Comprehensive Plan

Overview / Background

Larry Beach Construction (“Applicant”) has submitted a Zoning and Land Use Application, requesting an amendment to the 2018 Comprehensive Plan, changing the Land Use designation of the four (4) properties (“Subject Properties”) and adjusting the North Branch Municipal Urban Services Area (“MUSA”), removing those properties from the MUSA. The Subject Properties include:

- **Parcel 1: a vacant 38-acre parcel, located adjacent to 392nd Street (PID: 11.00390.00).**
- **Parcel 2: a vacant 39.6-acre parcel, adjacent to Highway 95 and bisected by the Sunrise River (PID: 11.00393.00).**
- **Parcel 3: a vacant 40-acre parcel, adjacent to Highway 95 and bisected by the Sunrise River (PID: 11.00392.00).**
- **Parcel 4: a vacant 9.3-acre parcel, adjacent to Flink Avenue and inclusive of the Sunrise River (PID: 11.00410.00).**

The Applicant is seeking the Comprehensive Plan amendment to allow for a large-lot, rural residential-style development with well and septic systems, similar to the existing subdivisions that flank the east and west side of Parcel 1. Those previous developments are known as Sunrise Bluff and Sunrise Bluff 2nd Addition. The current Land Use designation, per the 2018 Comprehensive Plan, and corresponding zoning require more urban-style residential subdivision and connection to the municipal water and wastewater systems.

Removing the Subject Properties from the MUSA would require a change in designation of

the residential to accommodate the conceptual rural-type of residential development. The Applicant did not request a change in the land use or zoning designation of the commercial land.

The Planning Commission (“Commission”) considered the request from the Applicant at its December 5, 2023 meeting, unanimously recommending approval, allowing the removal of all of Parcel 1 (PID: 11.00390.00) and that part of Parcel 3 currently guided/zoned as residential (PID: 11.00392.00) from the Municipal Utilities Service Area (MUSA), and re-guiding those areas from Low Density Residential to Rural Residential and rezoning them from R1–Single Family Residential to RR–Rural Residential. The Commission recommended denial of other proposed changes impacting the Commercial land use and zoning designations. More on this is discussed in Section 5 in this report.

Issue(s) to Consider

- 1. Land Use and Zoning**
- 2. Past Land Use & Planning**
- 3. Current Land Use**
- 4. Analysis of Request**
- 5. Planning Commission Review & Recommendation**
- 6. Additional City Staff Review & Consideration**

Analysis of Issue(s)

1. Land Use & Zoning

The current land use designation, or guiding, and zoning for Parcels 1 and 4 are Low Density Residential (2018 Comprehensive Plan) and R1–Single-Family Residential. Parcels 2 and 3 have dual guiding and zoning designations. Areas north of the Sunrise River are designated as Low Density Residential and R1–Single-Family Residential and areas south of the Sunrise River, and immediately adjacent to Highway 95, are General Business and B–Business. The General Business guiding is a Commercial land use.

1. Past Land Use & Planning

The 2018 Comprehensive Plan and related Land Use plan was put into effect on October 23, 2018, per Resolution No. 068-18-CC. As required by State Statute, the City’s official zoning map was revised and adopted on April 26, 2022, per Ordinance No. 330-22. The zoning map update was necessary to ensure zoning districts correspond to their underlying land use designations. There are many critical necessities as to why land use and zoning alignment is important. From a residential perspective, for example, a primary purpose

here is to ensure zoning standards (i.e. lot dimensions, setbacks, etc.) allow for residential densities (i.e. units per acre).

At the macro level, the purpose of any Comprehensive Plan is not just how and where a community grows, but how it supports that growth through planned, timely and cost-effective investments in utilities, roads, etc. In other words, a Comprehensive Plan is as much, or more financial planning as it is land use planning. As will be discussed later, a primary Guiding Issue of all previous Comprehensive Plans specifically cited the “orderly development pattern with water and sewer” to ensure infrastructure was constructed in a way necessary to serve the “future character, pattern and growth of North Branch.” The 2018 Comprehensive Plan further solidified this “most important concern” by specifically determining the City’s MUSA boundary.

North Branch Planning History

Rewinding back several decades: The prior three (3) North Branch Comprehensive Plans – 1995, 2003 and 2009 – specifically listed orderly development and efficient, affordable extension of utilities first of the over-arching strategic outcomes within those planning documents. That language in the 1995 Comprehensive Plan is especially notable, given it is the first such visioning and planning exercise of the newly merged North Branch-Branch community.

Both the 2003 and 2009 Comprehensive Plans, and 2004 Comprehensive Sewer Plan, established clear Developable Acreages and Growth Areas up to 20 years and beyond. The intent of these Area maps shows and supports the intended growth of utilities outward, as the community grows. That growth strategy is further supported by the corresponding land use maps. What is fascinating about the 2003 and 2009 Area maps and their corresponding Land Use maps – only four (4) areas were identified as non-municipal service areas. Those areas included: the northeastern part of the community (river bottom), the far northwest and southwest corners of the community, and the southern part of the City, from east from County Road 30 and roughly south of 367th Street. Those four (4) areas were guided as Agriculture; everything else was effectively designated for (eventual) urban development.

Looking at the 2003 and 2009 Land Use maps, much of the property within the 20 year and beyond growth area, including the four (4) Subject Properties, were actually guided as LU1–Single-Family Residential (“LU1”). Today LU1 is called Low Density Residential. The development policy behind LU1 clearly required a residential development density of two (2) units per acre (minimum) up to four (4) units per acre (maximum). As for utilities, the LU1 policy notes “required in all areas,” which is further supported by Policy #4 statement: “Require that all urban housing be connected to the public sewer and water systems.” In 2009, a portion of the Subject Properties was actually designated as LU2–Medium Density Residential, which requires a greater residential density for development of three (3) units per acre (minimum) up to six (6) units per acre (maximum).

What does this mean? As stated, that policy language requires urban-type of residential

development and all developments serviced by municipal utilities, no other types of development would be permitted. In planning terms, any areas without municipal utilities readily accessible would be considered “premature” for development purposes and, therefore, would need to wait for utilities to arrive. This approach is common and is, in effect, a strategic land holding approach to ensure that development, as it occurs over time, is uniform, efficient and cost-effective. In other words, the City grows outward vs. leapfrogs with developments occurring in different locations, and creating obstacles for development, notable the cost-effective movement of utilities into and through the community. Looking at today’s landscape, it is clear the City did not enforce that policy approach – if that was the actual intent.

It is important to acknowledge here that both the LU1 and LU2 land use designations in the 2003 and 2009 Plans does cite Rural Residential (RR) as a corresponding zoning district, in addition to R1, R1A and AG1. However, none of the specific corresponding development types noted in either LU1 and LU2 descriptions cite rural residential developments, which are typically larger lot with well and septic systems, as an allowable type of development pattern. Actually, it would be arguable that any RR or AG1 zoning was identified only to support uses that existed at the time of those updates in 2003 and 2009, and not supporting new developments of those types. Thus, any undeveloped land and/or new developments would need to have an appropriate and corresponding zoning, or R1, R1A or R2, to match the Land Use designation.

That said, old zoning maps do clearly show the City did, in fact, establish RR zoning districts within this 20 year and beyond Growth Areas. This was in direct conflict with the Comprehensive Plan vision and policy, and specifically the requirement regarding utilities. That RR zoning would not have met the minimum residential density requirements of either LU1 or LU2, and certainly would not have met the requirement of City utilities. When it comes to development, a City’s Comprehensive Plan, and specifically its Land Use plan, trumps any established zoning. Thus, if a property was zoned RR, that zoning should have been corrected to match the Land Use designation, and any development should have met those minimum standards for density and utilities.

This policy review reflects the development guide plan in 1995, 2003 and 2009, which was continued with the 2018 Comprehensive Plan update. Those earlier plans set the framework for the utilities boundary – meaning anything inside would need to connect to municipal services; anything outside would not. Again, it is arguable, based on the Land Use designations of the Comprehensive Plan policy at that time, any development likely should have connected to municipal services. But, when comparing the 2009 Growth Area map to the 2015 Zoning Map, for example, it would seem the City established an edge of the 20-year growth area, called the Growth Area Boundary. The 2013 Zoning Map is the first time the City drew a defined and delineated MUSA boundary, which directly correlated to the Growth Area Boundary.

That Growth Area approach is still employed today, and is still supported by the 2004 Comprehensive Sewer Plan. In recent years, the City has attempted to further focus development efforts – specific to utilities. City growth over the past decade, notably past

five (5) years, the MUSA boundary was expanded in 2018 to accommodate ongoing and projected growth. Thus, the City has taken a much more concerned effort and focus on development today by specifically targeting growth area versus what it might have been a more general statement during the 1995, post-merger Comprehensive Plan and later 2003 and 2009 Plans.

The general vision of a Comprehensive Plan is a 20-year perspective. Thus, it is worthy to point out that many of those development assumptions, as defined in 1995, 2003 and 2009, have or are coming to fruition.

Previous Developments

How does everything noted above affect the current request? As we consider this request, it is worthy to look back at two (2) similar development projects completed by the Applicant. The Applicant constructed both Sunrise Bluff and Sunrise Bluff 2nd Additions; final plats were approved in 2014 and 2017, respectively. Both developments still have lot inventory.

At the time of the first Sunrise Bluff subdivision, the development area was located adjacent to and (likely) just outside of the Growth Area Boundary, aka MUSA. As noted above, the property was guided LU1, but zoned Rural Residential (RR). Although zoned as RR, by land use policy, the proposed development by the Applicant did not match either the minimum residential density or municipal utility connection requirement. However, the development site was located outside of the MUSA boundary and was approved and allowed to proceed.

Several years later, the Applicant approached the City with a second phase to his Sunrise Bluff development. This subdivision is adjacent to Flink Avenue. Back then, this area was guided LU2 and appeared to have been zoned RR; staff is working to confirm that. But, unlike the first subdivision, Sunrise Bluff 2nd Addition was located well within the MUSA. Yet, the Applicant was again permitted to proceed – despite no change in land use and re-drawing of the MUSA boundary, as should have been required. Again, it is an important to reiterate that land use policy trumps zoning. And so, while it may be argued the first Sunrise Bluff – located outside of the MUSA – was ok to proceed, it is clear the 2nd Addition should not have moved forward without meeting required residential densities and zoning standards and also connecting to municipal utilities, except and unless by an amendment to the Comprehensive Plan and Zoning that would have permitted the type of development that did occur. That said, that was then.

1. Current Land Use

As noted above, the current North Branch Comprehensive Plan was adopted by the City Council on October 23, 2018, per Resolution 068-18-CC. The 2018 Plan continues the orderly and efficient development policy focus set initially in 1995 and continued with the

2003 and 2009 updates. With that policy focus, the 2018 plan surmises the significant public investment in the existing public utilities and the ongoing financial difficulties with maintaining and replacing existing systems, and expanding those systems to support community growth. Specifically, the 2018 Plan notes community investments made in 2003-2004 to build two (2) new water treatment plans, add new wells and raw water lines and storage capacity into the system, and the construction of a new wastewater treatment facility. Those investments were based on current development pressure then and the general timeliness for system upgrades to support existing needs, plus projected community growth, as established by the 2018 Land Use plan. In other words, the City has made investments and is making debt payments based on the expectation of not only growth from new development within the MUSA, but also the expectation of new development buying into the system by paying their share of those system upgrades constructed to provide capacity necessary to service those developments. Furthermore, the City depends on new growth – at the levels planned in the 2018 Plan – to maintain and expand existing services and systems necessary to accommodate today’s resident population and businesses, at a minimum.

1. Analysis of Request

The Applicant argues approval should be granted because of his desire to continue the same type of rural residential pattern found in Sunrise Bluff and Sunrise Bluff 2nd Addition. While staff understands the logic of this perspective, the decision to grant said amendment and rezoning requests bear significant burden, notably financial, on the City and property owners.

It is possible the Applicant could design a development plan that incorporates larger lots within the subdivision. Municipal utilities would be required and the residential density would need to be made up elsewhere within the development area, but the Applicant would be able to offer larger lot options to would-be buyers. City Code, in fact, does consider this type of development approach as a Planned Unit Development (PUD). However, it is also understood that achieving the density to make up for the lesser, rural residential development pattern is unlikely to be achieved on the Subject Property.

Before we review the financial implications, here are a few other factors of concern related to the request. The City’s engineering firm (WSB) also provided analysis in response to said request from the Applicant. Please refer to the attached memo.

Down Zoning

Down-zoning, or spot zoning, is a term used to describe a change in land use and/or zoning that means going from a more-restrictive land use category to one that is considered more permissive. In other words, that piece of land has a different set of rules, as compared to others surrounding it. This is of concern, especially given it is often in directly conflict with a city’s comprehensive plan. It can also create zoning conflicts between property owners,

notably questions of fairness. Again, staff understands the concept here would be to create a development similar to Sunrise Bluff and Sunrise Bluff 2nd Addition. But, while the change to allow the Subject Properties would seem innocuous, such a decision is of direct benefit for an individual property owner, not available to others. In other words, developers designing and completing development projects elsewhere in North Branch, and notably within the MUSA, are doing so in compliance with the existing land use policy and zoning regulations. Spot zoning is discouraged as it can and likely could create a dangerous precedence.

Impaired Sunrise River

The Sunrise River is identified as an impaired waterbody – not only because of its impairments but also because of it being one of the single-greatest contributors to the impairment of the St. Croix River [Sunrise River Watershed (Lower St. Croix River Watershed) Watershed Restoration and Protection Strategy Report, December 2014]. The main contributing factors causing the impairments are most likely phosphorous and sediment loads, and agricultural operations, such as farming and livestock operations. Although there are existing septic systems near or adjacent to the River, with the River's impairment status, there is concern about expanding the number of septic systems. Although maintained septic systems may last a very long time without incident, these systems do fail, and once they fail they can discharge waste streams into the ground, entering the groundwater and eventually into the river system. This is the case even with soils “perfect” for septic systems.

Available Capacity

From a utility perspective, serving the potential development of the Subject Properties is not a question of available capacity as water and sanitary sewer main lines are in the area with sufficient capacity to support existing land uses, pending development and future projected growth. As noted in the 2018 Comprehensive Plan: “the existing infrastructure system is well-positioned and of adequate size to support expansion.”

With this in mind, if removed from the MUSA any development would likely be on their own. As for the adjacent properties, if removed, when septic system fails the only alternative for property owners would be to install a new septic system. Connecting to municipal utilities would not be an option as city policy typically prevents non-MUSA properties from connecting. It is not uncommon for property owners to seek public investment to install municipal utilities in their neighborhood. While there is sufficient capacity to service the Subject Property is possible, the future capacity issue would be the capacity currently pledged for these Subject Properties will be pledged elsewhere. Existing water and sanitary sewer systems were built and have planned expansions based on so many households, which often does not include properties outside the MUSA.

Financial implications of Change

Land is a finite resource. Once a vacant plot of land is turned, that new use is unlikely to

change. In other words, development decisions today are lifetime decisions. The most significant impact of those decisions are financial. As discussed above, a Comprehensive Plan is more financial planning tool than a land use vision for how and where a City grows.

Again, while staff fully understand the logic associated with the Applicant's request, the current determination is backed by financial decisions made by the City, notably past and current City Councils. Removing the properties from the MUSA impacts the City's long-term financial stability and the efficient and cost associated with the delivery of municipal services to this area. Past public investments assumed ongoing development within the MUSA boundary, and with expectations as to the type of development that would occur and what those developments would contribute toward public investments, notably the repayment of debt issued to expand city infrastructure and roads, as well as their contribution for future capital investments to upgrade and expand City systems.

The removal of any property from the MUSA results in costs passed onto all remaining property owners within the city, resulting in those owners assuming a larger financial burden on the maintenance of the existing system and needed future capital improvements, in the form of upgrades, expansion and eventual replacement of City utility systems. On the utilities side, that cost is translated back to the existing owners in the form of utility rates. Development today and in the future buys into the system through the collection of development fees – known as trunk fees. This payment pays for the impact caused by development by helping pay for those future capital investments today.

Using the Applicant's proposed development and comparing that to a development at minimum residential density requirements – as currently required – City staff estimated the financial losses to the City were substantial. Not only would a rural residential development not pay truck charges and WAC and SAC fees, but also the properties would not have a utility bill, meaning additional lost revenue to the City.

From a property value perspective, City staff estimated an urban residential subdivision with approximately 104 homes would (likely) have greater value and pay more in property taxes than a smaller 32-unit rural residential development. For this calculation, City staff assumed all of the homes in the urban development were at the current median home price; staff used a flat estimated value offered up by the Applicant. This is (likely) true even though each of the urban homes would probably pay less in taxes individually, but would pay more in the aggregate. And, then there is the matter of more homes equals more families, which means more students, and which potentially equals more per pupil funding for North Branch Area Schools.

See Section 6, Additional City Staff Review and Considerations, below for additional financial impact review.

Resulting Gaps

In the 1995 Comprehensive Plan, the number one Guiding Issue identified by the City was

the “orderly development pattern with water and sewer” to ensure infrastructure was constructed in a way necessary to serve the “future character, pattern and growth of North Branch.” This same Guiding Issue was repeated verbatim and also repeated as the number one issue in the subsequent 2003 and 2009 Comprehensive Plan updates. And, even as far back as 1995, the City was already focused on smart growth and efficient expansion of municipal utilities. Specifically, the 1995 Plan identifies six (6) explicit implementation strategies targeting utilities:

1. Adopt a Sanitary Sewer Staging Service Area Plan that conforms to the boundaries of the Municipal Urban Services Area of the Comprehensive Plan.
2. The City of North Branch will give priority to utility extensions which further a contiguous and compact pattern of development over those extensions that would cross or "leap frog" land not immediately expected to be developed.
3. Amend the Zoning Ordinance to reflect the Municipal Urban Services Area established in the North Branch Comprehensive Plan.
4. Require new developments within the Municipal Urban Services Area to bear the costs of extending sewer and water services to that development.
5. Enforce the Municipal Urban Services Area boundary and encourage development within the boundary in areas not fully developed in order to most efficiently use existing infrastructure investments.
6. Establish a program to monitor private septic systems and educate owners on the maintenance of those systems.

The documentation of these strategies are notable as the 1995 Comprehensive Plan is the first plan post-merger with the City of Branch. Strategies 2, 4 and 5 are especially important to the City today as they clearly define a focus on guided development through the efficient and cost-effective extension of utilities by establishing policy that the City maximizes its development potential within the MUSA.

Thus, the proposed Comprehensive Plan and subsequent exclusion of the Subject Properties from the MUSA creates a gap in the system, thereby creating an obstacle to future development by financially burdening future development due to increased costs to extend utilities, which ultimately drives up the price of new homes, making them less affordable. Or, it may prompt the City – via existing property owners – to unnecessarily expend public dollars to extend utilities into an area. Again, the 1995 initially considered this issue, identifying the extension of utilities should be paid by development (Implementation Strategy #4).

What does this mean? Re-guiding the Subject Properties and removing them from the MUSA creates a math problem. It creates a funding problem. Thus, should the request be approved, the Planning Commission and City Council would need to “bring in” more property into the MUSA to solve the math problem to ensure the City can meet its financial obligations, and ensure property owners are not unnecessarily financially burdened as a result. In other words, more changes are begot by an action to approve this request.

Furthermore, the financial impact of removing the Subject Properties from the MUSA is a significant consideration and concern of the City, especially related to efficient growth of the City and those costs related to the current and future of the City's utility systems. This is especially true in this area, as it would make development of land adjacent to and north of the Subject Properties on 392nd Street have to pay a significantly higher price or cause the public to bear the cost of utility extensions with reduced ability to assess the cost of those improvements.

Staff acknowledge there are logical reasons why this request may be approved, notably uniformity of development. But, there are several reasons why this request should not be approved – most notably reason is purely financial. To be clear, the apprehensiveness of staff to not support this change, is not for a lack of support of the Applicant to develop his property. City staff are supportive of development. And, again, We do recognize the land is prime for residential development, and has many aesthetics making the land appealing for homes, and the continuation of the type of development that flanks either side of Parcel 2 bears logic.

With that in mind, we also recognize the finite nature of our land resources, meaning we should be maximizing our development potential, especially within the MUSA. The 1995, 2003, 2009 and 2018 Comprehensive Plans all focused on smart growth, including maximizing our land resources in a financially-responsible way. Additionally, the City does have sufficient land available outside the MUSA that can accommodate rural residential-type of developments. From a City staff perspective, there is no land use, economic development, planning rationale, or financial reasoning behind amending the Comprehensive Plan and rezoning the Subject Properties as requested by the Applicant.

1. Planning Commission Review & Recommendation

As noted above, the Planning Commission ("Commission") conducted the public hearing at its December 5, 2023 meeting, and considered all of the information presented by City staff, as well as public comment provided by the Applicant and residents attending the public hearing. After much deliberation, the Commission ultimately and unanimously made a recommendation approving part and denying part of the request. The recommendation of approval, if ratified by the City Council, would allow for parts of certain parcels to be excluded from the Municipal Utilities Service Area (MUSA) and approve a re-guiding and re-zoning of those areas to Rural Residential and RR–Rural Residential, respectively. The Commission further recommended denial of taking the same action to remove the rest of the Applicant's property from the MUSA. The Applicant noted at the meeting he was in agreement with the Commission's recommendation. With this action, the Commission primarily focused on the continuation of the rural residential development pattern on property in between Sunrise Bluffs and Sunrise Bluffs 2nd Addition. Commissioners concurred with concerns regarding removing the land from the MUSA, especially the result of said action is similar to that of spot zoning. They expressed hope whether there were other options for resolution versus the action proposed, but

concurring, absent that resolution, the recommendation to council, as stated, was practical given the location and site constraints.

1. Additional City Staff Review & Consideration

Again, City staff maintain concern to the proposed change for each of the reasons described herein, while also acknowledging the thought process of both the Applicant and Planning Commission. With this type of decision, City staff contend the City Council must consider impact, notably financial impact to the community, as it considers and debates said request. With that,

To be clear, City staff are carrying forward the City staff was asked to further research options that may allow the City to enable the development concept to move forward, yet protect City policy and land development planning and MUSA. Thoughts and responses to plausible options are toward the end of this section. Planning Commission recommendation, and have prepared the applicable Resolution and Ordinance, based on those recommendations.

Financial Implications

To understand the financial impact to the community, staff compared the conceptual development for Sunrise Bluff 3rd Addition to the expected minimum residential density, as required the 2018 Comprehensive Plan.

To establish a baseline for calculations, City staff followed the Planning Commission's recommendation which, if approved, would remove approximately 52 developable acres from the MUSA and re-guide and re-zone that land to Rural Residential. The related concept plan submitted by the Applicant shows 32 single-family residential lots, each roughly 1.0 acres. The minimum residential density, based on the current land use guiding (Low Density Residential) and zoning (R1-Single-Family Residential) is 2.0 units per net acre, meaning the 52 acres would require 104 residential units. Each of those 104 residential lots would be approximately one-half (½) acres, or 21,780 square feet. The minimum lot area for property zoned R1 is 12,000 square feet.

Development Fees:

Every development subject to platting pays to the City water and sanitary sewer trunk charges and park dedication, in addition to Water Access Charges (WAC) and Sewer Access Charges (SAC). Trunks charges are tied to the installation, upgrading and oversizing of trunk utilities necessary to serve the development. In other words, new development creates a burden on systems, causing the need for upgrades, whether now or in the future. Sometimes those upgrades, expansions and/or oversizing are specific to and paid for by development because said development directly causes the burden.

Trunk and Park Dedication fees are all based on the nexus of the cost of future and planned capital improvements. WAC and SAC fees are also funding source for capital improvements as well as system operations. All of these costs are paid one time, and, except for park dedication fees, are only paid by developments inside MUSAs because those developments connect to public systems. The application of these fees are consistent across cities, and are relied on by cities to ensure that development pays its way and helps to reduce impact to existing property owners that, meaning likely higher utility rates. So, what are the differences?

The attached spreadsheets show the general differences between development fees paid by the Concept Plan (32 units) versus the minimum density required (104 units). In summary, the Concept Plan would pay development fees totaling \$57,600 – all park dedication. The minimum density concept would pay \$1,157,208, of which \$187,200 is park dedication.

The difference here is nearly a \$1.1 million loss in anticipated revenue tied to future capital investments, including ongoing debt repayment of the wastewater treatment system constructed in 2004. Not having those funds potentially delays the City's ability to complete projects as necessary and timely.

Property Values & Taxes:

The Applicant has suggested that the development could result in the construction of \$1 million dollar homes. However, the average home value in Sunrise Bluff and Sunrise Bluff 2nd are \$470,817 and \$483,000, respectively. These are based on Chisago County values for Fiscal Year 2023 for Taxes Payable in 2024. There are eight (8) homes valued in excess of \$500,000 and one (1) home valued at more than \$650,000. The average values noted exclude the nine (9) vacant residential lots.

For calculation purposes, staff affixed a value of \$800,000 for each of the 32 units, per the Concept Plan, and the assumed the North Branch median home value for each of the 104 units for the minimum density concept. Staff did use the Pay 2023 North Branch tax rate (37.680%) to determine City property taxes paid, as that rate was readily available at the time of this exercise.

Although each of the homes valued at \$800,000 have a higher value and, therefore, would pay more in City taxes – individually. As a collective, the 104 units would have a higher Estimated and Taxable Market Value - \$32,905,600 vs. \$25,600,000 – and generate more in total taxes paid to the City, funding operations - \$120,540 vs. \$96,461. The higher taxable value is of direct benefit to property owners as it, in effect, has a direct impact on the tax rate.

Utility Revenue & Rates:

The last notable financial implication is an area often debated – utility rates and the related cost of service. For this calculation, the estimated monthly average household water consumption for a family of four (4) – 6,204 gallons. This estimate is provided by the

Minnesota Department of Natural Resources (DNR), which tracks water consumption. Water and Sanitary Sewer rates are based on water consumption. Utility rates in North Branch include both a monthly base rate and consumption rate per 1,000 gallons. The City also assesses a monthly Storm Water fee – urban residential properties pay that fee monthly; rural residential properties pay it annually.

Based on those data points, the utility bill for family of four (4) living inside the MUSA is estimated at \$131.21 per month and \$1,574.52 for the entire year. Per year, those 104 units, per the minimum density concept, would pay \$163,750. That revenue nets to \$818,750 over 5 years; \$1,637,500 over 10 years. Comparatively, none of the 32 units will be connected to municipal utilities and, therefore, pay only the storm water fee. Each unit would pay \$74.76 per month, which equals \$2,392 annual and \$11,960 over 5 years; \$23,920 over 10 years. The loss of potential revenue – all utilities combined – is \$161,358 annually and a net of more than \$1.6 million over 10 years. The attached spreadsheet breaks each revenue estimate down individually by utility.

It is true as a rural residential development, the 32 homes shown on the concept plan would not connect to municipal services and, therefore, would not create a demand for services and/or place a burden on the utilities. It is also true rural residential lots do have their own systems – private wells and septic systems, which have their own maintenance and improvement costs. But, understanding the City depends on growth to both maintain and improve its existing systems, at a minimum, the point of this exercise is to show the lack of those revenues cause the existing users of the system to pay a greater share of the system. That has a direct correlation on utility rates.

Concluding Points:

As the primary role of a City Council is the long-term financial health and stability of a community, understanding the financial impact here is important and requires discussion. Although the financial information presented is based on certain assumptions and estimates, the underlying data is based on actual information available (i.e. City fee schedule, County financial information, etc.). Thus, the outcomes presented are fact and reality. That being said, none of the revenues noted above are ever realized until development occurs.

This financial analysis is not to suggest the City Council cannot exercise its legislative authority to approve said request – there is logic to such action. But, in making that decision, the Council is doing so fully understanding and accepting the potential financial impacts on the community and tax and rate payers now and in the future.

With all of this in mind, as noted above, City staff was asked to further research options that may allow the City to enable the development concept to move forward, yet protect City policy and land development planning and MUSA, and capture some, if not all of the projected revenues.

Planned Unit Development (PUD)

As described above, the most plausible scenario would be to allow the Applicant to apply to rezone to PUD, and leverage a provision in the PUD code, allowing for a mixed rural-urban residential development design that includes both well and septic systems and municipal utilities. With this approach, any area developed into rural residential lots would need to have that density shortage made up elsewhere within the development. Because of the land constraints associated with this site – between the Sunrise River and 392nd Street and the previous two (2) developments, the ability to adjust – increase – density to make up for the large lot area would result in an overly intensified area that is out of character for the area. Thus, using the existing PUD approach is not likely practical.

Flexible Residential Development (FRD)

A secondary approach is Flexible Residential Development Standards (FRDS), which is not currently a land development and zoning policy of the City. The FRDS method allows for a particular form of development today (i.e. rural residential), while recognizing future development potential (i.e. urban/suburban neighborhood). This is a phased development approach of an area, allowing development to proceed without utilities today, but understanding utilities are planned and will service the area planned for in the future. In other words, when utilities arrive, the homes must connect to municipal services.

A FRD development plan, for example, would allow for 1.0-acre lots; each Ghost Platted showing further subdivision of each lot to three (3), one-third (1/3) acre lots. Some lots might not be divisible; others may be larger initially, allowing for the creation of four (4) lots or more. Each lot would have a covenant attached, requiring homes to be constructed on either of the three (3) ghost lots to ensure the lots could be subdivided in the future – if the owner so chose. The covenants would not restrict the owner from placing well and primary/secondary septic or accessory structures on them. At the time utilities arrive, the owner could decide to subdivide, creating one (1) or two (2) additional lots as planned to cover the cost of the assessments, or do nothing and pay the assessments. The intent: the developer is able to proceed with a development and demonstrates how the development plan can achieve the required minimum density (i.e. 2.0 units per acre) at a future date.

What does this mean from a financial perspective, based on the analysis above?

A developer would be required to pay the initial trunk and park dedication fees for the initial development, any remaining fees – up to the total maximum size of the future (potential) development – would be deferred and collected at the time of future subdivisions. WAC and SAC fees would also be collected at the time of said future connection. That developer may also not be responsible for paying the entire cost of utilities but rather pay for the share of those expenses today, based on a pro-rata share of that expense tied to the initial units constructed with Phase 1. Future utility improvement costs would be assessed. Again, this could be an option, but it is not part of current Comprehensive Plan or zoning policy. It is also worthy to point out that FRDS is typically used in areas not currently within MUSAs, as it is understood land within a MUSA must

connect. Often times, FRDS are employed on areas are located on the outside edge of a MUSA boundary. Cities would recognize them as not having services today, but they are likely to develop in the immediate future, based on the City's projected growth tract.

Staff Recommendation

City staff maintains a recommendation of denial of the requested amendments as presented, but has prepared the Resolution and Ordinance approving said requests, as recommended by the Planning Commission.

Recommended Planning Commission Action

There are two recommendations before the City Council to consider:

Motion to approve a resolution, approving a recommendation from the Planning Commission to remove from the Municipal Utilities Services Area (MUSA) all of Parcel 1 (PID: 11.00390.00) and that part of Parcel 3 (PID: 11.00392.00) north of the Sunrise River as necessary for the proposed concept development plan, and to re-guide said properties from Low Density Residential to Rural Residential, and to deny the request to remove from the MUSA and re-guiding and rezoning of those Parcel 2 (PID: 11.00393.00) and Parcel 4 (PID: 11.00410.00) and that part of the remaining portion of Parcel 2 (PID 11.00392.00) not needed for the proposed concept development plan.

AND

Motion to approve an ordinance, approving a recommendation from the Planning Commission to a re-zoning of Parcel 1 (PID: 11.00390.00) and that part of Parcel 3 (PID: 11.00392.00) north of the Sunrise River as necessary for the proposed concept development plan from R1–Single-Family Residential to RR–Rural Residential.

OR

Motion to approve a recommendation from City staff, denying said request to changes to the Municipal Utilities Services Area (MUSA) and re-guiding of the Subject Properties, as established by the 2018 Comprehensive Plan, and denying the corresponding re-zoning of the Subject Properties.

Voting Requirements:

Voting Options: Two-Thirds Majority Vote

CITY OF NORTH BRANCH
SUNRISE BLUFF 3RD RESIDENTIAL SUBDIVISION (RURAL RESIDENTIAL)

DEVELOPMENT INFORMATION		
Property - Acres	52.00	
Property - Square Feet	2,265,120.00	
Residential Units	32.00	<i>Proposed Concept Plan.</i>
Lots	32.00	

SECTION 1: LAND	COST	PER	DUE	NOTES
Land Price	-	Per SF	-	<i>N/A</i>
Total Land Price			-	

SECTION 2: DEVELOPMENT & PLATTING	COST	PER	DUE	NOTES
Water Trunk	3,500.00	Per Unit	-	<i>Rural Residential; no fees.</i>
Sanitary Sewer Trunk	1,656.00	Per Unit	-	<i>Rural Residential; no fees.</i>
Storm Sewer Trunk (Business Park Only)	-	Per SF	-	<i>Rural Residential; no fees.</i>
Park Dedication - Base	-	Flat	-	<i>Residential Units.</i>
Park Dedication	1,800.00	Per Unit	57,600.00	<i>Residential Units.</i>
Subtotal Development & Platting Fees			57,600.00	

SECTION 3: WATER & SEWER ACCESS	COST	PER	DUE	NOTES
Water Access Charge (WAC)	1,700.00	Per Unit	-	<i>Rural Residential; no fees.</i>
Sewer Access Charge (SAC)	2,471.00	Per Unit	-	<i>Rural Residential; no fees.</i>
Subtotal Water & Sewer Access Fees			-	

SECTION 4: TOTAL COST		DUE	NOTES
Section 1: Land		-	
Section 2: Development & Platting		57,600.00	
Section 3: WAC / SAC		-	
Total Land, Development and Access Charges	-	57,600.00	

CITY OF NORTH BRANCH
SUNRISE BLUFF 3RD RESIDENTIAL SUBDIVISION (MIN 2.0 DENSITY)

DEVELOPMENT INFORMATION			
Property - Acres	52.00		
Property - Square Feet	2,265,120.00		
Residential Units	104.00		<i>Estimate based on min. density (2.0u/na).</i>
Lots	104.00		

SECTION 1: LAND	COST	PER	DUE	NOTES
Land Price	-	Per SF	-	N/A
Total Land Price			-	

SECTION 2: DEVELOPMENT & PLATTING	COST	PER	DUE	NOTES
Water Trunk	3,500.00	Per Unit	364,000.00	<i>Residential Units.</i>
Sanitary Sewer Trunk	1,656.00	Per Unit	172,224.00	<i>Residential Units.</i>
Storm Sewer Trunk (Business Park Only)	-	Per SF	-	<i>Developable SF.</i>
Park Dedication - Base	-	Flat	-	<i>Residential Units.</i>
Park Dedication	1,800.00	Per Unit	187,200.00	<i>Residential Units.</i>
Subtotal Development & Platting Fees			723,424.00	

SECTION 3: WATER & SEWER ACCESS	COST	PER	DUE	NOTES
Water Access Charge (WAC)	1,700.00	Per Unit	176,800.00	<i>Paid with Building Permit.</i>
Sewer Access Charge (SAC)	2,471.00	Per Unit	256,984.00	<i>Paid with Building Permit.</i>
Subtotal Water & Sewer Access Fees			433,784.00	

SECTION 4: TOTAL COST		DUE	NOTES
Section 1: Land		-	
Section 2: Development & Platting		723,424.00	
Section 3: WAC / SAC		433,784.00	
Total Land, Development and Access Charges	-	1,157,208.00	

**NORTH BRANCH DEVELOPMENT PERSPECTIVE
PROPERTY TAX ESTIMATE**

2023, Pay 2024 Values		
Tax Rate	37.68000%	Pay 2023

EX1: Median Property Value		Market Value	Pay 2023	
Pay 2023	EMV	\$316,400		
	TMV	\$307,600	\$1,159	<i>City Only</i>

Develop Acres	52.00	
Density (u/na)	2.00	
Minimum Units	104.00	
	EMV	\$32,905,600
	TMV	\$31,990,400
	Pay 2023 Taxes	\$120,540

EX2: \$800,000 Property Value				
Pay 2023	EMV	\$800,000		
	TMV	\$800,000	\$3,014	<i>City Only</i>

Develop Acres	52.00	
Density (u/na)	0.00	
Concept Plan	32.00	
	EMV	\$25,600,000
	TMV	\$25,600,000
	Pay 2023 Taxes	\$96,461

NORTH BRANCH DEVELOPMENT PERSPECTIVE
SUNRISE BLUFF - 1ST & 2ND ADDITIONS

2023, Pay 2024 Values

Random order.

SUNRISE BLUFF 1ST ADDITION		SUNRISE BLUFF 2ND ADDITION	
1	\$475,400.00	1	\$498,600.00
2	\$472,600.00	2	\$515,300.00
3	\$450,800.00	3	\$72,500.00 <i>Vacant</i>
4	\$516,200.00	4	\$462,900.00
5	\$85,300.00 <i>Vacant</i>	5	\$540,000.00 <i>Built 2021</i>
6	\$502,400.00	6	\$68,000.00 <i>Vacant</i>
7	\$445,000.00	7	\$381,000.00
8	\$452,000.00	8	\$411,300.00
9	\$454,100.00	9	\$498,200.00
10	\$428,200.00	10	\$425,900.00
11	\$512,800.00	11	\$68,600.00 <i>Vacant</i>
12	\$449,900.00	12	\$442,800.00
13	\$473,800.00	13	\$497,400.00
14	\$72,800.00 <i>Vacant</i>	14	\$71,000.00 <i>Vacant</i>
15	\$400,600.00	15	\$426,300.00
16	\$496,800.00	16	\$483,000.00
17	\$483,200.00	17	\$677,600.00 <i>Built 2019</i>
18	\$438,800.00	18	\$68,600.00 <i>Vacant</i>
19	\$551,300.00	19	\$68,700.00 <i>Vacant</i>
		20	\$479,700.00
		21	\$68,600.00 <i>Vacant</i>
		22	\$505,000.00
\$8,003,900.00 Total EMV*		\$7,245,000.00 Total EMV*	
\$470,817.65 Avg EMV*		\$483,000.00 Avg EMV*	

**Total and Avg Less Vacant Lots*

**NORTH BRANCH DEVELOPMENT PERSPECTIVE
UTILITY REVENUE ESTIMATE**

Household Water Consumption			
Average Per Person	Daily	52.00	<i>Per MNDNR.</i>
	Monthly	1,560.00	
Family - 4 Persons	Monthly	6,240.00	

2023 Utility Rates	Factors	Rates	
Water	Base	\$20.00	
	Per 1,000	\$5.70	
Sanitary Sewer	Base	\$14.50	
	Per 1,000	\$8.80	
Storm Water	REF - Urban	\$6.23	<i>Monthly</i>
	REF - Rural	\$74.76	<i>Annual</i>

EX1: Per Urban Household	Monthly	Annual
Water	\$55.57	\$666.82
Sanitary Sewer	\$69.41	\$832.94
Storm Water	\$6.23	\$74.76

Develop Acres	52.00
Density (u/na)	2.00
Minimum Units	104.00

	Annual
Water	\$69,349
Sanitary Sewer	\$86,626
Storm Water	\$7,775

EX2: Per Concept Plan

Water	\$0.00	\$0.00
Sanitary Sewer	\$0.00	\$0.00
Storm Water	\$0.00	\$74.76

Develop Acres	52.00
Density (u/na)	0.00
Concept Units	32.00

	Annual
Water	\$0
Sanitary Sewer	\$0
Storm Water	\$2,392

	Annual Diff	5 Years	10 Years
Water	\$69,349	\$346,744.32	\$693,488.64
Sanitary Sewer	\$86,626	\$433,130.88	\$866,261.76
Storm Water	\$5,383	\$26,913.60	\$53,827.20

**CITY OF NORTH BRANCH
RESOLUTION NO. R-8-2024**

**A RESOLUTION AMENDING THE 2018 COMPREHENSIVE PLAN LAND USE MAP
OF THE CITY OF NORTH BRANCH**

WHEREAS, on October 23, 2018, the City Council approved Resolution No. 068-18-CC, adopting the 2018 Comprehensive Plan ("2018 Plan") for the City of North Branch as allowed by Minnesota Statute §462.355; and,

WHEREAS, Larry Beach Construction ("Applicant") made application to amend the 2018 Plan, changing the Land Use Plan designation and map of the following four (4) properties ("Subject Properties") and adjusting the North Branch Municipal Urban Services Area ("MUSA") boundary removing these Subject Properties from the MUSA:

- Parcel 1: a vacant 38-acre parcel, located adjacent to 392nd Street (PID: 11.00390.00).
- Parcel 2: a vacant 39.6-acre parcel, adjacent to Highway 95 and bisected by the Sunrise River (PID: 11.00393.00).
- Parcel 3: a vacant 40-acre parcel, adjacent to Highway 95 and bisected by the Sunrise River (PID: 11.00392.00).
- Parcel 4: a vacant 9.3-acre parcel, adjacent to Flink Avenue and inclusive of the Sunrise River (PID: 11.00410.00).

WHEREAS, the Applicant has requested the following Map Amendment on the Subject Properties:

Change the existing land use designation of Low Density Residential on each of the four (4) Subject Properties as shown in Exhibit A to Rural Residential, and no change to the existing Commercial land use designations located on the Subject Properties; and,

WHEREAS, pursuant to Minnesota Statute §462.357 the Planning Commission ("Commission") held a Public Hearing ("Hearing") on December 5, 2023 to consider and receive public comment regarding the proposed Map Amendments to the 2018 Plan; and,

WHEREAS, notice of the Hearing was posted, published in the City's official newspaper, and mailed to any and all owners of affected properties, as required by State Statute; and,

WHEREAS, verbal comments specific to the Map Amendments were received during the Hearing; all comments were affirmative to the request; and,

WHEREAS, following the Hearing, the Commission unanimously recommended to the City Council approval of the Map Amendment to the 2018 Plan.

NOW THEREFORE BE IT RESOLVED, BY THE CITY COUNCIL OF THE CITY OF NORTH BRANCH, MINNESOTA, the Map Amendment to the 2018 Comprehensive Plan, as stated herein, are hereby adopted and effective as of the date of this Resolution.

BE IT FURTHER RESOLVED, Parcel 1 (PID: 11.00390.00) and that part of Parcel 3 (PID: 11.00392.00), as depicted in Exhibit A, are hereby removed from the Municipal Urban Services Area (MUSA).

Moved by Councilmember _____. Seconded by Councilmember _____.

The following voted in favor of said resolution:

The following voted against the same:

The following abstained:

Whereupon said resolution was declared duly passed and adopted, and was signed by the Mayor and attested by the City Clerk dated this 23rd day of January, 2024.

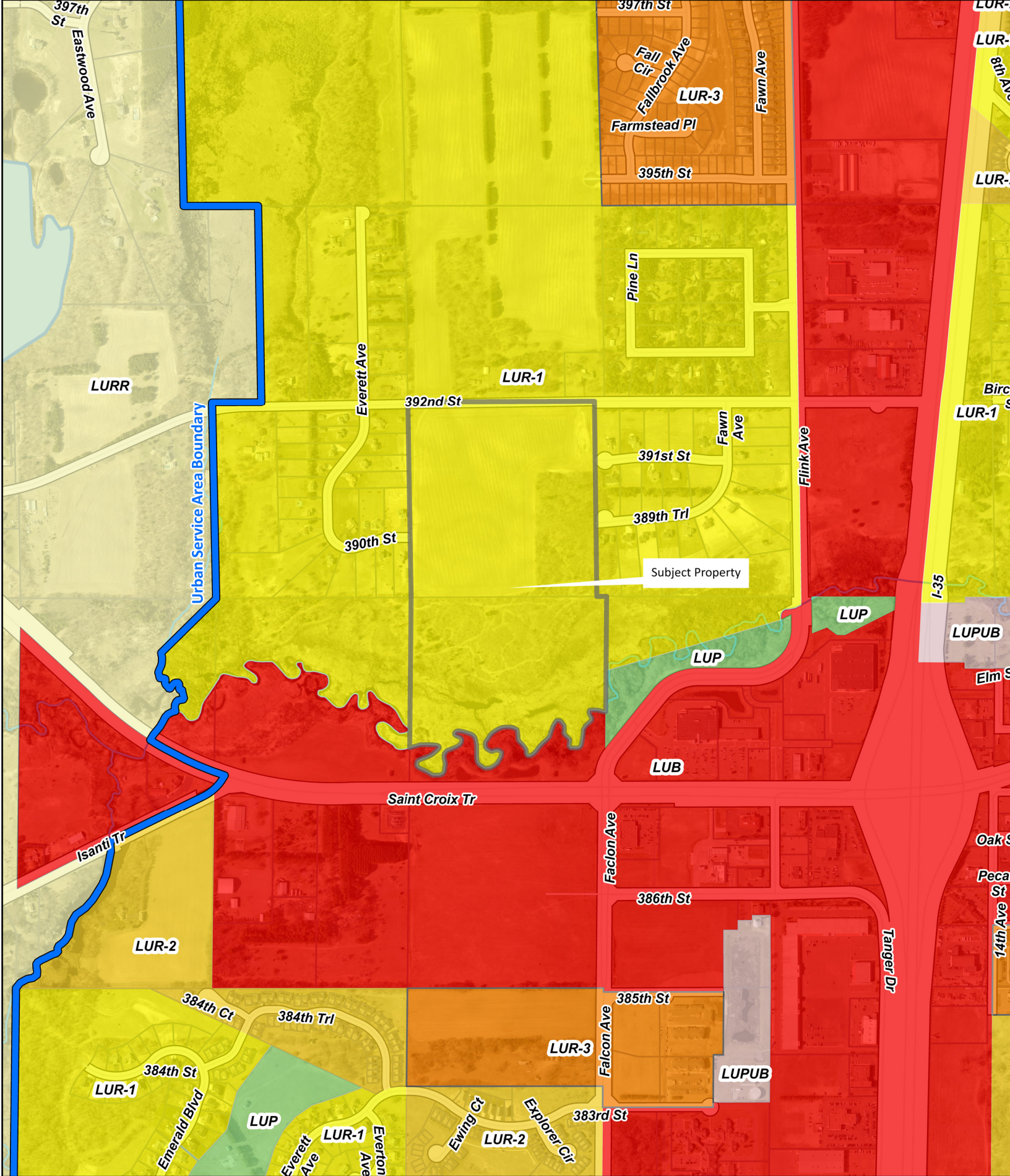
Kevin Schieber, Mayor

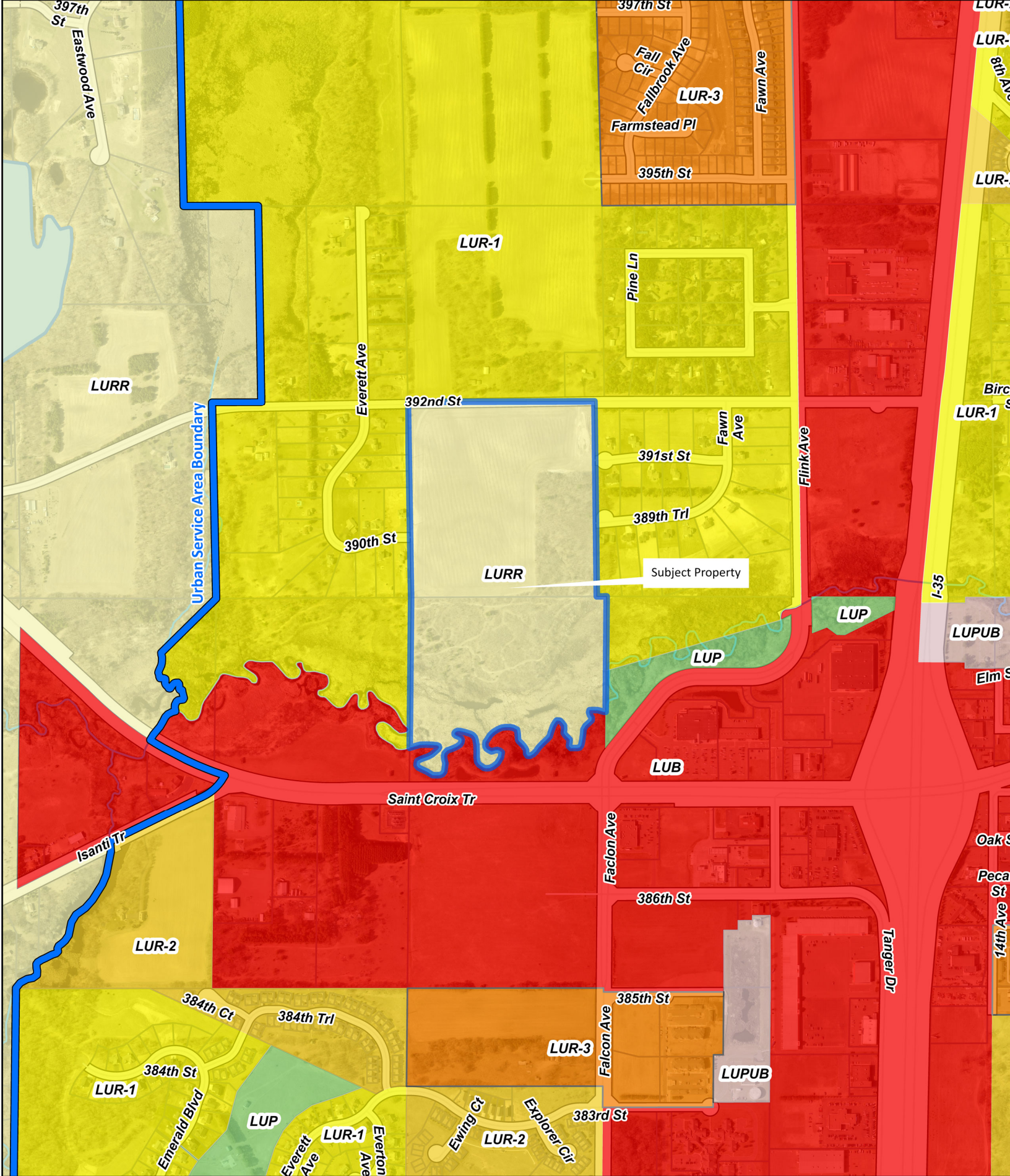
ATTEST

Ragini Varma, City Clerk

EXHIBIT A

**2018 COMPREHENSIVE PLAN MAP AMENDMENT
LOW DENSITY RESIDENTIAL TO RURAL RESIDENTIAL**







Prepared By:
Jason Ziemer, Community Development Director
Presenter: Jason Ziemer, Community Development Director
Date: 01/19/2024

Board & Commission: City Council

Subject: Consider an Ordinance, Amending the Official Zoning Map of the City of North Branch

See previous agenda item regarding a proposed amendment to the 20189 Comprehensive Plan for information and recommended motion.

Voting Requirements:

Voting Options Simple Majority

ORDINANCE NO. 368-24

**AN ORDINANCE AMENDING THE OFFICIAL ZONING MAP
OF THE CITY OF NORTH BRANCH**

The North Branch City Council hereby ordains as follows:

Section 1. Rezoning to Rural Residential

The official zoning map of the City of North Branch is hereby amended as follows:

The Subject Properties depicted in Exhibit A are hereby rezoned from R1–Single-Family Residential to RR–Rural Residential.

Section 2. Effective

The City Clerk is hereby directed to revise the Official Zoning Map consistent with this ordinance.

This ordinance shall have full force effect upon its passage and publication.

Passed by the City Council of the City of North Branch, Chisago County, Minnesota, this 23rd day of January, 2024.

Kevin Schieber, Mayor

ATTEST

Ragini Varma, City Clerk

EXHIBIT A

SUBJECT PROPERTIES

REZONING FROM R1—SINGLE-FAMILY RESIDENTIAL TO RR—RURAL RESIDENTIAL

