

**NOTICE OF OPEN MEETING & VOTE TO
CLOSE PART OF THE MEETING
A G E N D A
COUNCIL MEETING
City of Moberly
City Council Room – Moberly City Hall
101 West Reed Street
April 06, 2020
6:00 PM**

Posted:

Pledge of Allegiance

Roll Call

Approval of Agenda

Recognition of Visitors

Communications, Requests, Informational Items & Consent Calendar

1. A request authorizing the closure of Carpenter Street between Cleveland and Promenade on April 12, 2020 for drive up Easter service.

Public Hearing and Receipt of Bids

2. A Public Hearing/First Consideration Of A Plan For Industrial Development Project And Costs/Benefits Analysis (Plumrose USA Manufacturing Facility Project).
3. Receipt of bids for Morley St. Sidewalk project.
4. Receipt of bids for Street Improvements (Reclamite and Restorative).
5. Receipt of bids for pickup for Water D&C.

Ordinances & Resolutions

6. An Ordinance Approving A Plan For An Industrial Development Project And Costs-Benefits Analysis And An Industrial Development Project Within The City Of Moberly
7. An Ordinance Approving A Development Agreement In Connection With An Industrial Development Project; And Providing Further Authority
8. An Ordinance Approving A Cooperation And Purchase Agreement In Connection With An Industrial Development Project; Ratifying Prior Acts In Conformance; And Providing Further Authority
9. An Ordinance Authorizing Acceptance By The City Of Moberly Of Certain Real Property In Furtherance Of An Industrial Development Project; Authorizing The Issuance Of \$85,000,000 Maximum Aggregate Principal Amount Of Taxable Industrial Revenue Bond (Plumrose Manufacturing Facility Project) Series 2020; Approving The Execution And Delivery Of A Bond Purchase Agreement, A Lease Purchase Agreement And A Trust Indenture To Be Entered Into With Respect To Such Bond; Providing For The Form, Terms And Conditions Of Such Bond And The Method Of Paying Such Bond; Prescribing Other Details And Granting Further Authority In Connection With The Issuance Of Said Bond And The Execution Of The Documents Approved Herein
10. An Ordinance Accepting The Bid Of And Authorizing The City Manager To Enter Into A Construction Agreement With S & A Equipment & Builders, LLC For The City Of Moberly Morley Street Sidewalk Improvement Project.
11. An Ordinance Adopting Standardized Specifications for Sanitary Sewer Systems And Water Main Construction.

- [12.](#) An Ordinance Authorizing Execution Of An Letter Agreement With Jacobs Engineering Group, Inc., For Engineering Services.
- [13.](#) A Resolution Authorizing And Ratifying The City Manager's Execution On Behalf Of The City Of Moberly That Certain Commercial And Industrial Sale Contract.
- [14.](#) A Resolution Authorizing The City Manager To Enter Into An Agreement With Wiedeman Dozing, LLC For Removal Of The Fennel Building Roof.
- [15.](#) A Resolution Repealing Resolution R863 And Adopting A New Resolution Authorizing The Purchase Of Police Vehicles
- [16.](#) A Resolution Accepting The Bid Of Moberly Motors For A 2020 Ford F150, Crew Cab, 4x4 Xl Trim For The Water Department.
- [17.](#) A Resolution appropriating money out of the Treasury of the City of Moberly, Missouri.

Official Reports

Anything Else to Come Before the Council

18. Consideration of a Motion to Adjourn to a Work Session Meeting

Adjournment

Due to the recommendation of the President, The Governor, the CDC, we will not be allowing the public to be physically during meetings and bid openings. We invite you to attend virtually by viewing it live on the City of Moberly You Tube Live Channel, Facebook Page, Vimeo-Moberly View. A link to the City's Channel can be found on our website's main page at www.cityofmoberly.com. Representatives of the news media may obtain copies of this notice by contacting the City Clerk. If a special accommodation is needed as addressed by the Americans with Disabilities Act, please contact the City Clerk twenty-four (24) hours in advance of the meeting.

City of Moberly City Council Agenda Summary

Agenda Number: _____ #1.
 Department: Police
 Date: April 6, 2020

Agenda Item: A request authorizing the closure of Carpenter Street between Cleveland and Promenade on April 12, 2020 for drive up Easter service.

Summary: Pastor Richard Clouse of the Carpenter Street Baptist Church is requesting permission to close Carpenter Street between Cleveland and Promenade on April 12th, 2020 between 9:00am and 10:30 am to hold drive up Easter service for the congregation. The street closure is needed to ensure safety for the event. Participants would remain in their vehicles to maintain social distance. Pastor Clouse is requesting permission to have this event through Randolph County Health Department as well. Due to the short notice, this resolution does not have time to go through work session first.

Recommended Action: Disapprove due to stay at home order

Fund Name:

Account Number:

Available Budget \$:

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input checked="" type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution	Council Member		
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Kimmons	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Davis	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Kyser	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice		Passed	Failed
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other_____			

Chief Troy Link

From: Richard Clouse [brother.richard@gmail.com]
Sent: Tuesday, March 31, 2020 9:27 AM
To: Chief Troy Link
Subject: Temporary Street Closure

Dear Chief Link,

On behalf of Carpenter Street Baptist Church, we would like to request the ability to temporarily close 1 block of East Carpenter Street in front of our church building between Cleveland and Promenade on Sunday morning from 9:00am to 10:30 am. We would like to conduct an Easter Drive-up worship service and the street closure would be needed for the safety of the event.

Thank you



Richard Clouse
Pastor
Carpenter Street Baptist Church
501 E Carpenter Street
Moberly, MO. 65270
660-263-6201
www.csbcmoberly.org



City of Moberly City Council Agenda Summary

Agenda Number: _____

Department: City Manager

Date: April 6, 2020

#2.

Agenda Item: A Public Hearing/First Consideration Of A Plan For Industrial Development Project And Costs/Benefits Analysis (Plumrose USA Manufacturing Facility Project).

Summary: The Council of the City proposes to consider a certain “project for industrial development” (as that term is defined in section 100.010 of the Revised Statutes of Missouri, as amended) involving the acquisition, assembly, and leasing to Plumrose USA, Inc. of certain property and installation of certain real and personal property on a portion of an approximately 40 acre site located at the Moberly Area Industrial Park and the construction on the site of a food/bakery manufacturing facility containing approximately 85,000 square feet (collectively, the “Project”). The Project also call for the issuance by the City of its taxable industrial development revenue bonds in a maximum aggregate principal amount not to exceed \$85,000,000 in support of the Project.

Any city wishing to carry out a project for industrial development under the provisions of sections 100.010 through 100.200, inclusive of the Revised Statutes of Missouri, as amended (“Chapter 100”) must first prepare and approve a plan meeting requirement of Chapter 100. Accordingly, the City has caused to be prepared a certain Plan for Industrial Development Project and Costs/Benefits Analysis (Plumrose USA Manufacturing Facility Project) dated February 27, 2020 (the “Plan”).

Chapter 100 also requires that any municipality proposing a project for industrial development which involves issuance of revenue bonds or involves conveyance of a fee interest in property to a municipality shall, not less than twenty days before approving the plan for a project, provide notice of the proposed project to affected taxing districts setting forth, among other things, the date on which the governing body will first consider approval of the plan, and an invitation to such taxing districts to submit comments which be fairly and duly considered.

Although, strictly speaking, Chapter 100 does not require a “public hearing” on industrial development plans and projects, the Council has determined that a duly noticed public hearing is the best method of assuring that any comments received from affected taxing districts are “fairly and duly considered.” Accordingly, the Council by prior resolution has set the date of its April 6 regular meeting as the date on which the Council will first consider approval of the Plan and the Project and has directed the giving of notice required by Chapter 100. This hearing will constitute the Council’s first consideration of the approval of the Plan and the Project and will provide opportunity for receipt and fair and due consideration of taxing districts’ comment, all as provided in Chapter 100.

Recommended Action: Hold a Public Hearing

Fund Name: N/A

Account Number: N/A

Available Budget \$: N/A

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution			
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney’s Report	Council Member		
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Kimmons	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Davis	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice	M___ S___ Kyser	___	___
<input type="checkbox"/> Consultant Report	<input checked="" type="checkbox"/> Other_____		Passed	Failed

City of Moberly City Council Agenda Summary

Agenda Number: _____ #3.
 Department: Public Works
 Date: April 6, 2020

Agenda Item: Receipt of bids for Morley St. Sidewalk project.

Summary: These are the bids for the sidewalk replacement/construction along the West side of Morley from Coates to Hwy 24 and along the South side of Hwy 24 from Morley to the East Outer road. This bid includes moving several water customers off of the 2” water line on the West side that is continually failing and undersized to the large line on the East side of Morley.

The total construction cost for this project is \$1,274,320.22. Utilities will be paying for their portion of the work \$195,509.82, leaving \$1,078,810.40 as the public works portion from the Transportation Trust fund. We have \$936,471.38 in outside funding from the STP-U funding and the cost share funding.

Staff recommends approval of this.

Recommended

Action: Accept this bid.

Fund Name: Transportation Trust

Account Number: 600.167.5409

Available Budget \$: 925,000.00

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M__ S__ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution			
<input checked="" type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	Council Member		
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M__ S__ Brubaker	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M__ S__ Kimmons	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M__ S__ Davis	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice	M__ S__ Kyser	___	___
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____		Passed	Failed



Bid Tabulation

Date: January 23, 2020

Bartlett & West Project No.: 18943.000

Moberly, MO

STP-4500(207) Morley Street Sidewalk Improvements
STIP 2P3220

Item No.	Description	Quantity	Unit	Engineer's Estimate		S & A Equipment + Builders		Rhad A Baker Construction		Stockman Construction		Don Schnieders Excavating	
				Unit Price	Extension	Unit Price	Extension	Unit Price	Extension	Unit Price	Extension	Unit Price	Extension
Participating Bid Items - BASE BID A													
202-20.10	Removal of Improvements	1	LS	50,000.00	\$50,000.00	67,565.33	\$67,565.33	100,000.00	\$100,000.00	130,000.00	\$130,000.00	131,141.00	\$131,141.00
203-99.01	Earthwork	1	LS	45,000.00	\$45,000.00	14,340.58	\$14,340.58	75,000.00	\$75,000.00	150,000.00	\$150,000.00	70,020.00	\$70,020.00
304-05.04	Type 5 Aggregate for Base (4 in. Thick)	188	SY	8.00	\$1,504.00	17.79	\$3,344.52	20.00	\$3,760.00	11.00	\$2,068.00	29.96	\$5,632.48
608-10.12	Truncated Domes	542	SF	25.00	\$13,550.00	64.15	\$34,769.30	35.00	\$18,970.00	19.00	\$10,298.00	17.49	\$9,479.58
608-50.07	Paved Approach (7" Thick)	90	SY	55.00	\$4,950.00	258.27	\$23,244.30	150.00	\$13,500.00	69.00	\$6,210.00	179.40	\$16,146.00
608-50.08	Paved Approach (8" Thick)	5,441	SY	60.00	\$326,460.00	72.82	\$396,213.62	70.00	\$380,870.00	69.00	\$375,429.00	85.51	\$465,259.91
608-30.03	3 in. Concrete Median Strip	141	SY	40.00	\$5,640.00	153.69	\$21,670.29	90.00	\$12,690.00	78.00	\$10,998.00	79.38	\$11,192.58
608-40.23	Sidewalk Hand-Railing	73	LF	100.00	\$7,300.00	112.13	\$8,185.49	75.00	\$5,475.00	95.00	\$6,935.00	102.75	\$7,500.75
608-99.05	Paved Approach (8" Thick High Early Strength)	315	SY	85.00	\$26,775.00	84.49	\$26,614.35	95.00	\$29,925.00	88.00	\$27,720.00	92.05	\$28,995.75
608-99.25	Concrete Sidewalk and Ramps	4,677	SY	50.00	\$233,850.00	55.81	\$261,023.37	50.00	\$233,850.00	54.00	\$252,558.00	75.76	\$354,329.52
609-10.11	Concrete Curb (Over 6 in Height) Type S	151	LF	30.00	\$4,530.00	39.50	\$5,964.50	75.00	\$11,325.00	50.00	\$7,550.00	45.74	\$6,906.74
609-10.52	Curb and Gutter Type B	562	LF	30.00	\$16,860.00	76.07	\$42,751.34	40.00	\$22,480.00	40.00	\$22,480.00	42.94	\$24,132.28
609-99.01	Concrete Sidewalk Trench Cover	72	SF	200.00	\$14,400.00	34.91	\$2,513.52	50.00	\$3,600.00	275.00	\$19,800.00	152.36	\$10,969.92
616-10.05	Construction Signs	271	SF	20.00	\$5,420.00	11.38	\$3,083.98	75.00	\$20,325.00	10.30	\$2,791.30	13.87	\$3,758.77
616-10.28	Channelizers	135	EA	25.00	\$3,375.00	25.05	\$3,381.75	30.00	\$4,050.00	15.60	\$2,106.00	19.11	\$2,579.85
616-10.30	Type III Moveable Barricade	6	EA	175.00	\$1,050.00	153.69	\$922.14	150.00	\$900.00	112.00	\$672.00	110.00	\$660.00
616-10.31	Type III Moveable Barricade with Light	6	EA	200.00	\$1,200.00	221.99	\$1,331.94	225.00	\$1,350.00	230.00	\$1,380.00	198.00	\$1,188.00
616-10.40	Flashing Arrow Panel	3	EA	1,500.00	\$4,500.00	1,366.11	\$4,098.33	1,400.00	\$4,200.00	1,780.00	\$5,340.00	1,760.00	\$5,280.00
618-10.00	Mobilization	1	LS	60,000.00	\$60,000.00	22,199.22	\$22,199.22	120,000.00	\$120,000.00	30,000.00	\$30,000.00	82,000.00	\$82,000.00
620-00.03	Preformed Thermoplastic Pavement Marking, 4 in White	60	LF	2.00	\$120.00	4.94	\$296.40	5.00	\$300.00	10.30	\$618.00	5.00	\$300.00
620-00.09	Preformed Thermoplastic Pavement Marking, 6 in White	1,739	LF	2.00	\$3,478.00	7.40	\$12,868.60	6.75	\$11,738.25	6.20	\$10,781.80	7.18	\$12,486.02
620-00.12	Preformed Thermoplastic Pavement Marking, 12 in White	116	LF	2.00	\$232.00	14.80	\$1,716.80	14.00	\$1,624.00	31.00	\$3,596.00	14.66	\$1,700.56
620-00.21	Preformed Thermoplastic Pavement Marking, Left/Right Arrow	5	EA	450.00	\$2,250.00	398.45	\$1,992.25	375.00	\$1,875.00	361.00	\$1,805.00	400.00	\$2,000.00
620-00.24	Preformed Thermoplastic Pavement Marking, Straight Arrow	2	EA	350.00	\$700.00	341.53	\$683.06	400.00	\$800.00	361.00	\$722.00	350.00	\$700.00
627-40.00	Contractor Furnished Surveying and Staking	1	LS	35,000.00	\$35,000.00	11,384.22	\$11,384.22	40,000.00	\$40,000.00	18,000.00	\$18,000.00	14,000.00	\$14,000.00
726-99.02	15 in HDPE Pipe	12	LF	65.00	\$780.00	152.98	\$1,835.76	100.00	\$1,200.00	52.00	\$624.00	110.00	\$1,320.00
726-99.03	15 in CMP End Section	2	EA	600.00	\$1,200.00	810.84	\$1,621.68	400.00	\$800.00	240.00	\$480.00	207.00	\$414.00
805-10.00A	Seeding - Cool Season Mixture	1	AC	5,000.00	\$5,000.00	6,659.77	\$6,659.77	5,850.00	\$5,850.00	10,000.00	\$10,000.00	3,850.00	\$3,850.00
805-20.00A	Seeding - Warm Season Mixture	1	AC	5,000.00	\$5,000.00	6,659.77	\$6,659.77	5,850.00	\$5,850.00	10,000.00	\$10,000.00	4,290.00	\$4,290.00
806-10.07A	Curb Inlet Check	37	EA	150.00	\$5,550.00	187.84	\$6,950.08	165.00	\$6,105.00	185.00	\$6,845.00	132.00	\$4,884.00
806-10.19	Silt Fence	1,100	LF	5.00	\$5,500.00	3.19	\$3,509.00	3.00	\$3,300.00	4.00	\$4,400.00	5.40	\$5,940.00
806-10.05	DITCH CHECK	24	LF	25.00	\$600.00	18.78	\$450.72	17.00	\$408.00	22.00	\$528.00	47.00	\$1,128.00
902-08.33	flat sheet sign	28	SF	45.00	\$1,260.00	56.92	\$1,593.76	50.00	\$1,400.00	53.20	\$1,489.60	55.00	\$1,540.00
902-08.34	signal sign mounting hardware	10	EA	250.00	\$2,500.00	204.92	\$2,049.20	180.00	\$1,800.00	191.50	\$1,915.00	198.00	\$1,980.00
902.27-08	post, signal 8 ft.	6	EA	1,000.00	\$6,000.00	865.20	\$5,191.20	760.00	\$4,560.00	808.00	\$4,848.00	836.00	\$5,016.00
902.49-20	detector, pushbutton (new installation)	6	EA	200.00	\$1,200.00	314.20	\$1,885.20	276.00	\$1,656.00	294.00	\$1,764.00	304.00	\$1,824.00
902.49-44	detector, vehicle induction loop (2 channel)	1	EA	300.00	\$300.00	142.30	\$142.30	125.00	\$125.00	133.00	\$133.00	250.00	\$250.00
902.08-11	Signal head, 1S, Pedestrian	6	EA	650.00	\$3,900.00	801.45	\$4,808.70	704.00	\$4,224.00	750.00	\$4,500.00	775.00	\$4,650.00
902.99.02	Install Signal Heads Provided by Others	4	EA	1,000.00	\$4,000.00	437.15	\$1,748.60	384.00	\$1,536.00	408.00	\$1,632.00	422.00	\$1,688.00
902.50-20	conduit, 1 in., loop detector	11	LF	7.00	\$77.00	11.38	\$125.18	10.00	\$110.00	10.65	\$117.15	20.00	\$220.00
902.53-00	conduit, 3 in., trenched	101	LF	12.00	\$1,212.00	13.66	\$1,379.66	12.00	\$1,212.00	12.75	\$1,287.75	13.20	\$1,333.20
902.73-00	conduit, 3 in., pushed	173	LF	30.00	\$5,190.00	27.32	\$4,726.36	24.00	\$4,152.00	25.50	\$4,411.50	26.40	\$4,567.20
902.83-08	cable, 16 awg 2 conductor	1,170	LF	1.00	\$1,170.00	1.14	\$1,333.80	1.00	\$1,170.00	1.06	\$1,240.20	1.10	\$1,287.00
902.83-10	cable, 16 awg 5 conductor	1,170	LF	1.30	\$1,521.00	1.31	\$1,532.70	1.15	\$1,345.50	1.22	\$1,427.40	1.27	\$1,485.90
902.83-11	cable, 16 awg 7 conductor	1,370	LF	1.50	\$2,055.00	1.42	\$1,945.40	1.25	\$1,712.50	1.33	\$1,822.10	1.37	\$1,876.90
902.85-00	cable, loop detector, in duct	310	LF	7.00	\$2,170.00	6.83	\$2,117.30	6.00	\$1,860.00	6.35	\$1,968.50	6.60	\$2,046.00
902.85-10	cable, loop detector, lead-in	200	LF	3.00	\$600.00	1.71	\$342.00	1.50	\$300.00	1.60	\$320.00	2.00	\$400.00
902.99-03	video cable	650	LF	2.00	\$1,300.00	2.05	\$1,332.50	1.80	\$1,170.00	1.90	\$1,235.00	2.00	\$1,300.00
902.88-10	pull box, preformed class 1	1	EA	1,100.00	\$1,100.00	1,202.17	\$1,202.17	1,056.00	\$1,056.00	1,225.00	\$1,225.00	1,160.00	\$1,160.00
902.88-11	pull box, preformed class 2	2	CY	1,300.00	\$2,600.00	1,536.87	\$3,073.74	1,350.00	\$2,700.00	1,440.00	\$2,880.00	1,485.00	\$2,970.00
902.91-00	base, concrete	2.7	CY	1,500.00	\$4,050.00	3,187.58	\$8,606.47	2,800.00	\$7,560.00	2,950.00	\$7,965.00	3,080.00	\$8,316.00

Item No.	Description	Quantity	Unit	Engineer's Estimate		S & A Equipment + Builders		Rhad A Baker Construction		Stockman Construction		Don Schnieders Excavating	
				Unit Price	Extension	Unit Price	Extension	Unit Price	Extension	Unit Price	Extension	Unit Price	Extension
Participating Bid Items - BASE BID A Total					\$933,979.00		\$1,044,982.22		\$1,181,769.25		\$1,174,916.30		\$1,334,095.91
Non-Participating Bid Items - BASE BID B													
603-99.02A	Service Line - 1 in HDPE	951	LF	12.00	\$11,412.00	21.50	\$20,446.50	30.00	\$28,530.00	10.50	\$9,985.50	24.43	\$23,232.93
603-99.02B	Service Line - 1 in Copper	18	LF	20.00	\$360.00	434.23	\$7,816.14	15.00	\$270.00	65.50	\$1,179.00	282.65	\$5,087.70
603-99.02C	Service Line - 2 in HDPE	247	LF	20.00	\$4,940.00	25.06	\$6,189.82	10.00	\$2,470.00	37.10	\$9,163.70	55.94	\$13,817.18
603-99.02D	3 in HDPE Bored Crossing	951	LF	60.00	\$57,060.00	42.69	\$40,598.19	35.00	\$33,285.00	44.40	\$42,224.40	49.16	\$46,751.16
603-99.02E	4 in HDPE Bored Crossing	367	LF	75.00	\$27,525.00	54.08	\$19,847.36	45.00	\$16,515.00	61.65	\$22,625.55	65.92	\$24,192.64
603-99.02F	12 in HDPE Bored Crossing	80	LF	275.00	\$22,000.00	147.99	\$11,839.20	200.00	\$16,000.00	168.50	\$13,480.00	201.50	\$16,120.00
603-99.02G	Water Meter Pit Assembly - 1 in Meter	1	EA	2,500.00	\$2,500.00	6,186.96	\$6,186.96	4,500.00	\$4,500.00	1,287.00	\$1,287.00	2,265.00	\$2,265.00
603-99.02H	Water Meter Pit Assembly - 2 in Meter	2	EA	3,500.00	\$7,000.00	3,736.07	\$7,472.14	5,800.00	\$11,600.00	2,965.00	\$5,930.00	2,465.00	\$4,930.00
603-99.02I	Water Valve - 6 in	4	EA	1,200.00	\$4,800.00	2,598.22	\$10,392.88	1,200.00	\$4,800.00	1,586.00	\$6,344.00	1,899.45	\$7,597.80
603-99.02J	Water Valve - 8 in	1	EA	1,400.00	\$1,400.00	6,186.96	\$6,186.96	1,600.00	\$1,600.00	1,700.00	\$1,700.00	2,611.00	\$2,611.00
603-99.02K	Remove existing fire hydrant	1	EA	750.00	\$750.00	2,850.93	\$2,850.93	1,000.00	\$1,000.00	890.00	\$890.00	1,500.00	\$1,500.00
603-99.02L	Fire hydrant assembly (includes 6 in valve and stub of 6 in pipe)	7	EA	3,850.00	\$26,950.00	3,683.90	\$25,787.30	4,000.00	\$28,000.00	6,921.00	\$48,447.00	6,196.34	\$43,374.38
603-99.02M	Water Main 6 in PVC	180	LF	65.00	\$11,700.00	27.63	\$4,973.40	25.00	\$4,500.00	74.00	\$13,320.00	74.11	\$13,339.80
603-99.02N	Water Main 8 in PVC	25	LF	75.00	\$1,875.00	198.16	\$4,954.00	75.00	\$1,875.00	111.00	\$2,775.00	117.89	\$2,947.25
603-99.02O	Cut and cap 2 in main	8	EA	500.00	\$4,000.00	903.79	\$7,230.32	100.00	\$800.00	814.00	\$6,512.00	1,000.00	\$8,000.00
603-99.02P	Connect To Existing Water Main	3	EA	750.00	\$2,250.00	853.82	\$2,561.46	500.00	\$1,500.00	3,450.00	\$10,350.00	3,248.34	\$9,745.02
603-99.02Q	Sidewalk/Pavement repairs	178	SY	80.00	\$14,240.00	57.17	\$10,176.26	25.00	\$4,450.00	120.00	\$21,360.00	107.94	\$19,213.32
Non-Participating Bid Items - BASE BID B Total					\$200,762.00		\$195,509.82		\$161,695.00		\$217,573.15		\$244,725.18
BASE BID A + BASE BID B TOTAL					\$1,134,741.00		\$1,240,492.04		\$1,343,464.25		\$1,392,489.45		\$1,578,821.09
Add Alternate A - Median replacement at Hwy 24 & Bus. 63													
603-99.01	3 in Decorative Concrete Median Pavement	461	SY	40.00	\$18,440.00	73.38	\$33,828.18	75.00	\$34,575.00	87.00	\$40,107.00	67.08	\$30,923.88
Add Alternate A Bid Items Total					\$18,440.00		\$33,828.18		\$34,575.00		\$40,107.00		\$30,923.88
BASE BID + ALT A TOTAL CONSTRUCTION COST					\$1,153,181.00		\$1,274,320.22		\$1,378,039.25		\$1,432,596.45		\$1,609,744.97
Add Alternate B - Pedestrian Signals at Hwy 63 Southbound Ramp													
902-08.33	flat sheet sign	17	SF	45.00	\$765.00	56.92	\$967.64	50.00	\$850.00	53.20	\$904.40	55.00	\$935.00
902-08.34	signal sign mounting hardware	3	EA	250.00	\$750.00	204.92	\$614.76	180.00	\$540.00	191.50	\$574.50	200.00	\$600.00
902.27-08	post, signal 8 ft.	2	EA	1,000.00	\$2,000.00	865.20	\$1,730.40	760.00	\$1,520.00	808.00	\$1,616.00	836.00	\$1,672.00
902.49-20	detector, pushbutton (new installation)	2	EA	200.00	\$400.00	142.30	\$284.60	125.00	\$250.00	133.00	\$266.00	175.00	\$350.00
902.08-11	Signal head, 1S, Pedestrian	2	EA	650.00	\$1,300.00	801.45	\$1,602.90	704.00	\$1,408.00	750.00	\$1,500.00	775.00	\$1,550.00
902.99.02	Install Signal Heads Provided by Others	1	LF	1,000.00	\$1,000.00	437.15	\$437.15	384.00	\$384.00	408.00	\$408.00	422.00	\$422.00
902.53-00	conduit, 3 in., trenched	72	LF	12.00	\$864.00	13.66	\$983.52	12.00	\$864.00	12.80	\$921.60	13.21	\$951.12
902.83-08	cable, 16 awg 2 conductor	450	LF	1.00	\$450.00	1.25	\$562.50	1.10	\$495.00	1.15	\$517.50	1.23	\$553.50
902.83-10	cable, 16 awg 5 conductor	450	LF	1.30	\$585.00	1.31	\$589.50	1.15	\$517.50	1.20	\$540.00	1.32	\$594.00
902.91-00	base, concrete	1	CY	1,500.00	\$1,500.00	3,187.58	\$3,187.58	2,800.00	\$2,800.00	2,980.00	\$2,980.00	3,080.00	\$3,080.00
Add Alternate B Bid Items Total					\$9,614.00		\$10,960.55		\$9,628.50		\$10,228.00		\$10,707.62
BASE BID + ALT A + ALT B TOTAL CONSTRUCTION COST					\$1,162,795.00		\$1,285,280.77		\$1,387,667.75		\$1,442,824.45		\$1,620,452.59
Add Alternate C - Fiber Reinforcement in Sidewalks													
502-99.11	Misc. Macro-Synthetic Fiber Reinforced Concrete	4,666	SY	2.00	\$9,332.00	7.60	\$35,461.60	3.00	\$13,998.00	3.60	\$16,797.60	7.85	\$36,628.10
Add Alternate C Bid Items Total					\$9,332.00		\$35,461.60		\$13,998.00		\$16,797.60		\$36,628.10
BASE BID + ALT A + ALT B + ALT C TOTAL CONSTRUCTION COST					\$1,172,127.00		\$1,320,742.37		\$1,401,665.75		\$1,459,622.05		\$1,657,080.69
Add Alternate D - Longitudinal Steel Reinforcement in Sidewalks													
608-99.45	Longitudinal Reinforcement	4,666	SY	5.00	\$23,330.00	8.91	\$41,574.06	5.00	\$23,330.00	7.00	\$32,662.00	8.75	\$40,827.50
Add Alternate D Bid Items Total					\$23,330.00		\$41,574.06		\$23,330.00		\$32,662.00		\$40,827.50
BASE A + BASE B + ALT A + ALT B + ALT C + ALT D TOTAL CONSTRUCTION COST					\$1,195,457.00		\$1,362,316.43		\$1,424,995.75		\$1,492,284.05		\$1,697,908.19

City of Moberly City Council Agenda Summary

Agenda Number: _____ #4.
 Department: Public Works
 Date: April 6, 2020

Agenda Item: Receipt of bids for Street Improvements (Reclamite and Restorative).

Summary: Reclamite and Restorative seal are two key components of our annual street maintenance program. We have bid this segment early as we have a cooperative agreement set up on these bids and several Counties/Cities in the area complete their work off of our pricing. The prices are only up a few cents from last year and are inline with our anticipated budget. Staff recommends the acceptance and approval of these bids.

These particular products are a Tri-core exclusive product and they only provide it to one vendor in specific territories so there is no overlap. There are other products on the market that are similar, but don't come close to meet the specifications. We have had a presentation on the products in the past to explain how they work and why we don't get multiple bidders.

We frequently only get one bid on asphalt and microsurface as those commercial type operations tend not to overlap areas either. If any of our newer councilmen would like to have presentations on these products in the future to explain how they work, benefits and why we aren't getting multiple bids, let me know and I will arrange it.

Staff recommends accepting the bids for these and approving them.

Recommended

Action: Accept these bids.

Fund Name: Street Improvement Fund

Account Number: 601.000.5502

Available Budget \$: 108,186.99

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M__ S__ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution	Council Member		
<input checked="" type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	M__ S__ Brubaker	___	___
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M__ S__ Kimmons	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M__ S__ Davis	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M__ S__ Kyser	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice			
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____		Passed	Failed

CITY OF MOBERLY

"BID OPENING"

Date: 3-9-2020

Corrective Asphalt Materials

\$ Reclamite Seal 89¢ per sq yd.
Add on Resident
notifications .02¢ " " "
\$ Sweeping .04¢ " " "

\$ _____

\$ Restorative Seal 1.27 per sq yd.
Add on Resident
Noti Fications .02¢ " " "
\$ Sweeping .06¢ " " "

\$ _____

\$ _____

\$ _____

\$ _____

\$ _____

\$ _____

\$ _____

\$ _____

City of Moberly City Council Agenda Summary

Agenda Number: _____ #5.
 Department: Public Utilities
 Date: April 6, 2020

Agenda Item: Receipt of bids for pickup for Water D&C.

Summary: The City of Moberly advertised for bids for a new truck and bids were opened March 4th, 2020 at 10:00 am. Two bids were received from Moberly Motors one in the amount of \$31,074 and another in the amount of \$31,382 and one bid was received from W-K Ford in the amount of \$30,813.28. It is the staff's recommendation to proceed with purchase of the 2020 Ford F150 4X4 Crew Cab Pickup-XL trim level from Moberly Motors for \$31,382.

Recommended

Action: Accept these bids.

Fund Name: Capital Improvement Plan

Account Number: 301.112.5502

Available Budget \$: 118,943.25

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution	Council Member		
<input checked="" type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Kimmons	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Davis	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Kyser	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice		Passed	Failed
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____			

City of Moberly is requesting quotes on a 2020 Ford F150, Crew Cab, 4x4
(Large Door) XL trim

Color (White)

5.0 V8 Engine

Automatic 6 Speed Transmission

Limited Slip Axle (3.73)

145" Wheelbase

6'5" Bed

4 Wheel ABS Brakes

265/70/17 All Terrain Tires + Spare

Power Steering

Heating/Air Conditioning

AM/FM Radio

Speed Control/Tilt Wheel

Power Windows/Power Locks

(Grey) Cloth Bucket Seat w/Center Console, Rear cloth bench

Vinyl flooring

Tow Package

Trailer Brake Controller

***Quote due by 2/12/2020**

Mail to: City of Moberly Att: Tim Patrick Contact Number 660-998-0127

101 West Reed St.

Moberly, Mo 65270

Moberly Motor

Att: Dean Miller

1520 N Morley St.

Moberly, MO 65270

W-K Ford

Att: Brian Fahrendorf

1545 West Ashley Rd

Boonville, Mo 65233

Joe Machens Ford

Att: Kelly Sells

1911 West Worley St

Columbia, Mo 65203

moberly motors

Driven by tradition.

City of Moberly
101 West Reed
Moberly, Mo 65270

February 27, 2020

RE: Bid for (1) 2020 Ford F150 Crew Cab 4X4 Pickup - (1/2) Ton

Moberly Motor Company would like to submit the following bid specifications and pricing for your consideration.

2020 Ford F150 4X4 Crew Cab Pickup - XL Trim Level

W1E - 4 Wheel Drive
995 – 5.0L V8 Engine
XL6 - 3.73 Electric Lock Rear Axle
101A Pkg - XL Trim Series
YZ - White Exterior Color
Factory Air Conditioner
50S - Factory Cruise Control
Power Steering
AM/FM Radio
Black Vinyl Floor Covering
3 year / 36,000 mile warranty
67T – Trailer Brake Controller
Front Tow Hooks
Painted Front & Rear Bumpers
Dr & Pass Air Bag System
17" Silver Steel Wheels
53B - Class IV trailer hitch receiver
Max **6,000 lb Capacity**
4-pin/7-pin wiring harness
Smart Trailer Tow Connector

145" wheelbase - 5.5 ft Box

44G - 10-Speed Automatic Transmission
7,000# GVWR
\$10.00 Gasoline
Power Brakes 4-Wheel Disc w/ABS
Pickup Bed Cargo Light
Ford SYNC Communications Sys
Tilt Steering Column
WG – 40/Console/40 Front Bucket Seat – Gray Cloth
Manual-folding, Power Glass Side view Mirrors
(5) 265/70R 17 OWL All-terrain A/T tires
17" Silver Steel Wheels

XL Power Equipment Group (Incl w/101A)

Power Windows - Power Door Locks with
Flip Key and Integrated Key Transmitter
keyless-entry (includes Autolock), Power
Tailgate Lock, Perimeter Alarm, Illuminated
Entry, Mirrors Manual-folding, Power Glass

(1) 2020 F150 Crew Cab 4X4

\$31,074

Amount Due at Time of Delivery – Check – No Credit Cards

Optional for your consideration :



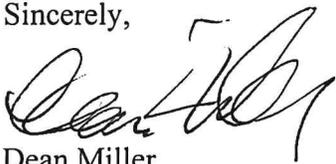
1520 North Morley, P.O. Box 249, Moberly, MO 65270

53A - Trailer Tow Package **\$732 extra**
Max 11,300 lb Capacity
Class IV trailer hitch receiver
4-pin/7-pin wiring harness
Smart Trailer Tow Connector
Engine Oil Cooler
Pro Trailer Backup Assist
Tailgate LED
Upgraded front stabilizer bar

53C - MAX Trailer Tow Package **\$799 extra**
Max 13,200 lb Capacity
Requires 944 - 3.5 Eco-Boost Engine
XL9 - 3.55 Electric Lock Rear Axle
Class IV trailer hitch receiver
4-pin/7-pin wiring harness
Smart Trailer Tow Connector
Engine Oil Cooler
Pro Trailer Backup Assist
Tailgate LED
Upgraded front stabilizer bar
655 - 36 Gallon Fuel Tank
67T - Integrated Brake Controller
Upgraded Rear Bumper

T7C - (5) LT245/70R 17E BSW 10-Ply A/T tires **\$260 extra**

Thank You for the opportunity to give you pricing on the above unit. Please let me know how you would like me to proceed from this point. Warranty is 3 year / 36,000 mile plus Power Train 5 year / 60,000 miles. Build date will be as soon as possible by the manufacture.

Sincerely,

Dean Miller
Moberly Motor Company

CITY OF MOBERLY, MISSOURI

BID FORM

Bid Due Date: March 4, 2020 at 10:00am

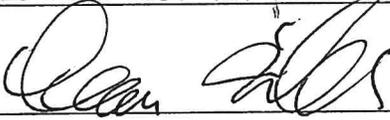
The City of Moberly is requesting a Bid Quotations for:

New 2020 Ford F150, Crew Cab, 4X4 (Large Door) XL Trim

\$ 31,074 145 "WB 5.5 ft Box

Dealer Name: Moberly Motor Company

Brand Name & Model: 2020 Ford F150 4X4 Crew Cab

Authorized Signature: 

Delivery Date: As soon as possible from the manufacture production

Bid submission deadline 10:00 a.m. Wednesday, March 4, 2020, to City Clerk's Office, Moberly City Hall, 101 West Reed Street, Moberly, Missouri 65270.

City of Moberly is requesting quotes on a 2020 Ford F150, Crew Cab, 4x4
(Large Door) XL trim

Color (White)

5.0 V8 Engine

Automatic 6 Speed Transmission

Limited Slip Axle (3.73)

145" Wheelbase

6'5" Bed

4 Wheel ABS Brakes

265/70/17 All Terrain Tires + Spare

Power Steering

Heating/Air Conditioning

AM/FM Radio

Speed Control/Tilt Wheel

Power Windows/Power Locks

(Grey) Cloth Bucket Seat w/Center Console, Rear cloth bench

Vinyl flooring

Tow Package

Trailer Brake Controller

***Quote due by 10 AM 3/4/2020**

Mail to: City of Moberly Att: Tim Patrick Contact Number 660-998-0127

101 West Reed St.

Moberly, Mo 65270

moberly motors

Driven by tradition.

City of Moberly
101 West Reed
Moberly, Mo 65270

February 27, 2020

RE: Bid for (1) 2020 Ford F150 Crew Cab 4X4 Pickup - (1/2) Ton

Moberly Motor Company would like to submit the following bid specifications and pricing for your consideration.

2020 Ford F150 4X4 Crew Cab Pickup - XL Trim Level

W1E - 4 Wheel Drive
995 - 5.0L V8 Engine
XL6 - 3.73 Electric Lock Rear Axle
101A Pkg - XL Trim Series
YZ - White Exterior Color
Factory Air Conditioner
50S - Factory Cruise Control
Power Steering
AM/FM Radio
Black Vinyl Floor Covering
3 year / 36,000 mile warranty
67T - Trailer Brake Controller
Front Tow Hooks
Painted Front & Rear Bumpers
Dr & Pass Air Bag System
17" Silver Steel Wheels
53B - Class IV trailer hitch receiver
Max **6,000 lb Capacity**
4-pin/7-pin wiring harness
Smart Trailer Tow Connector

157" wheelbase - 6.5 ft Box

44G - 10-Speed Automatic Transmission
7,000# GVWR
\$10.00 Gasoline
Power Brakes 4-Wheel Disc w/ABS
Pickup Bed Cargo Light
Ford SYNC Communications Sys
Tilt Steering Column
WG - 40/Console/40 Front Bucket Seat - Gray Cloth
Manual-folding, Power Glass Side view Mirrors
(5) 265/70R 17 OWL All-terrain A/T tires
17" Silver Steel Wheels
XL Power Equipment Group (Incl w/101A)
Power Windows - Power Door Locks with
Flip Key and Integrated Key Transmitter
keyless-entry (includes Autolock), Power
Tailgate Lock, Perimeter Alarm, Illuminated
Entry, Mirrors Manual-folding, Power Glass

(1) - 2020 F150 Crew Cab 4X4 \$31,382

Amount Due at Time of Delivery - Check - No Credit Cards

Optional for your consideration :



1520 North Morley, P.O. Box 249, Moberly, MO 65270

T (660) 263.6000 | T (800) 798.6006 | F (660) 263.1818 | ford@moberlymotors.com | www.moberlymotors.com

53A - Trailer Tow Package **\$732 extra**
Max 11,300 lb Capacity
Class IV trailer hitch receiver
4-pin/7-pin wiring harness
Smart Trailer Tow Connector
Engine Oil Cooler
Pro Trailer Backup Assist
Tailgate LED
Upgraded front stabilizer bar

53C – MAX Trailer Tow Package **\$799 extra**
Max 13,200 lb Capacity
Requires 944 - 3.5 Eco-Boost Engine
XL9 – 3.55 Electric Lock Rear Axle
Class IV trailer hitch receiver
4-pin/7-pin wiring harness
Smart Trailer Tow Connector
Engine Oil Cooler
Pro Trailer Backup Assist
Tailgate LED
Upgraded front stabilizer bar
655 - 36 Gallon Fuel Tank
67T - Integrated Brake Controller
Upgraded Rear Bumper

T7C - (5) LT245/70R 17E BSW 10-Ply A/T tires **\$260 extra**

Thank You for the opportunity to give you pricing on the above unit. Please let me know how you would like me to proceed from this point. Warranty is 3 year / 36,000 mile plus Power Train 5 year / 60,000 miles. Build date will be as soon as possible by the manufacture.

Sincerely,



Dean Miller
Moberly Motor Company

CITY OF MOBERLY, MISSOURI

BID FORM

Bid Due Date: March 4, 2020 at 10:00am

The City of Moberly is requesting a Bid Quotations for:

New 2020 Ford F150, Crew Cab, 4X4 (Large Door) XL Trim

\$ 31,382 157" WB 6.5 Ft Box

Dealer Name: Moberly Motor Company

Brand Name & Model: 2020 Ford F150 4X4 Crew Cab

Authorized Signature: 

Delivery Date: as soon as possible from the manufacture production

Bid submission deadline 10:00 a.m. Wednesday, March 4, 2020, to City Clerk's Office, Moberly City Hall, 101 West Reed Street, Moberly, Missouri 65270.

City of Moberly is requesting quotes on a 2020 Ford F150, Crew Cab, 4x4
(Large Door) XL trim

Color (White)

5.0 V8 Engine

Automatic 6 Speed Transmission

Limited Slip Axle (3.73)

145" Wheelbase

6'5" Bed

4 Wheel ABS Brakes

265/70/17 All Terrain Tires + Spare

Power Steering

Heating/Air Conditioning

AM/FM Radio

Speed Control/Tilt Wheel

Power Windows/Power Locks

(Grey) Cloth Bucket Seat w/Center Console, Rear cloth bench

Vinyl flooring

Tow Package

Trailer Brake Controller

***Quote due by 10 AM 3/4/2020**

Mail to: City of Moberly Att: Tim Patrick Contact Number 660-998-0127

101 West Reed St.

Moberly, Mo 65270

CITY OF MOBERLY, MISSOURI

BID FORM

Bid Due Date: March 4, 2020 at 10:00am

The City of Moberly is requesting a Bid Quotations for:

New 2020 Ford F150, Crew Cab, 4X4 (Large Door) XL Trim

\$ 30,813.28

Dealer Name: W-K FORD

Brand Name & Model: FORD F-150

Authorized Signature: 

Delivery Date: 6-8 WEEKS UPON BID ACCEPTANCE.

Bid submission deadline 10:00 a.m. Wednesday, March 4, 2020, to City Clerk's Office, Moberly City Hall, 101 West Reed Street, Moberly, Missouri 65270.

City of Moberly -

Due Date:

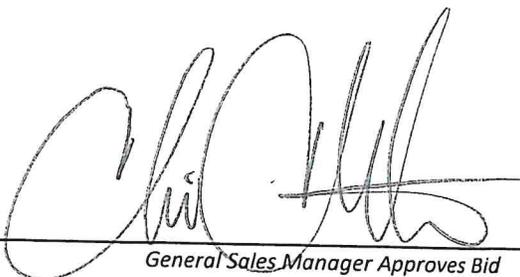
4-Mar-20



<i>2020 F-150 4x4 Crew Cab</i>		<i>Base Price</i>
		\$40,140.00
<i>Code</i>	<i>Description</i>	<i>Option Price</i>
995	5.0L V-8	\$1,995.00
44G	10-SPEED AUTOMATIC TRANSMISSION	STD
53A	TRAILER TOW PACKAGE	\$595.00
W	CLOTH BUCKET SEATS	\$295.00
XL6	3.73 ELECTRIC LOCKING DIFF	\$570.00
50S	CRUISE CONTROL	\$225.00
67T	TRAILER BRAKE CONTROLLER	\$275.00
85A	POWER EQUIPMENT GROUP - WINDOWS & LOCKS	\$1,170.00
W-K FORD BID DELIVERED PRICE		\$30,813.28

* Thank you for your consideration the W-K Family of Dealerships for your vehicle needs.

If Bid Is Accepted The Vehicle Will Be Ready:	6-8 WEEKS UPON BID ACCEPTANCE.
--	---------------------------------------

X 
 General Sales Manager Approves Bid

City of Moberly City Council Agenda Summary

Agenda Number: #6.
 Department: City Manager
 Date: April 6, 2020

Agenda Item: An Ordinance Approving A Plan For An Industrial Development Project And Costs-Benefits Analysis And An Industrial Development Project Within The City Of Moberly

Summary: This ordinance makes certain findings and determinations and approves a Plan for Industrial Development Project and Costs/Benefits Analysis dated February 27, 2020 (the “Plan”) prepared in accordance with Chapter 100 of the Revised Statutes of Missouri, as amended (“Chapter 100”) and a “Project for Industrial Development” (the “Project”) involving the acquisition, assembly, and leasing of certain property and installation of certain real and personal property on a portion of an approximately 40 acre site located at the Moberly Area Industrial Park.

The proposed Project includes the construction on the site of a food/bakery manufacturing facility containing approximately 85,000 square feet (collectively, the “Project”), and the issuance by the City in two or more series of its taxable industrial development revenue bonds in a maximum aggregate principal amount not to exceed \$85,000,000 for the purpose of completing the Project.

As required by Chapter 100, prior to the approval of the Plan and the Project the Council must first give 20 days prior notice to affected taxing districts stating the date the Council will first consider the Plan and Project. The notice including the Plan information and an invitation to such taxing jurisdictions to submit comments to the Council was approved by resolution on March 16 and the notice was duly provided. The hearing on the Pan and Project was to be held and concluded at the Council’s regular meeting of April 6, 2020.

Recommended

Action: Approve this ordinance

Fund Name: N/A

Account Number: N/A

Available Budget \$: \$0

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input checked="" type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution			
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney’s Report	Council Member		
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Kimmons	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Davis	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice	M___ S___ Kyser	___	___
<input type="checkbox"/> Consultant Report	<input checked="" type="checkbox"/> Other _____		Passed	Failed

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE APPROVING A PLAN FOR AN INDUSTRIAL DEVELOPMENT PROJECT AND COSTS-BENEFITS ANALYSIS AND AN INDUSTRIAL DEVELOPMENT PROJECT WITHIN THE CITY OF MOBERLY.

WHEREAS, Sections 349.012 and 100.020 of the Revised Statutes of Missouri, as amended, authorize the Council of the City (the “**Council**”) as the governing body of the City to promote commercial and industrial development, and to achieve such promotion, to engage in any activities which such municipality deems necessary, and sections 70.210 through 70.320 of the Revised Statutes of Missouri, as amended, authorize the City to contract with any private person, firm, association, or corporation for the planning, development, construction, acquisition, or operation of any public improvement, the subject and purposes of which are within the scope of the powers of the City; and

WHEREAS, the provisions of article VI, section 27(b) of the Missouri Constitution, as amended, and sections 100.010 to 100.200, inclusive, of the Revised Statutes of Missouri, as amended (collectively, the “**Act**”), further authorize the City to purchase, construct, extend and improve certain projects (as defined in the Act) for the purposes set forth in the Act and to issue industrial development revenue bonds in furtherance of such projects and to lease or otherwise dispose of such projects to private persons or corporations for manufacturing, commercial, warehousing and industrial development purposes upon such terms and conditions as the City shall deem advisable; and

WHEREAS, pursuant to Section 100.050 of the Act, the City has prepared a plan for an industrial development project attached as Exhibit A to and incorporated by reference in this Ordinance (the “**Plan**”) which calls for the acquisition, assembly, and leasing of certain property and installation of certain real and personal property on a portion of an approximately 40 acre site located at The Moberly Industrial Park situated within the City known and numbered as _____ McKeown Parkway (the “**Property**”), which activities are expected to facilitate the construction and installation of buildings and improvements on the Property including, without limitation, the construction of a food/bakery manufacturing facility containing approximately 80,000 square feet (collectively, the “**Project**”), and the Plan contemplates the issuance by the City in two or more series of its taxable industrial development revenue bonds in a maximum aggregate principal amount not to exceed \$85,000,000 (the “**Bonds**”) for the purpose of completing the Project as further described in the Plan, all in accordance with and pursuant to the Act; and

WHEREAS, pursuant to Section 100.059 of the Act, the Council has provided written notice of the proposed Plan and Project to affected taxing entities not less than Twenty (20) days prior to the Council’s consideration of the Plan and Project and in such notice, such taxing entities were invited to submit comments to the Council which were fairly and duly considered and a public hearing on the Plan and Project was conducted by the Council on April 6, 2020; and

WHEREAS, after closing the Hearing, and upon due consideration, the Council now wishes to approve the Plan and the Project, and in connection therewith, the Council hereby finds

and determines that the foregoing activities and undertakings are within the scope of the powers of the City, and the Council has further found and determined that such activities and undertakings are for a public purpose;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MOBERLY, MISSOURI as follows, to-wit:

SECTION 1. The Recitals to this Ordinance including, without limitation, the findings and determinations therein, are hereby incorporated by reference in their entirety in this Ordinance as if set forth in full at this place.

SECTION 2. The Council hereby further finds and determines that the acquisition, construction, improvement and equipping of the Project and the jobs created thereby will promote the economic well-being and industrial development of the City, the taxing entities in whose jurisdictions the Project is located, and such other affected taxing entities, and that the issuance of the Bonds to pay a portion of the costs of the Project will be in furtherance of the public purposes set forth in the Act, all as further set forth in the Plan. As such, the Plan and the Project are hereby approved.

SECTION 3. The portions of this Ordinance shall be severable. In the event that any portion of this Ordinance is found by a court of competent jurisdiction to be invalid, the remaining portions of this Ordinance are valid, unless the court finds the valid portions of this Ordinance are so essential and inseparably connected with and dependent upon the void portion that it cannot be presumed that the Council would have enacted the valid portions without the invalid ones, or unless the court finds that the valid portions standing alone are incomplete and are incapable of being executed in accordance with the legislative intent.

SECTION 4. This Ordinance shall take effect and be in force from and after its passage and adoption by the Council, and its signature by the officer presiding at the meeting at which it was passed and adopted.

PASSED AND ADOPTED by the Council of the City of Moberly, Missouri on this 6th day of April, 2020.

Presiding Officer at Meeting

ATTEST:

Diane Kay Galloway, CMC/MRCC, City Clerk

**EXHIBIT A
PLAN FOR INDUSTRIAL DEVELOPMENT PROJECT**

**CITY OF MOBERLY, MISSOURI
(PLUMROSE USA MANUFACTURING FACILITY PROJECT)**

**PLAN FOR
INDUSTRIAL DEVELOPMENT PROJECT
AND
COSTS/BENEFITS ANALYSIS**

FEBRUARY 27, 2020

**Prepared for the City of Moberly by
Cunningham, Vogel & Rost, P.C.
*legal counselors to local government***

**CITY OF MOBERLY, MISSOURI
(PLUMROSE USA MANUFACTURING FACILITY PROJECT)**

**PLAN FOR INDUSTRIAL DEVELOPMENT PROJECT
AND
COSTS/BENEFITS ANALYSIS**

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INDUSTRIAL DEVELOPMENT PLAN
AND
COSTS/BENEFITS ANALYSIS

CITY OF MOBERLY, MISSOURI
(PLUMROSE USA MANUFACTURING FACILITY PROJECT)

I. Industrial Development Plan

Pursuant to section 100.020 of the Revised Statutes of Missouri, as amended, the City of Moberly, Missouri (the “**City**”) enjoys express authority to carry out projects for industrial development. Additionally, the City may issue industrial revenue bonds to facilitate a “project for industrial development” under the terms of sections 100.010 to 100.200 of the Revised Statutes of Missouri, as amended (the “**IDB Act**”) and article VI, section 27(b) of the Missouri Constitution (together with the IDB Act, the “**Acts**”).

Under the IDB Act, a “project for industrial development” or “project” is defined as “the purchase, construction, extension and improvement of warehouses, distribution facilities, research and development facilities, office industries, agricultural processing industries, service facilities which provide interstate commerce, and industrial plants, including the real estate either within or without the limits of such municipalities, buildings, fixtures, and machinery.” Pursuant to the Acts, the City intends to issue taxable industrial revenue bonds (“**Chapter 100 Bonds**”) to facilitate a proposed industrial development project on behalf of Plumrose USA, Inc. (the “**Company**”), a Delaware corporation duly authorized to do business in Missouri and having a principal office at 651 West Washington Boulevard, Suite #304, Chicago, Illinois 60661.

The IDB Act requires any city proposing to carry out a project for industrial development to approve a plan for the proposed project. Accordingly, the City has caused this plan for an industrial development project (this “**Plan**”) to be prepared pursuant to the Acts to analyze and inform certain affected taxing entities of the potential costs and benefits, including the related anticipated tax impact on such affected taxing entities, of using Chapter 100 Bonds to facilitate abatement of ad valorem real and personal property taxes and exemption from sales and use taxes on property purchased for use in or incorporated into the project described below.

II. Parties

The Company. The Company was formed in 1932 and now offers several different product lines located across the United States which include products such as sliced deli meat, bacon, deli counter ham, canned ham, and cooked ribs. The Company now seeks to lease, construct, and conduct operations at a new food/bakery manufacturing facility (collectively, the “**Project**”) to be constructed on a site containing approximately 40 acres assembled within the Moberly Industrial Park known and numbered as ____ McKeown Parkway situated in the Moberly Industrial Park within corporate limits of the City, and described in Exhibit A, attached to and incorporated by reference in this Plan (the “**Property**”).

The City. The City is a city of the third classification and political subdivision of the State of Missouri. According to the United States Census Bureau, the City’s 2010 population was just under 14,000. The City is the largest city in Randolph County and is located near the center of the state, almost equidistant from Kansas City and St. Louis. The City is located at the intersection of two US Highways and rail facilities operated by Norfolk/Southern railroad.

The Holding Company. Moberly Holding Company (the “**Holding Company**”) owns title to a 11.2 acre portion of the Property (the “**Holding Company Portion**”) which will be merged and consolidated with certain real property currently owned by the City containing approximately 28.8 acres (the “**City Parcel**”) to comprise the Property. The Holding Company was formed in 2011 expressly for the purpose of lessening the burden of government of the Randolph County and the political subdivisions located therein, by holding and disposing of real property, and improvements and personal property in furtherance of economic development and job creation for the benefit of the City and other Randolph County political subdivisions.

III. Description of the Project

Pursuant to a Development Agreement among the City, the Holding Company, and the Company (the “**Development Agreement**”), upon the Holding Company’s conveyance of the Holding Company Portion to the City, the City will lease the assembled Property to the Company and the Company will construct and finance the Project. More specifically, under a Lease Purchase Agreement with the City (the “**Lease**”) the Company will construct on the Property a manufacturing facility containing approximately 85,000 square feet (the “**Financed Facilities**”) to be generally located as depicted in Exhibit B, attached to and incorporated by reference in this Plan. In addition, the Company plans to acquire and install machinery, equipment, furnishings, special tools, and other personal property to furnish and equip the Financed Facilities (collectively, the “**Financed Equipment**”). It is anticipated that the fully-realized Project will result in the creation of approximately 142 new full-time or full-time equivalent jobs (“**FTE Jobs**”).

Under the Development Agreement, beginning in calendar year 2020 and continuing through 2021, the City will issue Chapter 100 Bonds, in multiple series (including endorsements thereto), in the aggregate maximum principal amount not to exceed Eighty-Five Million Dollars (\$85,000,000) (collectively, the “**Bonds**”) for the purpose of providing funds for paying the Project costs. The maximum term of the Bonds (and of any endorsements thereto) shall be Fifteen (15) years in accordance with the schedule below:

Lease Year	Lease Term Start Date ¹	Bond Payment #/Due	Abatement Year
1	2/1/2020		0
2	1/1/2021	1 12/1/21	1
3	1/1/2022	2 12/1/22	2
4	1/1/2023	3 12/1/23	3
5	1/1/2024	4 12/1/24	4
6	1/1/2025	5 12/1/25	5

Lease Year	Lease Term Start Date ¹	Bond Payment #/Due	Abatement Year
7	1/1/2026	6 12/1/26	6
8	1/1/2027	7 12/1/27	7
9	1/1/2028	8 12/1/28	8
10	1/1/2029	9 12/1/29	9
11	1/1/2030	10 12/1/30	10
12	1/1/2031	11 12/1/31	11
13	1/1/2032	12 12/1/32	12
14	1/1/2033	13 12/1/33	13
15	1/1/2034	14 12/1/34	14
16	1/1/2035	15 12/1/35	15

¹ The foregoing assumes a single conveyance of the entire Project in one phase, however, the Project may be completed in sequential phases. Accordingly, the Lease by its terms ends on the *earlier* of (i) December 31, 2036 (15 years following the last date for acceptance by the City of any portion of the Financed Facilities or the Financed Equipment;) or (ii) with respect to each portion of the Bonds represented by an annual endorsement of principal, December 1 of that year which is fifteen (15) years from the year of such annual endorsement as set forth on the Table of Cumulative Outstanding Principal Amount on the Bonds, to which an Additional Payment/Principal Amount Advanced pertains. Thus, each portion of the Project will obtain a maximum 15 year abatement.

The initial issuance of the Bonds is expected to occur in the first quarter of 2020 and shall occur contemporaneous with the leasing by the City to the Company of the Property. Bond “proceeds” from the initial issuance shall be used to solely pay costs of issuance of the Bonds and administrative and legal costs of the Project. The second and potentially final issuance of the Bonds will likely occur in the first quarter of 2021. This second issuance and any subsequent issuance and endorsements to the Bonds required by the Project construction schedule or events of *force majeure* will attend the phasing of actual construction of the building, site improvements, and furnishing and equipping of the Financed Facilities and the Financed Equipment to support the Project. All additional endorsements to the Bonds shall be made in amounts corresponding to the costs of the portions of the Project then completed or installed, but not previously financed by the initial issuance of or prior endorsements to the Bonds.

To facilitate the Project, the City will retain fee simple title to the Property. Contemporaneous with the City’s acquisition of the Holding Company Portion, the City will issue the Bonds, and the Company will lease the Property from the City for a total term of Sixteen (16) years from the date of such initial issuance of the Bonds. Contemporaneous with each subsequent endorsement to the Bonds, the City will also acquire (but not more frequently than annually) title to all real property improvements comprising the Financed Facilities, and to all Financed Equipment as constructed or installed at the Financed Facilities and on the Property in furtherance of the Project. Under supplements to the Lease, the City shall lease the applicable portions of the Financed Facilities and Financed Equipment so acquired to the Company, in each case for a term of Fifteen (15) years from the date of acquisition.

The Company seeks to obtain a total Fifteen (15) year exemption from ad valorem taxation up to One Hundred Percent (100%) of ad valorem taxes imposed solely on the realty and personalty

comprising the Project. The City and the Company anticipate that the Property, the Financed Facilities and the Financed Equipment will be exempt from levies of ad valorem taxes for as long as the City owns such property and, accordingly, that the Company shall enjoy property tax abatement on the Property and portions of the Financed Facilities or Financed Equipment for a period of Fifteen (15) years after the City has acquired such portions of the Financed Facilities or Financed Equipment, as applicable. Pursuant to the Development Agreement, beginning in Year 4 of the Project and for every year thereafter during the term of the Lease, the Company shall make graduated payments in lieu of taxes (each a “PILOT”) in accordance with the schedule below. In compliance with section 100.050.3 of the IDB Act, PILOT amounts in excess of actual costs of Plan administration shall immediately upon receipt be disbursed by the City Treasurer to each affected taxing jurisdiction in proportion to their current ad valorem tax levies. In addition, in any year in which the Project fails to provide and maintain the target number of FTE Jobs, the Company will be required to make a further annual PILOT as additional rent under the Lease, as further described in Section XI of this Plan.

Lease Year	Lease Term Start Date	Abatement Year	% Exemption	% PILOT Required ¹
1	2/1/2020	0	N/A	N/A
2	1/1/2021	1	100%	0%
3	1/1/2022	2	100%	0%
4	1/1/2023	3	100%	0%
5	1/1/2024	4	95%	5%
6	1/1/2025	5	80%	20%
7	1/1/2026	6	80%	20%
8	1/1/2027	7	67%	33%
9	1/1/2028	8	67%	33%
10	1/1/2029	9	67%	33%
11	1/1/2030	10	67%	33%
12	1/1/2031	11	67%	33%
13	1/1/2032	12	67%	33%
14	1/1/2033	13	50%	50%
15	1/1/2034	14	50%	50%
16	1/1/2035	15	50%	50%

¹ Whether or not the Project is completed and conveyed in sequential phases, the percentage of PILOTs due in any year shall apply to all portions of the Property, the Financed Facilities, and the Financed Equipment then accepted and held in fee by the City. Thus each portion of the Project will obtain a maximum 15 year abatement.

Finally, the City will permit the Company to use the City’s tax-exempt status to obtain an exemption from certain sales taxes for purchases of qualified building materials and personal property to be incorporated into or consumed in the construction of the Project.

IV. Estimated Cost of the Project

The acquisition, construction and installation of the Financed Facilities (including the imputed value of the Property) is expected to cost approximately Thirty-five Million Six Hundred Thousand Dollars (\$35,600,000.00).

The acquisition and installation of the Financed Equipment is expected to cost approximately Thirty-Three Million Dollars (\$33,000,000.00) for a total Project cost/value of \$68.6 Million. See also **Attachment A** to this Plan for relevant assumptions informing these estimates.

V. Statement of Source of Funds to be Expended for the Project

The principal source of funds to be expended for the Project will be the issuance of Bonds, in an aggregate principal amount equal to: (i) in the case of the initial issuance of the Bonds, the costs of issuance of the Bonds including closing costs, fees and charges, together with and legal and administrative costs associated with the documentation of the Project and the required conveyances; and (ii) in the case of second (and any subsequent) issuance of Bonds, the “true value in money,” as finally determined in accordance with Missouri law, of the applicable portions of the Financed Facilities and Financed Equipment together with closing costs, fees, and charges associated with each such subsequent issuance and endorsement and conveyance of Financed Facilities and Financed Equipment. It is expected that the Company will purchase and hold the Bonds and each subsequent endorsement to the Bonds relating to the Project in exchange for the Property and applicable portions, as completed, of the Financed Facilities and the Financed Equipment, all pursuant to a written bond purchase agreement with the City and a trust indenture for the Bonds (the “**Indenture**”). Other available Company funds may also be expended in support of the Project.

The City shall in no way have liability to make payments with respect to the Bonds except from revenues derived by the City from payments or credits under the Lease and other related Bond documents and the City shall not be obligated to commit or expend the City’s own funds in connection with or support of the Project. The Bonds issued by the City shall be secured solely by rent payments or credits under the Lease, and the Bonds will be payable solely from the rent payments or credits provided by the Company to the City under the Lease. The Bonds shall not be an indebtedness, general obligation, or liability of the City, Randolph County, or the State of Missouri or of any political subdivision thereof.

VI. Statement of the Terms Upon Which the Facilities to be Provided by the Project are to be Leased or Otherwise Disposed of by the Municipality

The City shall lease the Property to the Company contemporaneous with the initial Bond issuance. It is expected that the Financed Facilities and the Financed Equipment shall be conveyed to the City as completed and, as necessary, on an annual rolling basis during the time that the Project is under construction, with the Company conveying to the City in December of each year during the construction period the portion of the Financed Facilities and Financed Equipment completed but not yet conveyed to the City. Contemporaneous with each such conveyance, the

City shall lease the Financed Facilities and Financed Equipment back to the Company via supplements to the Lease, and the Bonds shall be endorsed in an amount equal to the “true value in money” of the conveyed Financed Facilities and Financed Equipment. Payments or credits made under the Lease and supplements to the Lease shall at all times be deemed to be equal to, timed to coincide with the due dates of, and be pledged to the satisfaction of applicable principal of and interest on the Bonds, as the same shall become due and payable. The Company shall also be required to make certain PILOTs to affected taxing entities, as described in Section III, above and additionally described in Section XI of this Plan.

The Company will construct, furnish, and equip the Financed Facilities and will purchase and install the Financed Equipment on the Property in accordance with the Development Agreement, and the terms and provisions of the Lease. It is anticipated that the City shall be the sole owner in fee of the Property, and each portion of the Financed Facilities and Financed Equipment during the Fifteen (15) year period beginning in the year in which the Property or portion of the Financed Facilities or Financed Equipment was conveyed to the City. At the end of the Lease term, the City shall convey the Property and re-convey the Financed Facilities and Financed Equipment to the Company and the Project shall be subject to all applicable ad valorem tax levies.

Under the terms of the Lease, the Company shall have the option to purchase the Property, the Project, the Financed Facilities, and the Financed Equipment or any portion thereof at any time prior to the expiration of the term of the Lease at prices set forth in the Indenture. Upon the expiration or termination of the Lease or when all principal and interest due on the Bonds shall have been paid in full, the Company will have the obligation to purchase the Project and the Property under terms specified in the Lease and the Indenture. The Lease will terminate not later than December 31 of the year that is Fifteen (15) years from the year in which the final endorsement to the Bonds is made. The Lease is subject to earlier termination provisions.

VII. Statement Identifying Each School District, Community College District, County, or City Affected by Such Project Except Property Assessed by the State Tax Commission Pursuant to Chapters 151 and 153, RSMo.

The Moberly R-2 School District, Moberly Area Community College, Randolph County, and the City constitute the school district, community college district, county, and city, respectively, affected by the Project. The Moberly Special Road District, Moberly Road and Bridge District, Randolph County Road and Bridge District, Randolph County Developmental Disabilities Board, Little Dixie Library District, and the Randolph County Health District also levy property taxes within the Project area. Finally, the Westran R-1 School District, Higbee R-8 School District, Sturgeon R-5 School District, Renick R-5 School District, Northeast R-4 School District, Chariton R-4 School District, City of Huntsville, City of Clifton Hill, Village of Renick, Village of Cairo, City of Higbee, City of Clark, and Village of Jacksonville are also school districts, community college districts, or municipalities affected by the Project to the extent these entities receive allocations of merchants and manufacturers replacement or commercial surtax amounts. The Costs/Benefits Analysis set forth in Section X of this Plan and related exhibits to this Plan identifies all taxing entities affected by the Project.

VIII. Most Recent Equalized Assessed Valuation of the Real Property and Personal Property Included in the Project

According to the records of the Randolph County Assessor’s Office, the most recent equalized assessed valuation (2019) of the Property is \$1,060 which amount applies only to the land comprising the Holding Company Portion. At present, the Holding Company Portion comprises 11.2 acres of a total 67.5 acre tract. The current assessed valuation applies to the entire tract and reflects an “Agricultural” classification as determined by the Randolph County Assessor. Viewed proportionally, the Holding Company Portion represents 16.6% of the assessed valuation or \$175. The City Parcel, the remaining portion of the Property, is owned by the City and is therefore tax exempt. Both parcels are currently vacant and unimproved, providing a total assessed valuation of \$0 in respect of personalty.

IX. Estimate of the Equalized Assessed Valuation of the Real Property and Personal Property Included in the Project after Development

The equalized assessed valuation of the land and improvements included in the Project Property is estimated to be \$11,200,000 after the Project is complete. The estimated assessed value was determined by multiplying the estimated appraised value of the real property portion of the Project by the assessment ratio for commercial real property of 32%. Using the cost method of valuation, the appraised value of the real property portion of the Project is estimated to be \$35,000,000 after the Project is complete. This estimated appraised and assessed values were determined by using the estimated cost of construction of the real property portion of the Project, as provided by the Company to the Missouri Department of Economic Development.

The equalized assessed valuation of personal property included in the Project is estimated to be \$10,998,900 in the year the Project is expected to be completed. The estimated assessed valuation for personal property was calculated by multiplying the initial cost of the personal property, by the assessment ratio for commercial personal property of 33.33%. The value of the personal property reflects the value estimated as of 2021, when the Project is expected to be completed. The assessed value of personal property in the Project is expected to decrease in the years between 2021, when the Project is complete and the Financed Equipment is placed in service, and 2035, when the last endorsement to the Bonds is expected to be retired, due to depreciation. Some of this decrease may be offset, however, by periodic replacements by the Company of portions of the Financed Equipment pursuant to terms of the Lease.

The actual assessed value of the real and personal property comprising the Project may be more or less than the estimates provided in this section. The assumptions used in estimating the assessed value of real and personal property after the Project is complete are set forth in **Attachment A** and the exhibits attached to this Plan.

These estimates are not intended to bind the Company, or the Randolph County Assessor in determining the “true value in money” of the Property, the Financed Facilities or the Financed Equipment in determining PILOT amounts due or for other computational purposes.

X. An Analysis of the Costs and Benefits of the Project on Each School District, Community College District, County or City

Pursuant to section 100.050.2(3) of the IDB Act, this Plan includes an analysis of the costs and benefits to the City and other taxing entities affected by the proposed tax abatement and exemptions applicable to the Project. In addition, the following provides a summary of the exhibits attached to this Plan that estimate the direct tax impact the Project is expected to have on certain taxing entities accompanied by an explanation of the ancillary benefits expected to be derived from the Project. **Attachment A – Summary of Key Assumptions** illustrates and summarizes various assumptions related to the determination of the assessed valuations and the tax formulas that were applied.

Summary of Cost/Benefit Analysis. Exhibit C, attached to and incorporated by reference in this Plan, presents a summary for each affected taxing entity of: (1) the total estimated tax revenue that would be generated if no project were completed on the Property (the “No Project Scenario”); (2) the total real and personal property tax revenues that would be generated if the Project were completed taking into account the tax exemption provided under the Acts and the PILOTs required under the Development Agreement; and (3) the difference between revenues generated with and without the Project. The estimated cumulative value of the property tax abatement over the Lease term for all taxing districts is estimated at \$4,044,721, or \$252,795 annually. It should be noted also that, because the Randolph County Assessor will ultimately be responsible for determining the assessed valuation of the Project, the actual value of the Project may differ from the estimated values assumed in this Plan, which may have an impact on the actual value of the abatement and the PILOTs generated.

Arguably, these amounts are less than the amounts that would be “foregone” by the affected taxing jurisdictions over the same period without applying the Chapter 100 Bonds tax exemption provided for in the Development Agreement. This argument is falsified, however, by the highly competitive process that attended the ultimate selection of a location for the Project and the realization that the availability of the tax abatement/exemption provided the City and the State of Missouri was a material inducement to the Company to undertake the Project in Moberly. Indeed, the true impact on local taxing jurisdictions may only be the tax revenues foregone during the first four years of the Lease term. Exhibit D, attached to and incorporated by reference in this Plan, provides the estimated projected tax revenues that would be generated by the Property without the undertaking of the Project. The data in Exhibit D reveal that this foregone amount totals only \$51.96 for all of the affected taxing jurisdictions combined.

Real Property Tax Revenues. Exhibit E, attached to and incorporated by reference in this Plan, provides the projected revenues that would be generated from the Property and the Financed Facilities, assuming completion of the Project on the schedule and as described in this Plan. The estimated tax revenues are shown for all taxing districts affected, including those districts only affected to the extent that they receive a portion of the County’s commercial surtax applied to the Property. These tax revenue projections include amount that the Company is obligated to pay as payments in lieu of taxes. that would be generated from the Property and Financed Facilities with the tax abatement. Although the tax exemption resulting from the City’s ownership of the Project applies to one hundred percent (100%) of the real property taxes otherwise applicable, beginning

in 2024, the Company will make PILOT payments in graduated amounts representing portions of the real property revenues that would otherwise be generated by the realty comprising Project. These payments will increase over the remainder of the Lease term. Estimated revenues from annual PILOT payments total over \$3.6 Million over the Lease Term. Moreover, in year 2035, when the fifteen-year abatement period will have run, the Property can be expect to generate annual amounts in excess of \$975,000 in real property taxes alone.

Personal Property Tax Revenues. Exhibit F, attached to and incorporated by reference in this Plan, provides the projected personal property tax revenues that would be generated from the Financed Equipment for the term of the proposed tax abatement. Because the Chapter 100 Bonds cover personal as well as real property the resulting exemption from taxation applies to (100%) of the property taxes on personalty and equipment. However, as in the case of the real property tax revenues discussed above, beginning in 2024, the Company will also make graduated PILOT payments representing portions of revenues that would otherwise be generated by Project personal property. Estimated revenues from annual PILOT payments representing personalty and equipment total nearly \$369,000 over the Lease Term. This amount incorporates the assumption that the Company will enjoy applicable depreciation allowances on all such equipment. Again, when the fifteen-year abatement period will have run, the Property can be expected to generate annual amounts of nearly \$79,000 solely from personal property taxation.

Sales Tax Exemption. By allowing the Company to utilize the City’s sales tax exemption as provided under the Acts, the City will also provide a sales tax exemption on qualified building materials and certain personal property necessary to construct and equip the Project which are not otherwise exempt from sales tax. Based on the assumptions set forth in **Attachment A**, and an estimated \$17,500,000 in building materials purchases and an estimated \$2,000,000 in non-manufacturing personal property purchases, and factoring in the estimated \$31,000,000 in manufacturing personal property purchases exempt from local and state sales taxes, the net fiscal impact of the sales tax exemption if granted by the City is estimated to approach \$4,279,875,¹ allocated as follows and as further illustrated in Exhibit G, attached to and incorporated by reference in this Plan:

State of Missouri	\$ 2,133,625
City of Moberly	\$ 1,262,500
Randolph County	\$ 631,250
Randolph County Ambulance District	\$ 252,500
Total	\$ 4,279,875

Service Costs of School Districts, Community College Districts, County, and Cities. The completion of the Project may require taxing entities that are affected by the Project to provide certain additional governmental services to the Property. Service costs for Randolph County and the City have been estimated based on a pro-rata allocation of available budgeted 2019-2020 total annual expenditures for the respective taxing jurisdictions over the entire service area served respectively by each such taxing district. Estimated services costs resulting from the Project were

¹ Provides net fiscal impact of the sales tax exemption assuming all qualified building materials and personal property are purchased within the State of Missouri, County of Randolph, and City of Moberly. An estimate of the qualified building materials to be purchased outside of the State of Missouri, County of Randolph, and City of Moberly is not available as of the completion of this Plan.

calculated by allocating the estimated services costs of Randolph County and the City proportionally to the Project and the Property on a per acre basis.

Because the Project does not provide for residential development, it is assumed that no significant population will be added as a direct component of the Project. Further, both the City and the Company anticipate that the majority of new FTE Jobs can be expected to be filled by employees who will either be coming from outside the immediate area or who already reside in the service area. Thus, no significant influx of population of school-age children or adult students is expected. As such, the Moberly R-2 School District and the Moberly Area Community College District can be expected to incur only minimal direct service costs as a result of the Project. Moreover, to the extent any such student population increases are experienced, currently existing facilities are expected to satisfy any additional service demand. Table 1 below page provides a comparison of estimated annual costs by taxing entity to provide services to the Property under “No Build” and “With Project” scenarios.

Table 1: Taxing Entity Annual Service Costs ¹

Taxing Entity	“No Build” Services to Property ²	“No Build” Services Costs to Property	Added Services to Property “With Project” ³	Total Services Costs to Property “With Project”
City of Moberly	Administration, Law Enforcement, General Public Works, Community Development, Insurance, Debt Service, Capital Improvements, Transportation	\$125,245.75 ⁴	Municipal Court, Public Works Service, Building Inspection, Solid Waste, Wastewater, Water, Fire and Emergency Services	\$144,412.68 ⁵
Randolph County	General County Government Services, County Roads, Bridges, and Transportation, County Law Enforcement,	\$4157.52	Health Code Enforcement, Dispatch Services	\$4212.29
Moberly School District	Elementary & Secondary Education.	\$0	None/Minimal	\$0
Moberly Area Community College	Adult & Higher Education.	\$0	None/Minimal	\$0

¹ Services costs are based upon a pro-rata allocation of applicable portions of available 2019-2020 annual budget data for each individual taxing entity on a per acre basis. After the estimated services costs are determined for each individual taxing entity, such estimated services costs are applied to the Project based on a ratio of the total service area acreage of the taxing entity versus the acreage of the Project area. Where no service population exists, certain service costs are presumed to be \$0.00.

² “No Build” services are those provided on a general basis to all properties within the taxing district, whether improved or unimproved.

³ “With Project” services are those services provided to individual parcels of property with improvements. As such, these services will be additional services the taxing entity will have to provide to the Property once the Project is complete. Costs shown are allocation only – not necessarily actual costs.

⁴ Pro-rata allocation assumes that service demand associated with each acre is equal; in fact, vacant ground generates significantly less service demand than occupied ground. As such, this estimate of costs is likely a significant over-estimate of actual costs associated with the Property as presently used.

⁵ First Project Year only, based on pro-rata allocation of services applied to existing City population multiplied by number of new jobs expected.

Taxing entities identified in Section VII of this Plan that are affected by the Project only to the extent that they receive allocations of commercial surcharge amounts will provide no services to the Property, and thus, will bear no associated services costs.

As the Project is developed, affected taxing entities, particularly the City, may experience increased capital or operation costs as a result of providing services to industrial operations on the Property. For example, emergency services demand may increase due to the increase of industrial activity. However, some of these potential increased costs may be absorbed by the capacity of existing facilities that currently serve areas around the Property. On the other hand, individual facilities that currently are at capacity or in the near future may reach capacity could be overburdened by significant increases in localized demand. Simply put, the costs and impacts on taxing entities resulting directly from Project completion are difficult or impossible to objectively quantify. Any increase in business activity, construction, and development creates a potential concomitant increase in localized demand for certain public services. Where such impacts may be anticipated, however, these have been considered against the anticipated magnitude of new revenues generated by development and job creation that will be available to meet cost concerns.

Ancillary Project Benefits. During the term of the abatement, the Company is expected to create and maintain 142 FTE Jobs at the Property. The City and Randolph County may therefore experience an increase in businesses to support the Project’s employees and operations. The Project may also provide collateral benefits for local suppliers during the construction period. If the Company fails to create and maintain this anticipated number of FTE Jobs, the Company will pay PILOTs in amounts tied to the number of FTE Jobs actually created, as described in Section XI of this Plan, with the amount of PILOTs increasing as the number of FTE Jobs actually created decreases. Recognizing the difficulties in quantifying costs and impacts of the Project identified above, ancillary impacts were not quantified for the purposes of the Project and this Plan.

XI. Identification of any Payments In Lieu of Taxes Expected to be Made by Any Lessee of the Project, and the Disposition of any such Payments by the Municipality

As noted above, beginning in Year 4 of the Project, the Company will begin making PILOT payments on a graduated increasing scale through the term of the Lease as illustrated in the table below:

Lease Term	Abatement Year	% Exemption	% PILOT Required ¹
1/1/2024	4	95%	5%
1/1/2025	5	80%	20%
1/1/2026	6	80%	20%
1/1/2027	7	67%	33%
1/1/2028	8	67%	33%
1/1/2029	9	67%	33%
1/1/2030	10	67%	33%
Lease Term	Abatement Year	% Exemption	% PILOT Required ¹

1/1/2031	11	67%	33%
1/1/2032	12	67%	33%
1/1/2033	13	50%	50%
1/1/2034	14	50%	50%
1/1/2035	15	50%	50%

¹ The table above assumes a single phase completion and conveyance of the Project. However, whether or not the Project is completed and conveyed in sequential phases, the percentage of PILOTs due in any year shall apply to all portions of the Property, the Financed Facilities, and the Financed Equipment then accepted and held in fee by the City. Thus, each portion of the Project will enjoy a maximum 15 year abatement.

Under the Development Agreement, PILOTs equal to the percentage indicated on the schedule above of that amount which would have been levied and collected on the land and improvements to such Property and on the personalty located or installed therein or thereon in each applicable year will be determined from time to time by the Randolph County Assessor. In compliance with section 100.050.3 of the IDB Act, PILOT amounts above in excess of actual costs of Plan administration upon receipt will be disbursed by the City Treasurer to each affected taxing jurisdiction in proportion to their current ad valorem tax levies.

If the Company provides and maintains the anticipated 142 FTE Jobs through the Project, the Company will not incur an obligation to pay additional PILOTs (over those described in the preceding paragraph) during the term of the Bonds. However, if the number of FTE Jobs is determined to be less than 142, calculated in accordance with the Development Agreement, Company will pay additional PILOTs on the Financed Facilities and the Financed Equipment in the form of additional rent payments under the Lease (the “**Additional Rents**”), beginning in 2021 and in any year thereafter that the Bonds remain outstanding in which the number of FTE Jobs is not 142. The PILOTS will be calculated on a sliding scale based on the number of FTE Jobs actually provided compared to the target amount required. Such Additional Rents will be also disbursed to applicable taxing districts in accordance with section 100.050.3 of the IDB Act.

XII. Conclusion and Recommendations

Based on representations of the Company, the decision by the Company to pursue the Project would not have occurred without the City’s commitment to adopt and approve the Plan. The Project will provide a significant net benefit to Randolph County, the City, and other affected taxing entities. The Project is anticipated to generate 142 Jobs. The creation of 142 Jobs will provide a significant benefit to local taxing entities by increasing the overall tax base.

An additional overall benefit of the Project to affected taxing districts, as illustrated in Exhibit C – Summary of Project Revenues and Section X of this Plan, is the increase in taxing revenue after the end of the proposed tax abatement period of an estimated \$1,054,736 annually, a significant increase over the annual tax revenue of approximately \$14 that is estimated to be collected after the end of the abatement period if the Project were not to occur. Conversely, the estimated services costs resulting from the Project are minor compared to the correlative benefits of the Project. Under the circumstances and in furtherance of the profusion of resulting benefits, this Plan recommends the adoption and approval of the Industrial Development Plan and

Costs/Benefits Analysis for the City of Moberly, Missouri (Plumrose USA Manufacturing Facility Project) and the approval and implementation of the Project.

Attachment A – Summary of Key Assumptions and Sources

The following assumptions have been applied in the foregoing Plan and in the Costs/Benefits Analysis. Where applicable sources of information and limits have been identified:

1. The cost of acquiring, constructing, and installing the Financed Facilities is estimated to be \$35,600,000. The cost of acquiring and installing the Financed Equipment is estimated to be \$33,000,000. The foregoing estimated costs were provided by the Company in connection with the initial Project Information Questionnaire submitted to the Missouri Department of Economic Development. These costs may be subject to further refinement based on construction costs estimates obtained by the Company in the course of the Project. *The City has not undertaken to verify the accuracy of these estimates by independent investigation.*
2. The Financed Facilities and the Financed Equipment are expected to be complete by December 31, 2021, but may be completed prior to that date. This Plan and accompanying the Costs/Benefits analysis assumes that 100% of the Financed Facilities and Financed Equipment will be completed in 2021, but takes into account the possibility that delays in construction or events of *force majeure* could extend this period.
3. Construction of the Financed Facilities will begin early in 2020. The Holding Company Portion will be conveyed to the City at the initial closing on the Bonds. Purchase of the Financed Equipment will begin in 2020 and will be completed and installed not later than December 31, 2021.
4. The Financed Facilities and the Financed Equipment will be owned by the City and leased to the Company at all times during the term of the Lease.
5. The Property, the Financed Facilities, and the Financed Equipment will be excluded from the calculation of ad valorem property taxes for the term of the Lease. Each year, the portions of the Financed Facilities and Financed Equipment completed but not previously conveyed to the City shall be conveyed to the City, and the term of tax abatement shall commence for such portions. The term of the tax abatement for the Property and each portion of Financed Equipment and Financed Facilities shall be fifteen (15) years beginning in the year in which such portion was conveyed to the City. At the end of the fifteen-year period of abatement, the Property and the Financed Equipment and Financed Facilities will be conveyed back to the Company, and taxing districts will begin receiving the full tax revenue from the Project.
6. For the purposes of calculating the impact of the proposed abatement on real and personal property tax revenues, it is assumed that the Company will maintain at least 142 Jobs on the Property and therefore will not have to pay Additional Rent constituting PILOTs.
7. Taxes on commercial real property and personal property were calculated using the following formula:

$$(Assessed\ Value\ x\ Tax\ Rate)/100$$

- 8. Assessed value of the Property and Financed Facilities was calculated using the following formula:

$$\text{Fair Market Value} \times \text{Assessment Ratio of 32\%}$$

- 9. Assessed value of the Financed Equipment was calculated using the following formula:

$$(\text{Cost} * \text{Depreciation Factor}) \times \text{Assessment Ratio of 33.33\%}$$

- 10. The most recent equalized assessed value was obtained from the tax receipts prepared and issued by the Randolph County Collector’s Office. The current value of the Property was calculated using the fair market value of the Property of \$600,000. The estimated assessed value for the Property used to determine tax revenue if the Project is not completed was calculated using the cost method of valuation and assuming an increase in value of 2% every 2 years.
- 11. The estimated assessed value of the Property, Financed Facilities, and Financed Equipment during construction and after the Project is complete was provided by the Company and is based solely on the estimated costs of the various Project components. This Plan assumes the accuracy of these figures. To the extent that the actual value of the Property, Financed Facilities, and Financed Equipment during and after completion of the Project differs from the figures provided by the Company, the impact on tax revenue may be more or less than described in this Plan. The City and the Company accept no responsibility or liability for such impacts or differences.
- 12. For the purposes of calculating the assessed value of the real property (the completed Financed Facilities, including the Property and its improvements) if the Project is completed, it is assumed that the value of such real property will remain flat during the abatement period because any increase in the value of the Property will be offset by depreciation of the Financed Facilities.
- 13. It is assumed that the Financed Equipment has an average depreciable life of seven (7) years. The depreciated fair market value of the Financed Equipment is calculated in this Costs/Benefits Analysis using a 7-year Missouri depreciation schedule. In the year of the Financed Equipment’s purchase, the fair market value is assumed to be the Financed Equipment’s cost. At the end of the year of purchase, a depreciation factor is applied to the cost to determine the value on January 1 of the next year. Thereafter, at the end of each year, the applicable depreciation factor is applied to the original cost to determine the property’s value on January 1 of the following year. The table below shows the assumed depreciation factors. After the 7th year, the assumed fair market value of the property for personal property taxation purposes remains at 10% of its original purchase price. The attached analysis assumes that no personal property is replaced during the term of the proposed tax abatement.

Year	MO	Depreciation
After	Factor	Rate
Purchase		
1	89.29%	10.71%
2	70.16%	19.13%
3	55.13%	15.03%
4	42.88%	12.25%
5	30.63%	12.25%
6	18.38%	12.25%
7	10.00%	8.38%

14. For purposes of determining the impact of the sales tax exemption, it is assumed that:
- (a) The applicable sales tax rate is 8.425%, of which 4.225% is allocable to the State of Missouri, 2.500% is allocable to the City of Moberly, 1.250% is allocable to Randolph County, and 0.500% is allocable to Randolph County Ambulance District. It is assumed that these rates remain constant through the period during which all purchases of equipment and personal property for the Project are expected to be made.
 - (b) 100% of the qualified construction materials and personal property will be purchased in 2020.
 - (c) 50% of the total costs of the Financed Facilities will be allocated to construction materials costs.
 - (d) Only personal property not expected to benefit from the statutory manufacturing state and local sales and use tax exemption is included in the sales tax exemption value estimate in this Plan. Manufacturing-related personal property purchases are assumed to be exempt from state and local sales and use tax pursuant to the statutory exemption whether or not the sales tax exemption described in this Plan is provided. However, ultimate classification of the property as manufacturing or non-manufacturing may affect the value of the sales tax exemption discussed herein.
 - (e) The sales tax exemption analyzed in this Plan will apply only to non-manufacturing personal property purchased as a part of the Project’s original development. State and local sales tax will be applied to non-manufacturing personal property purchased following completion of the Project.
15. The tax rates used in this Plan were provided by Randolph County and reflect the rates in effect for the tax year 2019. The tax rates were held constant through the year 2035. Should any taxing district increase or decrease its levy rate during the proposed term of tax abatement, the impact on tax revenue of such taxing district could be more or less, as applicable, than the estimates set forth in this Plan.

EXHIBIT A

The Property - Legal Description

DESCRIPTION OF 11.2 ACRES FROM MOBERLY HOLDING COMPANY:

A tract of land being part of the Northwest Quarter of Section 25, Township 54 North, Range 14 West of the fifth principal meridian, Randolph County, Missouri, being more particularly described as follows: Commencing at an iron rod marking the Northwest corner of said Section 25; thence South 88 degrees 14 minutes 40 seconds East, a distance of 403.18 feet; thence South 00 degrees 00 minutes 00 seconds East, a distance of 922.11 feet to an iron rod on the South line of McKeown Parkway; thence along the South line of McKeown Parkway, South 90 degrees 00 minutes 00 seconds East, a distance of 298.66 feet to an iron rod and the POINT OF BEGINNING; thence continuing South 90 degrees 00 minutes 00 seconds East, a distance of 1125.34 feet to an iron rod on the Westerly right-of-way of the former Norfolk Southern Railroad; thence along said right-of-way, South 01 degrees 29 minutes 37 seconds West, a distance of 452.34 feet to an iron rod; thence North 88 degrees 12 minutes 20 seconds West, a distance of 1114.10 feet to an iron rod; thence North 00 degrees 00 minutes 00 seconds East, a distance of 417.30 feet to the POINT OF BEGINNING, containing 11.2 acres.

together with

DESCRIPTION OF 28.8 ACRES FROM THE CITY OF MOBERLY:

A tract of land being part of the Northwest Quarter of Section 25, Township 54 North, Range 14 West of the fifth principal meridian, Randolph County, Missouri, being more particularly described as follows: Commencing at an iron rod marking the Northwest corner of said Section 25; thence South 88 degrees 14 minutes 40 seconds East, a distance of 403.18 feet; thence South 00 degrees 00 minutes 00 seconds East, a distance of 922.11 feet to an iron rod on the South line of McKeown Parkway; thence along the South line of McKeown Parkway, South 90 degrees 00 minutes 00 seconds East, a distance of 298.66 feet to an iron rod; thence South 00 degrees 00 minutes 00 seconds West, a distance of 417.30 feet to an iron rod and the POINT OF BEGINNING; thence South 88 degrees 12 minutes 20 seconds East, a distance of 1114.10 feet to an iron rod on the Westerly right-of-way of the former Norfolk Southern Railroad; thence along said right-of-way, South 01 degrees 29 minutes 37 seconds West, a distance of 1125.25 feet to an iron rod; thence South 90 degrees 00 minutes 00 seconds West, a distance of 1084.22 feet to an iron rod; thence North 00 degrees 00 minutes 00 seconds East, a distance of 1159.75 feet to the POINT OF BEGINNING, containing 28.8 acres.

a total 40.0 acres +/-.

EXHIBIT B

The Project Location

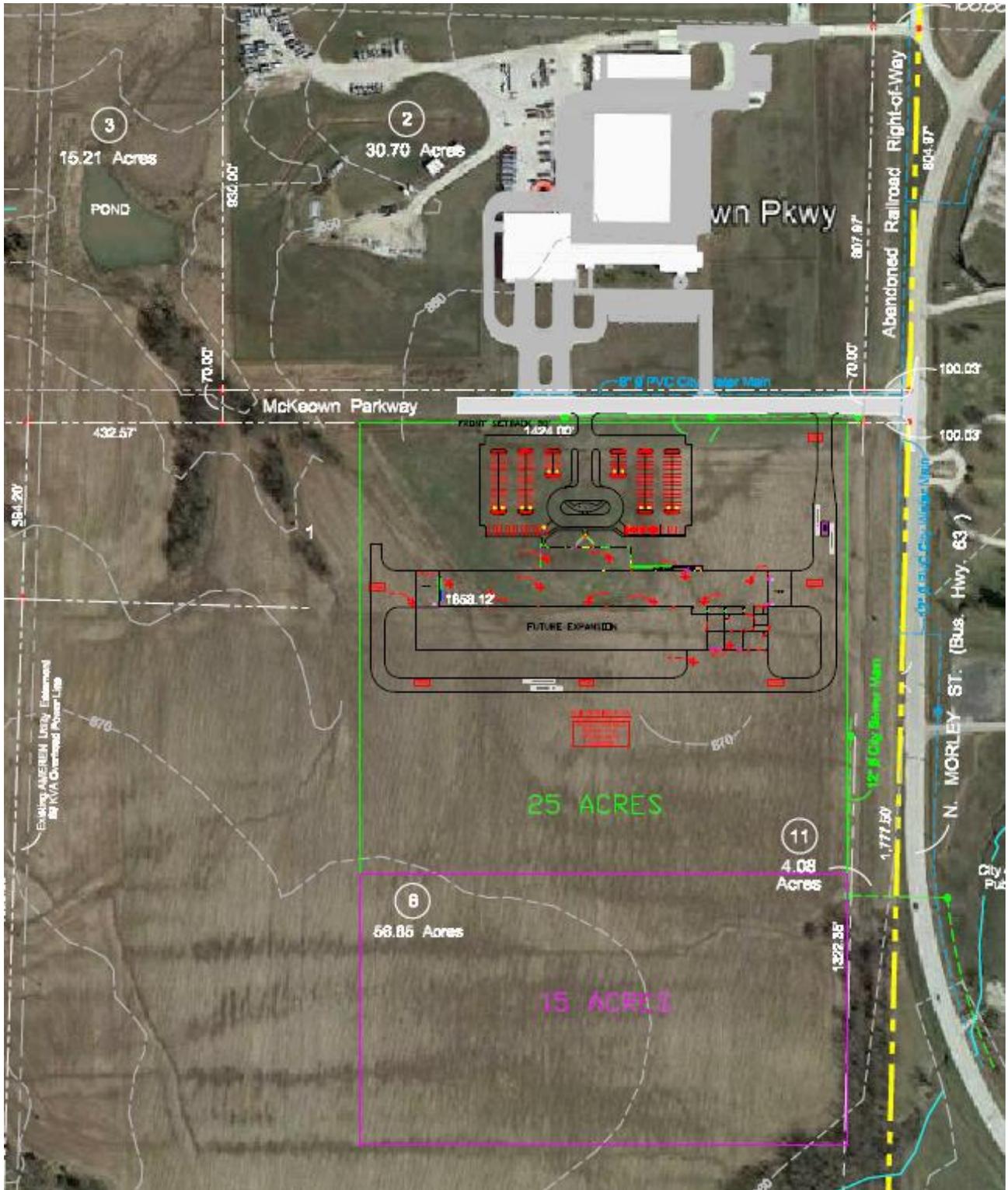


Exhibit C Summary of Project Revenues ¹

Taxing Jurisdiction	Total Tax Revenue Without Project (over 15 Year Project Period)*	Total Real Property Tax with Project (applying abatement + PILOTs)	Personal Property Tax with Project (applying abatement + PILOTs)	Combined Tax Revenue Generated by Project **	Difference Project vs. No Project
State of Missouri	\$ 0.91	\$ 14,956.61	\$ 1,541.08	\$ 16,497.68	\$ 16,496.77
City of Moberly	\$ 32.46	\$ 532,466.59	\$ 54,322.91	\$ 586,789.50	\$ 586,757.03
Randolph County General	\$ 6.79	\$ 111,296.02	\$ 11,516.97	\$ 122,812.99	\$ 122,806.21
County Road and Bridge	\$ 5.86	\$ 96,066.31	\$ 9,960.48	\$ 106,026.80	\$ 106,020.94
Little Dixie Library District	\$ 7.33	\$ 120,283.25	\$ 12,426.20	\$ 132,709.46	\$ 132,702.12
Randolph County Amb. Dist.	\$ 0.02	\$ 404.59	\$ -	\$ 404.59	\$ 404.56
Randolph County Health	\$ 4.40	\$ 72,150.38	\$ 7,448.53	\$ 79,598.92	\$ 79,594.52
Development Disabilities	\$ 4.35	\$ 71,294.18	\$ 7,392.02	\$ 78,686.21	\$ 78,681.86
Moberly Special Road Dist.	\$ 2.85	\$ 46,803.03	\$ 4,720.83	\$ 51,523.86	\$ 51,521.00
Moberly School Dist.	\$ 144.93	\$ 2,377,267.36	\$ 242,498.49	\$ 2,619,765.84	\$ 2,619,620.91
Moberly Area Comm. College	\$ 10.21	\$ 167,512.49	\$ 17,049.43	\$ 184,561.92	\$ 184,551.70
Commercial Surtax (combined)	\$ 3.93	\$ 65,343.53	N/A	\$ 65,343.53	\$ 65,339.60
	<u>\$ 224.05</u>	<u>\$ 3,675,844.34</u>	<u>\$ 368,876.94</u>	<u>\$ 4,044,721.28</u>	<u>\$ 4,044,497.24</u>

* This calculation of annual impact reflects the assumption that no development would occur at the Property without tax abatement.

** Based on investment of \$35,600,000 in acquisition and improvements to real property and \$33,000,000 of personal property placed in service on the Project site.

¹ Public services costs associated with the Project are estimated, discussed and analyzed in Part X of this Plan, *infra*.

Exhibit D
Estimated Total Tax Revenue with No Project (Real and Personal Property)

Assessed Value				\$ 175.96	\$ 175.96	\$ 179.48	\$ 179.48	\$ 183.07	\$ 183.07	\$ 186.73	\$ 186.73	\$ 190.46	\$ 190.46
Taxing Jurisdiction	Tax Rate Per \$100	Comm'l Surtax	Total Tax Per \$100	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
State of Missouri	0.0300	0.000188	0.03019	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06
City of Moberly	1.0575	0.017229	1.07473	\$ 1.89	\$ 1.89	\$ 1.93	\$ 1.93	\$ 1.97	\$ 1.97	\$ 2.01	\$ 2.01	\$ 2.05	\$ 2.05
City of Higbee	-	0.000328	0.00033	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Village of Cairo	-	0.000458	0.00046	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
City of Clark	-	0.000245	0.00025	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
City of Clifton Hill	-	0.000060	0.00006	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
City of Huntsville	-	0.001255	0.00126	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Village of Jacksonville	-	0.000018	0.00002	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Village of Renick	-	0.000053	0.00005	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Randolph County General	0.2242	0.000440	0.22464	\$ 0.40	\$ 0.40	\$ 0.40	\$ 0.40	\$ 0.41	\$ 0.41	\$ 0.42	\$ 0.42	\$ 0.43	\$ 0.43
County Road and Bridge	0.1939	-	0.19390	\$ 0.34	\$ 0.34	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.36	\$ 0.36	\$ 0.37	\$ 0.37
County Road and Bridge: Moberly	-	0.005476	0.00548	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
County Road and Bridge: Common #1	-	0.000091	0.00009	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Little Dixie Library District	0.2419	0.000879	0.24278	\$ 0.43	\$ 0.43	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.45	\$ 0.45	\$ 0.46	\$ 0.46
Randolph County Amb. Dist.	0.0000	0.000817	0.00082	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Randolph County Health	0.1450	0.000628	0.14563	\$ 0.26	\$ 0.26	\$ 0.26	\$ 0.26	\$ 0.27	\$ 0.27	\$ 0.27	\$ 0.27	\$ 0.28	\$ 0.28
Higbee Fire District	-	0.000328	0.00033	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Development Disabilities	0.1439	-	0.14390	\$ 0.25	\$ 0.25	\$ 0.26	\$ 0.26	\$ 0.26	\$ 0.26	\$ 0.27	\$ 0.27	\$ 0.27	\$ 0.27
Moberly Special Road Dist.	0.0919	0.002567	0.09447	\$ 0.17	\$ 0.17	\$ 0.17	\$ 0.17	\$ 0.17	\$ 0.17	\$ 0.18	\$ 0.18	\$ 0.18	\$ 0.18
Common Road District	-	0.000096	0.00010	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Moberly School Dist.	4.7207	0.077570	4.79827	\$ 8.44	\$ 8.44	\$ 8.61	\$ 8.61	\$ 8.78	\$ 8.78	\$ 8.96	\$ 8.96	\$ 9.14	\$ 9.14
Chariton R-4 School District	-	0.000024	0.00002	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Northeast R-4 School District	-	0.008897	0.00890	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02
Renick R-5 School District	-	0.001830	0.00183	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Sturgeon R-5 School District	-	0.002155	0.00216	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Higbee R-8 School District	-	0.001942	0.00194	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Westran R-1 School District	-	0.000217	0.00022	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Moberly Area Comm. College	0.3319	0.006207	0.33811	\$ 0.59	\$ 0.59	\$ 0.61	\$ 0.61	\$ 0.62	\$ 0.62	\$ 0.63	\$ 0.63	\$ 0.64	\$ 0.64
7.18090	0.13000	7.31090	\$ 12.86	\$ 12.86	\$ 13.12	\$ 13.12	\$ 13.38	\$ 13.38	\$ 13.65	\$ 13.65	\$ 13.92	\$ 13.92	\$ 13.92

Exhibit D
Estimated Total Tax Revenue with No Project (Real and Personal Property)

	\$ 194.27	\$ 194.27	\$ 198.16	\$ 198.16	\$ 202.12	\$ 202.12	
Taxing Jurisdiction	2030	2031	2032	2033	2034	2035	Total
State of Missouri	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.91
City of Moberly	\$ 2.09	\$ 2.09	\$ 2.13	\$ 2.13	\$ 2.17	\$ 2.17	\$ 32.46
City of Higbee	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.01
Village of Cairo	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.01
City of Clark	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.01
City of Clifton Hill	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
City of Huntsville	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.04
Village of Jacksonville	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Village of Renick	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Randolph County General	\$ 0.44	\$ 0.44	\$ 0.45	\$ 0.45	\$ 0.45	\$ 0.45	\$ 6.79
County Road and Bridge	\$ 0.38	\$ 0.38	\$ 0.38	\$ 0.38	\$ 0.39	\$ 0.39	\$ 5.86
County Road and Bridge: Moberly	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.17
County Road and Bridge: Common #1	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Little Dixie Library District	\$ 0.47	\$ 0.47	\$ 0.48	\$ 0.48	\$ 0.49	\$ 0.49	\$ 7.33
Randolph County Amb. Dist.	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.02
Randolph County Health	\$ 0.28	\$ 0.28	\$ 0.29	\$ 0.29	\$ 0.29	\$ 0.29	\$ 4.40
Higbee Fire District	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.01
Development Disabilities	\$ 0.28	\$ 0.28	\$ 0.29	\$ 0.29	\$ 0.29	\$ 0.29	\$ 4.35
Moberly Special Road Dist.	\$ 0.18	\$ 0.18	\$ 0.19	\$ 0.19	\$ 0.19	\$ 0.19	\$ 2.85
Common Road District	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Moberly School Dist.	\$ 9.32	\$ 9.32	\$ 9.51	\$ 9.51	\$ 9.70	\$ 9.70	\$ 144.93
Chariton R-4 School District	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Northeast R-4 School District	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.27
Renick R-5 School District	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.06
Sturgeon R-5 School District	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.07
Higbee R-8 School District	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.06
Westran R-1 School District	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.01
Moberly Area Comm. College	\$ 0.66	\$ 0.66	\$ 0.67	\$ 0.67	\$ 0.68	\$ 0.68	\$ 10.21
	\$ 14.20	\$ 14.20	\$ 14.49	\$ 14.49	\$ 14.78	\$ 14.78	\$ 220.83

Exhibit E Projected Real Property Tax Revenues With Abatement

Estimated "True Value in Money" of Real Property				\$ 35,600,000.00					
Assessment Rate				32.00%					
Estimated Assessed Value **				\$ 11,392,000.00	\$ 11,619,840.00	\$ 11,619,840.00	\$ 11,852,236.80	\$ 11,852,236.80	
PILOT requirement applied (begin in 2024)				0%	0%	0%	0%	5%	20%
Taxing Jurisdiction	Tax Rate Per \$100	Commercial Surtax Per \$100	Total Tax Per \$100	2020 *	2021	2022	2023	2024	2025
State of Missouri	0.0300	0.000188	0.03019	N/A	\$ -	\$ -	\$ -	\$ 178.90	\$ 715.60
City of Moberly	1.0575	0.017229	1.07473	N/A	\$ -	\$ -	\$ -	\$ 6,368.97	\$ 25,475.89
City of Higbee	-	0.000328	0.00033	N/A	\$ -	\$ -	\$ -	\$ 1.94	\$ 7.78
Village of Cairo	-	0.000458	0.00046	N/A	\$ -	\$ -	\$ -	\$ 2.71	\$ 10.86
City of Clark	-	0.000245	0.00025	N/A	\$ -	\$ -	\$ -	\$ 1.45	\$ 5.82
City of Clifton Hill	-	0.000060	0.00006	N/A	\$ -	\$ -	\$ -	\$ 0.36	\$ 1.43
City of Huntsville	-	0.001255	0.00126	N/A	\$ -	\$ -	\$ -	\$ 7.44	\$ 29.76
Village of Jacksonville	-	0.000018	0.00002	N/A	\$ -	\$ -	\$ -	\$ 0.10	\$ 0.42
Village of Renick	-	0.000053	0.00005	N/A	\$ -	\$ -	\$ -	\$ 0.31	\$ 1.25
Randolph County General	0.2242	0.000440	0.22464	N/A	\$ -	\$ -	\$ -	\$ 1,331.24	\$ 5,324.96
County Road and Bridge	0.1939	-	0.19390	N/A	\$ -	\$ -	\$ -	\$ 1,149.07	\$ 4,596.30
County Road and Bridge: Moberly	-	0.005476	0.00548	N/A	\$ -	\$ -	\$ -	\$ 32.45	\$ 129.81
County Road and Bridge: Common #1	-	0.000091	0.00009	N/A	\$ -	\$ -	\$ -	\$ 0.54	\$ 2.15
Little Dixie Library District	0.2419	0.000879	0.24278	N/A	\$ -	\$ -	\$ -	\$ 1,438.74	\$ 5,754.96
Randolph County Amb. Dist.	0.0000	0.000817	0.00082	N/A	\$ -	\$ -	\$ -	\$ 4.84	\$ 19.36
Randolph County Health	0.1450	0.000628	0.14563	N/A	\$ -	\$ -	\$ -	\$ 863.01	\$ 3,452.04
Higbee Fire District	-	0.000328	0.00033	N/A	\$ -	\$ -	\$ -	\$ 1.95	\$ 7.79
Development Disabilities	0.1439	-	0.14390	N/A	\$ -	\$ -	\$ -	\$ 852.77	\$ 3,411.07
Moberly Special Road Dist.	0.0919	0.002567	0.09447	N/A	\$ -	\$ -	\$ -	\$ 559.82	\$ 2,239.29
Common Road District	-	0.000096	0.00010	N/A	\$ -	\$ -	\$ -	\$ 0.57	\$ 2.27
Moberly School Dist.	4.7207	0.077570	4.79827	N/A	\$ -	\$ -	\$ -	\$ 28,435.12	\$ 113,740.47
Chariton R-4 School District	-	0.000024	0.00002	N/A	\$ -	\$ -	\$ -	\$ 0.14	\$ 0.58
Northeast R-4 School District	-	0.008897	0.00890	N/A	\$ -	\$ -	\$ -	\$ 52.72	\$ 210.89
Renick R-5 School District	-	0.001830	0.00183	N/A	\$ -	\$ -	\$ -	\$ 10.84	\$ 43.37
Sturgeon R-5 School District	-	0.002155	0.00216	N/A	\$ -	\$ -	\$ -	\$ 12.77	\$ 51.09
Higbee R-8 School District	-	0.001942	0.00194	N/A	\$ -	\$ -	\$ -	\$ 11.51	\$ 46.04
Westran R-1 School District	-	0.000217	0.00022	N/A	\$ -	\$ -	\$ -	\$ 1.29	\$ 5.15
Moberly Area Comm. College	0.3319	0.006207	0.33811	N/A	\$ -	\$ -	\$ -	\$ 2,003.66	\$ 8,014.64
	7.1809	0.1300	7.3109		\$ -	\$ -	\$ -	\$ 43,325.26	\$ 173,301.04

* Project construction begins in January 2020; no taxable improvements until 2021; taxing jurisdictions will forego an estimated combined \$34.29 in total tax revenue (FMV x 16.6% x .32 [resulting from change in assessment classification]/\$100 x \$7.3109)

** Assumed 1.0% annual inflationary increase realized in each re-assessment year

Exhibit E
Projected Real Property Tax Revenues With Abatement

Estimated EAV	\$ 12,089,281.54	\$ 12,089,281.54	\$ 12,331,067.17	\$ 12,331,067.17	\$ 12,577,688.51	\$ 12,577,688.51	\$ 12,829,242.28
PILOTs Required	20%	33%	33%	33%	33%	33%	33%
Project Year	2026	2027	2028	2029	2030	2031	2032
State of Missouri	\$ 729.91	\$ 1,204.35	\$ 1,228.44	\$ 1,228.44	\$ 1,253.01	\$ 1,253.01	\$ 1,278.07
City of Moberly	\$ 25,985.41	\$ 42,875.92	\$ 43,733.44	\$ 43,733.44	\$ 44,608.11	\$ 44,608.11	\$ 45,500.27
City of Higbee	\$ 7.93	\$ 13.09	\$ 13.35	\$ 13.35	\$ 13.62	\$ 13.62	\$ 13.89
Village of Cairo	\$ 11.08	\$ 18.28	\$ 18.64	\$ 18.64	\$ 19.01	\$ 19.01	\$ 19.39
City of Clark	\$ 5.93	\$ 9.79	\$ 9.99	\$ 9.99	\$ 10.19	\$ 10.19	\$ 10.39
City of Clifton Hill	\$ 1.46	\$ 2.41	\$ 2.46	\$ 2.46	\$ 2.51	\$ 2.51	\$ 2.56
City of Huntsville	\$ 30.35	\$ 50.08	\$ 51.08	\$ 51.08	\$ 52.10	\$ 52.10	\$ 53.14
Village of Jacksonville	\$ 0.43	\$ 0.70	\$ 0.72	\$ 0.72	\$ 0.73	\$ 0.73	\$ 0.75
Village of Renick	\$ 1.27	\$ 2.10	\$ 2.14	\$ 2.14	\$ 2.18	\$ 2.18	\$ 2.23
Randolph County General	\$ 5,431.46	\$ 8,961.91	\$ 9,141.15	\$ 9,141.15	\$ 9,323.98	\$ 9,323.98	\$ 9,510.45
County Road and Bridge	\$ 4,688.22	\$ 7,735.57	\$ 7,890.28	\$ 7,890.28	\$ 8,048.09	\$ 8,048.09	\$ 8,209.05
County Road and Bridge: Moberly	\$ 132.41	\$ 218.47	\$ 222.84	\$ 222.84	\$ 227.30	\$ 227.30	\$ 231.85
County Road and Bridge: Common #1	\$ 2.19	\$ 3.61	\$ 3.69	\$ 3.69	\$ 3.76	\$ 3.76	\$ 3.84
Little Dixie Library District	\$ 5,870.06	\$ 9,685.59	\$ 9,879.31	\$ 9,879.31	\$ 10,076.89	\$ 10,076.89	\$ 10,278.43
Randolph County Amb. Dist.	\$ 19.74	\$ 32.58	\$ 33.23	\$ 33.23	\$ 33.89	\$ 33.89	\$ 34.57
Randolph County Health	\$ 3,521.08	\$ 5,809.78	\$ 5,925.98	\$ 5,925.98	\$ 6,044.50	\$ 6,044.50	\$ 6,165.39
Higbee Fire District	\$ 7.94	\$ 13.10	\$ 13.36	\$ 13.36	\$ 13.63	\$ 13.63	\$ 13.90
Development Disabilities	\$ 3,479.30	\$ 5,740.84	\$ 5,855.65	\$ 5,855.65	\$ 5,972.77	\$ 5,972.77	\$ 6,092.22
Moberly Special Road Dist.	\$ 2,284.08	\$ 3,768.73	\$ 3,844.11	\$ 3,844.11	\$ 3,920.99	\$ 3,920.99	\$ 3,999.41
Common Road District	\$ 2.32	\$ 3.82	\$ 3.90	\$ 3.90	\$ 3.97	\$ 3.97	\$ 4.05
Moberly School Dist.	\$ 116,015.28	\$ 191,425.22	\$ 195,253.72	\$ 195,253.72	\$ 199,158.80	\$ 199,158.80	\$ 203,141.97
Chariton R-4 School District	\$ 0.59	\$ 0.97	\$ 0.99	\$ 0.99	\$ 1.01	\$ 1.01	\$ 1.03
Northeast R-4 School District	\$ 215.11	\$ 354.93	\$ 362.03	\$ 362.03	\$ 369.27	\$ 369.27	\$ 376.65
Renick R-5 School District	\$ 44.24	\$ 72.99	\$ 74.45	\$ 74.45	\$ 75.94	\$ 75.94	\$ 77.46
Sturgeon R-5 School District	\$ 52.11	\$ 85.99	\$ 87.71	\$ 87.71	\$ 89.46	\$ 89.46	\$ 91.25
Higbee R-8 School District	\$ 46.97	\$ 77.49	\$ 79.04	\$ 79.04	\$ 80.62	\$ 80.62	\$ 82.24
Westran R-1 School District	\$ 5.25	\$ 8.67	\$ 8.84	\$ 8.84	\$ 9.02	\$ 9.02	\$ 9.20
Moberly Area Comm. College	\$ 8,174.94	\$ 13,488.64	\$ 13,758.42	\$ 13,758.42	\$ 14,033.59	\$ 14,033.59	\$ 14,314.26
	\$ 176,767.06	\$ 291,665.64	\$ 297,498.96	\$ 297,498.96	\$ 303,448.94	\$ 303,448.94	\$ 309,517.91

Exhibit E Projected Real Property Tax Revenues With Abatement

Estimated EAV PILOTs Required	\$ 12,829,242.28 50%	\$ 13,085,827.13 50%	\$ 13,085,827.13 50%	\$ 13,347,543.67	
Project Year	<u>2033</u>	<u>2034</u>	<u>2035</u>	Cumulative Totals	Annual Amount (16th Year) after Completion
State of Missouri	\$ 1,936.47	\$ 1,975.20	\$ 1,975.20	\$ 14,956.61	\$ 4,029.41
City of Moberly	\$ 68,939.81	\$ 70,318.60	\$ 70,318.60	\$ 532,466.59	\$ 143,449.95
City of Higbee	\$ 21.05	\$ 21.47	\$ 21.47	\$ 162.58	\$ 43.80
Village of Cairo	\$ 29.38	\$ 29.97	\$ 29.97	\$ 226.96	\$ 61.14
City of Clark	\$ 15.74	\$ 16.06	\$ 16.06	\$ 121.60	\$ 32.76
City of Clifton Hill	\$ 3.88	\$ 3.96	\$ 3.96	\$ 29.97	\$ 8.08
City of Huntsville	\$ 80.52	\$ 82.13	\$ 82.13	\$ 621.91	\$ 167.55
Village of Jacksonville	\$ 1.13	\$ 1.15	\$ 1.15	\$ 8.74	\$ 2.35
Village of Renick	\$ 3.38	\$ 3.44	\$ 3.44	\$ 26.07	\$ 7.02
Randolph County General	\$ 14,409.78	\$ 14,697.98	\$ 14,697.98	\$ 111,296.02	\$ 29,983.87
County Road and Bridge	\$ 12,437.95	\$ 12,686.71	\$ 12,686.71	\$ 96,066.31	\$ 25,880.89
County Road and Bridge: Moberly	\$ 351.28	\$ 358.31	\$ 358.31	\$ 2,713.17	\$ 730.94
County Road and Bridge: Common #1	\$ 5.81	\$ 5.93	\$ 5.93	\$ 44.88	\$ 12.09
Little Dixie Library District	\$ 15,573.38	\$ 15,884.85	\$ 15,884.85	\$ 120,283.25	\$ 32,405.09
Randolph County Amb. Dist.	\$ 52.38	\$ 53.43	\$ 53.43	\$ 404.59	\$ 109.00
Randolph County Health	\$ 9,341.49	\$ 9,528.32	\$ 9,528.32	\$ 72,150.38	\$ 19,437.78
Higbee Fire District	\$ 21.07	\$ 21.49	\$ 21.49	\$ 162.72	\$ 43.84
Development Disabilities	\$ 9,230.64	\$ 9,415.25	\$ 9,415.25	\$ 71,294.18	\$ 19,207.12
Moberly Special Road Dist.	\$ 6,059.71	\$ 6,180.90	\$ 6,180.90	\$ 46,803.03	\$ 12,609.04
Common Road District	\$ 6.14	\$ 6.27	\$ 6.27	\$ 47.44	\$ 12.78
Moberly School Dist.	\$ 307,790.87	\$ 313,946.69	\$ 313,946.69	\$ 2,377,267.36	\$ 640,451.24
Chariton R-4 School District	\$ 1.56	\$ 1.59	\$ 1.59	\$ 12.03	\$ 3.24
Northeast R-4 School District	\$ 570.68	\$ 582.10	\$ 582.10	\$ 4,407.76	\$ 1,187.48
Renick R-5 School District	\$ 117.36	\$ 119.71	\$ 119.71	\$ 906.47	\$ 244.21
Sturgeon R-5 School District	\$ 138.26	\$ 141.02	\$ 141.02	\$ 1,067.84	\$ 287.68
Higbee R-8 School District	\$ 124.60	\$ 127.09	\$ 127.09	\$ 962.37	\$ 259.27
Westran R-1 School District	\$ 13.94	\$ 14.22	\$ 14.22	\$ 107.64	\$ 29.00
Moberly Area Comm. College	\$ 21,688.27	\$ 22,122.03	\$ 22,122.03	\$ 167,512.49	\$ 45,128.95
	\$ 468,966.54	\$ 478,345.87	\$ 478,345.87	\$ 3,622,130.97	\$ 975,825.57

**Exhibit F
Projected Personal Property Tax Revenue With Abatement (Depreciation Applied)**

Estimated Cumulative Depreciated Value Subject to Taxation		\$ 33,000,000.00	\$ 29,465,700.00	\$ 23,152,800.00	\$ 18,192,900.00	\$ 14,150,400.00	\$ 10,107,900.00
Assessment Rate		33.30%	33.30%	33.30%	33.30%	33.30%	33.30%
Assessed Value		\$ 10,989,000.00	\$ 9,812,078.10	\$ 7,709,882.40	\$ 6,058,235.70	\$ 4,712,083.20	\$ 3,365,930.70
PILOT requirement applied			0%	0%	0%	5%	20%
Taxing Jurisdiction	Tax Rate Per \$100	2020	2021	2022	2023	2024	2025
State of Missouri	0.0300	N/A	\$ -	\$ -	\$ -	\$ 70.68	\$ 201.96
City of Moberly	1.0575	N/A	\$ -	\$ -	\$ -	\$ 2,491.51	\$ 7,118.94
Randolph County General	0.2242	N/A	\$ -	\$ -	\$ -	\$ 528.22	\$ 1,509.28
County Road and Bridge	0.1939	N/A	\$ -	\$ -	\$ -	\$ 456.84	\$ 1,305.31
Little Dixie Library District	0.2419	N/A	\$ -	\$ -	\$ -	\$ 569.93	\$ 1,628.44
Randolph County Amb. Dist.	0.0000	N/A	\$ -	\$ -	\$ -	\$ -	\$ -
Randolph County Health	0.1450	N/A	\$ -	\$ -	\$ -	\$ 341.63	\$ 976.12
Development Disabilities	0.1439	N/A	\$ -	\$ -	\$ -	\$ 339.03	\$ 968.71
Moberly Special Road Dist.	0.0919	N/A	\$ -	\$ -	\$ -	\$ 216.52	\$ 618.66
Moberly School Dist.	4.7207	N/A	\$ -	\$ -	\$ -	\$ 11,122.17	\$ 31,779.10
Moberly Area Comm. College	0.3319	N/A	\$ -	\$ -	\$ -	\$ 781.97	\$ 2,234.30
	<u>7.1809</u>	N/A	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 16,918.50</u>	<u>\$ 48,340.82</u>

Exhibit F
Projected Personal Property Tax Revenue With Abatement (Depreciation Applied)

	2026	2027	2028	2029	2030	2031	2032	2033
FMV (Depreciated)	\$ 6,065,400.00	\$ 3,300,000.00	\$ 3,300,000.00	\$ 3,300,000.00	\$ 3,300,000.00	\$ 3,300,000.00	\$ 3,300,000.00	\$ 3,300,000.00
Assessment Rate	33.30%	33.30%	33.30%	33.30%	33.30%	33.30%	33.30%	33.30%
EAV	\$ 2,019,778.20	\$ 1,098,900.00	\$ 1,098,900.00	\$ 1,098,900.00	\$ 1,098,900.00	\$ 1,098,900.00	\$ 1,098,900.00	\$ 1,098,900.00
PILOT Req'd	20%	33%	33%	33%	33%	33%	33%	50%
State of Missouri	\$ 121.19	\$ 108.79	\$ 108.79	\$ 108.79	\$ 108.79	\$ 108.79	\$ 108.79	\$ 164.84
City of Moberly	\$ 4,271.83	\$ 3,834.89	\$ 3,834.89	\$ 3,834.89	\$ 3,834.89	\$ 3,834.89	\$ 3,834.89	\$ 5,810.43
Randolph County General	\$ 905.67	\$ 813.03	\$ 813.03	\$ 813.03	\$ 813.03	\$ 813.03	\$ 813.03	\$ 1,231.87
County Road and Bridge	\$ 783.27	\$ 703.15	\$ 703.15	\$ 703.15	\$ 703.15	\$ 703.15	\$ 703.15	\$ 1,065.38
Little Dixie Library District	\$ 977.17	\$ 877.22	\$ 877.22	\$ 877.22	\$ 877.22	\$ 877.22	\$ 877.22	\$ 1,329.12
Randolph County Amb. Dist.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Randolph County Health	\$ 585.74	\$ 525.82	\$ 525.82	\$ 525.82	\$ 525.82	\$ 525.82	\$ 525.82	\$ 796.70
Development Disabilities	\$ 581.29	\$ 521.83	\$ 521.83	\$ 521.83	\$ 521.83	\$ 521.83	\$ 521.83	\$ 790.66
Moberly Special Road Dist.	\$ 371.24	\$ 333.26	\$ 333.26	\$ 333.26	\$ 333.26	\$ 333.26	\$ 333.26	\$ 504.94
Moberly School Dist.	\$ 19,069.53	\$ 17,119.00	\$ 17,119.00	\$ 17,119.00	\$ 17,119.00	\$ 17,119.00	\$ 17,119.00	\$ 25,937.89
Moberly Area Comm. College	\$ 1,340.73	\$ 1,203.59	\$ 1,203.59	\$ 1,203.59	\$ 1,203.59	\$ 1,203.59	\$ 1,203.59	\$ 1,823.62
	\$ 29,007.65	\$ 26,040.60	\$ 26,040.60	\$ 26,040.60	\$ 26,040.60	\$ 26,040.60	\$ 26,040.60	\$ 39,455.46

**Exhibit F
Projected Personal Property Tax Revenue With Abatement (Depreciation Applied)**

					Annual Amounts (Year 16) after Completion
	<u>2034</u>	<u>2035</u>	<u>Cumulative Totals</u>		
FMV (Depreciated)	\$ 3,300,000.00	\$ 3,300,000.00			
Assessment Rate	33.30%	33.30%			
EAV	\$ 1,098,900.00	\$ 1,098,900.00			
PILOT Req'd	50%	50%			
State of Missouri	\$ 164.84	\$ 164.84	\$ 1,541.08	\$ 329.67	
City of Moberly	\$ 5,810.43	\$ 5,810.43	\$ 54,322.91	\$ 11,620.87	
Randolph County General	\$ 1,231.87	\$ 1,231.87	\$ 11,516.97	\$ 2,463.73	
County Road and Bridge	\$ 1,065.38	\$ 1,065.38	\$ 9,960.48	\$ 2,130.77	
Little Dixie Library District	\$ 1,329.12	\$ 1,329.12	\$ 12,426.20	\$ 2,658.24	
Randolph County Amb. Dist.	\$ -	\$ -	\$ -	\$ -	
Randolph County Health	\$ 796.70	\$ 796.70	\$ 7,448.53	\$ 1,593.41	
Development Disabilities	\$ 790.66	\$ 790.66	\$ 7,392.02	\$ 1,581.32	
Moberly Special Road Dist.	\$ 504.94	\$ 504.94	\$ 4,720.83	\$ 1,009.89	
Moberly School Dist.	\$ 25,937.89	\$ 25,937.89	\$ 242,498.49	\$ 51,875.77	
Moberly Area Comm. College	\$ 1,823.62	\$ 1,823.62	\$ 17,049.43	\$ 3,647.25	
	\$ 39,455.46	\$ 39,455.46	\$ 368,876.94	\$ 78,910.91	

**Exhibit G
Exempted Sales Tax Revenues**

Taxing District	Total Sales Tax Rate	Estimated Cost Building Materials Used in Real Property Improvements	Estimated Cost: Manufacturing Tangible Personal Property*	Estimated Cost: Non-Manufacturing Tangible Personal Property	Estimated Total Cost of Property Subject to Sales Tax Exemption	Sales Tax Revenue Exempted
City of Moberly	2.500%					\$1,262,500.00
Randolph County	1.250%					\$631,250.00
State of Missouri	4.225%	\$ 17,500,000.00	\$ 31,000,000.00	\$ 2,000,000.00	\$50,500,000.00	\$2,133,625.00
Randolph County Ambulance District	0.500%					\$252,500.00
Total	8.475%					\$4,279,875.00

*Note that personal property and equipment assumed to be classified as manufacturing-related assumed will be exempt from state and local sales tax with or without Chapter 100 pursuant to the grant of sales tax exemption under section 144.030 RSMo. Some property assumed as manufacturing personal property for purposes of this estimate may not ultimately be classified as manufacturing-related and may therefore be statutorily subject to sales/use tax but will be exempt from local sales and use tax per Chapter 100.

CERTIFICATE REGARDING PLAN ORDINANCE

I, the undersigned, as duly appointed and serving City Clerk of the City of Moberly, Missouri, do hereby certify that the attached including Exhibit A thereto, is a true and accurate copy of Ordinance No. _____ of the City approving, among other things, a Plan for an Industrial Development Project and Costs/Benefits Analysis, as the same appears of record in the Office of the City Clerk and said Ordinance was duly passed and approved by the Council of the City at a duly noticed meeting held on April 6, 2020 and has not been amended, modified or repealed and remains in full force and effect as of the date set forth below.

Dated: _____, 2020

Diane Kay Galloway, CMC/MRCC, City Clerk
City of Moberly, Missouri

City of Moberly City Council Agenda Summary

Agenda Number: #7.
 Department: City Manager
 Date: April 6, 2020

Agenda Item: An Ordinance Approving A Development Agreement In Connection With An Industrial Development Project; And Providing Further Authority

Summary: This ordinance approves Development Agreement among the City, Plumrose USA, Inc. ("Plumrose"), and the Moberly Holding Company (the "Holding Company") for the Plumrose USA Manufacturing Facility Project to be approved by ordinance in accordance with Chapter 100 of the Revised Statutes of Missouri, as amended ("Chapter 100").

The Development Agreement provides for the assembly, in cooperation with the Holding Company, of a 40 acre site at the Moberly Area Industrial Park; the implementation by Plumrose of the construction on the site of an 85,000 square foot food/bakery manufacturing facility; assistance by the City in the installation of certain public infrastructure; and the issuance by the City of its taxable industrial development revenue bonds in a maximum aggregate principal amount not to exceed \$85,000,000 to be purchased by Plumrose. The ordinance authorizes and directs the execution and delivery of the Development Agreement on behalf of the City, provides further authority to City officials and staff to satisfy the City's obligations under the Development Agreement, and ratifies and confirms all prior and subsequent acts in furtherance of the intent of the ordinance.

Recommended

Action: Approve this ordinance

Fund Name: N/A

Account Number: N/A

Available Budget \$: \$0

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input checked="" type="checkbox"/> Proposed Ordinance	M__ S__ Jeffrey	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution			
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	Council Member		
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M__ S__ Brubaker	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M__ S__ Kimmons	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M__ S__ Davis	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice	M__ S__ Kyser	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____		Passed	Failed

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE APPROVING A DEVELOPMENT AGREEMENT IN CONNECTION WITH AN INDUSTRIAL DEVELOPMENT PROJECT; AND PROVIDING FURTHER AUTHORITY.

WHEREAS, the City of Moberly, Missouri (the “City”) is authorized and empowered under the provisions of Article VI, Section 27(b) of the Missouri Constitution and Sections 100.010 through 100.200, inclusive, of the Revised Statutes of Missouri, as amended, (collectively, the “Acts”) to purchase, construct, extend and improve certain projects (as defined in the Acts) for the purposes set forth in the Acts and to issue industrial development revenue bonds in furtherance of such projects and to lease or otherwise dispose of such projects to private persons or corporations for manufacturing, commercial, warehousing and industrial development purposes upon such terms and conditions as the City shall deem advisable; and

WHEREAS, pursuant to Ordinance No. _____, passed and approved on April 6, 2020, the City has approved a plan for an industrial development project (the “Plan”) for the construction of a manufacturing facility (the “Facility”) on real property located within the Moberly Industrial Park to be owned by Plumrose USA, Inc. (the “Company”) and for the acquisition and installation of machinery, equipment, furnishings, special tools, and other property to be incorporated in the Facility (collectively, the “Project”), and the Plan contemplates the issuance by the City of taxable industrial development revenue bonds in an aggregate principal amount not to exceed \$85,000,000 (the “Bonds”) for the purpose of facilitating the Project; and

WHEREAS, the Council now wishes to approve a development agreement by and among the City, Moberly Holding Company, and the Company, in the form attached as Exhibit A to and incorporated by reference in this Ordinance (the “Development Agreement”) to govern the completion of the Project and the issuance of the Bonds;

NOW THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MOBERLY, MISSOURI, as follows, to wit:

SECTION 1: The Development Agreement is hereby approved in the form attached hereto as Exhibit A. The Mayor and the City Clerk are hereby authorized for and in the name of the City to execute, affix with the official seal of the City, and deliver the Development Agreement in the form thereof presented herewith, or with such ministerial insertions therein or ministerial changes or corrections thereto as shall be approved by the Mayor consistent with this Ordinance and the terms of the Acts, the execution thereof to constitute conclusive evidence of the approval of any such ministerial insertions and corrections.

SECTION 2: The City hereby authorizes and empowers the officers and representatives of the City, including the Mayor, City Manager, City Clerk, and Bond Counsel (as defined in the Development Agreement), specifically, to do all such acts and things and to execute, acknowledge and deliver all such documents as may in their discretion be deemed necessary or desirable to carry out or comply with the terms and provisions of this Ordinance with the signature of the official on such instrument or document to be conclusive evidence of the necessity or desirability of the actions or activities governed or contemplated by such instrument or document. All of the acts and undertakings of such officers and representatives that are in conformity with the intent and purposes of this Ordinance, whether heretofore or hereafter taken or done, shall be, and the same are hereby in all respects, ratified, confirmed, and approved.

SECTION 3: The portions of this Ordinance shall be severable. In the event that any portion of this Ordinance is found by a court of competent jurisdiction to be invalid, the remaining portions of this Ordinance are valid, unless the court finds the valid portions of this Ordinance are so essential and inseparably connected with and dependent upon the void portion that it cannot be

presumed that the Council would have enacted the valid portions without the invalid one, or unless the court finds that the valid portions standing alone are incomplete and are incapable of being executed in accordance with the legislative intent.

SECTION 4: This Ordinance shall take effect and be in force from and after its passage and adoption by the Council of the City of Moberly, Missouri, and its signature by the officer presiding at the meeting at which it was passed and adopted.

PASSED AND ADOPTED by the Council of the City of Moberly, Missouri on this 6th day of April, 2020.

Presiding Officer at Meeting

ATTEST:

Diane Kay Galloway, CMC/MRCC, City Clerk

EXHIBIT A
DEVELOPMENT AGREEMENT

(on file in City Clerk's Office; Item 4 in Bond Transcript)

CERTIFICATE REGARDING DEVELOPMENT AGREEMENT ORDINANCE

I, the undersigned, as duly appointed and serving City Clerk of the City of Moberly, Missouri, do hereby certify that the attached including Exhibit A thereto, is a true and accurate copy of Ordinance No. _____ of the City approving a Development Agreement, as the same appears of record in the Office of the City Clerk and said Ordinance was duly passed and approved by the Council of the City at a duly noticed meeting held on April 6, 2020 and has not been amended, modified or repealed and remains in full force and effect as of the date set forth below.

Dated: April _____, 2020

Diane Kay Galloway, CMC/MRCC, City Clerk
City of Moberly, Missouri

City of Moberly City Council Agenda Summary

Agenda Number: _____ #8.
 Department: City Manager
 Date: April 6, 2020

Agenda Item: An Ordinance Approving A Cooperation And Purchase Agreement In Connection With An Industrial Development Project; Ratifying Prior Acts In Conformance; And Providing Further Authority

Summary: This ordinance approves a Cooperation and Purchase Agreement (the “City Purchase Agreement”) between the City and the Moberly Holding Company (the “Holding Company”) which authorizes and directs the conveyance to the City of three tracts of real property within the Moberly Area Industrial Park currently held by Holding Company. The area described by the tracts to be conveyed includes that certain 11.2 acre parcel to be consolidated with property currently held by the City and leased to Plumrose USA, Inc. Consideration for the conveyances provided for in the City Purchase Agreement will be limited to forgiveness of long outstanding amounts of certain loans granted by the City to the Holding Company in September of 2001 and September of 2010. The loan forgiveness amounts are less than that amount which would have otherwise been paid by the City under the proposed Development Agreement. The result of the conveyances will be the City’s exclusive ownership and control of all of the now vacant land within the Moberly Area Industrial Park.

Recommended

Action: Approve this ordinance

Fund Name: N/A

Account Number: N/A

Available Budget \$: \$0

ATTACHMENTS:		Roll Call	Aye	Nay
___ Memo	___ Council Minutes	Mayor		
___ Staff Report	<u>x</u> Proposed Ordinance	M___ S___ Jeffrey	___	___
___ Correspondence	___ Proposed Resolution			
___ Bid Tabulation	___ Attorney’s Report	Council Member		
___ P/C Recommendation	___ Petition	M___ S___ Brubaker	___	___
___ P/C Minutes	___ Contract	M___ S___ Kimmons	___	___
___ Application	___ Budget Amendment	M___ S___ Davis	___	___
___ Citizen	___ Legal Notice	M___ S___ Kyser	___	___
___ Consultant Report	___ Other_____		Passed	Failed

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE APPROVING A COOPERATION AND PURCHASE AGREEMENT IN CONNECTION WITH AN INDUSTRIAL DEVELOPMENT PROJECT; RATIFYING PRIOR ACTS IN CONFORMANCE; AND PROVIDING FURTHER AUTHORITY.

WHEREAS, the City of Moberly, Missouri (the “**City**”) is authorized and empowered under the provisions of Article VI, Section 27(b) of the Missouri Constitution and Sections 100.010 through 100.200, inclusive, of the Revised Statutes of Missouri, as amended, (collectively, the “**Acts**”) to purchase, construct, extend and improve certain projects (as defined in the Acts) for the purposes set forth in the Acts and to issue industrial development revenue bonds in furtherance of such projects and to lease or otherwise dispose of such projects to private persons or corporations for manufacturing, commercial, warehousing and industrial development purposes upon such terms and conditions as the City shall deem advisable; and

WHEREAS, pursuant to Ordinance No. _____, passed and approved on April 6, 2020, the City has approved a plan for an industrial development project (the “**Plan**”) for the construction of a manufacturing facility (the “**Facility**”) on real property located within the Moberly Industrial Park to be owned by Plumrose USA, Inc. (the “**Company**”) and for the acquisition and installation of machinery, equipment, furnishings, special tools, and other property to be incorporated in the Facility (collectively, the “**Project**”), and the Plan contemplates the issuance by the City of taxable industrial development revenue bonds in an aggregate principal amount not to exceed \$85,000,000 (the “**Bonds**”) for the purpose of facilitating the Project and by Ordinance No. _____, passed and approved on April 6, 2020 has approved a certain Development Agreement dated as of April 1, 2020 (the “**Development Agreement**”) by and among the City, the Company, and Moberly

Holding Company (the “**Holding Company**”) which sets forth the terms and conditions for the implementation and completion of the Project and the issuance of the Bonds; and

WHEREAS, the City and the Moberly Holding Company (the “**Holding Company**”) have previously entered into a certain Cooperation Agreement for Industrial Land Sales and Development (the “**Cooperation Agreement**”) which authorizes and provides for the purchase and sale of real property owned by the Holding Company and the City by and through a separately created Joint Board established as a body corporate and politic under the Cooperation Agreement (the “**Joint Board**”) and at it’s initial meeting of December 31, 2019 the Joint Board, among other things, determined that the purchase and sale of the Holding Company Portion and the assembly of the Property (as those terms are defined and used in the Development Agreement), would be in furtherance of and facilitate the Plan and the Project and, accordingly, approved and authorized the sale to the City of the Holding Company Portion; and

WHEREAS, to facilitate the implementation of Plan and the transactions contemplated therein, the Council of the City (the “**Council**”) Board wishes to ratify and confirm the determinations of the Joint Board, to approve a certain Cooperation and Purchase Agreement dated as of April 1, 2020 by and between the City and the Holding Company in substantially the form attached as Exhibit A to and incorporated by reference in this Resolution (the “**City Purchase Agreement**”), and to approve the conveyance to the City of the Holding Company Properties (as that term is defined and used in the City Purchase Agreement) which include the entirety of the Holding Company Portion, by special warranty deed in substantially the form attached as Exhibit B to and incorporated by reference in this Ordinance (the “**Deed**”), all subject to the terms and conditions of the City Purchase Agreement;

NOW THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MOBERLY, MISSOURI, as follows, to wit:

SECTION 1: The City Purchase Agreement is hereby approved in the form attached as Exhibit A. The Mayor and the City Clerk are hereby authorized for and in the name of the City to execute, affix with the official seal of the City, and deliver the City Purchase Agreement in the form thereof presented herewith, or with such ministerial insertions therein or ministerial changes or corrections thereto as shall be approved by the Mayor consistent with this Ordinance, the execution thereof to constitute conclusive evidence of the approval of any such ministerial insertions and corrections.

SECTION 2: The Deed in the form attached as Exhibit B and the conveyance thereby and acceptance by the City of title to the Holding Company Properties is hereby approved.

SECTION 3: The officers and representatives of the City, including the Mayor, City Manager, and City Clerk are hereby authorized to do all such acts and things and to execute, acknowledge and deliver all such documents as may in their discretion be deemed necessary or desirable to carry out or comply with the terms and provisions of this Ordinance with the signature of the official on such instrument or document to be conclusive evidence of the necessity or desirability of the actions or activities governed or contemplated by such instrument or document. All of the acts and undertakings of such officers and representatives that are in conformity with the intent and purposes of this Ordinance, whether heretofore or hereafter taken or done, shall be, and the same are hereby in all respects, ratified, confirmed, and approved.

SECTION 4: The portions of this Ordinance shall be severable. In the event that any portion of this Ordinance is found by a court of competent jurisdiction to be invalid, the remaining portions of this Ordinance are valid, unless the court finds the valid portions of this Ordinance are

so essential and inseparably connected with and dependent upon the void portion that it cannot be presumed that the Council would have enacted the valid portions without the invalid one, or unless the court finds that the valid portions standing alone are incomplete and are incapable of being executed in accordance with the legislative intent.

SECTION 5: This Ordinance shall take effect and be in force from and after its passage and adoption by the Council of the City of Moberly, Missouri, and its signature by the officer presiding at the meeting at which it was passed and adopted.

PASSED AND ADOPTED by the Council of the City of Moberly, Missouri on this 6th day of April, 2020.

Presiding Officer at Meeting

ATTEST:

Diane Kay Galloway, CMC/MRCC, City Clerk

**EXHIBIT A
CITY PURCHASE AGREEMENT**

COOPERATION AND PURCHASE AGREEMENT

THIS COOPERATION AND PURCHASE AGREEMENT (this “**Agreement**”) is made and entered in to as of April 1, 2020 (the “**Effective Date**”) by and between the CITY OF MOBERLY, MISSOURI, a city of the third classification and Missouri municipal corporation having a principal office at 101 West Reed Street, Moberly, Missouri 65270 (the “**City**”) and MOBERLY HOLDING COMPANY, a Missouri nonprofit corporation having a principal office at 115 North Williams Street, Moberly, Missouri 65270 (the “**Holding Company**”). *Capitalized terms used and not defined in this Agreement shall have the meanings ascribed to them in that certain Development Agreement dated as of April 1, 2020 (the “**Development Agreement**”) by and among the City, the Holding Company, and Plumrose USA, Inc. (the “**Company**”).*

RECITALS

A. The City and the Holding Company wish to cooperate with one another and to provide for the coordinated sale and development of certain industrial lands situated in the Moberly Area Industrial Park and currently owned in fee by the respective entities all subject to the terms of and as set forth in that certain Cooperation Agreement for Industrial Land Sales and Development dated as of December __, 2019 (the “**Joint Board Agreement**”).

B. To provide for the efficient sale and development of the aforesaid industrial lands, the City and the Holding Company pursuant to the Joint Board Agreement have established a joint board (the “**Joint Board**”) to supervise, manage and have charge of the sale and development of the aforesaid industrial lands, to set forth the respective duties and obligations of and benefits to the respective entities in connection therewith, and to establish the powers and duties and other provisions, all as further set forth in the Joint Board Agreement.

C. To achieve the conveyance and consolidation under a single ownership of certain portions of the aforesaid industrial lands and to facilitate the undertaking of the Project by the Company in accordance with the terms of the Development Agreement, the City and the Holding Company wish to enter into this Agreement to set forth the financial terms of the conveyances and to provide guidance to the Joint Board regarding same.

AGREEMENT

NOW, THEREFORE, in consideration of the above premises, the mutual covenants and agreements contained herein, and for other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Parcels to be Conveyed; Covenant to Timely Convey Holding Company Portion. By and through the actions of Joint Board to be taken pursuant to the Joint Board Agreement within ten (10) Business Days of the Effective Date (or such later date as the parties may mutually agree)

the Holding Company shall convey in fee simple to the City by one or more Special Warranty Deeds the following parcels of real property situated within the Moberly Area Industrial Park:

Randolph County Assessor Parcel No. 07-7.0-25.0-2.0-000-003.002, being all of Lot 6 together with the easterly portion of Lot 3 as depicted on that certain Aerial Site Plan for Moberly Area Industrial Park dated 05/11/17 prepared by Outline Consultants (the “**Aerial Site Plan**”) and containing a total ____ acres; (“**Parcel No. 1**”) and

Randolph County Assessor Parcel No. 07-7.0-26.0-0.0-000-001.000, being all of Lot 5 together with the remaining westerly portion of Lot 3 as depicted on the Aerial Site Plan and containing a total ____ acres (“**Parcel No. 2**”); and

Randolph County Assessor Parcel No 07-7.0-25.0-2.0-000-008.002, being all of Lot 11 as depicted on the Aerial Site Plan and containing a total 4.08 acres (“**Parcel No. 3**” and, together with Parcels No. 1 and Parcel No. 2, the “**Holding Company Properties**”);

provided that, notwithstanding anything else in this Agreement to the contrary, each of the parties hereto hereby mutually agree and covenant to cooperate with one another, the Joint Board, and the Company and to take all actions and execute such documents and instruments as may be required to confer timely to the City, but in no event later than the closing on the issuance by the City of its \$85,000,000 (Aggregate Maximum Principal Amount) Taxable Industrial Revenue Bonds (Plumrose Manufacturing Facility Project) Series 2020, fee title to the Holding Company Portion for use in the Project, all as contemplated in the Development Agreement.

2. City’s Due Diligence. At any time prior to the conveyance of the Holding Company Properties, the City with respect to any of the Holding Company Properties, whether together or separately, may take the following actions, all of which shall be at the sole cost and expense of the City:

- (i) Obtain and review a commitment for an owner’s policy of title insurance with respect to any Holding Company Property from the Title Company; and
- (ii) Obtain and review a survey of any Holding Company Property prepared by a licensed Missouri land surveyor.

The Holding Company hereby grants permission to the City and its agents to come upon the Holding Company Properties or any of them for the purpose of conducting the activities described in this paragraph 2 at the sole cost, expense, and risk of the City.

3. Purchase Price. The parties hereto mutually acknowledge that the Holding Company is currently indebted to the City in the total amount of \$58,379.68 based upon certain loans granted by the City to the Holding Company in September of 2001 and September of 2010 (collectively, the “**Loan Amounts**”). In consideration of and as total compensation to the Holding Company in connection with the satisfaction of the obligations of the Holding Company under this Agreement and the conveyance to the City by the Holding Company of the Holding Company Properties, the City shall forgive and forego the entire Loan Amounts and any interest accruing therefrom.

4. Closing; Holding Company’s Representations. Closing on the conveyance of the Holding Company Properties shall be through an escrow, with the Title Company acting as escrowee and may occur contemporaneous with the conveyance of the Holding Company Portion as set forth in the Development Agreement and in paragraph 1 of this Agreement. Conveyance shall be by one or more Special Warranty Deeds in a form reasonably acceptable to the City, subject to any lien for real property taxes and assessments for the year in which the closing occurs and any subsequent year, building and zoning laws, ordinances and restrictions, utility easements, recorded easements, rights of way of record, deed restrictions and all other matters of record, use and occupancy restrictions, and rights to coal and other minerals with the right to mine and remove the same. In connection with the transactions and conveyances set forth in this Agreement, the Holding Company hereby represents and warrants to the City, as of the date of this Agreement and as of the date(s) of closing on the conveyances of the Holding Company Properties as follows:

(i) The Holding Company possesses the full right to convey fee title to each of the Holding Company Properties without the necessity of obtaining the consent of any person not a signatory to this Agreement and this Agreement constitutes the legal, valid and binding obligation of the Holding Company enforceable against the Holding Company in accordance with the terms hereof;

(ii) The Holding Company has good and marketable title to each of the Holding Company Properties, subject to those exceptions that may be disclosed in any commitment for title insurance obtained by the City and issued by the Title Company, and free and clear of liens, security interests, encumbrances, leases, options, rights of first refusal and restrictions of every kind and description and any liens pursuant to indebtedness for borrowed money which will be discharged at closing and there are no leases, options, contracts, maintenance, management, repair or other contracts, equipment leases or other similar agreements of any kind relating to or affecting any of the Holding Company Properties or any part thereof which will be binding upon the City after conveyancing;

(iii) There are no claims, causes of action or litigation or administrative proceedings pending, or to the Holding Company’s actual knowledge threatened, in respect to the ownership, operation or condition of any of the Holding Company Properties or the surface water on or groundwater beneath any of the Holding Company Properties, including, without limitation, disputes of tenants, employees, government authorities, environmental groups, prior owners, utilities, contractors, adjoining landowners or suppliers of goods and services;

(iv) The Holding Company has not received any notice: (A) from any federal, state, county or municipal governmental authority alleging any fire, health, safety, building, pollution, environmental, zoning or other violation of law, including, without limitation, any Environmental Law, in respect any of the Holding Company Properties or any part thereof which has not been entirely corrected; or (B) from any insurance company of any defects or inadequacies in the portions of any of the Holding Company Properties or any part thereof which would adversely affect the insurability of any of the Holding Company Properties or cause the imposition of extraordinary premiums therefor; and

(v) To the actual knowledge of the Holding Company, the condition of the portions of each of the Holding Company Properties do not violate any applicable governmental laws, rules, regulations, ordinances or codes, including, without limitation, any Environmental Law.

The Holding Company shall promptly notify the City if any of the Holding Company’s representations under this paragraph 4 are or become untrue immediately upon the Holding Company’s discovery thereof.

THE CITY ACKNOWLEDGES AND AGREES THAT THE CITY IS ACQUIRING EACH OF THE HOLDING COMPANY PROPERTIES IN “AS IS/WHERE IS” CONDITION WITH ALL FAULTS. OTHER THAN AS EXPRESSLY SET FORTH IN THIS PARAGRAPH 4, THE HOLDING COMPANY MAKES NO WARRANTY OR REPRESENTATION WHATSOEVER REGARDING ANY OF THE HOLDING COMPANY PROPERTIES, INCLUDING, WITHOUT LIMITATION, EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE.

5. Notices. All notices between the parties hereto shall be in writing and shall be sent by certified or registered mail, return receipt requested, by personal delivery against receipt or by overnight courier, shall be deemed to have been validly served, given or delivered immediately when delivered against receipt or three (3) Business Days after deposit in the mail, postage prepaid, or one (1) Business Day after deposit with an overnight courier, and shall be addressed as follows:

If to the City: City of Moberly
101 West Reed Street - City Hall
Moberly, Missouri 65270
Attention: City Manager

If to the Holding Company: Moberly Holding Company
115 North Williams Street
Moberly, Missouri 65270
Attention: President

Each party shall have the right to specify that notice is to be addressed to another address by giving to the other party ten (10) days written notice thereof.

6. Miscellaneous.

(a) The section and paragraph headings herein are solely for convenience and shall in no way be deemed to affect the meaning or construction of any part hereof. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Missouri without regard to its conflicts of law rules. If any term or provision of this Agreement shall be

unlawful, then such term or provision of this Agreement shall be null and void, but the remainder of the Agreement shall remain in full force and effect and be binding on both parties.

(b) The parties hereto each agree that any action at law, suit in equity, or other judicial proceeding arising out of this Agreement shall be instituted only in the Circuit Court of Randolph County, Missouri or in federal court of the Eastern District of Missouri and waive any objection based upon venue or *forum non conveniens* or otherwise.

(c) This Agreement shall not be assignable by either party without prior written consent of the other party.

(d) This Agreement constitutes the entire understanding between the parties with respect to the matters herein contained or referenced and may not be amended, supplemented, or modified except by a writing executed by both of the parties hereto.

(e) This Agreement shall be binding upon the parties hereto and their successors and assigns.

(f) Time is of the essence of this Agreement.

(g) This Agreement may be executed in two or more identical counterparts which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, The City and the Holding Company have each caused this Agreement to be executed in their respective names as of the date first above written.

CITY OF MOBERLY
(the “City”)

By: _____
Jerry Jeffrey, Mayor

ATTEST:

D. K. Galloway, CMC/MRCC, City Clerk

MOBERLY HOLDING COMPANY
(the “Holding Company”)

By: _____

Michael Bugalski, President

ATTEST:

Secretary
ACKNOWLEDGED AND AGREED TO:

**JOINT BOARD FOR MANAGEMENT, SALES AND DEVELOPMENT OF
INDUSTRIAL LANDS**
(the “**Joint Board**”)

Jerry Jeffrey, President

EXHIBIT B
DEED

_____ [Space Above this Line for Recording Data] _____

Title of Document: Special Warranty Deed

Date of Document: April 1, 2020

Grantor: MOBERLY HOLDING COMPANY,
a Missouri nonprofit corporation

Grantor's Address: 115 North Williams Street
Moberly Missouri 65270

Grantee: CITY OF MOBERLY, MISSOURI,
a Missouri municipal corporation

Grantee's Address: 101 West Reed Street
Moberly, Missouri 65270

Full Legal Description:

See Exhibit A, page ___ hereof.

Reference Documents:

SPECIAL WARRANTY DEED

THIS SPECIAL WARRANTY DEED (this “*Deed*”) is made and entered into as of April 1, 2020, by and between the MOBERLY HOLDING COMPANY, a Missouri nonprofit corporation having a principal office at 115 North Williams Street, Moberly, Missouri 65270 (“*Grantor*”) and the CITY OF MOBERLY, MISSOURI, a Missouri municipal corporation having a principal office at 101 West Reed Street, Moberly, Missouri 65270 (“*Grantee*”).

WITNESSETH, that Grantor, for and in consideration of the sum of Ten Dollars (\$10.00) and other valuable considerations paid by Grantee, the receipt of which is hereby acknowledged, does hereby BARGAIN AND SELL, CONVEY AND CONFIRM unto Grantee the following described real property and any improvements thereon (collectively, the “*Property*”) situated in the County of Randolph and State of Missouri, to wit:

See Exhibit A attached hereto and by this reference incorporated herein;

Subject to restrictions, easements, dedications, conditions, building lines, covenants, reservations and limitations of record.

TO HAVE AND TO HOLD the Property, together with all rights and appurtenances belonging to the Property, unto Grantee and Grantee’s successors and assigns forever. Grantor covenants that Grantor shall and will WARRANT AND DEFEND the title to the Property unto Grantee and Grantee’s successors and assigns against the lawful claims of all persons claiming by or through Grantor but none other, excepting, however, all claims, liens and encumbrances of record and further subject to the general taxes for the calendar year 2020 and thereafter, and special taxes becoming a lien after the date of this Deed.

IN WITNESS WHEREOF, Grantor's duly authorized official has signed this Deed as of the day and year first above written.

MOBERLY HOLDING COMPANY

By: _____
Printed Name: Michael Bugalski
Its: President

ATTEST:

Secretary

ACKNOWLEDGEMENTS

STATE OF MISSOURI)
) SS.
COUNTY OF RANDOLPH)

On this ___ day of April, 2020 before me appeared Michael Bugalski, to me personally known, who being by me duly sworn, did say that he is the President of MOBERLY HOLDING COMPANY, a Missouri nonprofit corporation in good standing, and that the foregoing instrument was signed in behalf of said corporation by authority of its board of directors and said officer acknowledged said instrument to be the free act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal in the County and State aforesaid, the day and year first above written.

Notary Public

My commission expires:

Exhibit A (to Form of Deed)

THE PROPERTY - LEGAL DESCRIPTION

All of the following:

Randolph County Assessor Parcel No. 07-7.0-25.0-2.0-000-003.002, being all of Lot 6 together with the easterly portion of Lot 3 as depicted on that certain Aerial Site Plan for Moberly Area Industrial Park dated 05/11/17 prepared by Outline Consultants (the “**Aerial Site Plan**”) and containing a total _____ acres; (“**Parcel No. 1**”) and

Randolph County Assessor Parcel No. 07-7.0-26.0-0.0-000-001.000, being all of Lot 5 together with the remaining westerly portion of Lot 3 as depicted on the Aerial Site Plan and containing a total _____ acres (“**Parcel No. 2**”); and

Randolph County Assessor Parcel No 07-7.0-25.0-2.0-000-008.002, being all of Lot 11 as depicted on the Aerial Site Plan and containing a total 4.08 acres (“**Parcel No. 3**”).

City of Moberly City Council Agenda Summary

Agenda Number: _____
Department: City Manager
Date: April 6, 2020

#9.

Agenda Item: An Ordinance Authorizing Acceptance By The City Of Moberly Of Certain Real Property In Furtherance Of An Industrial Development Project; Authorizing The Issuance Of \$85,000,000 Maximum Aggregate Principal Amount Of Taxable Industrial Revenue Bond (Plumrose Manufacturing Facility Project) Series 2020; Approving The Execution And Delivery Of A Bond Purchase Agreement, A Lease Purchase Agreement And A Trust Indenture To Be Entered Into With Respect To Such Bond; Providing For The Form, Terms And Conditions Of Such Bond And The Method Of Paying Such Bond; Prescribing Other Details And Granting Further Authority In Connection With The Issuance Of Said Bond And The Execution Of The Documents Approved Herein

Summary: This ordinance authorizes and directs the issuance by the City of its Taxable Industrial Revenue Bond (Plumrose Manufacturing Facility Project) Series 2020 in a maximum aggregate principal amount not to exceed \$85,000,000 (the “Bond”) to facilitate the implementation of a “project for industrial development” on a 40 acres site in the Moberly Area Industrial Park. The project is expected to result in creation of approximately 142 new full-time or full-time equivalent jobs at the proposed facility.

Proposed to be issued two or more series as the project is constructed and conveyed to the City, the Bond provides an exemption from real and personal property taxation by virtue of the City’s ownership of the site and the constructed facilities. As such the Bond is issued to facilitate property tax relief and does not represent financing in the true sense. No City funds or properties are obligated in the satisfaction of the Bond. In circular fashion, Plumrose will purchase the Bond and “pay itself back” from rents charged under a lease of the facilities by the City to Plumrose. Plumrose will also make periodic payments in lieu of taxes on a graduated scale for the duration of the lease and will purchase the facilities and the site from the City for a nominal sum at the end of the lease term.

Specifically, the ordinance approves (i) a bond purchase agreement through which Plumrose will purchase the initial series Bond; (ii) a lease purchase agreement through which the City will lease to Plumrose the site and the project improvements as constructed and installed with the “rents” paying debt service on the Bond; (iii) a trust indenture by BOKF, N.A., as trustee which governs the terms of the bond issuance; and (iv) a special warranty deed conveying the parcels currently held by the Moberly Holding Company to the City. The ordinance also approves selection of Bond Counsel and the Bond Trustee and authorizes and approves further actions taken in furtherance of the issuance of the Bond and the consolidation of the property necessary for the project

Recommended

Action: Approve this ordinance

Fund Name: N/A

**Account
Number:** N/A

#9.

**Available
Budget \$:** \$0

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input checked="" type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution			
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	Council Member		
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Kimmons	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Davis	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice	M___ S___ Kyser	___	___
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____		Passed	Failed

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE AUTHORIZING ACCEPTANCE BY THE CITY OF MOBERLY OF CERTAIN REAL PROPERTY IN FURTHERANCE OF AN INDUSTRIAL DEVELOPMENT PROJECT; AUTHORIZING THE ISSUANCE OF \$85,000,000 MAXIMUM AGGREGATE PRINCIPAL AMOUNT OF TAXABLE INDUSTRIAL REVENUE BOND (PLUMROSE MANUFACTURING FACILITY PROJECT) SERIES 2020; APPROVING THE EXECUTION AND DELIVERY OF A BOND PURCHASE AGREEMENT, A LEASE PURCHASE AGREEMENT AND A TRUST INDENTURE TO BE ENTERED INTO WITH RESPECT TO SUCH BOND; PROVIDING FOR THE FORM, TERMS AND CONDITIONS OF SUCH BOND AND THE METHOD OF PAYING SUCH BOND; PRESCRIBING OTHER DETAILS AND GRANTING FURTHER AUTHORITY IN CONNECTION WITH THE ISSUANCE OF SAID BOND AND THE EXECUTION OF THE DOCUMENTS APPROVED HEREIN.

WHEREAS, the City of Moberly, Missouri (the “**City**”) is authorized under the provisions of article VI, section 27(b) of the Missouri Constitution, as amended, and sections 100.010 to 100.200, inclusive of the Revised Statutes of Missouri, as amended (collectively, the “**Acts**”), to purchase, construct, extend and improve certain projects (as defined in the Acts), and to issue industrial development revenue bonds for the purpose of providing funds to finance the costs of such projects and to lease or sell such projects to others, and to pledge the payments, revenues and receipts from such projects as security for the payment of the principal of, redemption premium, if any, and interest on such bonds; and

WHEREAS, pursuant to the Act, the Council of the City (the “**Council**”) has received a certain plan for a project for an industrial development project (the “**Plan**”) which calls for the acquisition and installation of certain real and personal property on a portion of an approximately 40.0 acre consolidated site located in the Moberly Industrial Park within the City and known and numbered as _____ McKeown Parkway (the “**Property**”), which activities are expected to facilitate the construction and installation of buildings and improvements on and installation of equipment at the Property including, without limitation, the construction of a food/bakery manufacturing facility containing approximately 85,000 square feet (collectively, the “**Project**”), resulting in job creation and capital investment within the City and the region and which includes the information required by the Act, together with a request for issuance of the City’s Taxable Industrial Revenue Bond (Plumrose Manufacturing Facility Project) Series 2020 in the maximum principal amount of \$85,000,000 (the “**Bonds**”) for the purpose of financing the Project; and

WHEREAS, in accordance with the Acts, this Ordinance and the instruments and documents specified herein, the Bonds and interest thereon shall not constitute an indebtedness of the City within the meaning of any State constitutional provision or statutory limitation and shall not constitute or give rise to a pecuniary liability of the City or a charge against the City’s general credit or taxing powers;

WHEREAS, the Council, in furtherance of the Plan and the Project, has approved a certain development agreement with Plumrose USA, Inc. (the “**Company**”) dated as of April 1, 2020 (the “**Development Agreement**”) providing for, among other things, the implementation of the Project and the issuance of the Bonds and now wishes to approve (i) the acceptance by the City from the Moberly Holding Company (the “**Holding Company**”) of a certain portion of adjacent real property containing approximately 11.2 acres legally described in Exhibit A, attached to this Ordinance (the “**Holding Company Portion**”) which shall be merged and consolidated with certain real property currently owned by the City containing approximately 28.8 acres (the “**City Parcel**”) to comprise the Property; and (ii) the leasing of the Property and the Project to the Company upon terms which will be sufficient to enable the City to pay principal of, premium, if any, and interest on the Bonds as the same become due and payable, all in furtherance of the public purposes of the Acts; and

WHEREAS, it is necessary and desirable in connection with the Project and the issuance of the Bonds that the City enter into certain documents, including: (i) a bond purchase agreement in substantially the form attached as Exhibit B to this Ordinance (the “**Purchase Agreement**”) by and between the City and the Company as bond purchaser (the “**Purchaser**”); (ii) a lease purchase agreement in substantially the form attached as Exhibit C to this Ordinance (the “**Lease**”) by and between the City as “lessor,” and the Company as “lessee;” and (iii) a trust indenture in substantially the form attached as Exhibit D to this Ordinance (the “**Indenture**”) between the City and BOKF, N.A., as trustee (the “**Trustee**”); and

WHEREAS, the Holding Company together with the City has previously entered into a certain Cooperation Agreement for Industrial Land Sales and Development (the “**Cooperation Agreement**”) which authorizes and provides for the purchase, assembly, and sale of real property owned by the Holding Company and the City by and thorough a separately created Joint Board established as a body corporate and politic under the Cooperation Agreement (the “**Joint Board**”) and at it’s initial meeting of December 31, 2019 the Joint Board, among other things, determined that the purchase and sale of the Holding Company Portion to the City and the assembly and leasing by the City of the Property to the Company, would be in furtherance of and facilitate the Plan and the Project and, accordingly, has approved and authorized the sale to the City of the Holding Company Portion; and

WHEREAS, the Board wishes to ratify and confirm the determinations of the Joint Board and to accept the conveyance to the City of the Holding Company Portion as a portion of such other parcels as may be conveyed to the City by the Holding Company in accordance with the terms and conditions of that certain Cooperation and Purchase Agreement dated as of April 1, 2020 by and between the City and the Holding Company (the “**City Purchase Agreement**”) by acceptance of the Special Warranty Deed attached as Exhibit E to and incorporated by reference in this Ordinance (the “**Deed**”);

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MOBERLY, MISSOURI as follows, to-wit:

SECTION 1. Capitalized terms used and not defined in this Ordinance shall have the meanings ascribed to them in the Indenture.

SECTION 2. The City Council hereby finds, determines and declares that the adoption of this Ordinance, the actions hereby authorized, and the execution and delivery of the documents herein authorized and approved is necessary to carry out the powers, purposes and duties expressly provided in the Acts and each and every matter and thing as to which provision is made herein and therein is necessary to carry out and effectuate the purposes of the City in accordance with the Acts, and the powers of the City herein exercised are in each case discharged in accordance with the provisions of the Acts and in furtherance of the purposes of the City.

SECTION 3. The City shall issue the Bonds but only in the manner provided in the Indenture, for the purpose of providing funds to finance the Project. The City and the Trustee shall deposit and apply and use the proceeds of the Bonds as set forth in the Indenture. The Bonds shall be issued in such form, mature on such dates, bear and pay interest at such rates and on such dates, be subject to redemption prior to maturity and contain such other terms and provisions as set forth in the Indenture. The Bonds shall be executed on behalf of the City by the Mayor under the official seal of the City attested by the City Clerk. The signatures of the Mayor and the City Clerk may be manual or facsimile. The official seal of the City may be actually impressed or imprinted or otherwise reproduced thereon by facsimile. No Bond shall be issued unless first authenticated by the Trustee, to be evidenced by the manual signature of an authorized signatory of the Trustee on such Bond. The Bonds shall be a limited obligation of the City, payable solely from the revenues from the Lease as pledged under the Indenture. The Bonds and interest thereon shall never be or be considered a general obligation of the City or an indebtedness of the City, the County of Randolph, or of the State of Missouri or any subdivision thereof within the meaning of any State constitutional provision or statutory limitation and shall not constitute or give rise to a pecuniary liability of any of them or a charge against their general credit or taxing powers.

SECTION 4. The City has negotiated for the sale of the Bonds to the Company at the price set forth in the Purchase Agreement. Given the purposes of the financing and the involvement of the City therewith, it is the determination of the City Council that the Bonds shall be hereby awarded to the Company at the price aforesaid with delivery to follow in the manner, at the time or times and subject to the conditions set forth in the Purchase Agreement and this Ordinance. As evidence thereof, the Mayor and the City Clerk are hereby authorized and directed for and in the name of the City to execute and deliver the Purchase Agreement in substantially the form of Exhibit B presented herewith, with such insertions therein changes or corrections thereto as shall be approved by the Mayor consistent with this Ordinance and the terms of the Acts, the execution thereof to constitute conclusive evidence of the approval of any such insertions and corrections.

SECTION 5. The terms and provisions of the Lease and the Indenture are hereby approved. The Mayor and the City Clerk are hereby authorized for and in the name of the City to execute, affix with the official seal of the City and deliver such documents in the substantially the forms of Exhibit C and Exhibit D presented herewith, or with such insertions therein changes or corrections thereto as shall be approved by the Mayor consistent with this Ordinance and the terms of the Acts, the execution thereof to constitute conclusive evidence of the approval of any such insertions and corrections.

SECTION 6. The Mayor and the City Clerk are hereby authorized for and in the name of the City to execute the Bonds in the manner authorized by Section 3 of this Ordinance. Subject to the terms and conditions of the Purchase Agreement and the Development Agreement, the City shall deliver the Bonds to the Company as purchaser against payment of the purchase price therefor.

SECTION 7. The Mayor and other appropriate officials of the City are hereby authorized and directed to accept the conveyance from the Holding Company of the Holding Company Portion as a portion of those additional tracts set forth in the Deed; and to acknowledge and cause to be recorded in the office of the Randolph County Recorder the Deed and any and all such instruments necessary to effectuate such conveyance, and to take such further actions and execute such further instruments and may be necessary or convenient to merge and consolidate the Holding Company Portion with the City Parcel to comprise the Property.

SECTION 8. The selection of Cunningham, Vogel & Rost, P.C. as Bond Counsel in connection with the issuance of the Bonds is hereby confirmed and approved, and the Bond Counsel fee in the total amount of \$96,800, including amounts previously paid by Moberly Area Economic Development Corporation (“MAEDC”) pursuant to that certain Initial Funding Agreement dated as of December 12, 2019 by and between MAEDC and the Company), is hereby approved as a Cost of Issuance of the Bonds. The selection of BOKF, N. A. as Trustee under the Indenture in connection with the issuance of the Bonds is hereby approved, and the Trustee’s closing fee of \$750 is hereby approved as a Cost of Issuance of the Bonds. The City shall and the Mayor and the City Clerk and other appropriate officers, agents and employees of the City are hereby each further authorized to execute, publish, file and record such other documents, instruments, notices (including, without limitation the Annual Report filed with the State of Missouri Department of Economic Development) and records and to take such other actions and execute and deliver such other documents, certificates, and instruments as shall be necessary or desirable to accomplish the purposes of this Ordinance and to comply with and perform the obligations of the City under the Bonds, the Lease, and the Indenture.

SECTION 9. All exhibits referenced in this Ordinance are hereby incorporated in this Ordinance by this reference as if such exhibits were fully set forth herein.

SECTION 10. The portions of this Ordinance shall be severable. In the event that any portion of this Ordinance is found by a court of competent jurisdiction to be invalid, the remaining portions of this Ordinance are valid, unless the court finds the valid portions of this Ordinance are so essential and inseparably connected with and dependent upon the void portion that it cannot be presumed that the City Council would have enacted the valid portions without the invalid ones, or unless the court finds that the valid portions standing alone are incomplete and are incapable of being executed in accordance with the legislative intent.

SECTION 11. This Ordinance shall take effect and be in force from and after its passage and adoption by the Council of the City of Moberly, Missouri, and its signature by the officer presiding at the meeting at which it was passed and adopted.

PASSED AND ADOPTED by the Council of the City of Moberly, Missouri on this 6th day of

April, 2020.

Presiding Officer at Meeting

ATTEST:

Diane Kay Galloway, CMC/MRCC, City Clerk

**EXHIBIT A
LEGAL DESCRIPTION OF HOLDING COMPANY PORTION**

DESCRIPTION OF 11.2 ACRES FROM MOBERLY HOLDING COMPANY:

A tract of land being part of the Northwest Quarter of Section 25, Township 54 North, Range 14 West of the fifth principal meridian, Randolph County, Missouri, being more particularly described as follows:
Commencing at an iron rod marking the Northwest corner of said Section 25; thence South 88 degrees 14 minutes 40 seconds East, a distance of 403.18 feet; thence South 00 degrees 00 minutes 00 seconds East, a distance of 922.11 feet to an iron rod on the South line of McKeown Parkway; thence along the South line of McKeown Parkway, South 90 degrees 00 minutes 00 seconds East, a distance of 298.66 feet to an iron rod and the POINT OF BEGINNING; thence continuing South 90 degrees 00 minutes 00 seconds East, a distance of 1125.34 feet to an iron rod on the Westerly right-of-way of the former Norfolk Southern Railroad; thence along said right-of-way, South 01 degrees 29 minutes 37 seconds West, a distance of 452.34 feet to an iron rod; thence North 88 degrees 12 minutes 20 seconds West, a distance of 1114.10 feet to an iron rod; thence North 00 degrees 00 minutes 00 seconds East, a distance of 417.30 feet to the POINT OF BEGINNING, containing 11.2 acres.

EXHIBIT B
PURCHASE AGREEMENT
(included as Item 3 in Bond Transcript)

EXHIBIT C
LEASE
(included as Item 2 in Bond Transcript)

EXHIBIT D
INDENTURE
(included as Item 1 in Bond Transcript)

EXHIBIT E
SPECIAL WARRANTY DEED
(included as Item 18 in Bond Transcript)

CERTIFICATE REGARDING BOND ORDINANCE

I, the undersigned, as duly appointed and serving City Clerk of the City of Moberly, Missouri, do hereby certify that the attached including Exhibits A, B, C, D, and E thereto, is a true and accurate copy of Ordinance No. _____ of the City approving, among other things, the issuance by the City of its Taxable Industrial Revenue Bond (Plumrose Manufacturing Facility Project) Series 2020 in the maximum aggregate principal amount of \$85,000,000 as the same appears of record in the Office of the City Clerk and said Ordinance was duly passed and approved by the Council of the City at a duly noticed meeting held on April 6, 2020 and has not been amended, modified or repealed and remains in full force and effect as of the date set forth below.

Dated: April _____, 2020

Diane Kay Galloway, CMC/MRCC, City Clerk
City of Moberly, Missouri

City of Moberly City Council Agenda Summary

Agenda Number: _____ #10.
 Department: Public Works
 Date: April 6, 2020

Agenda Item: An Ordinance Accepting The Bid Of And Authorizing The City Manager To Enter Into A Construction Agreement With S & A Equipment & Builders, LLC For The City Of Moberly Morley Street Sidewalk Improvement Project.

Summary: These are the bids for the sidewalk replacement/construction along the West side of Morley from Coates to Hwy 24 and along the South side of Hwy 24 from Morley to the East Outer road. This bid includes moving several water customers off of the 2” water line on the West side that is continually failing and undersized to the large line on the East side of Morley.

The total construction cost for this project is \$1,274,320.22. Utilities is funding \$195K of this for new waterline services connecting some of the west side businesses over to the larger water main on the East, and the remainder is supported by a little less than \$1M is STP-U and MoDOT Cost Share funds. The remaining balance will be covered by the transportation trust fund.

This is the approval for the City Manager to execute the contract with S&A to construct the sidewalk down the West side of Morley and along Hwy 24.

Staff recommends approval

Recommended

Action: Approve this ordinance.

Fund Name: Transportation Trust

Account Number: 600.167.5409

Available Budget \$: 925,000.00

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input checked="" type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution	Council Member		
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Kimmons	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Davis	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Kyser	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice		Passed	Failed
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____			

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE ACCEPTING THE BID OF AND AUTHORIZING THE CITY MANAGER TO ENTER INTO A CONSTRUCTION AGREEMENT WITH S & A EQUIPMENT & BUILDERS, LLC FOR THE CITY OF MOBERLY MORLEY STREET SIDEWALK IMPROVEMENT PROJECT.

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MOBERLY, MISSOURI, TO-WIT:

SECTION ONE: As part of Federal Project No.: STP-4500(207) & STIP 2P3220 known locally as the Morley Street Sidewalk Improvement Project , city staff sought bids for sidewalk replacement and construction along the west side of Morley Street from Coates to Highway 24 and along the south side of Highway 24 from Morley Street to the East Outer Road.

SECTION TWO: Four bids were received with the bid of S & A Equipment & Builders, LLC being the lowest responsible bid in the amount of One million two hundred and seventy-four thousand three hundred and twenty dollars and 22/100 (\$1,274,320.22).

SECTION THREE: The Moberly City Council hereby accepts the bids of S & A Equipment & Builders, LLC and authorizes the City Manager or his designee to enter into the attached construction agreement for the bid amount.

SECTION FOUR: This Ordinance shall be in full force and effect from and after its passage and adoption by the Council of the City of Moberly, Missouri, and its signature by the officer presiding at the meeting at which it was passed and adopted.

PASSED AND ADOPTED by the Council of the City of Moberly, Missouri, this 6th day of April, 2020.

ATTEST:

Presiding Officer at Meeting

City Clerk

AGREEMENT

THIS AGREEMENT, made this _____, by and between the City Moberly, Missouri, hereinafter called "OWNER" and S&A Equipment & Builders doing business as _____ an Individual hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements herein after mentioned:

1. The CONTRACTOR will commence and complete the construction of the

City of Moberly – Morley Street Sidewalk Improvements
Federal Aid Project No. STP-4500(207) & STIP 2P3220

2. The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the PROJECT described herein.

3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within 14 calendar days after the date of the NOTICE TO PROCEED and will complete the same by October 1, 2020, unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of **One million two hundred seventy-four thousand three hundred twenty dollars and twenty-two cents (\$1,274,320.22)**

5. The term "CONTRACT DOCUMENTS" consists of the following:

- A. NOTICE TO BIDDERS *(inclusive)*
- B. CONTRACTOR'S BID (BID FORM) *(inclusive)*
- C. THIS AGREEMENT *(inclusive)*
- D. BID BOND *(inclusive)*
- E. PERFORMANCE BOND *(inclusive)*
- F. PAYMENT BOND *(inclusive)*
- G. DRAWINGS *(inclusive)* consisting of sheets prepared or issued by Bartlett & West, Inc.,
dated August 2019 with each bearing the following general title:
CITY OF MOBERLY – MORLEY STREET SIDEWALK IMPROVEMENTS
- H. MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2011

- I. MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION, 2009
- J. JOB SPECIAL PROVISIONS (*inclusive*)
- K. ADDENDA (Numbers____ Through____)
- L. The following which may be delivered or issued on or after the Effective Date of the Agreement, and are not attached hereto:
 - 1) NOTICE TO PROCEED
 - 2) CHANGE ORDERS

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this Agreement in four (4) copies each of which shall be deemed an original on the date first above written.

OWNER: City of Moberly, Missouri

(SEAL)

By _____

Name _____

Title _____

ATTEST:

By _____

Name _____

Title _____

CONTRACTOR:

(CORPORATE SEAL)

By _____

Name _____

Title _____

Address _____

FEIN _____

ATTEST:

By _____

Name _____

Title _____

NOTICE TO CONTRACTORS

Sealed bids, addressed City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270 for the proposed work will be received by the City of Moberly until 10:00 A.M (prevailing local time) on Thursday, January 23, 2020, at the office of the City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270, and at that time will be publicly opened. Bids should be delivered to: City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270.

(1) **PROPOSED WORK:** The proposed work, hereinafter called the work, includes:

The proposed work involves reconstruction of various sections of sidewalk along the west side of North Morley Street from East Coates Street to Allen Street. The project will also include a portion of new sidewalk construction along North Morley Street from Allen Street (KB Tire & Auto) to HWY 24 then proceeding east along HWY 24 ending at East Outer Road of US HWY 63. The project will consist of concrete pavement work, portions of curb and gutter, tie in grading, ditch grading, storm pipe installation, seeding, erosion and traffic control. All equipment, material, and workmanship must be in accordance with the plans, specifications, and contract documents on file with the City of Moberly.

(2) **COMPLIANCE WITH CONTRACT PROVISIONS:** The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the current version of the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction," and "Missouri Standard Plans for Highway Construction" (if applicable), their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted.

The following documents are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Revisions to Missouri Standard Plans
For Highway Construction (if applicable)

These supplemental bidding documents contain all current revisions to the bound printed versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

Please note that within the above-listed documents, the term "Commission" shall be replaced with the term, "City of Moberly", and the term "Engineer" is a reference to the Engineer of Record from Bartlett & West, Inc.

The contracting authority for this contract is the City of Moberly.

(3) **PERIOD OF PERFORMANCE:** If the bid is accepted, the bidder agrees that work shall be diligently prosecuted at such rate and in such manner as, in the judgment of the engineer, is necessary for the completion of the work within the time specified as follows in accordance with Sec 108:

Completion Date: October 1, 2020

(4) **LIQUIDATED DAMAGES:** The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages to be recovered in accordance with Sec 108 shall be as follows:

Liquidated damages per day \$ 1,100

(5) **BID GUARANTY:** The bidder shall submit a Bid Guaranty meeting the requirements of Section 102.18.1 of the Missouri Standard Specifications for Highway Construction (if applicable). A sample project bid bond form is included in the bid book. The bidder shall mark the box below to identify the type of Bid Guaranty.

- Paper Bid Bond
 Cashier's Check

(6) **CERTIFICATIONS FOR FEDERAL JOBS:** By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the contracting authority may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

(7) **ANTIDISCRIMINATION:** The Contracting Authority hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

(8) **FEDERAL AND STATE INSPECTION:** The Federal Government is participating in the cost of construction of this project. All applicable Federal laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate State or Federal Agency in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

(9) **PREVAILING WAGE (FEDERAL AND STATE):** This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations, and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. The applicable state wage rates for this contract are detailed in "Annual Wage Order No. 23", that is attached to this bidding document. The applicable federal wage rates for this contract are the effective Davis-Bacon federal wage rates posted the tenth day before the bid opening date and are attached herein.

These supplemental bidding documents have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

(10) **WORKER ELIGIBILITY REQUIREMENTS:** Execution of the construction contract for this project is dependent upon the awarded bidder providing an Affidavit of Compliance AND E-Verify Memorandum-of-Understanding (MOU) between the bidder and Department of Homeland Security to the Contracting Authority as required by section 285.530 RSMo. The cover page and signature page of the E-Verify MOU and the Affidavit must be submitted prior to award of this contract.

A sample Affidavit of Compliance can be found at the Missouri Attorney General's website at the following link:

http://ago.mo.gov/forms/Affidavit_of_Compliance.pdf

All bidders must also be enrolled in the E-Verify Program, and include their MOU prior to contract execution. Bidders who are not enrolled will need to go to the following website link and select "Enroll in the Program" to get started. After completing the program, they will receive their E-Verify MOU with Department of Homeland Security. This document will need to be printed out and kept on file so that a copy can be attached to the Affidavit of Compliance.

http://www.dhs.gov/files/programs/gc_1185221678150.shtm

This requirement also applies to subcontractors and contract labor, but this contract only requires submittal of verification documents for the prime contractor. It is the prime contractor's responsibility to verify the worker eligibility of their subcontractors in order to protect their own company from liability as required by section 285.530 RSMo.

(11) **OSHA TEN HOUR TRAINING REQUIREMENTS:** Missouri Law, 292.675 RSMO, requires any awarded contractor and its subcontractor(s) to provide a ten-hour Occupational Safety and Health Administration (OSHA) Construction Safety Program (or a similar program approved by the Missouri Department of Labor and Industrial Relations as a qualified substitute) for their on-site employees (laborers, workmen, drivers, equipment operators, and craftsmen) who have not previously completed such a program and are directly engaged in actual construction of the improvement (or working at a nearby or adjacent facility used for construction of the improvement). The awarded contractor and its subcontractor(s) shall require all such employees to complete this ten-hour program, pursuant to 292.675 RSMO, unless they hold documentation on their prior completion of said program. Penalties, for Non-Compliance include contractor forfeiture to the Contracting Authority in the amount of \$2,500, plus \$100 per contractor and subcontractor employee for each calendar day such employee is employed beyond the elapsed time period for required program completion under 292.675 RSMO.

(12) **BUY AMERICA REQUIREMENTS:** Construction contracts shall assure compliance with Section 165 of the Surface Transportation Assistance Act of 1982, Section 337 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and 23 CFR 635.410 regarding Buy America provisions on the procurement of foreign products and materials. On all contracts involving Federal-aid, all products of iron, steel, or a coating of steel which are incorporated into the work must have been manufactured in the United States. The Contracting Authority may allow minimal amounts of these materials from foreign sources, provided the cost does not exceed 0.1 percent of the contract sum or \$2,500, whichever is greater. The Contractor certifies that these materials are of domestic origin. Additional information regarding the "Buy America" requirements can be found at:

<http://www.fhwa.dot.gov/programadmin/contracts/b-amquck.cfm>

(13) **ADDENDUM ACKNOWLEDGEMENT:** The undersigned states that the all addenda (if applicable) have been received, acknowledged and incorporated into their bid, prior to submittal. For paper bids, staple addenda to the bid in the appropriate part of the bid.

(14) **SIGNATURE AND IDENTITY OF BIDDER:** The undersigned states that the following provided information is correct and that (if not signing with the intention to bind themselves to become the responsible and sole bidder) they are the agent of, and they are signing and executing this, as the bid of

_____, which is the correct LEGAL NAME as stated on the contractor questionnaire (if applicable).

a) The organization submitting this bid is a(n) (1) individual bidder, (2) partnership, (3) joint venturer (whether individuals or corporations, and whether doing business under a fictitious name), or (4) corporation. Indicate by marking the appropriate box below.

- sole individual
- partnership
- joint venture
- corporation, incorporated under laws of state of _____.

b) If the bidder is doing business under a fictitious name, indicate below by filling in the fictitious name

Executed by bidder this _____ day of _____ 20__.

THE BIDDER CERTIFIES THAT THE BIDDER AND ITS OFFICIALS, AGENTS, AND EMPLOYEES HAVE NEITHER DIRECTLY NOR INDIRECTLY ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THIS BID, AND THAT THE BIDDER INTENDS TO PERFORM THE WORK WITH ITS OWN BONAFIDE EMPLOYEES AND SUBCONTRACTORS, AND DID NOT BID FOR THE BENEFIT OF ANOTHER CONTRACTOR.

THE BIDDER ACKNOWLEDGES THAT THIS IS AN UNSWORN DECLARATION, EXECUTED UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND/OR FALSE DECLARATION UNDER THE LAWS OF MISSOURI, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS. THE FAILURE TO PROVIDE THIS CERTIFICATION IN THIS BID MAY MAKE THIS BID NON-RESPONSIVE, AND CAUSE IT TO BE REJECTED.

THE BIDDER CERTIFIES THAT THE BIDDER'S COMPANY KNOWINGLY EMPLOYS ONLY INDIVIDUALS WHO ARE AUTHORIZED TO WORK IN THE UNITED STATES IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND ALL PROVISIONS OF MISSOURI EXECUTIVE ORDER NO. 07-13 FOR CONTRACTS WITH THE CONTRACTING AUTHORITY.

Check this box ONLY if the bidder REFUSES to make any or all of these certifications. The bidder may provide an explanation for the refusal(s) with this submittal.

Signature of Bidder's Owner, Officer, Partner or Authorized Agent

Please print or type name and title of person signing here

Attest:

Secretary of Corporation if Bidder is a Corporation

Affix Corporate Seal (If Bidder is a Corporation)

NOTE: If bidder is doing business under a fictitious name, the bid shall be executed in the legal name of the individual, partners, joint ventures, or corporation, and registration of fictitious name filed with the secretary of state, as required by sections 417.200 to 417.230 RSMo. If the bidder is a corporation not organized under the laws of Missouri, it shall procure a certificate of authority to do business in Missouri, as required by section 351.572 et seq RSMo. A certified copy of such registration of fictitious name or certificate of authority to do business in Missouri shall be filed with the Missouri Highways and Transportation Commission, as required by the standard specifications.

(15) **TRAINEES:** By submitting this bid, the bidder certifies that the bidder is familiar with the Training Provision in the Missouri Highways and Transportation Commission's "General Provisions and Supplement Specifications" which are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The number of trainee hours provided under this contract will be 0 slots at 1000 hours per slot or 0 hours.

(16) **SUBCONTRACTOR DISCLOSURE:** Requirements contained within Sec 102.7.12 of the Missouri Standard Specification for Highway Construction shall be waived for this contract.

(17) **PROJECT AWARD:** This project will be awarded to the lowest, responsive, responsible bidder.

(18) **MATERIALS INSPECTIONS:** All technicians who perform, or are required by the FHWA to witness, such sampling and testing shall be deemed as qualified by virtue of successfully completing the requirements of EPG 106.18 Technician Certification Program, for that specific technical area.

(19) **PRIME CONTRACTOR REQUIREMENTS:** The limitation in Sec 108.1.1 of the Missouri Standard Specifications for Highway Construction that "the contractor's organization shall perform work amounting to not less than 40 percent of the total contract cost" is waived for this contract. Instead, the less restrictive terms of the Federal Highway Administration's rule at Title 23 Code of Federal Regulations (CFR) § 635.116(a) shall apply, so that the contractor must perform project work with its own organization equal to and not less than 30 percent of the total original contract price. Second-tier subcontracting will not be permitted on this contract. All other provisions in Sec 108.1.1 et seq. of the Missouri Standard Specifications for Highway Construction shall remain in full force and effect, and shall continue to govern the contractor and its subcontractors, in accordance with the provisions of Title 23 CFR § 635.116.

(20) **SALES AND USE TAX EXEMPTION:** City of Moberly, a tax exempt entity, will furnish a Missouri Project Exemption Certificate as described in Section 144.062 RSMo to the awarded contractor who in turn may use the certificate to purchase materials for a specific project performed for the tax exempt entity. Only the materials and supplies incorporated or consumed during the construction of the project are exempt. The certificate will be issued to the contractor for a specific project for a defined period of time.

ITEMIZED BID: The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

BIDDER CHECKLIST
FINAL CHECKLIST BEFORE SUBMITTING BID

- 1. Submit completed Contractor Questionnaire and/or Contractor Prequalification Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Secs 101-103 of the Standard Specifications, and Rule 7 CSR 10-15.900, "Prequalifications to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website. (if applicable – required on highway and bridge projects)
- 2. For submittal of paper bids, the complete set of bidding documents includes all information through the DBE forms (for DBE forms see #7). The Technical Specifications/Job Special Provisions are for the bidder's information only and is not to be returned with the bid.
- 3. If submitting the bid by mail, it is to be completed, executed, and submitted in a sealed envelope addressed to Tom Sanders, Director, Public Works, 101 W. Reed St., City of Moberly. **Provide the vendor name, vendor address, vendor number, county, route and federal project number on the outside of the envelope (if applicable).**
- 4. Please read all items in the bidding document carefully. For paper bids, complete all items in ink or by typing in the information.
- 5. Sign this bidding document properly. If submitted in the name of a firm or corporation, the legal name of the firm or corporation should appear in the space designated, and be signed for by one or more persons legally qualified to execute papers in the name of said firm or corporation. Affix Corporate Seal if the Bidder is a Corporation.
- 6. For paper bids submit a bid bond executed by bidder and surety, or attach cashier's check to the bid bond form.
- 7. Submit the DBE Identification Submittal within 3 business days of the Bid Opening.
- 8. For paper bids, staple addenda to the bid in the appropriate part of the bid. The letter accompanying the addenda should be stapled to the inside of the back cover of the bid and returned. The bidder should retain a duplicate copy. (if applicable)

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Below is a list of common mistakes made by bidders leading to non-responsive bids. Please refer to the Standard Specifications for the appropriate procedures for completing and submitting a bid.

- a) Not signing the bid
- b) Not incorporating the addendum into the bidding documents, including attaching the letter to the bid
- c) Not providing a bid bond
- d) Using pencil to fill out the bid
- e) Using white out to make corrections to the itemized bid sheets
- f) Not initialing changes made

.....

All questions concerning the bid document preparation can be directed to Tom Sanders, the Director of Public Works at (660) 269-8705. Project specific questions can be directed to Todd Kempker of Bartlett & West, Inc. at (573) 659-6734.

Special Needs: If you have special needs addressed by the Americans with Disabilities Act, please notify the Tom Sanders, the Director of Public Works at (660) 269-8705 or through Missouri Relay System, TDD 1-800-735-2966, at least five (5) working days prior to the bid opening.

Item No.	Description	Quantity	Unit	Unit Price	Extension
Participating Bid Items - BASE BID A					
202-20.10	Removal of Improvements	1	LS	67,565 ³²	67,565 ³²
203-99.01	Earthwork	1	LS	14,340 ⁵⁸	14,340 ⁵⁸
304-05.04	Type 5 Aggregate for Base (4 in. Thick)	188	SY	17 ²⁵	3,344 ⁵²
608-10.12	Truncated Domes	542	SF	64 ¹⁵	34,769 ³⁰
608-50.07	Paved Approach (7" Thick)	90	SY	258 ²¹	23,244 ³⁰
608-50.08	Paved Approach (8" Thick)	5,441	SY	72 ⁵²	396,213 ⁶²
608-30.03	3 in. Concrete Median Strip	141	SY	153 ⁶⁵	21,670 ²⁹
608-40.23	Sidewalk Hand-Railing	73	LF	112 ¹³	8,185 ⁴⁹
608-99.05	Paved Approach (8" Thick High Early Strength)	315	SY	84 ⁴⁶	26,614 ³⁵
608-99.25	Concrete Sidewalk and Ramps	4,677	SY	55 ²¹	261,023 ²¹
609-10.11	Concrete Curb (Over 6 in Height) Type S	151	LF	39 ³⁰	5,964 ³⁰
609-10.52	Curb and Gutter Type B	562	LF	76 ⁰²	42,757 ³⁴
609-99.01	Concrete Sidewalk Trench Cover	72	SF	34 ⁰¹	2,532 ³³
616-10.05	Construction Signs	271	SF	11 ³⁸	3,083 ⁵⁸
616-10.28	Channelizers	135	EA	25 ⁰³	3,391 ¹⁵
616-10.30	Type III Moveable Barricade	6	EA	153 ⁶⁹	922 ¹⁴
616-10.31	Type III Moveable Barricade with Light	6	EA	221 ⁹⁹	1,331 ⁹⁹
616-10.40	Flashing Arrow Panel	3	EA	1,366 ¹¹	4,098 ³³
618-10.00	Mobilization	1	LS	22,199 ²²	22,199 ²²
620-00.03	Preformed Thermoplastic Pavement Marking, 4 in White	60	LF	4 ⁹⁴	296 ⁴⁰
620-00.09	Preformed Thermoplastic Pavement Marking, 6 in White	1,739	LF	7 ⁴⁰	12,868 ⁶⁰
620-00.12	Preformed Thermoplastic Pavement Marking, 12 in White	116	LF	14 ⁸⁰	1,716 ⁸⁰
620-00.21	Preformed Thermoplastic Pavement Marking, Left/Right Arrow	5	EA	398 ⁴⁵	1,992 ²⁵
620-00.24	Preformed Thermoplastic Pavement Marking, Straight Arrow	2	EA	341 ⁵³	683 ⁰⁶
627-40.00	Contractor Furnished Surveying and Staking	1	LS	11,384 ²²	11,384 ²²
726-99.02	15 in HDPE Pipe	12	LF	152 ⁹⁸	1,835 ²⁶
726-99.03	15 in CMP End Section	2	EA	810 ²⁹	1,621 ⁶⁸
805-10.00A	Seeding - Cool Season Mixture	1	AC	6,659 ²²	6,659 ²²
805-20.00A	Seeding - Warm Season Mixture	1	AC	6,659 ²²	6,659 ²²
806-10.07A	Curb Inlet Check	37	EA	187 ⁸⁴	6,950 ⁰⁸
806-10.19	Silt Fence	1,100	LF	3 ¹⁹	3,509 ⁰³
806-10.05	DITCH CHECK	24	LF	18 ⁷⁸	450 ⁷²
902-08.33	flat sheet sign	28	SF	56 ⁹²	1,593 ⁷⁶
902-08.34	signal sign mounting hardware	10	EA	204 ⁹²	2,049 ²⁰
902.27-08	post, signal 8 ft.	6	EA	865 ²⁰	5,191 ²⁰
902.49-20	detector, pushbutton (new installation)	6	EA	314 ²⁰	1,885 ²⁰
902.49-44	detector, vehicle induction loop (2 channel)	1	EA	142 ³⁰	142 ³⁰
902.08-11	Signal head, 1S, Pedestrian	6	EA	801 ⁴⁵	4,808 ⁷⁰
902.99.02	Install Signal Heads Provided by Others	4	EA	437 ¹⁵	1,748 ⁶⁰

902.50-20	conduit, 1 in., loop detector	11	LF	11.38	125.18
902.53-00	conduit, 3 in., trenched	101	LF	13.66	1379.66
902.73-00	conduit, 3 in., pushed	173	LF	27.32	4726.36
902.83-08	cable, 16 awg 2 conductor	1,170	LF	1.14	1333.80
902.83-10	cable, 16 awg 5 conductor	1,170	LF	1.31	1532.70
902.83-11	cable, 16 awg 7 conductor	1,370	LF	1.42	1945.40
902.85-00	cable, loop detector, in duct	310	LF	6.83	2117.30
902.85-10	cable, loop detector, lead-in	200	LF	1.71	342.00
902.99-03	video cable	650	LF	2.05	1332.50
902.88-10	pull box, preformed class 1	1	EA	1202.17	1202.17
902.88-11	pull box, preformed class 2	2	CY	1536.87	3073.74
902.91-00	base, concrete	2.7	CY	3187.58	8606.47
Participating Bid Items - BASE BID A Total					\$1,044,982.22
Non-Participating Bid Items - BASE BID B					
603-99.02A	Service Line - 1 in HDPE	951	LF	21.50	20446.50
603-99.02B	Service Line - 1 in Copper	18	LF	434.23	7816.14
603-99.02C	Service Line - 2 in HDPE	247	LF	25.06	6189.82
603-99.02D	3 in HDPE Bored Crossing	951	LF	42.69	40598.19
603-99.02E	4 in HDPE Bored Crossing	367	LF	54.08	19847.36
603-99.02F	12 in HDPE Bored Crossing	80	LF	147.99	11839.20
603-99.02G	Water Meter Pit Assembly - 1 in Meter	1	EA	6186.96	6186.96
603-99.02H	Water Meter Pit Assembly - 2 in Meter	2	EA	3736.07	7472.14
603-99.02I	Water Valve - 6 in	4	EA	2598.22	10392.88
603-99.02J	Water Valve - 8 in	1	EA	6186.96	6186.96
603-99.02K	Remove existing fire hydrant	1	EA	2850.93	2850.93
603-99.02L	Fire hydrant assembly (includes 6 in valve and stub of 6 in pipe)	7	EA	3683.90	25787.30
603-99.02M	Water Main 6 in PVC	180	LF	27.63	4973.40
603-99.02N	Water Main 8 in PVC	25	LF	198.16	4954.00
603-99.02O	Cut and cap 2 in main	8	EA	903.79	7230.32
603-99.02P	Connect To Existing Water Main	3	EA	853.82	2561.46
603-99.02Q	Sidewalk/Pavement repairs	178	SY	57.17	10,176.26
Non-Participating Bid Items - BASE BID B Total					\$195,509.83
BASE BID A + BASE BID B TOTAL					\$1,240,492.05
Add Alternate A - Median replacement at Hwy 24 & Bus. 63					
603-99.01	3 in Decorative Concrete Median Pavement	461	SY	73.38	33,828.18
Add Alternate A Bid Items Total					33,828.18
BASE BID + ALT A TOTAL CONSTRUCTION COST					\$1,274,320.23
Add Alternate B - Pedestrian Signals at Hwy 63 Southbound Ramp					
902-08.33	flat sheet sign	17	SF	\$56.92	967.64
902-08.34	signal sign mounting hardware	3	EA	\$204.92	614.76

902.27-08	post, signal 8 ft.	2	EA	\$ 865.20	1730.40
902.49-20	detector, pushbutton (new installation)	2	EA	\$ 142.30	284.60
902.08-11	Signal head, 1S, Pedestrian	2	EA	\$ 801.45	1602.90
902.99.02	Install Signal Heads Provided by Others	1	LF	\$ 437.15	437.15
902.53-00	conduit, 3 in., trenched	72	LF	\$ 13.66	983.52
902.83-08	cable, 16 awg 2 conductor	450	LF	\$ 1.25	562.50
902.83-10	cable, 16 awg 5 conductor	450	LF	\$ 1.31	589.50
902.91-00	base, concrete	1	CY	3187.58	3187.58
Add Alternate B Bid Items Total					10,960.55
BASE BID + ALT A + ALT B TOTAL CONSTRUCTION COST					\$ 1,285,280.17
Add Alternate C - Fiber Reinforcement in Sidewalks					
502-99.11	Misc. Macro-Synthetic Fiber Reinforced Concrete	4666	SY	\$ 7.60	35,461.60
Add Alternate C Bid Items Total					35,461.60
BASE BID + ALT A + ALT B + ALT C TOTAL CONSTRUCTION COST					1,320,741.77
Add Alternate D - Longitudinal Steel Reinforcement in Sidewalks					
608-99.45	Longitudinal Reinforcement	4666	SY	\$ 8.91	41,574.06
Add Alternate D Bid Items Total					41,574.06
BASE BID + ALT A + ALT B + ALT C + ALT D TOTAL CONSTRUCTION COST					\$ 1,362,315.83

BID TOTAL

\$ 1,362,315⁸³
(figures)

one million three hundred sixty two thousand three hundred sixteen dollars and forty three cents
(words)

NOTICE TO CONTRACTORS

Sealed bids, addressed City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270 for the proposed work will be received by the City of Moberly until 10:00 A.M (prevailing local time) on Thursday, January 23, 2020, at the office of the City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270, and at that time will be publicly opened. Bids should be delivered to: City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270.

- (1) **PROPOSED WORK:** The proposed work, hereinafter called the work, includes:

The proposed work involves reconstruction of various sections of sidewalk along the west side of North Morley Street from East Coates Street to Allen Street. The project will also include a portion of new sidewalk construction along North Morley Street from Allen Street (KB Tire & Auto) to HWY 24 then proceeding east along HWY 24 ending at East Outer Road of US HWY 63. The project will consist of concrete pavement work, portions of curb and gutter, tie in grading, ditch grading, storm pipe installation, seeding, erosion and traffic control. All equipment, material, and workmanship must be in accordance with the plans, specifications, and contract documents on file with the City of Moberly.

(2) **COMPLIANCE WITH CONTRACT PROVISIONS:** The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the current version of the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction," and "Missouri Standard Plans for Highway Construction" (if applicable), their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted.

The following documents are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Revisions to Missouri Standard Plans
For Highway Construction (if applicable)

These supplemental bidding documents contain all current revisions to the bound printed versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

Please note that within the above-listed documents, the term "Commission" shall be replaced with the term, "City of Moberly", and the term "Engineer" is a reference to the Engineer of Record from Bartlett & West, Inc.

The contracting authority for this contract is the City of Moberly.

(3) **PERIOD OF PERFORMANCE:** If the bid is accepted, the bidder agrees that work shall be diligently prosecuted at such rate and in such manner as, in the judgment of the engineer, is necessary for the completion of the work within the time specified as follows in accordance with Sec 108:

Completion Date: October 1, 2020

(4) **LIQUIDATED DAMAGES:** The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages to be recovered in accordance with Sec 108 shall be as follows:

Liquidated damages per day \$ 1,100

(5) **BID GUARANTY:** The bidder shall submit a Bid Guaranty meeting the requirements of Section 102 of the Missouri Standard Specifications for Highway Construction (if applicable). A sample project bid bond form is included in the bid book. The bidder shall mark the box below to identify the type of Bid Guaranty.

- Paper Bid Bond
 Cashier's Check

(6) **CERTIFICATIONS FOR FEDERAL JOBS:** By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the contracting authority may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

(7) **ANTIDISCRIMINATION:** The Contracting Authority hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

(8) **FEDERAL AND STATE INSPECTION:** The Federal Government is participating in the cost of construction of this project. All applicable Federal laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate State or Federal Agency in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

(9) **PREVAILING WAGE (FEDERAL AND STATE):** This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations, and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. The applicable state wage rates for this contract are detailed in "Annual Wage Order No. 23", that is attached to this bidding document. The applicable federal wage rates for this contract are the effective Davis-Bacon federal wage rates posted the tenth day before the bid opening date and are attached herein.

These supplemental bidding documents have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

(10) **WORKER ELIGIBILITY REQUIREMENTS:** Execution of the construction contract for this project is dependent upon the awarded bidder providing an Affidavit of Compliance AND E-Verify Memorandum-of-Understanding (MOU) between the bidder and Department of Homeland Security to the Contracting Authority as required by section 285.530 RSMo. The cover page and signature page of the E-Verify MOU and the Affidavit must be submitted prior to award of this contract.

A sample Affidavit of Compliance can be found at the Missouri Attorney General's website at the following link:

http://ago.mo.gov/forms/Affidavit_of_Compliance.pdf

All bidders must also be enrolled in the E-Verify Program, and include their MOU prior to contract execution. Bidders who are not enrolled will need to go to the following website link and select "Enroll in the Program" to get started. After completing the program, they will receive their E-Verify MOU with Department of Homeland Security. This document will need to be printed out and kept on file so that a copy can be attached to the Affidavit of Compliance.

http://www.dhs.gov/files/programs/gc_1185221678150.shtm

This requirement also applies to subcontractors and contract labor, but this contract only requires submittal of the verification documents for the prime contractor. It is the prime contractor's responsibility to verify the worker eligibility of their subcontractors in order to protect their own company from liability as required by section 285.530 RSMo.

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(14) **SIGNATURE AND IDENTITY OF BIDDER:** The undersigned states that the following provided information is correct and that (if not signing with the intention to bind themselves to become the responsible and sole bidder) they are the agent of, and they are signing and executing this, as the bid of

S + A Equipment + Builders, which is the correct LEGAL NAME as stated on the contractor questionnaire (if applicable).

a) The organization submitting this bid is a(n) (1) individual bidder, (2) partnership, (3) joint venturer (whether individuals or corporations, and whether doing business under a fictitious name), or (4) corporation. Indicate by marking the appropriate box below.

- sole individual
- partnership
- joint venture
- corporation, incorporated under laws of state of _____

b) If the bidder is doing business under a fictitious name, indicate below by filling in the fictitious name

Executed by bidder this 22nd day of Jan 2020.

THE BIDDER CERTIFIES THAT THE BIDDER AND ITS OFFICIALS, AGENTS, AND EMPLOYEES HAVE NEITHER DIRECTLY NOR INDIRECTLY ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THIS BID, AND THAT THE BIDDER INTENDS TO PERFORM THE WORK WITH ITS OWN BONAFIDE EMPLOYEES AND SUBCONTRACTORS, AND DID NOT BID FOR THE BENEFIT OF ANOTHER CONTRACTOR.

THE BIDDER ACKNOWLEDGES THAT THIS IS AN UNSWORN DECLARATION, EXECUTED UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND/OR FALSE DECLARATION UNDER THE LAWS OF MISSOURI, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS. THE FAILURE TO PROVIDE THIS CERTIFICATION IN THIS BID MAY MAKE THIS BID NON-RESPONSIVE, AND CAUSE IT TO BE REJECTED.

THE BIDDER CERTIFIES THAT THE BIDDER'S COMPANY KNOWINGLY EMPLOYS ONLY INDIVIDUALS WHO ARE AUTHORIZED TO WORK IN THE UNITED STATES IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND ALL PROVISIONS OF MISSOURI EXECUTIVE ORDER NO. 07-13 FOR CONTRACTS WITH THE CONTRACTING AUTHORITY.

Check this box ONLY if the bidder REFUSES to make any or all of these certifications. The bidder may provide an explanation for the refusal(s) with this submittal.

Ryan Arrowood
Signature of Bidder's Owner, Officer, Partner or Authorized Agent

Ryan Arrowood owner
Please print or type name and title of person signing here

Attest:
Maria Arrowood
Secretary of Corporation if Bidder is a Corporation

Affix Corporate Seal (If Bidder is a Corporation)

NOTE: If bidder is doing business under a fictitious name, the bid shall be executed in the legal name of the individual, partners, joint ventures, or corporation, and registration of fictitious name filed with the secretary of state, as required by sections 417.200 to 417.230 RSMo. If the bidder is a corporation not organized under the laws of Missouri, it shall procure a certificate of authority to do business in Missouri, as required by section 351.572 et seq RSMo. A certified copy of such registration of fictitious name or certificate of authority to do business in Missouri shall be filed with the Missouri Highways and Transportation Commission, as required by the standard specifications.

(15) **TRAINEES:** By submitting this bid, the bidder certifies that the bidder is familiar with the Training Provision in the Missouri Highways and Transportation Commission's "General Provisions and Supplement Specifications" which are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The number of trainee hours provided under this contract will be 0 slots at 1000 hours per slot or 0 hours.

(16) **SUBCONTRACTOR DISCLOSURE:** Requirements contained within Sec 102.7.12 of the Missouri Standard Specification for Highway Construction shall be waived for this contract.

(17) **PROJECT AWARD:** This project will be awarded to the lowest, responsive, responsible bidder.

(18) **MATERIALS INSPECTIONS:** All technicians who perform, or are required by the FHWA to witness, such sampling and testing shall be deemed as qualified by virtue of successfully completing the requirements of EPG 106.18 Technician Certification Program, for that specific technical area.

(19) **PRIME CONTRACTOR REQUIREMENTS:** The limitation in Sec 108.1.1 of the Missouri Standard Specifications for Highway Construction that "the contractor's organization shall perform work amounting to not less than 40 percent of the total contract cost" is waived for this contract. Instead, the less restrictive terms of the Federal Highway Administration's rule at Title 23 Code of Federal Regulations (CFR) § 635.116(a) shall apply, so that the contractor must perform project work with its own organization equal to and not less than 30 percent of the total original contract price. Second-tier subcontracting will not be permitted on this contract. All other provisions in Sec 108.1.1 et seq. of the Missouri Standard Specifications for Highway Construction shall remain in full force and effect, and shall continue to govern the contractor and its subcontractors, in accordance with the provisions of Title 23 CFR § 635.116.

(20) **SALES AND USE TAX EXEMPTION:** City of Moberly, a tax exempt entity, will furnish a Missouri Project Exemption Certificate as described in Section 144.062 RSMo to the awarded contractor who in turn may use the certificate to purchase materials for a specific project performed for the tax exempt entity. Only the materials and supplies incorporated or consumed during the construction of the project are exempt. The certificate will be issued to the contractor for a specific project for a defined period of time.

ITEMIZED BID: The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

BID FORM

Proposal of S+A Equipment + Builders (hereinafter called "BIDDER"), organized and existing under the laws of the State of MO doing business as an Individual to the City of Moberly, Missouri.
(a corporation, a LLC, a partnership, an individual)

BIDDER hereby proposes to perform all WORK for the construction of

**City of Moberly – Morley Street Sidewalk Improvements
Federal Aid Project No. STP-4500(207) & STIP 2P3220**

in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to its own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED.

BIDDER further agrees to pay as liquidated damages the sum of **\$1,100.00** for each consecutive calendar day after the allowed period of performance.

BIDDER acknowledges receipt of the following ADDENDUM:

No.____, dated _____

No.____, dated _____

No.____, dated _____

NOTICE TO CONTRACTORS

Sealed bids, addressed City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270 for the proposed work will be received by the City of Moberly until 10:00 A.M (prevailing local time) on Thursday, January 23, 2020, at the office of the City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270, and at that time will be publicly opened. Bids should be delivered to: City of Moberly, 101 West Reed Street, Moberly, Missouri, 65270.

(1) **PROPOSED WORK:** The proposed work, hereinafter called the work, includes:

The proposed work involves reconstruction of various sections of sidewalk along the west side of North Morley Street from East Coates Street to Allen Street. The project will also include a portion of new sidewalk construction along North Morley Street from Allen Street (KB Tire & Auto) to HWY 24 then proceeding east along HWY 24 ending at East Outer Road of US HWY 63. The project will consist of concrete pavement work, portions of curb and gutter, tie in grading, ditch grading, storm pipe installation, seeding, erosion and traffic control. All equipment, material, and workmanship must be in accordance with the plans, specifications, and contract documents on file with the City of Moberly.

(2) **COMPLIANCE WITH CONTRACT PROVISIONS:** The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the current version of the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction," and "Missouri Standard Plans for Highway Construction" (if applicable), their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted.

The following documents are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The effective version shall be determined by the letting date of the project.

- General Provisions & Supplemental Specifications
- Supplemental Revisions to Missouri Standard Plans For Highway Construction (if applicable)

These supplemental bidding documents contain all current revisions to the bound printed versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

Please note that within the above-listed documents, the term "Commission" shall be replaced with the term, "City of Moberly", and the term "Engineer" is a reference to the Engineer of Record from Bartlett & West, Inc.

The contracting authority for this contract is the City of Moberly.

(3) **PERIOD OF PERFORMANCE:** If the bid is accepted, the bidder agrees that work shall be diligently prosecuted at such rate and in such manner as, in the judgment of the engineer, is necessary for the completion of the work within the time specified as follows in accordance with Sec 108:

Completion Date: October 1, 2020

(4) **LIQUIDATED DAMAGES:** The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages to be recovered in accordance with Sec 108 shall be as follows:

Liquidated damages per day \$ 1,100

The low bidder will be determined based upon the total construction cost.

This Bid is submitted by:

S+A Equipment & Builders
Name (Corporation, LLC, Partnership, Individual)

[Signature] 1-22-2020
Authorized Signature Date

owner Po Box 937, Fulton, MO 65251
Title Address

20-4099920 573 220 3653 FULTON, MO 65251
FEIN Phone No. City, State, Zip

CORPORATE SEAL – (if BID is by a corporation)

Bond No. CBB0057114

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we

S & A Equipment & Builders, LLC.
as principal and National American Insurance Company
as surety, are held and firmly bound unto the City of Moberly in the penal sum
of Five percent of bid Dollars (\$ 5 % of bid) to be
paid to the commission to be credited to the state road fund, the principal and surety binding themselves, their heirs,
executors, administrators, successors, and assigns, jointly and severally, firmly by these presents,

Sealed with our seals and dated this
January 23, 2020

THE CONDITION OF THIS OBLIGATION is such that

WHEREAS the principal is submitting herewith a bid to the commission on West Reed Street in
Randolph County, project City of Moberly - Morely Street Sidewalk for construction or improvement of sidewalk as
set out in said bid;

NOW THEREFORE, if the commission shall accept the bid of the principal and if the principal shall properly
execute and deliver to the commission the contract, contract bond, and evidence of insurance coverage in compliance with
the requirements of the bid, the specifications, and the provisions of section 227.100 RSMo, to the satisfaction of the
commission, then this obligation shall be void and of no effect, otherwise to remain in full force and effect.

In the event the said principal shall, in the judgment of the commission, fail to comply with any requirement
as set forth in the preceding paragraph, then the state of Missouri, acting by and through the commission, shall immediately
and forthwith be entitled to recover the full penal sum above set out, together with court costs, attorney's fees, and any
other expense of recovery.

The principal and surety hereby certify that the document is the original or a verbatim copy of the bid bond
form furnished by the Commission, in accordance with Sec 102.9 of the Missouri Standard Specifications for Highway
Construction.

S & A Equipment & Builders, LLC.
Principal

SEAL

By [Signature]
Signature

National American Insurance Company
Surety

SEAL

By [Signature]
Signature of Attorney in Fact David S. Salavitch

NOTE: This bond must be executed by the principal, and by a corporate surety authorized to conduct surety business in
the state of Missouri.

Revised 09-20-2017

NATIONAL AMERICAN INSURANCE COMPANY
CHANDLER, OKLAHOMA
POWER OF ATTORNEY

Number: CBB0057114

DUPLICATES SHALL HAVE THE SAME FORCE AND EFFECT AS AN ORIGINAL ONLY WHEN ISSUED IN CONJUNCTION WITH THE ORIGINAL.

KNOW ALL MEN BY THESE PRESENTS: That the National American Insurance Company, a corporation duly organized under the laws of the State of Oklahoma, having its principal office in the city of Chandler, Oklahoma, pursuant to the following resolution, adopted by the Board of Directors of the said Company on the 8th day of July, 1987, to wit:

"Resolved, that any officer of the Company shall have authority to make, execute and deliver a Power of Attorney constituting as Attorney-in-fact, such persons, firms, or corporations as may be selected from time to time.

Resolved that nothing in this Power of Attorney shall be construed as a grant of authority to the attorney(s)-in fact to sign, execute, acknowledge, deliver or otherwise issue a policy or policies of insurance on behalf of National American Insurance Company.

Be It Further Resolved, that the signature of any officer and the Seal of the Company may be affixed to any such Power of Attorney or any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such powers so executed and certified by facsimile signature and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond and documents relating to such bonds to which it is attached."

National American Insurance Company does hereby make, constitute and appoint

David S. Salavitch, Luke P. Sealer, Robert L. Cox, II

Its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred in its name, places and stead, to sign, execute, acknowledge and deliver in its behalf, and its act and deed, as follows:

To bind the company for bonds, not to exceed \$4,000,000.00 for any single bond. And to bind National American Insurance Company thereby as fully and to the same extent as if such bonds and documents relating to such bonds were, signed by the duly authorized officer of the National American Insurance Company, and all the acts of said Attorney(s) pursuant to the authority herein given, are hereby ratified and confirmed.

IN WITNESS WHEREOF, the National American Insurance Company has caused these presents to be signed by any officer of the Company and its Corporate Seal to be hereto affixed.



NATIONAL AMERICAN INSURANCE COMPANY

W. Brent LaGere

W. Brent LaGere, Chairman & Chief Executive Officer

STATE OF OKLAHOMA }
COUNTY OF LINCOLN } SS:

On this 28th day of September, A.D. 2017, before me personally came W. Brent LaGere, to me known, who being by me duly sworn, did depose and say; that he resides in the County of Lincoln, State of Oklahoma; that he is the Chairman and Chief Executive Officer of the National American Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that he signed his name, thereto by like order.



Janet Taylor

Notary Public
My Commission Expires April 8, 2022
Commission #02006203

STATE OF OKLAHOMA }
COUNTY OF LINCOLN } SS:

I, the undersigned, Secretary of the National American Insurance Company, an Oklahoma Corporation, DO HEREBY CERTIFY that the foregoing and attached POWER OF ATTORNEY remains in full force.

Signed and Sealed at the City of Chandler.

Dated the 23rd day of January, 2020



R. Patrick Gilmore

R. Patrick Gilmore, Secretary

DBE Submittal Forms

Identification of Participating DBEs. The information shown on this page must be completed. If this page is submitted but not signed, it will not be cause for rejection. The apparent low and second low bidder must file this form with the _____ by 4:00 p.m. on the third working day after the bid opening. Fax or email transmittal is permitted. The fax number is _____ and the email address for submittal is _____. The original copy must be mailed by overnight mail to the Local Public Agency the day of the FAX or email transmittal. Contact External Civil Rights at (573) 751-7801 for questions or assistance in completion. (Note: Submittal of this form is not required if the Contract DBE Goal is 0%)

The undersigned submits the following list of DBEs to be used in accomplishing the work of this contract. The work, supplies or services, applicable value and percent of total federal contract each DBE is to perform or furnish is as follows:

(A) DBE Name & Address	(B) Bid Item numbers (Or Line numbers)	(C) \$ Value of DBE of Work ** (Unit Price x Quantity of each item in B, or Lump Sum)	(D) % Of \$ Value Applicable to DBE Goal ** (100%, 60%)	(E) \$ Amount Applicable to DBE Goal for each item (C x D)	(F) % Of Total Contract Amount for each item (E/Total Contract Amount)
1. ATH Safety Supply 6352 Cedar Springs Rd Cedar Hill, MO 63016	616-10.05 616-10.27 616-10.30 616-10.71 616-10.40 618-10.00 620-10.03 620-10.00	10 x 271 4.34 x 6 22 x 135 6.5 x 17.3 135 x 6 13 x 116 145 x 6 120 x 3 100 x 1 Total 27,681 ⁰⁰	100%	2710 ⁰⁰ 1000 ⁰⁰ 2476 ⁰⁰ 266 ⁴⁰ 810 ⁰⁰ 11,303 ⁵⁰ 1170 ⁰⁰ 1505 ⁰⁰ 3600 ⁰⁰ 1750 ⁰⁰ 6000 ⁰⁰ Total 27,681 ⁰⁰	$\frac{27681}{1,240,441} = 2.2\%$ Total 2.2%
2. Schrimpf Landscaping 2820 Brush creek Ct. Jefferson City, Mo 65110	618-10.00 805-10.00A 805-10.00A 806-10.07A 806-10.19 806-10.05	1 x 2500 = 2500 1 x 5850 = 5850 1 x 5850 = 5850 37 x 165 = 6105 1000 1100 x 2.80 = 3080 24 x 16.5 = 396 Total 23,781 ⁰⁰	100%	2,500 ⁰⁰ 5850 ⁰⁰ 5850 ⁰⁰ 6105 ⁰⁰ 3070 ⁰⁰ 396 ⁰⁰ Total 23,781 ⁰⁰	$\frac{23781}{1,240,441} = 1.9\%$ Total 1.9%
3. Columbia Curb & Gutter 4105 Interstate 70 Dr SE, Columbia, MO 65201	608-30.03 609-10.52 618-10.00	1 x 4000 ⁰⁰ = 4000 ⁰⁰ 141 x 135 ⁰⁰ = 19,035 ⁰⁰ 140 x 95 = 13,300 ⁰⁰ Total 36,335 ⁰⁰	100%	4,000 ⁰⁰ 19,035 ⁰⁰ 13,300 ⁰⁰ Total 36,335	$\frac{36335}{1,240,441}$ 2.9% Total 2.9%
4.					
Total DBE Participation		87,797 ⁰⁰		87,797 ⁰⁰	7.07%

** Cannot exceed contract amount for given item of work.

DBE Submittal

(A) DBE Name & Address	(B) Bid Item numbers	(C) \$ Value of DBE of Work ** (Unit Price x Quantity of each item in B, or Lump Sum)	(D) % Of \$ Value Applicable to DBE Goal ** (100%, 60%)	(E) \$ Amount Applicable to DBE Goal for each item (C x D)	(F) % Of Total Contract Amount for each item (E/Total Contract Amount)
Trucking Services Only used if the DBE owns the trucks or is leasing from a DBE firm		\$ 0 ⁰⁰	100%		
Trucking Services Trucks are leased from non-DBE source		\$ 0 ⁰⁰		Only Include Fees for Trucking Services	
Brokered Services		\$ 0 ⁰⁰		Only Include Fees for Brokered Services	
Totals (Page 1)		\$ 87,797 ⁹⁰			
Totals (Page 2)					
Totals (additional pages if needed)					
Total DBE Participation		\$ 87,797 ⁹⁰			

** Cannot exceed contract amount for given item of work.

Company: SAH Equipment + Builders LLC Date: 2/7/2020
 By: Ryan T Arrowood Title: Owner

FEDERAL JOB NO. STP-4500(207) & STIP 2P3220
MORLEY STREET SIDEWALK IMPROVEMENTS
MOBERLY, RANDOLPH COUNTY, MO

JOB SPECIAL PROVISIONS

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- DD. Decorative Concrete Median Pavement
- EE. LPA Buy America Requirements

	City of Moberly 101 West Reed Street Moberly, MO 65270 Phone (660) 269-8705
	BARTLETT & WEST, INC. 1719 Southridge Drive, Suite 100 Jefferson City, MO 65109 Certificate of Authority No. 000167 Phone No. 573-634-3181
	Date Prepared: 08/28/2019
Date: 08/28/2019	
Only the following items of the Job Special Provisions are authenticated by this seal: All	

JOB SPECIAL PROVISIONS

A. GENERAL

1.0 The Technical Specifications for this project shall consist of the latest effective 2019 version of the Missouri Standard Specifications for Highway Construction except as modified or contradicted by the City's Contract, Special Provisions, General Provisions, and Plans.

2.0 The standard drawings for this project shall consist of the latest effective edition of the 2019 Missouri Standard Plans for Highway Construction, except as modified or contradicted by the City's Contract, Special Provisions, General Provisions, and Plans.

2.1 Copies of the Missouri Standard Plans for Highway Construction can be found at http://www.modot.org/business/standards_and_specs/currentstandardplans.htm and are available upon request from the City.

3.0 The contractor shall familiarize himself with these drawings and specifications prior to bidding. Failure to do so shall not relieve the contractor from delivering the completed project in accordance with the intent of the Plans and Specifications to provide a workable project.

3.1 All Construction Details included with the plans and attached hereto shall be used in constructing this project.

B. WORK ZONE TRAFFIC MANAGEMENT PLAN

1.0 Description. Work zone traffic management supplied by the contractor shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

2.0 Traffic Management Schedule.

2.1 Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management schedule shall include the proposed traffic control measures, hours traffic control will be in place, and work hours.

2.2 The engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.

2.3 In order to ensure minimal traffic interference, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.4 Traffic Congestion. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone.

2.4.1 Traffic Delay. The contractor shall be responsible for maintaining the existing local traffic flow through the job site during construction. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from occurring again.

JOB SPECIAL PROVISIONS

2.4.2 Traffic Safety.

2.4.2.1 Where traffic queues routinely extend to within 1000 feet (300 m) of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet (150 m) of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall contact the City for an evaluation of the traffic control.

3.0 Work Hour Restrictions: There are no work hour restrictions for this project. It shall be the responsibility of the engineer to determine if work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer.

4.0 Detours and Lane Closures.

4.1 The contractor shall notify the emergency response agencies prior to any closures. The contractor shall submit a schedule of closure to the engineer **THREE WEEKS** prior to the closure. The engineer must approve the schedule prior to any work beginning.

4.2 Morley Street and Highway 24 shall not be closed to through traffic at any time. Side roads may be closed to through traffic during construction, but local traffic must have access to the area at all times.

4.3 When closing a road, the contractor shall place Type III Movable Barricades with R11-2 signs and Type C warning lights at the road closure. The contractor shall also place W020-1 and R11-3a signs in advance of any road work or closure. The signs shall be in accordance with MoDOT's Engineering Policy Guide and approved by the Engineer. If the contractor has to do any miscellaneous work before and/or after the road closures, he shall provide temporary traffic control in accordance with the Manual on Uniform Traffic Control Devices. This shall include but not be limited to, signing, flagging, cones, etc.

5.0 Property Owner Coordination:

5.1 Property owners shall have access to their property at all times. Contractor shall coordinate with property owner to accommodate driveway reconstruction and parking alternatives. Contractor may have to use high early strength concrete for some properties without parking alternatives, with approval from the Engineer.

5.2 Properties or parking lots with multiple entrances (excluding one-way entrance/exits) shall have only one entrance closed at any time. Properties with only one entrance or one-way entrance/exits shall have the entrance constructed in two sections to maintain access at all times. A driveway may not be closed without prior approval from the Engineer and the property owner.

6.0 Basis of Payment: Any expenses incurred by the contractor by reason of their compliance with this provision shall be considered as completely covered by the project bid items.

C. PROJECT CONTACT FOR CONTRACTOR / BIDDER QUESTIONS

1.0 All questions concerning this project during the bidding process shall be forwarded to the project contacts listed below.

Austin Johnson
Bartlett & West, Inc.

FEDERAL JOB NO. STP-4500(207) & STIP 2P3220
MORLEY STREET SIDEWALK IMPROVEMENTS
MOBERLY, RANDOLPH COUNTY, MO

JOB SPECIAL PROVISIONS

1719 Southridge Drive, Suite 100
Jefferson City, MO 65109-4000

Telephone Number (573) 659-6737

D. UTILITIES

1.0 The location and extent of the existing underground utilities and other utilities shown on the plans may not be totally accurate or all inclusive. It shall be the sole responsibility of the contractor to locate, protect, and restore all existing utilities encountered on the project. Notify Missouri One Call (1-800-DIG-RITE) for location of the utilities at least five days prior to the construction.

1.1 The contractor shall be aware of the presence of utilities above and/or below the ground or in the vicinity of this project that may interfere with their operations. The contractor expressly acknowledges and assumes this risk even though the nature and extent is unknown to both the contractor and the owner at the time of bidding and award of the contract. The effect in cost or time of the presence of utilities above, below or in the vicinity of the contractor's work under this contract shall not be compensable.

1.2 The contractor agrees that any effects of the presence of the utilities, their relocation, contractor's coordination of work with the utilities and any delay in utility relocation shall not be compensable as a suspension of work, extra work, a change in the work, as a differing site condition or otherwise including but, without limitation, delay, impact, incidental or consequential damages. The contractor's sole remedy for the effects of the presence of utilities, delay in their relocation or any other effects shall be an excusable delay as provided in Section 105.7.3. The contractor waives, for itself, its subcontractors and suppliers the compensability of the presence of utilities, delay in their relocation and any cost to the contractor, its subcontractors and suppliers in any claim or action arising out of or in relation to the work under the contract.

1.3 The contractor shall be solely responsible and liable for incidental and consequential damage to any utility facilities or interruption of the service caused by it or its subcontractors operation. The contractor shall hold and save harmless the owner from damages to any utility facilities interruption of service by it or its subcontractor's operation.

1.4 The contractor shall coordinate with utility companies to allow the utilities to inspect any exposed lines that are to remain in place before being backfilled. Any damage to the utilities that occurred during construction shall be repaired or replaced at the expense of the contractor.

1.5 The known utility impacts are listed below and are shown on the project plans.

1. Various locations require vertical adjustments to water valve covers and other utility box covers. The Contractor will be responsible for adjusting the covers at no additional cost to the project.

2.0 Basis of Payment: No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials or time required to fulfill the above provisions.

E. EMERGENCY PROVISIONS AND INCIDENT MANAGEMENT

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency

FEDERAL JOB NO. STP-4500(207) & STIP 2P3220
MORLEY STREET SIDEWALK IMPROVEMENTS
MOBERLY, RANDOLPH COUNTY, MO

JOB SPECIAL PROVISIONS

agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow through the job site, the contractor shall notify police or other emergency agencies immediately as needed.

2.0 In addition to the 911 emergency telephone number for ambulance, fire or police services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol:	573-751-1000
Randolph County EMS:	660-263-2267
Moberly Police:	911 (emergency)
Non-emergency:	660-263-0346
Moberly Fire Department:	911 (emergency)
Non-emergency:	660-269-8705 x 2035

2.1 This list is not all inclusive. Notification of the need for wrecker or tow truck services will remain the responsibility of the appropriate police agency.

2.2 The contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

3.0 No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials or time required to fulfill the above provisions.

F. CONTRACT LIQUIDATED DAMAGES

1.0 **Description.** Completion of this contract shall be in accordance with Sec. 108.7 and will be administered on a completion date basis. The liquidated damages include amounts for contract administrative costs incurred by the City and its consultant.

2.0 **Period of Performance.** Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Notice to Proceed: April 3, 2020
Completion Date: **October 1, 2020**

2.1 For the entirety of this project, Section 108.8.1.3(a) shall not apply.

3.0 Should the contractor, or in case of default, the surety, fail to complete the work by the completion date shown above, a deduction of the amount shown below will be made for each day that the contract remains uncompleted in accordance with the requirements of Sec 108.8. These damages are in addition to any other damages as specified elsewhere in this contract.

Liquidated Damages **Per Day**: \$1,100.00

JOB SPECIAL PROVISIONSG. LIQUIDATED DAMAGES FOR WINTER MONTHS

1.0 Description. Revise Sec 108.8.1.2 (a) and (b) and substitute the following for the project:

- (a) Liquidated damages will be assessed from December 15 to March 15
- (b) Liquidated damages will be assessed for Saturdays, Sundays and Holidays.

H. AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE AND FINAL ACCEPTANCE OF CONSTRUCTED FACILITIES JSP-10-01A

1.0 Description. The contractor shall comply with all laws pertaining to the Americans with Disabilities Act (ADA) during construction of pedestrian facilities on public rights of way for this project. An ADA Checklist is provided herein to be utilized by the contractor for verifying compliance with the ADA law. The contractor is expected to familiarize himself with the plans involving pedestrian facilities and the ADA Post Construction Checklist prior to performing the work.

2.0 ADA Checklist. The contractor can locate the ADA Checklist form on the Missouri Department of Transportation website:

[http://epg.modot.org/index.php?title=136.11 Local Public Agency Construction](http://epg.modot.org/index.php?title=136.11%20Local%20Public%20Agency%20Construction)

2.1 The ADA Checklist is intended to be a helpful tool for the contractor to use during the construction of the pedestrian facilities and a basis for the commission's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any planned work that is in conflict with the design or with the requirement shown in the checklist. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated July 26, 2011, MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

2.2 It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize negative impacts that his equipment, subcontractors or general public may have on the work. Completed facilities must comply with the requirements of ADA and the ADA Checklist or have documented reasons for the non-complaint items to remain.

3.0 Coordination of Construction.

3.1 The contractor shall consolidate concrete pours into one period each day.

3.2 The contractor shall provide the construction observer a minimum of 24 hours notice prior to any concrete pour.

3.3 Prior to construction and/or closure on an existing pedestrian path of travel, the contractor shall submit a schedule of work to be constructed, which includes location of work performed, the duration of time the contractor expects to impact the facility and an accessible signed pedestrian

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detour complaint with MUTCD Section 6D that will be used during each stage of construction. This plan shall be submitted to the engineer for review and approval at or prior to the pre-construction conference. Accessible signed detours shall be in place prior to any work being performed that has the effect of closing an existing pedestrian travel way.

4.0 Final Acceptance of Work. The contractor shall provide the completed ADA Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA requirements and the ADA Checklist. Each item listed in the checklist must receive either a "YES" or an "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer. Documentation must be provided about the location of any non-complaint items that are allowed to remain at the end of the construction project. Specific details of the non-complaint items, the ADA requirement that the work was not able to comply with, and the specific reasons that justify the exception are to be included with the completed ADA Checklist provided to the engineer.

4.1 Slope and grade measurements shall be made using a properly calibrated, 2 foot long, electronic digital level approved by the engineer.

5.0 Basis of Payment. The contractor will receive full pay of the contract unit cost for all sidewalk, curb ramp, approach work, and temporary traffic control measures that are completed during the current estimate period as approved by the engineer. Based upon completion of the ADA Checklist, the contractor shall complete any necessary adjustments to items deemed non-compliant as directed by the engineer.

5.1 No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract documents.

I. REMOVAL OF IMPROVEMENTS

1.0 Description. This provision covers the removal of items required to complete the construction of this project, as noted in the contract plans and the special provisions.

1.1 Items required, as stated above, include but are not limited to; full depth sawcut, removal of existing pavement, existing curb and gutter, and barrier curb as shown on plans, and grading of existing greenspace.

2.0 Method of Measurement. No measurement will be made.

3.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract lump sum price for 202-20.10 "Removal of Improvements".

J. GUIDELINES FOR OBTAINING ENVIRONMENTAL CLEARANCE

1.0 Description. This provision provides guidance for obtaining environmental clearance for construction activities including but not limited to borrow areas, burn pits and staging areas.

1.1 The contractor shall refer to the MoDOT Engineering Policy Guide section 127.27 for details on the proper methods expected by MoDOT concerning environmental issues.

JOB SPECIAL PROVISIONS

2.0 Basis of Payment. No direct payment will be made to cover the above provision.

K. SEEDING, FERTILIZING AND MULCH

1.0 Final grade shall be established and seeded within 10 working days of proposed improvements being completed on a property unless approved otherwise by the Engineer.

1.1 All disturbed areas of the project not paved or concrete shall be seeded, unless noted on the plans. The seed mixture shall be 80 lbs. Tall Fescue, 10 lbs. Annual Ryegrass, 5 lbs. Perennial Ryegrass, 5 lbs. White Clover, 10 lbs. Oats. Seed bed preparation and seeding by hand will be allowed.

1.2 Fertilizer shall conform to Sec. 801 and more specifically as follows; 80 lbs/acre Nitrogen, 120 lbs/acre Phosphorous, 40 lbs/acre Pot Ash, and an effective neutralizing material of 800.

1.3 All disturbed areas shall be mulched and conform to Section 802 and more specifically the contractor shall use vegetative mulch. Mulching by hand will be allowed.

2.0 Basis of Payment: Any expenses incurred by the contractor by reason of their compliance with this provision shall be considered as completely covered by Item No. 805-10.00A, Seeding – Cool Season Mixture.

L. MATERIAL CERTIFICATION AND TESTING

The contractor shall submit certifications and substantiating test reports, furnished by the supplier or fabricator, certifying that material and manufacturing procedures conform to the specifications. There shall be no direct charge to the owner for materials taken as samples, either for field tests or for laboratory tests. If a specification of a recognized national standard agency (ASTM, AASHTO, AWWA, AWS, etc.) is designated, the material may, unless otherwise specified, meet either the designated specification or the latest revision thereof in effect at the time of letting of the contract.

Written certification for all materials shall be provided to the owner at least ten (10) days prior to subject material being incorporated into the work. The certification shall state the type, source, quantity, and other applicable information of the material and shall state that the material being supplied meets all provisions of the contract documents. This certification shall be signed by a responsible individual of the supplier.

Job control tests may be run by the owner or its representative as the work progresses to assure the owner that the project is constructed in compliance with the applicable specifications. Unless otherwise specified, all concrete shall be subject to visual inspection, job control tests, and compressive strength tests performed on job control samples. These inspections and job control tests and samples will be performed by the owner, at no expense to the contractor.

The lack of supervision or inspection by the owner shall not relieve the contractor of the responsibility to construct the project according to the plans and specifications.

JOB SPECIAL PROVISIONS

M. SIDEWALK AND CURB RAMPS

1.0 Description. This provision covers the construction of all sidewalk and curb ramps, as noted in the contract plans and the special provisions.

1.1 Items required, as stated above, include but are not limited to; sidewalk, curb ramps, flares, variable height curb, and sidewalk transitions as shown on plans.

2.0 All labor, materials, and equipment required for construction of sidewalks and curb ramps shall be in accordance to the 2016 version of the Missouri Standard Specifications for Highway Construction.

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item No. 608-99.25, "Concrete Sidewalk and Ramps", per square yard. There will be no payment difference between concrete poured as sidewalk, sidewalk ramp, ramp flair or variable height curb.

N. PAVED APPROACH (8" THICK HIGH EARLY STRENGTH)

1.0 Description. This provision covers the construction of paved approaches that are to be constructed with high early strength concrete, as noted in the contract plans and the special provisions.

1.1 Items required, as stated above, include but are not limited to; commercial drives and side streets as shown on plans.

2.0 All labor, materials, and equipment required for construction of paved approaches shall be in accordance to the 2016 version of the Missouri Standard Specifications for Highway Construction.

3.0 The contractor shall propose a mix design and method of obtaining high early strength concrete with possible methods including adding additional cement to the mix, utilizing hot water, or others suggested by the contractor. The mix design shall be approved by the Engineer prior to construction.

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item No. 608-99.05, "Paved Approach (8" Thick High Early Strength)", per square yard.

O. Sidewalk at Storm Drainage Inlets

1.0 Description. This provision covers the construction of sidewalk around drainage inlets. This includes providing a 5" thick sidewalk around the inlet and reinforcing steel. The reinforcing steel shall be doweled into the existing concrete inlets by drilling into the inlet.

2.0 Reinforcing steel shall be #4 deformed dowel bars, 12" long, and spaced 12" on centers. Reinforcing steel shall be doweled 6" into the inlet.

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item No. 608-60.04, "Concrete Sidewalk, 4 in.", per square yard.

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P. PERMITS

1.0 MoDNR Land Disturbance Permit. The contractor is responsible for obtaining a Land Disturbance Permit on behalf the City of Moberly from the Missouri Department of Natural Resources, Water Protection for construction and land disturbance activity, which covers the work entailed in the project.

1.1 In signing the contract, the contractor obligates himself to follow the provisions of the permit. The Contractor shall obtain the permit prior to beginning construction. Specifically the contractor shall be responsible for:

- a) All required inspections of erosion control BMP's.
- b) Maintaining records of precipitation.
- c) Maintaining logs of BMP Inspections, BMP Maintenance, and BMP Corrective Actions taken to correct deficiencies identified during inspections.
- d) Documenting any changes made to the Erosion Control Plan.

2.0 Basis of Payment. All expenses incurred by the Contractor by reason of their compliance with this provision shall be considered as completely covered by each of the appropriate pay items included in the contract.

Q. EROSION CONTROL

1.0 Description. The Contractor shall employ all necessary erosion control Best Management Practices (BMP) necessary to limit the amount of sediment entering drop inlets, pipes, streams, and adjacent properties.

2.0 The Contractor shall provide erosion control in accordance with Std. 806.10 of the Missouri Standard Plans for Highway Construction and the Missouri Department of Natural Resources field guide Protecting Water Quality which can be found at <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>.

3.0 The erosion control measures may be subject to inspection by MoDNR and/or the City at any time. Any deficiencies noted during inspection shall be fixed immediately by the contractor subject to approval by the engineer.

4.0 Any silt material that enters the inlets and/or pipes from the construction site shall be the responsibility of the contractor to remove prior to project completion. No direct payment shall be made since silt should not be allowed to enter based on the provisions of this bid item.

5.0 Basis of Payment. All expenses incurred by the Contractor by reason of their compliance with this provision shall be considered as Item No 806-10.07A, Curb Inlet Check, per each.

R. FLASHING YELLOW ARROW IMPLEMENTATION DETAILS

1.0 Description. This work shall consist of implementing flashing yellow arrows at various intersections on this project.

2.0 Any and all required cabinet modules or components to make the Flashing Yellow Arrow function properly will be supplied and installed by the Contractor, unless otherwise noted.

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This includes, but is not limited to, such things as load switches, detector cards, load resistors, conflict monitor cards.

2.1 The following items will be provided by MoDOT:

- Flashing yellow arrow signal head
- Conflict monitor

3.0 The following person shall be contacted to obtain the required equipment, controller timing, and data changes at least one week in advance of the desired implementation:

Gary Winkler
 Mobile Phone 660-651-7534
 Email: Gary.Winkler@modot.mo.gov

4.0 The contractor shall follow the appropriate conflict monitor unit manual to properly configure and implement the flashing yellow arrow and ensure the traffic signals/phases are safely monitored.

5.0 The contractor shall replace signal head mounting hardware for the left turn signal heads being replaced with this project. Additionally, the contractor shall replace the splice box on the mast arm.

6.0 **Basis of Payment.** All costs required to fulfill this provision, shall be considered completely covered by the contract unit price for 902-99.02 "Install Signal Heads Provided by Others", per each.

S. REPLACEMENT VIDEO DETECTION CABLE

1.0 **Description.** This work shall consist of installing new video detection cable at the intersection of Highway 24 and Morely Street (Business 63).

2.0 The video detection cable installed shall match the existing video detection cable, currently in use.

3.0 **Basis of Payment.** All costs incurred for equipment, labor, materials or time required to fulfill this provision, shall be considered completely covered by the contract unit price for 902-99.03 "Video Cable", per linear foot.

T. EARTHWORK

1.0 **Description.** This work shall consist of any grading or excavation work required as part of the project, except as noted.

2.0 **Construction Requirements.**

2.1 Grading activities shall conform to Sec. 203 and other applicable areas of the Standard Specifications.

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2.2 All excavation that is required for storm sewer installation shall be included in the unit bid price of pipe per linear foot and also shall be included in the unit bid price of inlet per each. There will be no separate payment for any rock excavation that is encountered.

3.0 Method of Measurement.

3.1 No measurements will be made and contract quantity will be used.

4.0 Basis of Payment. All costs incurred for equipment, labor, materials or time required to fulfill this provision, except as noted above, shall be considered completely covered by the contract unit price for 203-99.01 "Earthwork", per lump sum.

U. CONTRACTOR FURNISHED SURVEYING AND STAKING

1.0 Description. This provision covers the pay item for survey work on this project.

1.1 The requirements of this provision shall be fulfilled in accordance with Sec. 627.

2.0 Basis of Payment. Payment for the above described work will be in accordance with Sec. 627.4 for a lump sum contract price and shall be considered completely covered by the pay item 627-40.00 "Contractor Furnished Surveying and Staking".

V. WATER DISTRIBUTION IMPROVEMENTS

1.0 Description. This work consists of constructing water lines and new service connections including but not limited to; trenching, bedding, backfilling, pipe, gate valves, fire hydrants, bends, taps, service lines, meter, setter, pit, bore, and casing.

2.0 Construction Methods. All construction relating to waterlines shall be in accordance with the City of Moberly's specifications. Any items not covered by the City of Moberly's standard specifications shall use MoDOT standards in place. Except as modified in the attached specification sections and as noted below:

2.1 Attached specification sections:

- 01120 – Measurement and Payment
- 01510 – Tracer Wire
- 02440 – Boring of Pipe
- 02450 – Underground Crossings
- 15060 – Pipe and Fittings

3.0 Basis of Payment: All expenses incurred by the contractor by reason of their compliance with this provision shall be considered as completely covered by the unit prices bid for:

- Item No. 603-99.02A, Service Line – 1 in HDPE, per linear foot
- Item No. 603-99.02B, Service Line – 1 in Copper, per linear foot
- Item No. 603-99.02C, Service Line – 2 in HDPE, per linear foot
- Item No. 603-99.02D, 3 in HDPE Bored Crossing, per linear foot
- Item No. 603-99.02E, 4 in HDPE Bored Crossing, per linear foot
- Item No. 603-99.02F, 12 in HDPE Bored Crossing, per linear foot
- Item No. 603-99.02G, Water Meter Pit Assembly – 1 in Meter, per each
- Item No. 603-99.02H, Water Meter Pit Assembly – 2 in Meter, per each

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- Item No. 603-99.02I, Water Valve – 6 in, per each
- Item No. 603-99.02J, Water Valve – 8 in, per each
- Item No. 603-99.02K, Remove existing fire hydrant, per each
- Item No. 603-99.02L, Fire hydrant assembly (includes 6" valve and stub of 6" pipe), per each
- Item No. 603-99.02M, Water Main 6 in PVC, per linear foot
- Item No. 603-99.02N, Water Main 8 in PVC, per linear foot
- Item No. 603-99.02O, Cut and cap 2 in Main, per each
- Item No. 603-99.02LP Connect to Existing Water Main, per each
- Item No. 603-99.02MQ Sidewalk/Pavement repairs, per square yard

All fittings, bends, tapping saddles, solid sleeves, and tracer wire shall be included in the linear foot price of pipe. No direct payment will be made for thrust blocks. All required testing and disinfection shall be considered subsidiary to the bid items in the contract.

W. CONCRETE SIDEWALK FLUME

- 1.0 Description.** This provision covers the work noted in the plans for construction of a sidewalk flume across the sidewalk. A standard detail is shown in the plans. Any alteration to that detail may be submitted to the engineer prior to construction for review and approval if desired. This work shall be ADA compliant and allow drainage of water under the pedestrian traveled way.
- 2.0 Basis of Payment.** Payment for the above described work will be considered completely covered by the pay item 609-99.01 "Concrete Sidewalk Trench Cover" per square foot. The concrete work will not be measured for this construction.

X. REPLACE SIDEWALK LID

- 1.0 Description.** This provision covers the work noted in the plans for reconstruction of the existing sidewalk lids. This work shall provide an ADA compliant pedestrian route across the lid of the existing inlet. It may be required that the inlet lid be cast oversized to accommodate the full width of the sidewalk. This work may also require the contractor to adjust the grade of the inlet lid by extending the walls of the inlet. All work on the existing inlet shall be in compliance with MoDOT Standard Specifications and Standard Plans.
- 2.0 Basis of Payment.** Payment for the above described work will be for a per square yard contract price and shall be considered completely covered by the pay item 608-99.25" Concrete Sidewalk and Ramps".

Y. STORM SEWER PIPE AND END SECTIONS

- 1.0 Description.** This provision covers the pipe and end section material which will be accepted on this project. All storm sewer pipe shall be HDPE pipe which complies with MODOT specifications. All end sections shall be galvanized CMP end sections which comply with MoDOT specifications.
- 2.0 Basis of Payment.** Payment for the above described work will be for the contract price and shall be considered completely covered by the pay items 729-99.03" 15 in CMP End Section"

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per each and 729-99.02 "15 in HDPE Pipe" per linear foot. The cost for all excavation required shall be included in the price for the storm sewer pipe.

Z. CONCRETE WASHOUT

1.0 Description. This provision covers the contractor's requirement to provide a concrete washout location(s) dedicated for this project. The contractor shall provide propose the location and control devices to be used to the city a minimum of two weeks prior to any intended use of the washout location for review and approval.

2.0 Basis of Payment. Payment for the above described work will be considered completely covered by the various bid items on the project.

AA. ADD ALTERNATE SECTIONS

1.0 Description. This contract requires bidders to bid on additional contract work that will be considered for award. The award of this project does not guarantee work for all add alternate sections.

Routes	Proposal Section Description
Bus 63 & Hwy 24 – sidewalk construction	Base A
Bus 63 – waterline relocation and associated work (sheets 54-60)	Base B
Bus 63 & Hwy 24 – median replacement	Add Alternate A
Hwy 24 southbound ramps – ped signals	Add Alternate B
Bus 63 & Hwy 24 – fiber reinforcing	Add Alternate C
Bus 63 & Hwy 24 – longitudinal steel	Add Alternate D

Note: See plans for a breakdown of all quantities for each add alternate section.

2.0 Consideration of Bids. The contractor shall submit a bid for each add alternate section. The Commission reserves the right to award, to the lowest responsible bidder, the combination of base plus add alternate sections that will allow the most work to be completed within the Commission's budget of *\$(Insert Program Dollar Amount)*. If the Commission chooses to exercise this right, the award of add alternate sections will be selected in accordance with the following priorities:

1. Base A + Base B + Add Alt A + Add Alt B + Add Alt C + Add Alt D
2. Base A + Base B + Add Alt A + Add Alt B + Add Alt C
3. Base A + Base B + Add Alt A + Add Alt B
4. Base A + Base B + Add Alt A
5. Base A + Base B

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2.1 The City reserves the right to award the combination of highest priority add alternate sections over the City's budget as long as the low bidder does not change.

2.2 The City's budget is the basis for award of add alternates but not the basis for award of the base section. The base section of the contract will be awarded or rejected in accordance with Sec 100.

2.3 The awarded bidder will be notified of the City's selection of the combination of add alternate sections to be awarded.

3.0 Bid Bond Requirements. The contractor shall be required to obtain a bid bond for 5% of the total bid amount for the base bid and all add alternates. This bid bond will be considered applicable to the proposed work for any option.

4.0 DBE Goal. The DBE contract goal percentage applies to all work awarded. The bidder shall meet the DBE Goal in the base section and any add alternates awarded. The award of any add alternates will be determined by the City's budget as described in Section 2.0.

5.0 Basis of Payment. The accepted quantities of the chosen combination of base plus add alternate sections will be paid for by the contract unit bid price for item numbers found within the schedule of items for each section.

BB. FIBER REINFORCED CONCRETE SIDEWALK

1.0 Description. This work shall consist of producing and placing macro-synthetic fiber reinforced (MSFR) concrete as shown on the plans or as directed by the engineer. If Add Alternate C is selected, all sidewalk and sidewalk ramps constructed in the project shall include MSFR as described in this specification. The MSFR pavement shall be in accordance with Sec 502, except as modified herein.

2.0 Materials. All materials shall be in accordance with Division 1000, Material Details, unless otherwise noted.

2.1 Macro-Synthetic Fiber. The macro-synthetic fibers shall be manufactured from virgin polyolefins (polypropylene and polyethylene) and shall comply to ASTM D7508/D7508M with the following additional criteria:

Property	Minimum Criteria
Fiber Length, in., minimum	1.50 in
Aspect Ratio (length divided by equivalent diameter)	45 - 150
Relative Tensile Strength, ksi., minimum	50 ksi

2.2 Macro-Synthetic Fiber Reinforced Concrete. The MSFR concrete shall be a Type III Synthetic Fiber-Reinforced concrete mixture in accordance with ASTM C 1116.4.1.3.

2.3 Submittals. The fiber manufacturer shall submit ASTM C1609/C1609M test results from a 4000/600 psi (28-Day Compressive Strength / Flexural Strength, respectively) mix

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design for MSFR concrete with a minimum equivalent flexural strength ratio ($R_{T,150}^D$) of 30 percent at the recommend fiber dosage rate. The $R_{T,150}^D$ results along with the fiber dosage rate shall be submitted with the mix design in accordance with Sec 501. Under no circumstances shall the fiber dosage rate be less than 3 pounds per cubic yard or greater than 20 pounds per cubic yard.

3.0 Construction. Fiber material shall be delivered, stored, handled, and mixed in accordance with manufacturer's guidelines. The fiber shall be added at the concrete plant at the addition rate specified in the mix design. The fiber manufacture shall be on site during the first day's production and shall specify the mixing time required to ensure adequate dispersion of the fibers and achieve a homogenous and workable mixture. All other requirements shall be in accordance with Sec 502.

3.1 Finishing. The concrete shall be finished in accordance with MoDOT standard specifications. Any exposed fibers shall be burned as directed by the engineer once the concrete cures at no direct pay.

4.0 Basis of Payment. Payment for the above described work will be for a per square yard contract price and shall be considered completely covered by the pay item 502-99.11 "Misc. Macro-Synthetic Fiber Reinforced Concrete)". No measurement will be made for this item, the pay quantity for bid item 608-99.25 (Concrete Sidewalk and Ramps) will be used as the pay amount for the longitudinal reinforcing steel per square yard.

CC. LONGITUDINAL STEEL REINFORCED CONCRETE SIDEWALK

1.0 Description. This work shall be done in accordance with Section 608 and as described below.

1.1 Construction. If Add Alternate D is selected, 3 #4 (1/2") rebar shall be placed longitudinally in the sidewalk. The bars shall be approximately spaced 1-foot from each edge and in the centerline of the sidewalk. Care shall be taken to maintain clearance from ground contact or from exposing the reinforcement on the surface of the concrete.

1.2 Bar Overlap. Areas where bars are exposed in any manner will be required to be removed and re-constructed at no additional pay. At areas which are removed and replaced or connections between separate pours, the reinforcing steel shall be lap jointed a minimum of 18" or drilled and epoxied into the adjacent sidewalk a minimum of 12".

2.0 Basis of Payment. Payment for the above described work will be for a per square yard contract price and shall be considered completely covered by the pay item 608-99.45 "Longitudinal Reinforcement". No measurement will be made for this item, the pay quantity for bid item 608-99.25 (Concrete Sidewalk and Ramps) will be used as the pay amount for the longitudinal reinforcing steel per square yard.

DD. DECORATIVE CONCRETE MEDIAN PAVEMENT

1.0 Description. This provision covers the work noted in the plans for reconstruction of the existing median pavement at the intersection of Highway 24 and Business 63 (Morley Street). The existing curbs shall be left in place or the existing median pavement shall be saw cut 6-inches from the face of curb/gutter line to leave a curb in place. The area of pavement behind the curb line shall be removed and replaced with concrete median pavement. The pavement shall be tinted throughout, not a surface stain applied after the concrete is placed. The

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surface of the pavement shall be stamped with a pattern approved by the City prior to use. Any depth left below the 3 inch pay limit for the decorative concrete median payment shall be filled with additional concrete or aggregate as approved by the engineer at no additional cost.

- 2.0 Basis of Payment.** Payment for the above described work will be for a per square yard contract price and shall be considered completely covered by the pay item 603-99.01 "3 inch Decorative Concrete Median Pavement".

EE. LPA BUY AMERICA REQUIREMENTS

- 1.0 Buy America Requirement.** On all federal-aid projects, the contractor's attention is directed to Title 23 CFR 635.410 Buy America Requirements. Where steel or iron products are to be permanently incorporated into the contract work, steel and iron material shall be manufactured in the USA except for "minor usage" as described herein. Furthermore, any coating process of the steel or iron shall be performed in the USA. The use of pig iron and processed, pelletized and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.
- 2.0** Any sources other than the USA as defined will be considered foreign. The required domestic manufacturing process shall include formation of ingots and any subsequent process. Coatings shall include any surface finish that protects or adds value to the product.
- 3.0** "Minor usage" of foreign steel, iron or coating processes will be permitted, provided the cost of such products does not exceed 1/10 of one percent of the total contract cost or \$2,500.00, whichever is greater. If foreign steel, iron or coating processes are used, invoices to document the cost of the foreign portion, as delivered to the project, shall be provided and the engineer's written approval obtained prior to placing the material in any work.
- 4.0** Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000.
- 5.0** Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies the following. That all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.
- 6.0** Items designated as Category 2 will include all other steel or iron products not in Category 1 and permanently incorporated in the project. Category 2 items shall consist of, but not be limited to items such as fencing, guardrail, signing, lighting and signal supports. The prime contractor is required to submit a material of origin form certification prior to incorporation into the project from the fabricator for each item that the product is

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JOB SPECIAL PROVISIONS

- domestic. The Certificate of Materials Origin form ([link to certificate form](#)) from the fabricator must show all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements and be signed by a fabricator representative. The Engineer reserves the right to request additional information and documentation to verify that all Buy America requirements have been satisfied. These documents shall be submitted upon request by the Engineer and retained for a period of 3 years after the last reimbursement of the material.
- 7.0** Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read "I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage". The certification shall be signed by an authorized representative of the prime contractor.
- 8.0** When permitted in the contract, alternate bids may be submitted for foreign steel and iron products. The award of the contract when alternate bids are permitted will be based on the lowest total bid of the contract based on furnishing domestic steel or iron products or 125 percent of the lowest total bid based on furnishing foreign steel or iron products. If foreign steel or iron products are awarded the contract, domestic steel or iron products may be used; however, payment will be at the contract unit price for foreign steel or iron products.

SECTION 01120
MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED AND DEFINITIONS

- A. The term "all costs", as used in the payment descriptions within Part 2, is defined as full compensation for all equipment, labor, material and incidental costs.
- B. The Work of this Contract (and subsequent payment) consists of furnishing all equipment, labor, material and incidentals, as well as performing all construction, installation and testing of all improvements, modifications and additions, all as shown on the drawings and detailed in the specifications.
- C. All work shown on the drawings or detailed in the specifications and not specifically set forth in the Itemized Proposal (Bid Form) as a pay item shall be considered a subsidiary obligation of the contractor, and all costs in connection therewith shall be included in the prices named in the proposal.
- D. Progress measurements (for progress payments on the pay applications) shall be determined by the amount of work performed during a given period.
 - 1. Payments for items with a lump sum unit shall be based on one of the three options below, with the payment method being agreed upon by all parties.
 - i. Field measured to determine the actual value.
 - ii. An estimated value of the work performed.
 - iii. Pro-rated over the life of the contract, based off contract time or based off the total value of work performed percentage. Example: Construction Field Office.
 - 2. Payments for items with a unit that may be measured to the tenth, may be paid to the tenth. However, rounding will only occur during the final pay application and shall not be applied to any progress measurements.
- E. Final measurement will not be made unless changes to the bid quantity are authorized. Final measurement is to be applied to the final pay application. Items not requiring final measurement will pay the full amount on the Bid Form, unless appreciable errors are found in the bid quantity, or changes are authorized by the Owner.
- F. Rounding shall be performed during the final pay application, and rounding shall be to the nearest whole number, with 0 thru 4 being rounded down, and 5 thru 9 being rounded up.

PART 2 BID ITEMS

2.01 MOBILIZATION

- A. Partial payment for the mobilization pay item will be based on the contract lump sum bid price for mobilization and will be made in accordance with the following Payment Schedule:
 - 1. Twenty-five percent, when five percent or more of the original contract amount is earned.
 - 2. Fifty percent, when ten percent or more of the original contract amount is earned.
 - 3. Seventy-five percent, when twenty-five percent or more of the original contract amount is earned.
 - 4. One-hundred percent, when fifty percent or more of the original contract amount is earned.

2.02 SERVICE LINE (COPPER or HDPE/PEX)

- A. Final measurement will not be made unless changes to the bid quantity are authorized. Measurement shall be made per linear foot installed.
- B. Payment for service line shall be based on the unit price per linear foot as set forth in the Bid Form, per type or size of pipe. Said price shall include all costs necessary to complete the work including, but not limited to, pipe and related materials, all trenching and excavation (earth, rock, shale), bedding, placing, flared pack joint connections to existing service line, potholing for existing service

location, sealing, backfilling, compacting, chlorination, flushing, testing, disinfection, clean-up, grading and removal of excess or unsuitable material, as required by the drawings and specifications.

1. No separate measurement and payment will be made for connection of the new service line to the existing service line outside the customer house or business or at the water meter pit assembly. This shall be included in the service line bid price.

2.03 FITTINGS (ALL SIZES)

- A. Measurement and payment will not be made for fittings. Notes on drawings are for reference. Fittings are considered subsidiary to the water main whether horizontal or vertical.

2.04 WATER METER PIT ASSEMBLY

- A. Measurement shall be for each water meter pit assembly installed.
- B. Payment for water meter assembly shall be based on the unit price per each as set forth in the Bid Form. Said price shall include all costs necessary to complete the work including, but not limited to, excavation (earth, rock, shale), bedding, placing, backfilling, compaction, yoke, meter pit, riser, lid, insulation, piping, flared pack joints connection to existing service line outside, blocking, gravel and as detailed by the drawings and specifications.
 1. The water meter shall be provided by the City either new or from existing meter pits. No separate measurement and payment will be made for the Contractor to move and reinstall or install new water meters. This shall be included in the new water meter pit assembly bid price.
 2. No separate measurement and payment will be made for abandonment or removal of the old water meter pit. This shall be included in the new water meter pit assembly bid price.

2.05 BORED CROSSING (DIRECTIONAL, ROAD AND DRIVEWAY CROSSINGS)

- A. Measurement shall be made in the horizontal plane per linear foot of line work bored. Final measurement will not be made unless changes to the bid quantity are authorized and are different from the quantities in the Bid Form by more or less than 20% per each crossing.
- B. Payment for bored crossing shall be based on the unit price per each as set forth in the Bid Form. Said price shall include all costs necessary to complete the work including, but not limited to, permits, insurance and bonding, casing pipe, casing spacers, excavation (earth, rock, shale), backfilling and compaction of bore pits, transitional couplers, dewatering, and drilling fluids.
- C. Type of bore (directional or bore and jack) shall be as stated in the Bid Form/Drawing or as required by permitting agency, if not stated or otherwise required shall be at the discretion of the contractor.
- D. Size and type of encasement (HDPE) shall be as stated in the Bid Form/Drawing.
 1. Bored crossing payment does not include the carrier pipe. Additional measurement and payment for carrier pipe will be at the unit price and per size, class, and type in the Bid Form for water main.

2.06 SERVICE LINE TO MAINLINE CONNECTION

- A. Measurement shall be for each service line connection to a mainline greater than 4-inch in diameter.
- B. Payment for service line connections shall be based on the unit price per each as set forth in the Bid Form, regardless of type or size of water main or service line. Said price shall include all costs necessary to complete the work including, but not limited to connection to mainline, saddle and tap, corp stop, pack joints, couplers and reducers, transferring water service from old water main to new main, all property owner notifications, all trenching and excavation (earth, rock, shale), backfilling, compacting as required by the drawings and specifications.

END OF SECTION

SECTION 01510

TRACER WIRE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Basic requirements for furnishing and installing tracer wire.

1.02 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.03 WORK SCOPE

- A. The work covered by the specifications shall include furnishing all labor, material, equipment, and services to install tracer wire and pipeline markers as a complete system.

PART 2 PRODUCTS

2.01 TRACER WIRE

- A. Direct Bury/Open Cut: Tracer wire shall be #12 AWG high strength copper clad steel conductor (HS-CCS) insulated with a 30 mil HDPE insulation and rated for direct burial use at 30 volts, 380# average tensile break load, by Copperhead, Kris-Tech Wire, Paige Electric, or RWU90, twelve gauge (12AWG), single strand, insulated copper wire with 60 mil cross-linked polyethylene (XLPE) insulation specifically manufactured for direct burial applications with 380# average break load or approved equal.
- B. Directional Drilling, Stream or Highway Crossings: Tracer wire shall be #12 AWG high strength copper clad steel conductor (EHS-CCS) insulated with a 45 mil HDPE insulation and rated for direct burial use at 30 volts, tensile break load 1150# minimum, Copperhead, Paige Electric, or approved equal.
- C. Insulation color of tracer wire shall meet the APWA color code standard for identification of buried utilities.
- D. All connections shall be made using a Wing Nut Model 454 wire connector and shall be made waterproof using an approved wire closure.
- E. Tracer Wire Risers shall be 3-inch ASTM class 200 PVC pipe approximately 10-feet in length and extending 3-4 feet above grade with a PVC cap.

PART 3 EXECUTION

3.01 TRACER WIRE INSTALLATION

- A. Install tracer wire alongside and at the same depth as the pipe.
- B. Tracer wire shall extend up inside mainline valve boxes with approximately 12 inches of excess wire from each side.

- C. At locations where no valve boxes are otherwise required, the Contractor shall install Tracer Wire Risers extending 3-4 feet above grade. Risers shall be installed in the ROW line, or fence lines offset as necessary from the mainline pipe. Tracer wire shall be extended to the offset Tracer Wire riser box.
- D. Tracer wire shall be brought to the surface at road and stream crossings, significant changes in alignment, and at a maximum spacing of every 400 feet of pipeline.
- E. Coordination: Owner to test conductivity of tracer wire before acceptance of work.

END OF SECTION

SECTION 02440
BORING OF PIPE

PART 1 GENERAL

1.01 DESCRIPTION

- A. This section includes installation of high-density polyethylene (HDPE), fusible polyvinylchloride (PVC), restrained joint PVC, restrained ductile iron, and welded steel pipe by directional boring or horizontal boring and jacking.

1.02 SUBMITTALS

- A. Submit drawings showing proposed method of construction including location of receiving and sending pits. Submit proposed sequence of construction.
- B. Submit proposed pressure testing location for pipe before directional boring.
- C. Submit an accurate record of the crossing location in plan view and profile depth. Record all changes on the contract drawings as work progresses.

PART 2 PRODUCTS

2.01 CASING PIPE

- A. Casing pipe 12-inch diameter and smaller shall be SDR 11 HDPE water pipe as specified in Section 15060 Pipe and Pipe Fittings.
- B. Join HDPE casing sections per HDPE Spec in the field.

2.02 CASING SEALS

- A. Casing seals shall be 1/8-inch-thick synthetic rubber, designed to fit snugly around pipe and casing. Casing seals shall be one piece with no field seams. Bands and hardware for attachment to pipe and casing outside diameter shall be stainless steel. Products: PSI, APS or approved equal.

2.03 DRILLING FLUID

- A. Drilling fluid shall be bentonite and water or a combination of bentonite and polymers and water formulated to move cuttings to the surface and lubricate the pipe during pullback.

2.04 DRILL PIPE

- A. Drill pipe shall be steel with sufficient strength to withstand the maximum rated pullback and pushing load of the drilling equipment. Drill pipe joints shall be flush and capable of transmitting maximum rated torque of the drilling equipment.

2.05 DOWNHOLE TOOLS

- A. Cutting heads, back-reamers, and hole-openers shall be suitable for the soil and rock conditions anticipated by the Contractor.

- B. Grips, pulling heads, and swivels shall be compatible with the pipe material. Design to transmit without distortion the maximum rated pullback force of the equipment used. Grips, pulling heads, and swivels shall be specifically engineered for directional drilling applications.
- C. Tracking equipment shall be capable of determining the location of the cutting head at depth within \pm one foot.

PART 3 EXECUTION

3.01 DIRECTIONAL BORING

- A. The pipe shall follow the line and grade shown in the drawings and shall exit the ground within one foot of the design location.
- B. Construct a pilot bore at the centerline alignment and grade as shown in the drawings. Circulate drilling fluids to maintain an open bore at all times. If the path of the pilot bore is successfully completed, then proceed with the reaming procedure, and pull the pipe from the receiving location (exit pit) to the sending location (entry pit). If the pilot bore could not be successfully completed, then do not proceed with the reaming procedure until the Owner, Owner's Representative, Engineer, and Contractor have met to discuss alternative options for the pipeline crossing. The pilot bore and reaming procedure shall be controlled by a magnetic survey system including accelerometers, magnetometers, connector wire, and survey probe. The guidance system shall be capable of measuring depth, location, pitch, and roll of the bore and shall be able to indicate depth up to 30 feet.
- C. Upon completing the pilot bore, pull the drill pipe back through the bore using an oversized backreamer larger than the proposed pipe to be pulled back through the bore hole. Repeat backreaming as necessary to enlarge the bore to provide sufficient clearance for the pipe. Attach pulling head and swivel and pull pipe through with closed end. Pull pipe back in one continuous pull to avoid closure of the bore hole.
- D. Install the pipe in a manner that does not cause upheaval, settlement, cracking, movement, or distortion of the surface material including bridge walls, rock retaining walls, and roadways.
- E. Locate the entrance and exit pits to be within the Owner's right-of-way.
- F. Where the staging area permits, join entire length of pipe to be pulled through bore prior to commencement of pullback operation. If not feasible because of the length of the bore and the size of the staging area, each pipe section may be fused or welded to the previous section before the pull back. Support weight of joined pipe suspended on rollers to minimize pulling forces. Ballast the installation if required by the pipe manufacturer or engineer.

3.02 BORING AND JACKING

- A. Fit the boring machine to the leading section of the pipe to be flush with the outer surface of the pipe. Anchor the machine to prevent any wobble or alignment variation during the jacking operation.
- B. The maximum allowable overcut shall not be greater than 33% larger in radius than the outside diameter of the pipe. Completely pressure-fill the annular space created by the overcut with bentonite lubricant.
- C. Restrained joint carrier pipe shall extend a minimum of 10' beyond ends of casing pipe.
- D. Backfill at the ends of the casing pipe shall be hand placed and shall be thoroughly compacted for a distance along the axis of the pipe at least three feet out from the end of the casing for the full width of the trench and to a height at least one foot above the pipe.

- E. Spoil removal from the face shall be by automatic hydraulically driven means. Design spoil conveyance to minimize damage to pipe interior.
- F. Use intermediate jacking stations when primary jacking forces will exceed specified acceptable bearing stresses on the pipe or when primary jacking forces will exceed the capacity of the primary jacks.
- G. Fit a sectional shield or steel jacking head to the leading section of the casing to extend around the outer surface of the upper two-thirds of the casing and project at least 18 inches beyond the driving end of the casing but do not protrude more than 1/2 inch outside of the outer casing surface. Anchor the head to prevent wobble or alignment variation during the jacking operation. To avoid causing a collapse of ground outside the casing, carry out excavation entirely within the jacking head and not in advance of the head.

3.03 PRE-BORE AND POST-BORE PRESSURE TESTING

- A. Prior to pulling pipe through the directional bore hole, the pipe shall be pressure tested in accordance with Section 400510. Perform pressure testing again after final installation of the pipe and before final acceptance by the Owner.
- B. At the Contractor's option, pipe need not be pressure tested before pulling the pipe through the bore hole. In such case, if the pipe does not pass the pressure test after installation, then remove the entire pipe from the bore hole, repair the pipe, and perform pressure testing prior to reinstalling the pipe and again after reinstallation.

3.04 SETTLEMENT

- A. Repair any damage resulting from surface settlement or heave of greater than 1.0 inch caused by shaft excavation, dewatering, or conduit installation at no additional cost to the Owner.

3.05 COORDINATION

- A. For bored pipe crossing under roadways, railroads, or other installations not within the jurisdiction of the Owner, the Contractor shall comply with regulations of said authority and shall be subject to approval or rejection by the authority.
- B. Provide barricades, temporary fencing, traffic control and other safety devices required by the agency responsible for the facility to be crossed.
- C. Contractor shall exercise caution during boring operations to protect existing utilities and roadbeds. Contractor responsible for obtaining "locates" and all damage resulting from construction operations.
- D. Bored installations for railroads shall be governed by the American Railway Engineering Association, Part 5, Section 5.2, "Specifications for Pipelines Conveying Non-Flammable Substances" in supplement to conditions stipulated by permit issued by the Railroad.
- E. The Contractor shall obtain permits for Railroads, Interstate and Highway crossing from MoDOT, the City, and County as in indicated in the Section Permits. Contractor shall post any bonds or cash deposits, obtain any additional insurance required, or provide other required assurances required by the governing authority of the facility being crossed. Contractor shall obtain permits and coordinate for crossings of utilities.
- F. If engineering plans for crossings do not reflect surveyed information, the restrained joint areas are not to be considered exact and represent the generalized location of the restrained joint pipe. The actual location, length, and size of the restrained joint area will be determined in the field by the Owner's Representative and may differ from that shown on the drawings.

- G. Provide long-body transition couplings and reducers as necessary to complete the connection to the adjoining pipe. The Contractor shall provide the required depth of cover over the pipe upon tying in the restrained joint pipe with the adjoining pipeline.

3.06 DEWATERING

- A. Provide and maintain means and devices to remove and dispose of all water entering the bore pit excavation, pipe, and jacking pit during the time the tunnel is being excavated, during the jacking of the pipe, and until the backfill at the jacking pits has been completed. These provisions shall apply during the noon hour as well as overnight. Dispose of the water in a manner to prevent damage to adjacent property. Do not drain trench water through the pipeline under construction.

3.07 LOCATION OF EXCAVATED MATERIAL

- A. Place excavated material only within the working area or within the areas shown in the drawings. Do not obstruct any roadways or streets. Conform to federal, state, and local codes governing the safe loading of trenches with excavated material. Dispose of excess material off site.

3.08 DRILLING FLUIDS

- A. Contain and dispose of the drilling mud in accordance with state and federal regulations and permit conditions. Install erosion and sedimentation control measures including straw bales to prevent drilling mud from inadvertently spilling out of the entrance/exit pit. Monitor drilling fluids at the surface to avoid excessive downhole pressures which may buckle the surface or the pipe during installation.

3.09 EXTERIOR GROUTING

- A. Immediately after completion of the boring and jacking operation, inject lean grout through grout connections in the pipeline in such a manner as to completely fill all voids outside the pipe resulting from the operation. Control grout pressure to avoid deformation of the pipe, avoid damaging or plugging of adjacent subdrains, and avoid movement of the surrounding ground. After completion of grouting, close the grout connections with plugs and repair the interior of the pipe.

END OF SECTION

SECTION 02450
UNDERGROUND CROSSINGS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work under this section consists of materials and installation of crossings utilized on the pipelines to be installed. The crossings are to be complete with all materials, excavation, backfill, drilling, boring, and casings as required to complete the crossings as specified herein or as detailed on the Drawings.

1.02 SUBMITTALS

- A. Submit manufacturer's data on casing pipe, carrier pipe, casing spacers, end seals, and other miscellaneous material required to complete the crossing.

PART 2 MATERIALS

2.01 HDPE CASING PIPE

- A. HDPE casing pipe shall comply with AWWA C901/906. Minimum pipe class and size shall be as noted on the Drawings.

PART 3 EXECUTION

3.01 CASED BORED UNDERGROUND CROSSINGS

- A. Cased underground crossings for pipelines which pass under State or Federal paved highways, or other designated roads or facilities as staked in the field by the Owner's Representative shall be encased with the type of encasement pipe necessary to meet the requirements of the Railroad, Highway Department, County, or other governing agencies. Material type and wall thickness shall be as shown on the Drawings.
- B. The pipeline and casing shall be installed by dry boring or the 'Directional Drilling' within the limits shown on the Drawings. Open trench excavation or casing installation may be utilized for areas outside the boring limits. Work within the R/W shall conform to the requirements of the applicable permit and shall be completed to the limits shown on the Drawings.
- C. Carrier pipe for encased and bored crossings shall be HDPE as specified in Section 15060.
- D. Rubber end seals shall be as shown on the Drawings.
- E. Compaction of backfill within these areas shall be in accordance with APWA requirements.

3.02 UNCASED BORED UNDERGROUND ROAD CROSSINGS

- A. Pipeline crossings of other roads may be designated by the Drawings or Owner's Representative as uncased bored road crossings.
- B. The pipeline shall be installed beneath the road bed by dry boring or the 'Directional Drilling' method within the limits shown on the drawings. Carrier pipe shall be provided in standard laying lengths. The Contractor shall make every attempt to eliminate installation of pipe joints beneath the limits of the road bed. If joints need to be installed beneath the road bed the Contractor shall review the installation with the Owner's Representative to determine the most desirable placing of those joints.
- C. Restrained joint pipe, is required for carrier pipe in uncased road crossings.
- D. Some pipelines crossing roadways, concrete or asphalt approaches or driveways, may not be shown on the Drawings or designated as road crossings and shall be installed as a portion of and subsidiary to pipeline installation. In such cases additional payment shall be made for removal and replacement of roadway or driveway surface.

3.03 SEWAGE SYSTEM CROSSINGS

- A. The following provisions shall pertain to crossings of sewage system crossings, septic tanks, lateral fields, waste stabilization ponds, sewer lines discharging to the ditch, or when other sources of pollution are encountered. These crossings and the cost of all materials and labor shall be subsidiary to pipeline installation.
1. All water main distribution and supply lines shall be installed at least 25 feet (horizontal distance) from any septic tank or waste stabilization pond.
 2. When it is necessary for a water line to cross a non-perforated sewer line such as a sewer drain, a sewer lateral, or a sewer draining to the road ditch, the water line shall be encased for 20 feet (horizontal distance) either side of the sewer line or point of discharge with solvent weld PVC pipe. Casing pipe size shall be the size used for Road Crossings as described in the detailed drawings. Center the waterline at the crossing, such that the waterline pipe joint is located at least 10 ft. horizontally from the crossing.
 3. When it is absolutely necessary for a water line to cross a perforated sewer line or pass through a drainfield, the water line shall be encased for the entire distance of the drainfield plus 25 feet on either side of the drainfield with solvent weld PVC pipe. Casing pipe size shall be the size used for Road Crossings as described in the detailed drawings. However, prior to making the proposed crossing, a written request asking for approval shall be submitted to the Missouri DNR.
 4. When it is necessary to install a water service line parallel to a sewer drain, a minimum horizontal distance of 10 feet shall be maintained.
 5. Maintain at least 18" vertical separation between the waterline and the crossing. In any event the vertical separation requirements and encasement shall be no less than the requirements of the Missouri DNR.

3.04 UTILITY CROSSINGS

- A. Utility crossings are not shown either expressed or implied on the drawings. Generalized locations of some utilities may be shown on the drawings. If shown, such locations were derived from the utility's general location maps and are not to be considered exact.
- B. The following items shall pertain to utility crossings encountered on the Project.
1. All utility crossings shall be made in accordance with the provisions of the utility permit, including compaction of backfill.
 2. If a utility crossing permit is not required, the crossing shall be made in accordance with the guidelines of the utility.
 3. Excavation and backfill shall comply with APWA requirements.
 4. Unless specifically denoted as a separate pay item and shown as such by a pay item note on the drawings, utility crossings shall be subsidiary to pipeline installation.
 5. Prior to crossing any utility, proper notification shall be provided to the utility as required by Missouri One-Call and in accordance with applicable laws, regulations, and ordinances.

END OF SECTION

SECTION 15060
PIPE AND PIPE FITTINGS

PART 1 GENERAL

1.01 DESCRIPTION

This section includes materials, installation, and testing of:

- A. PVC pipe.
- B. High-density polyethylene pipe and fittings.
- C. Ductile iron pipe fittings
- D. Fusible PVC

1.02 SUBMITTALS

- A. Submit shop drawings.
- B. Provide affidavit of compliance with applicable standard.
- C. Submit fully dimensioned cross-section of the bell and barrel of the pipe. Show the bell maximum outside diameter in the pressurized area and its minimum wall thickness at the same location.
- D. Submit manufacturer's literature of gray iron and ductile-iron fittings including dimensions, thickness, weight, coating, lining, and a statement of inspection and compliance with the acceptance tests of AWWA C110 or C153. Submit copy of report of pressure tests for qualifying the designs of all sizes and types of AWWA fittings that are being used in the project. The pressure test shall demonstrate that the minimum safety factor described in AWWA is met:
- E. Submit materials list for review. Submit manufacturer's recommended method of installing pipe, including methods for butt-fusing joints.
- F. For polyethylene pipe, manufacturer shall provide certification that stress regression testing has been performed on the specific product. Certification shall include a stress life curve per ASTM D2837.
- G. Provide certification that polyethylene material is listed by the Plastics Pipe Institute in PPI TR-4 with a 73°F hydrostatic design stress rating of 800 psi and a 140°F hydrostatic design stress rating of 400 psi. The PPI listing shall be in the name of the pipe manufacturer and shall be based on ASTM D2837 and PPI TR-3 testing and validation of samples of the pipe manufacturer's production pipe.
- H. Manufacturer's certification shall state that pipe was manufactured from one specific resin in compliance with these specifications. The certificate shall state the specific resin used, its source, and list its compliance to these specifications.
- I. Submit certified lab data to verify specified physical properties. Certify that tests are representative of pipe supplied for this project.
- J. Submit recommended locations of flanged joints, unions, shop-fabricated fittings, and connections to other pipe materials. Submit detailed drawings of fittings.
- K. Submit installation schedule.
- L. Submit qualification certificates for operators of heat fusion equipment.
- M. Submit certified copies of mill test reports for bolts and nuts, including coatings if specified. Provide recertification by an independent domestic testing laboratory for materials originating outside of the United States.

1.03 REFERENCES

- A. ANSI/ASTM D1784 - Rigid Polyvinyl Chloride (PVC) Compounds.
- B. ANSI/ASTM D2241 - Polyvinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series)
- C. ANSI/ASTM D2564 - Solvent Cements for Polyvinyl Chloride (PVC) Plastic Pipe and Fittings.
- D. ANSI/AWWA C110 - Ductile-Iron and Gray-Iron Fittings, 3 In. through 48 In. (75 mm through 1200 mm), for Water and Other Liquids.
- E. ANSI/AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
- F. ANSI/AWWA C153 - Ductile-Iron Pipe Compact Fittings, 3 In through 24 In. (76 mm through 610 mm) and 54 In. through 64 In. (1400 mm through 1600 mm), for Water Service.
- G. ANSI/AWWA C605 – Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.
- H. ANSI/AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 inch through 12 inch, for Water Transmission and Distribution.
- I. ANSI/AWWA C905 -- Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 inch through 48 inch, for Water Transmission and Distribution.
- J. ANSI/AWWA C906 – Polyethylene (PE) Pressure Pipe and Tubing, 4 inch through 63 inch for Water Distribution and Transmission.
- K. ANSI/AWWA C909 – Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 inch through 24 inch, for Water Distribution

PART 2 MATERIALS

2.01 PIPE AND TUBE

- A. PVC Plastic Pipe
 - 1. ANSI/ASTM D1784, Class 12454-A or 12454-B compound specifications.
 - 2. 2,000 psi design stress for water at 73.4 degrees F., designated as PVC 1120.
 - 3. Pipe shall bear the NSF seal of approval and shall conform to the Department of Commerce PS22-70 (SSDR-PR).
 - 4. Pipe shall have integral bell joints or shall be jointed with a double gasket coupling. Integral bell joints and double gasket couplings shall conform to ASTM D-3139. Double gasket couplings shall have a pipe stop in the center of the coupling. Each male pipe end shall be marked with a line to indicate the full seating depth of the pipe.
 - 5. Pipe shall be the pressure class and size as indicated on the drawings.
 - 6. Cast iron equivalent outside diameter.
- B. Factory Testing of PVC Pipe
 - 1. Test the quick-burst strength of pipe produced from each extrusion outlet at the beginning of production of each specific material, style, or size; thereafter, test one sample every 24 hours. Test a minimum of five specimens total. Test in accordance with ASTM D1599. For bell-end pipe, include the bell (with any reinforcement sleeve) as part of at least two specimens.
 - 2. Perform sustained pressure test in accordance with ASTM D2241 and D1599, except that test pressure may be 6% less than that given in Table 3 of ASTM D2241. If pipe has been tested previously, submit copy of test report

3. Perform burst pressure test in accordance with ASTM D2241 and D1599, except that test pressure may be 6% less than that given in Table 4 of ASTM D2241.
 4. Test the flattening resistance and impact resistance of pipe produced from each extrusion outlet at the beginning of production of each specific material or size; thereafter, test one sample every 24-hour shift or every 100 pieces. Test a minimum of three specimens total. Test for flattening resistance per ASTM D2241, Section 7.6. Test for impact resistance per ASTM D256, Method A. The minimum impact strength shall be 0.65 ft-lbs/inch.
 5. Test the pipe produced from each extrusion outlet by the acetone-immersion method at the beginning of production of each specific material or size; thereafter, test one sample every 24-hour shift or every 100 pieces. Test per ASTM D2152.
 6. When any product fails to meet a specified test requirement, perform additional tests to determine which products are acceptable of those produced from the same extruder or mold as of the last favorable test. Reject pipe that fails to meet any test requirement.
- C. Ductile Iron Pipe
1. Conforming to ANSI/AWWA C150 and C151.
 2. Cement-mortar lined, standard thickness, according to ANSI/AWWA C104. Lining thickness shall be the double thickness listed in ANSI/AWWA C104, Section 4.8. Cement for lining shall conform to ASTM C150, Type II.
 3. Joint Type: Push-on, mechanical, flanged, or restrained.
 4. Provide with fusion bonded epoxy coating for the interior and exterior surfaces. Minimum coating and lining thickness of 8 mils on the body. Epoxy coating to be applicable for wastewater uses.
 5. Gaskets: In accordance with ANSI/AWWA C111.
 6. Wrapping: Polyethylene (8 mil) encasement in accordance with AWWA C105, the entire length of pipe with an overlap of one foot at each joint, securing and sealing with industrial duct tape.
 7. Restrained joints shall utilize integral bell gland and restrain through wedge-action. US Pipe, "TR Flex"; American, "Flex-Ring"; or approved equal.
- D. Fusible Polyvinylchloride Pipe
1. A Fusible polyvinylchloride pipe for potable water shall conform to AWWA C900, AWWA C905, ASTM D2241 or ASTM D1785, as applicable. Testing shall be in accordance with the referenced AWWA standards for all pipe types. Pipe shall be marked verifying suitability for potable water service per NSF-61.
 2. Fusible polyvinylchloride pipe for non-potable water or pressurized wastewater not conforming to AWWA C905 dimensionality shall conform to AWWA C900, ASTM D2241 or ASTM D1785 for standard dimensionality, as applicable. Testing shall be in accordance with the referenced AWWA standards.
 3. Fusible polyvinylchloride pipe for non-potable water or pressurized wastewater conforming to AWWA C905 dimensionality shall conform to AWWA C905.
 4. Fusible polyvinyl chloride pipe for non-pressure storm or wastewater not conforming to AWWA C905 dimensionality shall conform to ASTM D3034, ASTM F679, AWWA C900, ASTM D2241, or ASTM D1785 for standard dimensions, as applicable. Testing shall be in accordance with the applicable standard used.

5. Fusible polyvinylchloride pipe for non-pressure storm or wastewater conforming to AWWA C905 dimensionality shall conform to AWWA C905.
 6. Fusible polyvinylchloride pipe shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe.
 7. Fusible polyvinylchloride pipe shall be manufactured in a standard 40' nominal length or custom lengths as specified.
 8. Fusible polyvinylchloride pipe shall be blue in color for potable water use. Fusible polyvinylchloride pipe shall be purple in color for reclaim, reuse, or other non-potable use. Fusible polyvinylchloride pipe shall be green in color for wastewater use. Fusible polyvinylchloride pipe shall be white in color for surface or storm water use.
 9. Pipe shall be marked as follows:
 - a. Nominal pipe size
 - b. PVC
 - c. Dimension Ratio, Standard Dimension Ratio or Schedule
 - d. AWWA pressure class, or standard pressure rating for non-AWWA pipe, as applicable
 - e. AWWA standard designation number, or pipe type for non-AWWA pipe, as applicable
 - f. Extrusion production-record code
 - g. Trademark or trade name
 - h. Cell Classification 12454 and/or PVC material code 1120 may also be included
 10. Pipe shall be homogeneous throughout and be free of visible cracks, holes, foreign material, blisters, or other visible deleterious faults.
- E. Polyethylene (PE) Pipe
1. Pipe 1/2 inch through 3 inches shall conform to AWWA C901 with the SDR and the pressure rating in accordance with Table 5.
 2. Pipe and fittings 4 inches through 20 inches shall conform to AWWA C906. The minimum wall thickness shall be in accordance with Table 5 for the SDR shown in the drawings. Produce the pipe to the dimensions and tolerances specified in ASTM F714
 3. Pipe shall have a nominal IPS outside diameter.
 4. The pipe shall be homogeneous throughout and free of visible cracks, holes, voids, foreign inclusions, or other deleterious defects and shall be identical in color, density, melt index, and other physical properties throughout.
 5. Pipe shall have a minimum hydrostatic design basis (HDB) of 1,600 psi, as determined in accordance with ASTM D2837.
 6. Pipe Material
 - a. Materials used for the manufacture of polyethylene pipe and fittings shall be very high molecular weight, high-density ethylene/hexene copolymer PE 3408 polyethylene resin meeting the physical property and pipe performance requirements listed below.

Property	Specification	Units	Min. Values
Material Designation	PPI/ASTM	—	PE3408 PE4710
Material Classification	ASTM D1248	---	III C 5 P34
Cell Classification	ASTM D3350	---	345434C
Hardness	ASTM D2240	Shore "D"	64
Compressive Strength (Yield)	ASTM D695	psi	1,600
Tensile Strength @ Yield (Type IV Spec.)	ASTM D638 (2"/min)	psi	3,200
Elongation @ Yield	ASTM D638	%, min.	8
Tensile Strength @ Break (Type IV Spec.)	ASTM D638	psi	3,500 psi
Elongation @ Break	ASTM D638	%, min.	600
Modulus of Elasticity	ASTM D638	psi	110,000
ESCR:			
(Cond A,B,C: Mold. Slab)	ASTM D1693	Fo, Hrs	Fo>5,000
(Compressed Ring [Pipe])	ASTM F1248	F50, Hrs	F50>1,000
Slow Crack Growth	Battelle Method	Days to Failure	Fo>32
Impact Strength (IZOD) (0.125-Inch Thick)	ASTM D256 (Method A)	in-lb/in Notch	42
Linear Thermal Expansion Coefficient	ASTM D696	in/in/°F	1.2 x 10 ⁻⁴
Thermal Conductivity	ASTM C177	BTU, in/ Ft ² /hrs/°F	2.7
Brittleness Temp.	ASTM D746	°F	<-180°F
Vicat Soft. Temp.	ASTM D1525	°F	257
NSF Listing	Standard 14	—	"Listed"
*Standard deviation 0.01.			

- b. The pipe shall be extruded from pre-compounded resin. In-plant blending of resin is unacceptable.
7. Fittings: Minimum radius of fabricated elbows shall be 2.5 diameters. The fittings shall be fully pressure rated by the manufacturer to provide a working pressure equal to the pipe for 50 years of service at 73°F with an included 2:1 safety factor. Manufacture the fittings from the same resin type, grade, and cell classification as the pipe. Fittings shall be homogeneous throughout and free from cracks, holes, foreign inclusions, voids, or other injurious defects. The fittings shall be as uniform as practicable in color, opacity, density and other physical properties. 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.
 8. Joints: Join sections of polyethylene pipe into continuous lengths on the jobsite above ground. The joining method shall be the butt fusion method performed in accordance with the pipe manufacturer's recommendations. The butt fusion equipment used in the joining procedures shall be capable of meeting all conditions recommended by the pipe manufacturer requirements of 500°F, alignment, and 150-psi interfacial fusion pressure.

9. Butt fusion joining shall result in a joint weld strength equal to or greater than the tensile strength of the pipe. Socket fusion shall not be used. Extrusion welding or hot gas welding of HDPE shall not be used. Flanges, unions, grooved-couplers, transition fittings, and some mechanical couplers may be used to connect HDPE pipe mechanically without butt fusion where shown in the drawings and at elbows and tees.

2.02 STANDARD PIPE FITTINGS

A. Ductile Iron Fittings:

1. Mechanical Joint: Conforming to ANSI/AWWA C110 or ANSI/AWWA C153.
2. Cement-mortar lined, standard thickness, according to ANSI/AWWA C104.
3. Provide with fusion bonded epoxy coating for the interior and exterior surfaces. Minimum coating and lining thickness of 8 mils on the body. Epoxy coating to be applicable for wastewater uses.
4. Gaskets: In accordance with ANSI/AWWA C111. Locking gaskets shall not be used to restrain piping.
5. Wrapping: Polyethylene (8 mil) encasement in accordance with AWWA C105, extend one foot beyond the fitting and securing and sealing the ends with industrial duct tape.

B. PVC Pipe Fittings:

1. Mechanical Joint: Conforming to ANSI/AWWA C110 or ANSI/AWWA C153, use on 4-inch and larger PVC pipe.
2. Gasket Joint: Conforming to ANSI/ASTM D2729, use on 1-1/2 inch through 3 inch
3. Solvent Weld Joint: conform to ANSI/ASTM D2564, use on 1 inch and smaller.
4. ASTM C564 rubber gasket joints (transition gaskets for PVC pipe).
5. ANSI/AWWA C111/A21.11-90, rubber gasket joints.

C. HDPE Fittings:

1. Provide butt fusion HDPE fittings when joining HDPE to HDPE pipe.
2. Provide MJ fused adapter with MJ restraint for all connections at valves, meter pits or transitioning to PVC.
3. Provide concrete thrust collar on either side of stream crossings at all transitions to PVC pipe.

D. Fusible PVC Fusion Joints

1. Unless otherwise specified, fusible polyvinylchloride pipe lengths shall be assembled in the field with butt-fused joints. The fusion technician shall follow the pipe supplier's guidelines for this procedure. All fusion joints shall be completed as described in this specification.

E. PVC Restraining Glands:

1. Utilized to restrain PVC pipe to mechanical joint fittings in conjunction with concrete thrust blocking.
2. Restrained joints shall be provided by restraining systems that incorporate a series of machined serrations on the inside diameter of a restraint ring to provide positive restraint. Restraining systems shall meet or exceed the requirements of UNI-B-13-94 and ASTM F1674 and the following:
 - a. Restraint devices for bell-and-spigot joints shall consist of a split restraint ring installed on the spigot, connected to a solid blocking ring seated behind the bell.

- b. Restraint devices for connection to ductile-iron mechanical joints shall consist of a split restraint ring installed behind the ductile-iron fitting follower gland and gasket and shall retain the full deflection capability of the joint.
- c. The split restraint ring shall be machined to match the outside diameter of the pipe, provide full 360-degree support around the barrel of the pipe, and shall incorporate a series of machined serrations for gripping the outside surface of the pipe. The serrations shall be uniform and extend the full circumference of the clamp. The ring shall also incorporate a positive means of avoiding applying excessive clamping force to the pipe.
- d. Materials used in the restraint device shall be ductile iron conforming to ASTM A536, Grade 60-42-12 or 65-45-12.
- e. T-bolts, studs, and connecting hardware shall be high-strength, low alloy material in accordance with AWWA C111.
- f. Design restraining devices to have a 2:1 safety factor based on the design strength of the pipe.
- g. Restraining devices shall be UNI-Flange Block Buster Series 1300 or 1500, EBAA Iron Series 1600, or approved equal.

2.03 FLEXIBLE PIPE COUPLINGS

- A. Couplings shall have middle rings made of steel conforming to ASTM A 36, A 53 (Type E or F), or A 512 having a minimum yield strength of 30,000 psi. Follower rings shall be steel (ASTM A 108, Grade 1018, or ASTM A 510, Grades 1018 or 1021). Minimum middle ring length shall be 5-inches for pipe sizes 3/4 inch through 4-1/2 inches; 7-inches for pipe sizes 5-inches through 24-inches; and 10-inches for pipe sizes larger than 24-inches. Longer couplings shall be provided adjacent to buried valves to allow valve removal.
- B. Coupling shall be Dresser Style 38, Smith-Blair 411A, or approved equal.
- C. Steel sleeve bolts shall have a minimum yield strength of 40,000 psi, an ultimate strength of 60,000 psi, and shall conform to AWWA C111.
- D. Steel follower rings shall be cast, forged, or hot rolled in one piece. Do not use rings fabricated from two or more shapes.
- E. Flanged coupling adapters shall be steel: Dresser Style 128, Smith-Blair 913A, or approved equal. Flange ends shall conform to ANSI B16.1, Class 125.
- F. Transition couplings for connecting different pipes having different outside diameters shall be steel: Dresser Style 62 or 162, Smith-Blair 413A or 415A, or approved equal.
- G. Insulating couplings shall be Steel: Dresser Style 39, Smith-Blair, or approved equal.
- H. Combination transition and insulating couplings shall be steel: Dresser Style 39-162, Smith Blair, or approved equal.
- I. Joint Harness
 - 1. Joint harness for flexible couplings shall be as shown on the drawings. Bolt or stud material shall conform to ASTM A 193, Grade B7. Nuts shall conform to ASTM A 194, Grade 2H. Joint harness for ductile iron pipe shall be as shown on drawings. Retainer gland shall be ductile iron in accordance with ASTM A 536. Retainer ring used for welding to pipe to restrain retainer gland shall be steel, ASTM A36.
 - 2. Provide washer for each nut. Washer material shall be the same as the nuts. Minimum washer thickness shall be 1/8 inch.

- J. Gaskets for flexible pipe couplings shall be made of Buna-N or nitrile material.

2.04 GROOVED-END COUPLINGS

- A. Couplings shall conform to AWWA C606.
- B. Grooved-end pipe couplings shall be malleable iron, ASTM A 47 (Grade 32510), or ductile iron, ASTM A 536 (Grade 65-45-12). Gaskets shall be halogenated butyl rubber and shall conform to ASTM D 2000.
- C. Bolts in exposed service shall conform to ASTM A 183, 110,000-psi tensile strength. Bolts in buried or submerged service shall be Type 304 Stainless Steel ASTM A 193, Grade B8, Class 2.
- D. Couplings for pipe 36-inches and smaller shall be rigid type except where flexible radius couplings are noted on drawings. Couplings shall be Victaulic Style 31 or 44 (DIP), Style 07 or 77 (CMST) or approved equal.
- E. Grooved-end adapter flanges for pipe having an operating pressure of 150 psi and less shall be Victaulic Style 341 (DIP), Style 741 (CMST), or equal. Flange dimensions shall conform to ANSI B16.1, Class 125.

2.05 GASKETS

- A. Gaskets for 125 lb. flanges, except PVC pipe, shall be full face, 1/8-inch thick, cloth-inserted rubber with a Shore "A" hardness of 75 to 85. Gaskets shall be suitable for a pressure of 200 psi at a temperature of 180°F. Products: John Crane Co. Style 777, Garlock Style 3000, or approved equal.
- B. Gaskets for 250 lb. flanges shall be 1/16 inch thick, full face or ring. Gaskets shall be non-asbestos, wire mesh reinforced: John Crane Style 2160, Garlock Style 3000, or approved equal.
- C. Gaskets for PVC flanged joints shall be full faced, 1/8-inch thick, made of ethylene propylene diene monomer (EPDM) rubber. When the mating flange has a raised face, provide a flat ring gasket filler between the PVC flange gasket and the adjacent flange.
- D. Gaskets for push-on and mechanical joint fittings shall be in compliance with AWWA C111.

2.06 MODULAR ANNULAR SEALING DEVICES

- A. Modular annular sealing devices shall be of the modular mechanical type, utilizing interlocking synthetic rubber links shaped to continuously fill the annular space between the pipe sleeve and the passing pipe. Assemble links with Type 316 stainless-steel bolts to form a continuous rubber belt around the pipe, with a pressure plate under each bolthead and nut. Devices shall be Link-Seal or approved equal.
- B. The size of the wall sleeve needed to accommodate the passing pipe shall be as recommended by the modular annular seal manufacturer.
- C. Wall sleeves for modular annular sealing devices shall be galvanized in accordance with ASTM A 123.

2.07 TAPPING SLEEVES

- A. Tapping sleeves shall comply with Manufacturers Standard Society and AWWA C223.
- B. The minimum working pressure rating shall be 150 psig. The height from the flange surface to the pipe centerline shall comply with MSS SP-111. Recess dimensions are per MSS SP-60.
- C. Tapping sleeves shall include the appropriate sized gate valve to isolate the flow of water.
- D. Top Shell: The top shell shall be 18-8 Type 304 stainless steel, minimum 12 gauge thickness. Bottom Shell: The bottom shell shall be 18-8 Type 304 stainless steel, minimum 14 gauge thickness.
- E. Flange: The flange shall be 18-8 Type 304 stainless steel and shall have a 3/4-inch NPT test port
- F. Gasket: The tapping sleeve shall have a full circumferential gasket made of synthetic rubber.
- G. Manufacturer: Mueller, Ford, Cascade, Smith-Blair or approved equal.

2.08 ACCESSORIES

- A. Polyethylene covering for ductile iron pipe
 1. Encase pipe, fittings, valves, and other appurtenances with 8 mil polyethylene film, conform to ANSI/AWWA C105, Class C (Black). Wrap pipe, valves, fittings, and couplings per ANSI/AWWA C105 installation standards.
 2. Adhesive tape shall be approximately 2 inches wide, plastic backed, and capable of bonding securely to metal surfaces and/or polyethylene material. Polyken No. 900, Scotchrap No. 50, or approved equal.
 3. Minimize exposure of polyethylene film to sunlight.
- B. Provide elastomeric seal joints conforming to ASTM D3139. Elastomeric gaskets shall comply with ASTM F477.
- C. Pipe Saddles: "Ford" Style S71 for 1-1/2" through 12", Mueller, or approved equal.
- D. Saddle Stops: "Ford" Brass Saddle Stops, AWWA Tap, or approved equal.
- E. Pipe Couplings: "Dresser" Style 40 (Long Coupling), Smith-Blair, or approved equal.
- F. Copper to Polyethylene (PE) Pipe Transition Couplings: "Ford" No. C46-44, Mueller, or approved equal.
- G. Tubing Couplings: "Ford" Pack joint couplings, Mueller, or approved equal.

2.09 PIPE SAMPLING

- A. The Owner may obtain samples of pipe to be utilized for this work, excluding restrained joint PVC pipe, at the time of delivery to the jobsite. Samples obtained may be used for impact testing as well as other applicable tests. Pipe samples may be taken from each production length provided. The Contractor shall inform the Owner's Representative at least 48 hours in advance of the time and place of pipe delivery so that the Owner's Representative can schedule obtaining the necessary samples. The Contractor shall be responsible for providing the necessary assistance in obtaining the samples and shall be responsible for rebeveling the pipe from which samples are taken.

PART 3 EXECUTION

3.01 DELIVERY AND TEMPORARY STORAGE OF PIPE

- A. Ship, store, and place pipe at the installation site, supporting the pipe uniformly. Avoid scratching the pipe surface. Do not stack higher than 4 feet or with weight on bells. Cover to protect from sunlight.
- B. Do not install pipe that is gouged or scratched forming a clear depression.

3.02 VERIFICATION OF MEASUREMENTS

- A. Before installation, verify measurements at site, including:
 1. Actual location of connections to existing waterlines and service lines.
 2. Type of joints on existing lines at point of connection.
 3. Outside diameter of existing pipe.
- B. Make necessary field measurements to determine accurately pipe laying lengths to permit installation without forcing or springing.

3.03 SEPARATION OF WATER MAINS AND SEWERS

- A. Horizontal distance shall be no less than 10 feet.

- B. Vertical separation distance for water pipelines crossing sewer lines is 2 feet. If vertical separation is less than 2 feet, the sewer line shall be encased in concrete for a distance of 10 feet on each side of the water line. The minimum thickness of the concrete is 6 inches.

3.04 SEPARATION OF WATER MAINS AND OTHER POLLUTION SOURCES

- A. Pertains to individual or industrial septic tanks, absorption fields, waste stabilization ponds, wastewater lines discharging into roadside ditches, feedlots or other pollution sources.
- B. Provide 25 feet horizontal separation.
- C. Water lines shall not be constructed through septic tank tile absorption fields or feedlots.

3.05 DUCTILE IRON AND PVC BURIED PIPE INSTALLATION

- A. Install in accordance with ANSI/AWWA C600 (Ductile Iron) and ANSI/AWWA C605 (PVC), manufacturer's instructions, and as indicated on the Drawings.
- B. Close securely open ends of pipe and fittings during progression of Work to prevent entrance of trench water, earth, animals, or other foreign matter.
- C. Assemble pipe in conformance with manufacturer's recommendations.
 1. Handle pipe in a manner to avoid any damage to the pipe. Do not drop or dump pipe into trenches under any circumstances.
 2. Joint deflections shall not exceed the manufacturer's recommended maximum allowable deflections.
 3. Grade the bottom of the trench by hand. Remove hard spots that would prevent a uniform thickness of bedding. The trench bottom shall form a continuous and uniform bearing and support for the pipe at every point between bell holes, except that the grade may be disturbed for the removal of lifting tackle.
 4. Pipe installed on slopes steeper than 10% shall be laid in the uphill direction.
 5. At the location of each joint, dig bell (joint) holes of sufficient dimensions in the bottom of the trench and at the sides to permit visual inspection of the entire joint.
- D. Install pipe cap during any time pipe is left unattended.
- E. Prevent water, soil, and other foreign material from entering the pipe during laying operations.
- F. Soil, vegetation and any other material that has collected in any pipe section shall be removed by swabbing prior to installation.
- G. Assembly of Pipe Joint
 1. The spigot and bell or bell coupling shall be dirt free and slide together without displacing the rubber ring. Lay the pipe section with the bell coupling facing the direction of laying.
 2. Insert the rubber ring into the groove in the bell in the trench just before joining the pipes. First clean the groove. Observe the correct direction of the shaped ring. Feel that the ring is completely seated.
 3. Lubricate the spigot over the taper and up to the full insertion mark with the lubricant supplied by the pipe manufacturer. If the lubricated pipe end touches dirt, clean the pipe end and reapply lubricant.
 4. Insert the spigot into the bell and force it slowly into position.
 5. Check that the rubber ring has not left the groove during assembly by passing a feeler gauge around the completed joint.

- H. Wrap buried cast-iron fittings with polyethylene.
- I. Tighten mechanical joint bolts to the torque recommended by the manufacturer with a torque wrench. When tightening bolts, it is essential that the gland be brought up toward the flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket.
- J. Provide thrust blocks or restrained joints at all fittings in pipe having push-on or mechanical joints. Concrete thrust and anchor blocks shall be placed between the undisturbed ground and the fittings to be anchored. All concrete supports shall be allowed to cure for at least five days prior to filling the supported section of pipeline.
- K. The Contractor shall make arrangements with the pipe manufacturer to have a factory representative, skilled in the installation of the specified pipe to be present for a minimum of one day at the starting of the laying of the pipe. A pipe supply house representative will not be considered as being a factory representative. Following the visit the factory representative shall provide a letter regarding the site visit and the Contractor's procedures which were observed. The Contractor shall be advised of any practices which are not acceptable to the factory representative.
- L. Trees, shrubbery, fences, poles, and all other property and surface structures shall be protected unless their removal is shown on the drawings or authorized by the Resident Project Representative. When it is necessary to cut roots and tree branches, such cutting shall be done under the supervision and direction of the Resident Project Representative.

3.06 FUSIBLE PVC INSTALLATION

A. GENERAL INSTALLATION

- 1. Installation guidelines from the pipe supplier shall be followed for all installations.
- 2. The fusible polyvinylchloride pipe will be installed in a manner so as not to exceed the recommended bending radius guidelines.
- 3. Where fusible polyvinylchloride pipe is installed by pulling in tension, the recommended maximum safe pulling force, established by the pipe supplier, shall not be exceeded.

B. FUSION PROCESS

- 1. Fusible polyvinylchloride pipe will be handled in a safe and non-destructive manner before, during, and after the fusion process and in accordance with this specification and pipe supplier's guidelines.
- 2. Fusible polyvinylchloride pipe will be fused by qualified fusion technicians holding current qualification credentials for the pipe size being fused, as documented by the pipe supplier.
- 3. Pipe supplier's procedures shall be followed at all times during fusion operations.
- 4. Each fusion joint shall be recorded and logged by an approved electronic monitoring device (data logger) connected to the fusion machine, which utilizes a current version of the pipe supplier's recommended and compatible software.
- 5. Only appropriately sized and outfitted fusion machines that have been approved by the pipe supplier shall be used for the fusion process. This includes requirements for safety, maintenance, and operation with modifications made for PVC.

3.07 HDPE INSTALLATION

- A. Each operator performing fusion joining shall be qualified in the use of the manufacturer's recommended fusion procedure(s) by the f

1. Appropriate training or experience in the use of the fusion procedure.
2. Making a sample joint according to the procedure that passes the following inspections and tests:
 - a. The joint shall be visually examined during and after joining and found to have the same appearance as a photograph or sample of an acceptable joint that was joined in accordance with the procedure; and
 - b. Test or examine the joint by one of the following methods:
 - (1) Pressure and tensile test as described in 49 CFR 192.283;
 - (2) Ultrasonic inspection and found to be free of flaws that would cause failure; or
 - (3) Cut into at least three longitudinal straps, each of which is visually examined and found to be free of voids or un-bonded areas on the cut surface of the joint.
 - c. Each operator shall be re-qualified under the procedure, if, during any 12-month period he does not make any joints under the procedure or has three joints or three percent of the joints he has made, whichever is greater, that are found unacceptable by testing under 49 CFR 192.513.

B. Heat Fusion

1. Comply with ASTM F2620, except as modified below.
2. Use fusion equipment specially designed for heat fusion of HDPE.
3. Maintain the proper temperature of the heater plate as recommended by the pipe manufacturer. Check it with a tempilstik or pyrometer for correct surface temperature.
4. Clean pipe ends inside and outside with a clean cotton cloth to remove dirt, water, grease, and other foreign materials.
5. Square (face) the pipe ends using facing tool of the fusion machine. Remove burrs, chips, and filings before joining pipe or fittings.
6. Check line-up of pipe ends in fusion machine to see that pipe ends meet squarely and completely over the entire surface to be fused. Make sure the clamps are tight so that the pipe does not slip during the fusion process.
7. Insert clean heater plate between aligned ends and bring ends firmly in contact with plate but do not apply pressure while achieving melt pattern. Allow pipe ends to heat and soften. Approximate softening depths are as follows:

Pipe Size, inches	Approximate Melt Bead, inches
2 and below	1/16
3 to 5	1/8
6 to 12	3/16
12 to 20	1/4 to 5/16

8. Carefully move the pipe ends away from the heater plate and remove the plate (if the softened material sticks to the heater plate, discontinue the joint, clean heater plate, re-square pipe ends, and start over).
9. Bring melted ends together rapidly. Do not slam. Apply enough pressure to form a double roll-back bead to the body of the pipe around the entire circumference of the pipe about 1/8- to 3/16-inch wide. Pressure is necessary to ca

- 10. Allow the joint to cool and solidify properly. Remove the pipe from the clamps and inspect the joint appearance.

C. Sidewall Fusion

- 1. Accomplish side fusion procedure for HDPE in the field using 2- through 12-inch fusion units and proper heater plate adapters. Where branch outlets are larger than 12 inches in outside diameter, accomplish sidewall fusion in a fitting fabrication shop.
- 2. Clean the pipe with a clean cotton cloth. Prepare surface of pipe (main) by roughing with 60 grit or coarser utility cloth.
- 3. Prepare the base of the branch by roughing with 60 grit or coarser utility cloth.
- 4. Align branch on the main and tighten clamp.
- 5. Check branch for square alignment.
- 6. Retract moveable clamp, roll in, and center heater plate with adapter between base of branch and main.
- 7. For all sizes, apply a strong, firm, continuous pressure until complete melt bead can be seen on main. Release pressure to light pressure. Continue heat soak cycle on branch and main. Watch base of branch for:

Main Sizes, inches	Heat Soak Cycle, Fitting Base Bead
1-1/4 and smaller	1/16-inch Melt Bead
2	1/8-inch Melt Bead
3 and Larger	1/8- to 3/16-inch Melt Bead

- 8. Retract moveable clamp and cleanly remove heater plate.
- 9. Bring melted surfaces together rapidly. Do not slam. Apply continuous progressive pressure until proper fusion bead is formed. Maintain pressure until joint has cooled.

D. Placement of Pipe in Trench

- 1. Per AWWA Manual M55, the care taken by the installer during installation will dramatically affect system performance. A high quality installation in accordance with recommendations and engineered plans and specifications can provide the performance as designed, while a low quality installation can cause substandard performance.
- 2. After the pipe has been butt-fused and the joints have set, snake the pipe into the trench per the pipe manufacturer's recommendations in order to allow for thermal expansion and contraction of the pipe.
- 3. Consideration shall be given to pull-out forces caused by circumferential as well as longitudinal thermal contraction when flanged and mechanical joints are used. Make provisions for sealing as well as restraining to compensate for the axial loading due to expansion or contraction and/or pipe settlement.

- E. Cold-Bending of Curved Segments: HDPE may be cold-bent to a minimum radius of no less than 30 times the pipe diameter as it is installed along curved alignment. The minimum bending radius that can be applied to the pipe without kinking it varies with the diameter and wall thickness of the pipe and shall not exceed the recommendations of the manufacturer. If adequate space is not available for the

required radius, fuse a fitting of the required angle into the piping system to obtain the necessary change in direction

F. Flanged Connections

1. Accomplish mechanical joining to other piping materials (fittings, valves, tanks, pumps, etc.) with factory-made flange adapters and steel or ductile-iron backup flanges. Use flanges to connect lengths of HDPE together when heat fusion is impractical.
2. Use gaskets between the polyethylene flange adapters when recommended by the HDPE pipe manufacturer. Apply sufficient torque evenly to the bolts to prevent leaks. After initial installation and tightening of flanged connections, allow the connections to set for a few hours. Then conduct a final tightening of the bolts.

3.08 GROOVED-END PIPE AND FITTING INSTALLATION

- A. Install the grooved-end pipe and fittings in accordance with the coupling manufacturer's recommendations and the following.
- B. Clean loose scale, rust, oil, grease, and dirt from the pipe or fitting groove before installing coupling. Apply the coupling manufacturer's gasket lubricant to the gasket exterior lips, pipe ends, and housing interiors.
- C. Fasten coupling alternately and evenly until coupling halves are seated. Use torques as recommended by the coupling manufacturer.

3.09 INSTALLATION OF FLEXIBLE COUPLINGS OR SOLID SLEEVES

- A. Couplings or sleeves shall be used as shown on the Drawings. The coupling or sleeve joints shall be completed in the trench after the pipe has been laid. Each pipe end, for a sufficient distance back from the end, shall be thoroughly cleaned to remove oil, dirt, and other foreign matter to effectively seal the joint. Remove burrs from pipe ends. Clean gaskets before installing. Glands, gaskets, and sleeves shall then be assembled on the pipe ends, in accordance with the manufacturer's recommendations. Glands and sleeves shall be accurately centered over the pipe ends and one pipe end shall touch the coupling sleeve centering stop if the coupling sleeve is so equipped.
- B. Install couplings and sleeves per manufacturer's recommendations. Install couplings and sleeves so that 50% of the total travel is available for expansion and 50% is available for contraction.
- C. Bolts shall be tightened to the torque recommended by the manufacturer with a torque wrench in the presence of the Owner's Representative. When tightening bolts, it is essential that the gland be brought up toward the pipe flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket.
- D. Wrap complete assembly with two wraps of 8-mil polyethylene tubing per AWWA C105.

3.10 COORDINATION

- A. Licenses, permits and certificates as required by law or other regulatory agencies shall be procured and purchased when necessary by the Contractor. The Contractor shall comply with all applicable laws, ordinances, safety provisions, rules and regulations relating to the work.
- B. When the construction work area is located in public right-of-way, the Contractor shall obtain a permit from the agency having jurisdiction over that right-of-way. The Contractor shall meet the requirements of the permitting agency.
- C. Anytime the construction work area is located in a private utility easement, such as a natural gas pipeline company, the Contractor shall notify the utility and meet all requirements of that utility while working in their easement.

- D. The Contractor shall inform affected property owners, even though easements have been obtained, before construction occurs on their property. Should the property contain farm crops, at least three days notice shall be given to allow for harvesting. Crops damaged without notice so given shall be paid for by the Contractor at current market value.
- E. The Contractor shall obtain permission, in writing, before cutting fences and repair same to original condition or better. Fences shall be completely repaired the day they are taken apart. Fences left unrepaired may be fixed by the owner and costs deducted from monies due to the Contractor. If a controversy arises over fence cutting and Contractor does not have written permission, damages may be assessed against Contractor to return fence to original condition. Contractor shall use existing openings, insofar as practical to maneuver equipment.

END OF SECTION

PIPE SCHEDULE

ABBREV	SERVICE	MATERIAL ¹	TEST ²		ID COLOR	COMMENTS
			PRESSURE (PSI)			
AM	AMMONIA SOLUTION	POLY TUBING W/ CONDUIT	50	WHITE		NOT USED
AMS	ANTISCALANT SOLUTION	POLY TUBING W/ CONDUIT	75	ORANGE W/ GREEN BAND		
BLW	BLENDED WATER	DIP	50	DARK BLUE		
BP	BY-PASS		75	LIGHT BLUE W/ GREEN BAND		
CA	COMPRESSED AIR	SEE SECTION 15410	100	DARK GREEN		
CIP-C	R/O CLEAN-IN-PLACE CONCENTRATE	PVC SCH 80	100	RED W/ YELLOW BAND		
CIP-P	R/O CLEAN-IN-PLACE PERMEATE	PVC SCH 80	100	RED W/ DARK BLUE BAND		
CL	CHLORINE SOLUTION	POLY TUBING W/ CONDUIT	50	YELLOW		
CS	CAUSTIC SODA	POLY TUBING W/ CONDUIT	50	YELLOW W/ GREEN BAND		
DL	DRAIN LINE	PVC-DWV, PVC-GRAY SEWER	NONE	DARK BROWN		
DW	DOMESTIC WATER	SEE SECTION 15410	125	DARK BLUE		
FL	FLOURIDE SOLUTION	POLY TUBING W/ CONDUIT	50	LIGHT BLUE W/ RED BAND		
FW	FILTERED WATER	DIP	50	DARK BLUE		
HS-N	HIGH SERVICE - NORTH	DIP	200	DARK BLUE		
HS-S	HIGH SERVICE - SOUTH	DIP	200	DARK BLUE		
OF	OVERFLOW	BY TANK MANUFACTURE				
PW	PLANT WATER	DIP, COPPER (SEE SECTION 15410)	125	DARK BLUE WITH WHITE BAND		
R/C	R/O CONCENTRATE	PVC SCH 80	50	DARK BROWN W/YELLOW BAND		
R/O F	R/O FEED	SSI	75	AQUA		
R/O P	R/O PERMEATE	SSI	50	LIGHT BLUE		
RW	RAW WATER	PVC C905, DIP	75	OLIVE GREEN		
SA	SAMPLE	PVC SCH 80	50	SAME AS PROCESS LINE BEING SAMPLED		
SR	SURGE RELIEF	DIP	200	DARK BLUE		
SS	SANITARY SEWER	SEE SECTION 15410	NONE			
TW	TREATED WATER	DIP	50	DARK BLUE		
VENT	VENT	SEE SECTION 15410	NONE			
WL	WASTE LINE	PVC SCH 80				

NOTES:

- (1) See plans for transitions between pipe material.
- (2) Contractor shall verify the pipe shows no leakage under normal operating conditions.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, or declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

FEDERAL AID PROVISIONS

December 1980

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidders attention is called to the "Equal Opportunity Clause" and the Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth therein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:
3. Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their covered construction work, such contractors are required to comply with the following goals:

Goals for Female participation for each trade

AREA COVERED

Goals for women apply nationwide

GOALS AND TIMETABLES

Goals

Timetable	(Percent)
From April 1, 1978 until March 31, 1979	3.1
From April 1, 1979 until March 31, 1980	5.1
From April 1, 1980 until March 31, 1981	6.9

Goals for Minority Participation for Each Trade

<u>County</u>	<u>Goal (Percent)</u>	<u>County</u>	<u>Goal (Percent)</u>
Adair	4	Linn	4
Andrew	3.2	Livingston	10
Atchison	10	McDonald	2.3
Audrain	4	Macon	4
Barry	2.3	Madison	11.4
Barton	2.3	Maries	11.4
Bates	10	Marion	3.1
Benton	10	Mercer	10
Bollinger	11.4	Miller	4
Boone	6.3	Mississippi	11.4
Buchanan	3.2	Moniteau	4
Butler	11.4	Monroe	4
Caldwell	10	Montgomery	11.4
Callaway	4	Morgan	4
Camden	4	New Madrid	26.5
Cape Girardeau	11.4	Newton	2.3
Carroll	10	Nodaway	10

Carter	11.4	Oregon	2.3
Cass	12.7	Osage	4
Cedar	2.3	Ozark	2.3
Chariton	4	Pemiscot	26.5
Christian	2	Perry	11.4
Clark	3.4	Pettis	10
Clay	12.7	Phelps	11.4
Clinton	10	Pike	3.1
Cole	4	Platte	12.7
Cooper	4	Polk	2.3
Crawford	11.4	Pulaski	2.3
Dade	2.3	Putnam	4
Dallas	2.3	Ralls	3.1
Daviess	10	Randolph	4
DeKalb	10	Ray	12.7
Dent	11.4	Reynolds	11.4
Douglas	2.3	Ripley	11.4
Dunklin	26.5	St. Charles	14.7
Franklin	14.7	St. Clair	2.3
Gasconade	11.4	St. Francois	11.4
Gentry	10	Ste. Genevieve	11.4
Greene	2	St. Louis City	14.7
Grundy	10	St. Louis County	14.7
Harrison	10	Saline	10
Henry	10	Schuyler	4
Hickory	2.3	Scotland	4
Holt	10	Scott	11.4
Howard	4	Shannon	2.3
Howell	2.3	Shelby	4
Iron	11.4	Stoddard	11.4
Jackson	12.7	Stone	2.3
Jasper	2.3	Sullivan	4
Jefferson	14.7	Taney	2.3
Johnson	10	Texas	2.3
Knox	4	Vernon	2.3
Laclede	2.3	Warren	11.4
Lafayette	10	Washington	11.4
Lawrence	2.3	Wayne	11.4
Lewis	3.1	Webster	2.3
Lincoln	11.4	Worth	10
		Wright	2.3

These goals are applicable to all of the contractor’s construction work (whether or not is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor’s compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on Its Implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority, or female employees or trainees from Contractor to Contractor or from project to project

for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

4. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.
5. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" of the county, route and limits described in the proposal for the work.

July 1986

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation which this contract resulted.
 - b. "Director" mean Director, Office of Federal Contract Compliance Programs, United States Department of labor, or any person to who the Director delegates authority;
 - c. "Employer Identification Number" means the Federal Social Security number used on the Employer's quarterly Federal Tax Return, U.S. Treasury Department Form 941;
 - d. "Minority" includes;
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and pacific islander (all persons having origins in any of the original peoples of the Far East, southeast Asia, the Indian Subcontinent, or the Pacific Islands; and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintain identifiable affiliations through membership and participation or community identifications.
2. Whenever the Contractor, or any Subcontractor at any tier, subcontractors a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contract is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through the association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with the Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligation under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith

performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractors' failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with who the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours or apprentices and trainees to be counted in meeting the goal, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be used its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and all facilities at which the Contractor's employees are assigned to work. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred not employed by the contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has as collective bargaining agreement has not referred to the contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and

trainee programs relevant of the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources complied under 7b above.

- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement by publicizing it in the company newspaper, annual report, etc., by specific review of the policy with all management personnel and with all minority and female employees at least one a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendents, General foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, person attending, subject matter discussed, and the disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media and providing written notification to and discussing the contractor's EEO policy with other Contractors and Subcontractors with who the Contractor does or anticipates doing business.
- i. Direct is a recruitment effort, both oral and written, to minority female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance or applicants for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and test to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer vacations employment to minority and female youth both on the site and in other areas or contractor's workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc. such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligation under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations or offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

- p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling anyone or more of its obligations under 7a through 7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. A single goal for minorities and a separate single goal for women have been established to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the executive order if a specific minority group of women is underutilized).
 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contract pursuant to Executive Order 11246.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
 13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Direct shall proceed in accordance with 41 CFR 60-4.8.
 14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status, (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rat of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
 15. Nothing herein provided shall be constructed as a limitation upon the application of other laws which establish different standard of compliance or upon the application of requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Action of 1977 and the Community Development Block Grant Program).

OPERATING POLICY STATEMENT

The contractor shall accept as his operating policy the following statement, or one of equal coverage, which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program.

“It is the policy of this company to assure that applicants are employed, and that employees are treated during employment without regard to their race, religion, sex, color, or national origin. Such action shall include: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training.”

SUPPLEMENTAL REPORTING REQUIREMENTS

- A. The Contractor will keep such records as are necessary to determine compliance with the contractor’s equal employment opportunity obligations. The records kept by the contractor will be designed to indicate the number of minority and non-minority group members and women employed in each work classification on the project.
- B. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State Highway Agency and the Federal Highway Administration.
- C. The contractor and each covered subcontractor will submit to the State Highway Agency, for the month of July, for the duration of the project, a report (Form PR-1391) “Federal-Aid Highway Construction Contractors Annual EEO Report”, indicating the number of minority, women and non-minority group employees currently engaged in each work classification required by the contract work.

NONDISCRIMINATION IN EMPLOYMENT

July 1990

The following provisions are added by the State to the Required Contract Provisions of Federal-Aid Contracts.

The contractor is advised that the exemptions referred to in the Required Contract Provisions, Federal-Aid contracts under Section II, Nondiscrimination, Paragraph 3g, with respect to contracts and subcontracts, are substantial and are to be found in Chapter 60, Office of Federal Contract Compliance, Equal Employment Opportunity, Department of Labor (33 Federal Register 7804-7812, May 28, 1968, effective July 1, 1968, Chapter 60, Title 41, Code of Federal Regulations), by which contracts and subcontracts of \$10,000 or less and certain contracts and subcontracts for indefinite quantities are exempt.

The two pertinent exemption clauses are as follows:

60-1.5 Exemptions

- (a) General – (1) Transactions of \$10,000 or under. Contracts and Subcontractors not exceeding \$10,000, other than Government bills of lading, and other than contract and subcontracts with depositories of Federal funds in any amount and with financial institutions which are issuing and paying agents for U.S. savings bonds and savings notes, are exempt from the requirements of the equal opportunity clause. In determining the applicability of this exemption to any federally assisted construction contract, or subcontract thereunder, the amount of such contract or subcontract rather than the amount of the Federal financial assistance shall govern. No agency, contractor, or subcontractor shall procure supplies or services in a manner so as to avoid applicability of the equal opportunity clause: Provided, that where a contractor has contracts or subcontracts with the Government in any 12-month period which have an

aggregate total value (or can reasonably be expected to have an aggregate total value) exceeding \$10,000, the \$10,000 or under exemption does not apply, and the contracts are subject to the order and the regulation issued pursuant thereto regardless of whether any single contracts exceeds \$10,000.

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Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



MICHAEL L. PARSON, Governor

Annual Wage Order No. 26

Section 088
RANDOLPH COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by

Taylor Burks, Director
 Division of Labor Standards

Filed With Secretary of State: _____ **March 8, 2019**

Last Date Objections May Be Filed: **April 8, 2019**

Prepared by Missouri Department of Labor and Industrial Relations

Building Construction Rates for
RANDOLPH County

Section 088

OCCUPATIONAL TITLE	** Date of Increase	Basic Hourly Rates
Asbestos Worker		\$57.21
Boilermaker		\$21.25*
Bricklayer		\$21.25*
Carpenter		\$45.35
Lather		
Linoleum Layer		
Millwright		
Pile Driver		
Cement Mason		\$21.25*
Plasterer		
Communications Technician		\$21.25*
Electrician (Inside Wireman)		\$50.60
Electrician Outside Lineman		\$21.25*
Lineman Operator		
Lineman - Tree Trimmer		
Groundman		
Groundman - Tree Trimmer		
Elevator Constructor		\$21.25*
Glazier		\$21.25*
Ironworker		\$59.62
Laborer		\$43.00
General Laborer		
First Semi-Skilled		
Second Semi-Skilled		
Mason		\$21.25*
Marble Mason		
Marble Finisher		
Terrazzo Worker		
Terrazzo Finisher		
Tile Setter		
Tile Finisher		
Operating Engineer		\$21.25*
Group I		
Group II		
Group III		
Group III-A		
Group IV		
Group V		
Painter		\$21.25*
Plumber		\$62.02
Pipe Fitter		
Roofer		\$50.07
Sheet Metal Worker		\$21.25*
Sprinkler Fitter		\$21.25*
Truck Driver		\$21.25*
Truck Control Service Driver		
Group I		
Group II		
Group III		
Group IV		

*The Division of Labor Standards received less than 1,000 reportable hours as required by RSMo 290.257.4(b). Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center, in accordance with RSMo 290.257.2.

Heavy Construction Rates for
RANDOLPH County

Section 088

OCCUPATIONAL TITLE	** Date of Increase	Basic Hourly Rates
Carpenter		\$21.25*
Millwright		
Pile Driver		
Electrician (Outside Lineman)		\$21.25*
Lineman Operator		
Lineman - Tree Trimmer		
Groundman		
Groundman - Tree Trimmer		
Laborer		\$21.25*
General Laborer		
Skilled Laborer		
Operating Engineer		\$21.25*
Group I		
Group II		
Group III		
Group IV		
Truck Driver		\$21.25*
Truck Control Service Driver		
Group I		
Group II		
Group III		
Group IV		

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received less than 1,000 reportable hours as required by RSMo 290.257.4(b). Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center, in accordance with RSMo 290.257.2.

OVERTIME and HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, "**overtime work**" shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

"General Decision Number: MO20190001 11/08/2019

Superseded General Decision Number: MO20180001

State: Missouri

Construction Types: Heavy and Highway

Counties: Missouri Statewide.

HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/15/2019
2	03/08/2019
3	03/22/2019
4	04/12/2019
5	05/10/2019
6	05/24/2019
7	06/07/2019
8	06/21/2019
9	07/05/2019
10	07/19/2019
11	09/20/2019
12	09/27/2019
13	10/04/2019
14	10/25/2019
15	11/01/2019
16	11/08/2019

CARP0002-002 05/01/2019

ST. LOUIS COUNTY AND CITY

	Rates	Fringes
Carpenters.....	\$ 38.02	17.77

CARP0005-006 05/03/2015

CASS (Richards-Gebauer AFB ONLY), CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Carpenters:		
CARPENTERS & LATHERS.....	\$ 36.34	15.55
MILLWRIGHTS & PILEDRIVERS...	\$ 36.34	15.55

CARP0011-001 05/01/2019

Rates Fringes

Carpenter and Piledriver

ADAIR, AUDRAIN (West of Hwy 19), BOONE, CALLAWAY, CHARITON, COLE, COOPER, HOWARD, KNOX, LINN, MACON, MILLER, MONITEAU, MONROE, OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SHELBY AND SULLIVAN COUNTIES.....\$ 32.28	17.77
ATCHISON, ANDREW, BATES, CALDWELL, CARROLL, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, LIVINGSTON, MERCER, NODAWAY, ST. CLAIR, SALINE AND WORTH COUNTIES.....\$ 30.76	17.77
AUDRAIN (East of Hwy.19), RALLS, MARION, LEWIS, CLARK AND SCOTLAND COUNTIES.\$ 32.29	17.77
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES.\$ 30.36	17.77
BENTON, MORGAN AND PETTIS...\$ 30.81	17.77
BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY, STE. GENEVIEVE, SCOTT, STODDARD AND WAYNE COUNTIES.....\$ 32.14	17.77
BUCHANAN, CLINTON, JOHNSON AND LAFAYETTE COUNTIES.....\$ 31.49	17.77
CARTER, HOWELL, OREGON AND	

RIPLEY COUNTIES.....	\$ 31.09	17.77
CRAWFORD, DENT, GASCONADE, IRON, MADISON, MARIES, MONTGOMERY, PHELPS, PULASKI, REYNOLDS, SHANNON AND TEXAS COUNTIES.....	\$ 32.13	17.77
FRANKLIN COUNTY.....	\$ 35.56	17.77
JEFFERSON AND ST. CHARLES COUNTIES.....	\$ 38.02	17.77
LINCOLN COUNTY.....	\$ 34.00	17.77
PIKE, ST. FRANCOIS AND WASHINGTON COUNTIES.....	\$ 32.92	17.77
WARREN COUNTY.....	\$ 34.44	17.77

ELEC001-002 06/03/2018

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, FRANKLIN,
IRON, JEFFERSON, LINCOLN, MADISON, MISSISSIPPI, NEW MADRID,
PEMISCOT, PERRY, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,
ST. LOUIS (City and County), STE. GENEVIEVE, SCOTT, STODDARD,
WARREN, WASHINGTON AND WAYNE COUNTIES

Rates Fringes

Electricians.....	\$ 38.12	15.60
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ELEC002-001 09/01/2018

ADAIR, AUDRAIN, BOONE, CALLAWAY, CAMDEN, CARTER, CHARITON,
CLARK, COLE, COOPER, CRAWFORD, DENT, FRANKLIN, GASCONADE,
HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCON, LINN,
MACON, MARIES, MARION, MILLER, MONITEAU, MONROE, MONTGOMERY,
MORGAN, OREGON, OSAGE, PERRY, PHELPS, PIKE, PULASKI, PUTNAM,
RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,
ST. LOUIS (City and County), STE. GENEVIEVE, SCHUYLER,
SCOTLAND, SHANNON, SHELBY, SULLIVAN, TEXAS, WARREN AND
WASHINGTON COUNTIES

Rates Fringes

Line Construction:

Equipment Operator.....	\$ 39.50	19.96
Groundman & Truck Driver....	\$ 30.36	16.67
Lineman & Cable Splicer.....	\$ 45.90	22.27

ELEC0053-004 09/02/2018

Rates Fringes

Line Construction: (ANDREW,
ATCHINSON, BARRY, BARTON,
BUCHANAN, CALDWELL, CEDAR,
CHRISTIAN, CLINTON, DADE,
DALLAS, DAVIES,, DEKALB,
DOUGLAS, GENTRY, GREENE,
GRUNDY, HARRISON, HICKORY,
HOLT, JASPER, LACLEDE,
LAWRENCE, LIVINGSTON,
MCDONALD, MERCER, NEWTON,
NODAWAY, OZARK, POLK, ST.
CLAIR, STONE, TANEY, VERNON,
WEBSTER, WORTH AND WRIGHT
COUNTIES)

Groundman Powderman.....	\$ 31.56	14.90
Groundman.....	\$ 29.46	14.29
Lineman Operator.....	\$ 42.24	18.00
Lineman.....	\$ 45.70	19.00

Line Construction; (BATES,
BENTON, CARROLL, CASS, CLAY,
HENRY, JACKSON, JOHNSON,
LAFAYETTE, PETTIS, PLATTE,
RAY AND SALINE COUNTIES)

Groundman Powderman.....	\$ 31.56	14.90
Groundman.....	\$ 29.46	14.29
Lineman Operator.....	\$ 42.24	18.00
Lineman.....	\$ 45.70	19.00

ELEC0095-001 06/01/2017

BARRY, BARTON, CEDAR, DADE, JASPER, LAWRENCE, MCDONALD, NE

ST CLAIR, AND VERNON COUNTIES

Rates Fringes

Electricians:

Cable Splicers.....	\$ 25.40	12.19
Electricians.....	\$ 26.79	13.86

ELEC0124-007 08/26/2019

BATES, BENTON, CARROLL, CASS, CLAY, COOPER, HENRY, JACKSON,
JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY AND SALINE
COUNTIES:

Rates Fringes

Electricians.....	\$ 40.79	22.92
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ELEC0257-003 03/01/2019

AUDRAIN (Except Cuivre Township), BOONE, CALLAWAY, CAMDEN,
CHARITON, COLE, CRAWFORD, DENT, GASCONADE, HOWARD, MARIES,
MILLER, MONITEAU, OSAGE, PHELPS AND RANDOLPH COUNTIES

Rates Fringes

Electricians:

Cable Splicers.....	\$ 30.42	16.085
Electricians.....	\$ 33.25	18.18

ELEC0350-002 12/01/2018

ADAIR, AUDRAIN (East of Highway 19), CLARK, KNOX, LEWIS, LINN,
MACON, MARION, MONROE, MONTGOMERY, PIKE, PUTNAM, RALLS,
SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES

Rates Fringes

Electricians.....\$ 31.50 17.20

ELEC0453-001 09/01/2019

Rates Fringes

Electricians:

CHRISITAN, DALLAS,
DOUGLAS, GREENE, HICKORY,
HOWELL, LACLEDE, OREGON,
OZARK, POLK, SHANNON,
WEBSTER and WRIGHT COUNTIES.\$ 27.88 14.99
PULASKI and TEXAS COUNTIES..\$ 32.53 15.46
STONE and TANEY COUNTIES....\$ 23.67 14.17

ELEC0545-003 06/01/2019

ANDREW, BUCHANAN, CLINTON, DEKALB, ATCHISON, HOLT, MERCER,
GENTRY, HARRISON, DAVIESS, GRUNDY, WORTH, LIVINGSTON, NODAWAY,
AND CALDWELL COUNTIES

Rates Fringes

Electricians:.....\$ 32.00 17.30

ELEC0702-004 01/01/2019

BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MADISON,
MISSISSIPPI, NEW MADRID, PEMISCOT, SCOTT, STODDARD AND WAYNE
COUNTIES

Rates Fringes

Line Construction:

Groundman - Class A.....\$ 29.48 14.55
Groundman-Equipment
Operator Class II (all
other equipment).....\$ 37.35 16.83

Heavy-Equipment Operator		
Class I (all crawler type		
equipment D-4 and larger)...	\$ 42.59	18.35
Lineman.....	\$ 51.88	21.04

ENGI0101-001 05/01/2016

ANDREW, ATCHISON, BATES, BENTON, BUCHANAN, CALDWELL, CARROLL,
CHARITON, CLINTON, COOPER, DAVIESS, DEKALB, GENTRY, GRUNDY,
HARRISON, HENRY, HOLT, HOWARD, JOHNSON, LAFAYETTE, LINN,
LIVINGSTON, MERCER, NODAWAY, PETTIS, SALINE, SULLIVAN AND WORTH
COUNTIES

Rates Fringes

Power equipment operators:

GROUP 1.....	\$ 33.38	15.92
GROUP 2.....	\$ 32.98	15.92
GROUP 3.....	\$ 30.98	15.92

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and
spreader; asphalt plant operator; auto grader or trimmer or
sub-grader; backhoe; blade operator (all types); boilers -
2; booster pump on dredge; bulldozer operator; boring
machine (truck or crane mounted); clamshell operator;
concrete mixer paver; concrete plant operator; concrete
pump operator; crane operator; derrick or derrick trucks;
ditching machine; dragline operator; dredge engineman;
dredge operator; drill cat with compressor mounted
(self-contained) or similar type self- propelled rotary
drill (not air tract); drilling or boring machine
(rotary-self-propelled); finishing machine operator;
greaser; high loader-fork lift-skid loader (all types);
hoisting engineer (2 active drums); locomotive operator
(standard gauge); mechanics and welders (field and plants);
mucking machine operator; pile drive operator; pitman crane
or boom truck (all types); push cat; quad track; scraper
operators (all types); shovel operator; sideboom cats; s

discharge spreader; skimmer scoop operators; slip form paver operator (CMI, Rex, Gomeco or equal); la tourneau roter (all tiller types); tow boat operator; truck crane; wood and log chippers (all types).

GROUP 2: A-frame truck operator; articulated dump truck; back filler operator; boilers (1); chip spreader; churn drill operator; compressor; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grade operator; hoisting engine (one drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); paymill operator; power shield; pumps; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; siphons and jets; straw blower; stump cutting machine; siphons and jets; tank car heater operator (combination boiler and booster); welding machine; vibrating machine operator (not hand held); welding machine.

GROUP 3: (a) Oiler;

(b) Oiler driver

(c) Mechanic.

HOURLY PREMIUMS:

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.25) ABOVE GROUP 1 RATE: Dragline operator - 3 yds. & over; shovel 3 yds. & over; clamshell 3 yds. & over; Crane, rigs or piledrivers, 100' of boom or over (incl. jib.), hoist - each additional active drum over 2 drums

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.50) ABOVE GROUP 1 RATE: Tandem scoop operator; crane, rigs or piledrivers 150' to 200' of boom (incl. jib.)

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.75) ABOVE GROUP 1 RATE: Crane rigs, or piledrivers 200 ft. of boom or over (including jib.)

ENGI0101-005 04/01/2018

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 36.22	17.99
GROUP 2.....	\$ 35.18	17.99
GROUP 3.....	\$ 30.71	17.99
GROUP 4.....	\$ 34.06	17.99

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers-2; booster pump on dredge; boring machine (truck or crane mounted); bulldozer operator; clamshell operator; concrete cleaning decontamination machine operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drillcat with compressor mounted (self-contained) or similar type self propelled rotary drill (not air tract); drilling or boring machine (rotary - self-propelled); finishing machine operator; greaser; heavy equipment robotics operator/mechanic; horizontal directional drill operator; horizontal directional drill locator; loader-forklift - skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); master environmental maintenance mechanic; mechanics and welders (field and plants); mucking machine operator; piledrive operator; pitman crane or boom truck (all types); push cat; quad-track; scraper operators (all types); shovel operator; side discharge spreader; sideboom cats; skimmer scoop operator; slip-form paver (CMI, REX, Gomaco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; ultra high perssure waterjet cutting tool system operator/mechanic;

vacuum blasting machine operator/mechanic; wood and log chippers (all types)

GROUP 2: ""A"" Frame truck operator; back filler operator; boilers (1); chip spreader;churn drill operator; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyer operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grader operator; hoisting engine (1 drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra- hammer (or similar type); power shield; paymill operator; pumps; siphons and jets; stump cutting machine; tank car heater operator (combination boiler and booster); compressor; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; straw blower; tank car heater operator (combination boiler and booster); vibrating machine operator (not hand held)

GROUP 3: Oilers

GROUP 4: Oiler Driver (All Types)

FOOTNOTE:

HOURLY PREMIUMS FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$1.00) ABOVE GROUP 1 RATE:

Clamshells - 3 yd. capacity or over; Cranes or rigs, 80 ft. of boom or over (including jib); Draglines, 3 yd. capacity or over;

Piledrivers 80 ft. of boom or over (including jib);

Shovels & backhoes, 3 yd. capacity or over.

ENGI0101-022 05/01/2016

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES and CITY OF SPRINGFIELD

Rates Fringes

Power equipment operators:

GROUP 1.....	\$ 30.82	13.30
GROUP 2.....	\$ 29.88	13.30
GROUP 3.....	\$ 30.27	13.30
GROUP 4.....	\$ 28.22	13.30

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader; asphalt plant console operator; autograder; automatic slipform paver; backhoe; blade operator - all types; boat operator - tow; boilers-2; central mix concrete plant operator; clamshell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine - 2 active drums; launch hammer wheel; locomotive operator; - standard guage; mechanic and welders; mucking machine; off-road trucks; piledriver operator; pitman crane operator; push cat operator; quad trac; scoop operator - all types; shovel operator; sideboom cats; skimmer scoop operators; trenching machine operator; truck crane.

GROUP 2: A-frame; asphalt hot-mix silo; asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant man; asphalt plant mixer operator; asphalt roller operator; backfiller operator; barber-greene loader; boat operator (bridges and dams); chip spreader; concrete mixer operator - skip loader; concrete plant operator; concrete pump operator; crusher operator; dredge oiler; elevating grader operator; fork lift; greaser-fleet; hoisting engine - 1; locomotive operator - narrow gauge; multiple compactor; pavement breaker; powerbroom - self-propelled; power shield; rooter; side discharge concrete spreader; slip form finishing machine; stumpcutter machine; throttle man; tractor operator (over 50 h.p.); winch truck.

GROUP 3: Boilers - 1; chip spreader (front man); churn drill operator; clef plane operator; concrete saw operator (self-propelled); curb finishing machine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; roller operator, other than high type asphalt; screening & washing plant operator; siphons & jets; sub-grading machine operator; spreader box operator, self-propelled (not asphalt); tank car heater operator (combination boiler & booster); tractor operator (50 h.p. or less); Ulmac, Ulric or similar spreader; vibrating machine operator, not hand;

GROUP 4: Grade checker; Oiler; Oiler-Driver

HOURLY PREMIUMS:

The following classifications shall receive \$.25 above GROUP 1 rate:

Clamshells - 3 yds. or over; Cranes - Rigs or Piledrivers, 100 ft. of boom or over (including jib); Draglines - 3 yds. or over; Hoists - each additional active drum over 2 drums; Shovels - 3 yds. or over;

The following classifications shall receive \$.50 above GROUP 1 rate:

Tandem scoop operator; Cranes - Rigs or Piledrivers, 150 ft. to 200 ft. of boom (including jib); Tandem scoop.

The following classifications shall receive \$.75 above GROUP 1 rate:

Cranes - Rigs or Piledrivers, 200 ft. of boom or over (including jib.).

 ENGI0513-004 05/06/2019

FRANKLIN, JEFFERSON, LINCOLN, ST CHARLES, AND WARREN COUNTIES

Rates Fringes

Power equipment operators:

GROUP 1.....	\$ 34.36	27.36
GROUP 2.....	\$ 34.36	27.36
GROUP 3.....	\$ 33.06	27.36
GROUP 4.....	\$ 32.61	27.36

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, Cable; Backhoe, Hydraulic (2 cu yds bucket and under regardless of attachment, one oiler for 2 or 3, two oilers for 4 through 6); Backhoe, Hydraulic over 2 cu yds; Cableway; Crane, Crawler or Truck; Crane, Hydraulic - Truck or Cruiser mounted, 16 tons and over; Crane, Locomotive; crane with boom including jib over 100 ft from pin to pin; Crane using rock socket tool; Derrick, Steam; Derrick Car and Derrick Boat; Dragline, 7 cu yds and over; Dredge; Gradall, Crawler or tire mounted; Locomotive, Gas, Steam & other powers; Pile Driver, Land or Floating; Scoop, Skimmer; Shovel, Power (Electric, Gas, Steam or other powers); Shovel, Power (7 cu yds and over); Switch Boat; Whirley; Air Tugger with air compressor; Anchor Placing Barge; Asphalt Spreaker; Athey Force Feeder Loader, self-propelled; Backfilling Machine; Boat Operator - Push Boat or Tow Boat (job site); Boiler, High Pressure Breaking in Period; Boom Truck, Placing or Erecting; Boring Machine, Footing Foundation; Bullfloat; Cherry Picker; Combination Concrete Hoist and Mixer (such as Mixermobile); Compressor, Two 125 CFM and under; Compressor, Two through Four over 125 CFM; Compressor when operator runs throttle; Concrete Breaker (Truck or Tractor mounted); Concrete Pump (such as Pumpcrete machine); Concrete Saw (self-propelled); Concrete Spreader; Conveyor, Large (not selfpropelled) hoisting or moving brick and concrete into, or into and on floor level, one or both; Crane, Climbing (such as Linden); Crane, Hydraulic - Rough Terrain, self-propelled; Crane, Hydraulic - Truck or Cruiser mounted - under 16 tons; Drilling machine - Self-powered, used for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other souces including concrete breakers, jackhammers and Barco equipmnet no engineer required); Elevating Grader; Engine Man, Dredge; Excavator or Powerbelt Machi

Finishing Machine, self- propelled oscillating screed;
 Forklift; Generators, Two through Six 30 KW or over;
 Grader, Road with power blade; Greaser; Highlift; Hoist,
 Concrete and Brick (Brick cages or concrete skips operating
 or on tower, Towermobile, or similar equipment); Hoist,
 Three or more drums in use; Hoist, Stack; Hydro-Hammer;
 Lad-A-Vator, hoisting brick or concrete; Loading Machine
 such as Barber-Greene; Mechanic on job site

GROUP 2: Air Tugger with plant air; Boiler (for power or
 heating shell of building or temporary enclosures in
 connection with construction work); Boiler, Temporary;
 Compressor, One over 125 CFM; Compressor, truck mounted;
 Conveyor, Large (not self- propelled); Conveyor, Large (not
 self- propelled) moving brick and concrete (distributing)
 on floor level; Curb Finishing Machine; Ditch Paving
 Machine; Elevator (outside); Endless Chain Hoist; Fireman
 (as required); Form Grader; Hoist, One Drum regardless of
 size (except brick or concrete); Lad-A-Vator, other
 hoisting; Manlift; Mixer, Asphalt, over 8 cu ft capacity;
 Mixer, one bag capacity or less; Mixer, without side
 loader, two bag capacity or more; Mixer, with side loader,
 regardless of size, not Paver; Mud Jack (where mud jack is
 used in conjunction with an air compressor, operator shall
 be paid \$.55 per hour in addition to his basic hourly rate
 for covering both operations); Pug Mill operator; Pump,
 Sump - self powered, automatic controlled over 2"; Scissor
 Lift (used for hoisting); Skid Steer Loader; Sweeper,
 Street; Tractor, small wheel type 50 HP and under with
 grader blade and similar equipment; Welding Machine, One
 over 400 amp; Winch, operating from truck

GROUP 3: Boat operator - outboard motor, job site; Conveyors
 (such as Con-Vay-It) regardless of how used; Elevator
 (inside); Heater operator, 2 through 6; Sweeper, Floor

GROUP 4: Crane type

HOURLY PREMIUMS:

Backhoe, Hydraulic 2 cu yds or less without oiler - \$2.00;

Crane,climbing (such as Linden) - \$.50;
 Crane, Pile Driving and Extracting - \$.50
 Crane with boom (including job) over
 100 ft from pin to pin - add \$.01 per foot
 to maximum of \$4.00);
 Crane, using rock socket tool - \$.50;
 Derrick, diesel, gas or electric hoisting material
 and erecting steel (150 ft or more above ground) - \$.50;
 Dragline, 7 cu yds and over - \$.50;
 Hoist, Three or more drums in use - \$.50;
 Scoop, Tandem - \$.50;
 Shovel, Power - 7 cu yds and over - \$.50;
 Tractor, Tandem Crawler - \$.50;
 Tunnel, man assigned to work in tunnel or
 tunnel shaft - \$.50;
 Wrecking, when machines are working on
 second floor or higher - \$.50

 ENGI0513-006 05/01/2019

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 29.69	27.16
GROUP 2.....	\$ 29.34	27.16
GROUP 3.....	\$ 29.14	27.16
GROUP 4.....	\$ 25.49	27.16

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening
 spreader, asphalt plant console operator; autograder;
 automatic slipform paver; back hoe; blade operator - all
 types; boat operator tow; boiler two; central mix concrete
 plant operator; clam shell operator; concrete mixer paver;
 crane operator; derrick or derrick trucks; ditching
 machine; dozer operator; dragline operator; dredge booster
 pump; dredge engineman; dredge operator; drill cat with
 compressor mounted on cat; drilling or boring machine
 rotary self-propelled; highloader; hoisting engine 2 act

drums; launchhammer wheel; locomotive operator standrad guage; mechanics and welders; mucking machine; piledriver operator; pitman crane operator; push cat operator; guad-trac; scoop operator; sideboom cats; skimmer scoop operator; trenching machine operator; truck crane, shovel operator.

GROUP 2: A-Frame; asphalt hot-mix silo; asphalt roller operator asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant mixer operator; backfiller operator; barber-greene loader; boat operator (bridge & dams); chip spreader; concrete mixer operator skip loader; concrete plant operator; concrete pump operator; dredge oiler; elevating graded operator; fork lift; grease fleet; hoisting engine one; locomotive operator narrow guage; multiple compactor; pavement breaker; powerbroom self-propelled; power shield; rooter; slip-form finishing machine; stumpcutter machine; side discharge concrete spreader; throttleman; tractor operator (over 50 hp); winch truck; asphalt roller operator; crusher operator.

GROUP 3: Spreader box operator, self-propelled not asphalt; tractor operator (50 h.p. or less); boilers one; chip spreader (front man); churn drill operator; compressor over 105 CFM 2-3 pumps 4" & over; 2-3 light plant 7.5 KWA or any combination thereof; clef plane operator; compressor maintenance operator 2 or 3; concrete saw operator (self-propelled); curb finishing mancine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; riller operator other than high type asphalt; screening & washing plant operator; siphons & jets; subgrading machine operator; tank car heater (combination boiler & booster); ulmac, ulric or similar spreader; vibrating machine operator; hydrobroom.

GROUP 4: Oiler; grout machine; oiler driver; compressor over 105 CFM one; conveyor operator one; maintenance operator; pump 4" & over one.

FOOTNOTE: HOURLY PREMIUMS

Backhoe hydraulic, 2 cu. yds. or under Without oiler - \$2.00
 Certified Crane Operator - \$1.50;
 Certified Hazardous Material Operator \$1.50;
 Crane, climbing (such as Linden) - \$0.50;
 Crane, pile driving and extracting - \$0.50;
 Crane, with boom (including jib) over 100' from pin to pin
 add \$0.01 per foot to maximum of \$4.00;
 Crane, using rock socket tool - \$0.50;
 Derrick, diesel, gas or electric, hoisting material and
 erecting steel (150' or more above the ground) - \$0.50;
 Dragline, 7 cu. yds, and over - \$0.50;
 Hoist, three or more drums in use - \$0.50; Scoop, Tandem -
 \$0.50;
 Shovel, power - 7 cu. yds. or more - \$0.50;
 Tractor, tandem crawler - \$0.50;
 Tunnel, man assigned to work in tunnel or tunnel shaft -
 \$0.50;
 Wrecking, when machine is working on second floor or higher -
 \$0.50;

ENGI0513-007 05/06/2019

ST. LOUIS CITY AND COUNTY

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 34.36	27.36
GROUP 2.....	\$ 34.36	27.36
GROUP 3.....	\$ 33.06	27.36
GROUP 4.....	\$ 32.61	27.36

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, cable or hydraulic; cableway; crane
 crawler or truck; crane, hydraulic-truck or cruiser mounted
 16 tons & over; crane locomotive; derrick, steam; derrick
 car & derrick boat; dragline; dredge; gradall, crawler or
 tire mounted; locomotive, gas, steam & other powers; pil

driver, land or floating; scoop, skimmer; shovel, power (steam, gas, electric or other powers); switch boat; whirley.

GROUP 2: Air tugger w/air compressor; anchor-placing barge; asphalt spreader; atehy force feeder loader (self-propelled); backfilling machine; backhoe-loader; boat operator-push boat or tow boat (job site); boiler, high pressure breaking in period; boom truck, placing or erecting; boring machine, footing foundation; bull- float; cherry picker; combination concrete hoist & mixer (such as mixer mobile); compressor (when operator runs throttle); concrete breaker (truck or tractor mounted); concrete pump, such as pump-crete machine; concrete saw (self-propelled), concrete spreader; conveyor, large (not self-propelled), hoisting or moving brick and concrete into, or into and on floor level, one or both; crane, hydraulic-rough terrain, self-propelled; crane hydraulic-truck or cruiser mounted-under 16 tons; drilling machines, self-powered use for earth or rock drilling or boring (wagon drills nd any hand drills obtaining power from other sources including concrete breakers, jackhammers and barco equipment-no engineer required); elevating grader; engineman, dredge; excavator or powerbelt machine; finishing machine, self-propelled oscillating screed; forklift; grader, road with power blade; highlift. greaser; hoist, stack, hydro-hammer; loading machine (such as barber-greene); machanic, on job site; mixer, pipe wrapping machines; plant asphalt; plant, concrete producing or ready-mix job site; plant heating-job site; plant mixing-job site; plant power, generating-job site; pumps, two through six self-powered over 2"; pumps, electric submersible, two through six, over 4"; quad-track; roller, asphalt, top or sub-grade; scoop, tractor drawn; spreader box; sub-grader; tie tamper; tractor-crawler, or wheel type with or without power unit, power take-offs and attachments regardless of size; trenching machine; tunnel boring machine; vibrating machine automatic, automatic propelled; welding machines (gasoline or diesel) two through six; well drilling machine

GROUP 3: Conveyor, large (not self-propelled); conveyor

large (not self-propelled) moving brick and concrete distributing) on floor level; mixer two or more mixers of one bag capacity or less; air tugger w/plant air; boiler, for power or heating on construction projects; boiler, temporary; compressor (mounted on truck; curb finishing machine; ditch paving machine; elevator; endless chain hoist; form grader; hoist, one drum regardless of size; lad-a-vator; manlift; mixer, asphalt, over 8 cu. ft. capacity, without side loader, 2 bag capacity or more; mixer, with side loader, regardless of size; pug mill operator; pump, sump-self-powered, automatic controlled over 2" during use in connection with construction work; sweeper, street; welding machine, one over 400 amp.; winch operating from truck; scissor lift (used for hoisting); tractor, small wheel type 50 h.p. & under with grader blade & similar equipment; Oiler on dredge and on truck crane.

GROUP 4: Boat operator-outboard motor (job site); conveyor (such as con-vay-it) regardless of how used; sweeper, floor

HOURLY PREMIUMS:

Backhoe, hydraulic	
2 cu. yds. or under without oiler	\$2.00
Certified Crane Operator	1.50
Certified Hazardous Material Operator	1.50
Crane, climbing (such as Linden)	.50
Crane, pile driving and extracting	.50
Crane, with boom (including jib) over	
100' (from pin to pin) add \$.01	
per foot to maximum of	4.00
Crane, using rock socket tool	.50
Derrick, diesel, gas or electric,	
hoisting material and erecting steel	
(150' or more above ground)	.50
Dragline, 7 cu. yds. and over	.50
Hoist, three (3) or more drums in use	.50
Scoop, Tandem	.50
Shovel, power - 7 cu. yds. or more	.50
Tractor, tandem crawler	.50
Tunnel, man assigned to work in tunnel	
or tunnel shaft	.50

Wrecking, when machine is working on
second floor or higher .50

IRON0010-012 04/01/2019

Rates Fringes

Ironworkers:

ANDREW, BARTON, BENTON,
CAMDEN, CEDAR, CHARITON,
CHRISTIAN, COOPER, DADE,
DALLAS, DAVIESS, DE KALB,
GENTRY, GREENE, GRUNDY,
HARRISON, HICKORY, HOLT,
HOWARD, LACLEDE, LINN,
LIVINGSTON, MERCER,
MONITEAU, MORGAN, NODAWAY,
PETTIS, POLK, PUTNAM,
RANDLOPH, ST. CLAIR,
SULLIVAN, TANEY, VERNON,
WEBSTER, WRIGHT and WORTH

Counties and portions of

ADAIR, BOONE, MACON,
MILLER and RANDOLPH

Counties.....\$ 30.55 30.44

ATCHISON, BATES, BUCHANAN,

CALDWELL, CARROLL, CASS,

CLAY, CLINTON, HENRY,

JACKSON, JOHNSON,

LAFAYETTE, PETTIS, PLATTE,

SALINE, AND RAY COUNTIES...\$ 33.55 30.44

IRON0321-002 09/01/2019

DOUGLAS, HOWELL and OZARK COUNTIES

Rates Fringes

Ironworker.....\$ 21.10 19.01

IRON0396-004 08/07/2019

ST. LOUIS (City and County), ST. CHARLES, JEFFERSON, IRON, FRANKLIN, LINCOLN, WARREN, WASHINGTON, ST. FRANCOIS, STE. GENEVIEVE, and REYNOLDS Counties; and portions of MADISON, PERRY, BOLLINGER, WAYNE, and CARTER Counties

	Rates	Fringes
Ironworker.....	\$ 34.91	27.36

IRON0396-009 08/07/2019

AUDRAIN, CALLAWAY, COLE, CRAWFORD, DENT, GASCONADE, MARIES, MONTGOMERY, OSAGE, PHELPS, PIKE, PULASKI, TEXAS and WRIGHT Counties; and portions of BOONE, CAMDEN, DOUGLAS, HOWELL, LACLEDE, MILLER, MONROE, OREGON, SHANNON and RALLS Counties

	Rates	Fringes
Ironworker.....	\$ 30.44	27.36

IRON0577-005 06/01/2019

ADAIR, CLARK, KNOX, LEWIS, MACON, MARION, MONROE, RALLS, SCHUYLER, SCOTLAND, AND SHELBY COUNTIES

	Rates	Fringes
Ironworker.....	\$ 26.60	24.00

IRON0584-004 06/01/2019

BARRY, JASPER, LAWRENCE, MCDONALD, NEWTON AND STONE Counties

	Rates	Fringes
Ironworkers:.....	\$ 26.00	15.35

IRON0782-003 05/01/2019

CAPE GIRARDEAU, MISSISSIPPI, NEW MADRID, SCOTT, & STODDARD
Counties; and portions of BOLLINGER, BUTLER, CARTER, DUNKLIN,
MADISON, PEMISCOT, PERRY, RIPLEY, and WAYNE Counties

Rates Fringes

Ironworkers:

Locks, Dams, Bridges and other major work on the Mississippi and Ohio River only.....	\$ 31.63	24.27
All Other Work.....	\$ 27.38	23.29

LAB00042-003 03/06/2019

ST. LOUIS (City and County)

Rates Fringes

LABORER

Plumber Laborer.....	\$ 33.22	15.67
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LAB00042-005 03/06/2019

ST. LOUIS (City and County)

Rates Fringes

LABORER

Dynamiter, Powderman.....	\$ 33.22	15.67
Laborers, Flaggers.....	\$ 33.22	15.67
Wrecking.....	\$ 33.22	15.67

LAB00424-002 05/01/2016

Rates Fringes

LABORER

ADAIR, AUDRAIN, BOONE,
 CALLAWAY, CHARITON, CLARK,
 COLE, COOPER, HOWARD,
 IRON, KNOX, LEWIS, LINN,
 MACON, MADISON, MARION,
 MILLER, MONITEAU, MONROE,
 PERRY, PIKE, PUTNAM,
 RALLS, RANDOLPH, REYNOLDS,
 ST. FRANCOIS, STE.
 GENEVIEVE, SCHUYLER,
 SCOTLAND, SHELBY AND
 SULLIVAN COUNTIES

GROUP 1.....	\$ 27.96	13.17
GROUP 2.....	\$ 27.96	13.17

BOLLINGER, BUTLER, CAPE
 GIRARDEAU, CARTER,
 CRAWFORD, DENT, DUNKLIN,
 GASCONADE, HOWELL, MARIES,
 MISSISSIPPI, NEW MADRID,
 OREGON, OSAGE, PEMISCOT,
 PHELPS, PULASKI, RIPLEY,
 SCOTT, SHANNON, STODDARD,
 TEXAS, WASHINGTON AND

WAYNE COUNTIES

GROUP 1.....	\$ 27.96	13.17
GROUP 2.....	\$ 27.96	13.17

FRANKLIN COUNTY

GROUP 1.....	\$ 29.71	13.17
GROUP 2.....	\$ 30.31	13.17

JEFFERSON COUNTY

GROUP 1.....	\$ 29.76	13.17
GROUP 2.....	\$ 30.36	13.17

LINCOLN, MONTGOMERY AND

WARREN COUNTIES

GROUP 1.....	\$ 31.18	13.32
GROUP 2.....	\$ 31.18	13.32

ST. CHARLES COUNTY

GROUP 1.....	\$ 3.18	13.32
GROUP 2.....	\$ 31.18	13.32

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggy man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutement and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men on brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other simila

type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

LAB00579-005 05/01/2019

	Rates	Fringes
LABORER (ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HOLT, LIVINGSTON, MERCER, NODAWAY and WORTH COUNTIES.)		
GROUP 1.....	\$ 26.66	14.97
GROUP 2.....	\$ 27.01	14.97
LABORER (BARRY, BARTON, BATES, BENTON, CAMDEN, CARROLL, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HENRY, HICKORY, JASPER, JOHNSON, LACLEDE, LAWRENCE, MCDONALD, MORGAN, NEWTON, OZARK, PETTIS, POLK, ST. CLAIR, SALINE, STONE, TANEY, VERNON, WEBSTER and WRIGHT COUNTIES)		
GROUP 1.....	\$ 25.66	14.17
GROUP 2.....	\$ 26.21	14.17
LABORER (LAFAYETTE COUNTY)		
GROUP 1.....	\$ 27.21	0.0014.42
GROUP 2.....	\$ 27.56	0.0014.42

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers - Carpenter tenders; salamander tenders; loading trucks under bins; hoppers & conveyors;

track men & all other general laborers; air tool operator; cement handler-bulk or sack; dump man on earth fill; georgie buggy man; material batch hopper man; material mixer man (except on manholes); coffer dams; riprap pavers - rock, block or brick; signal man; scaffolds over ten feet not self-supported from ground up; skipman on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoline, oil drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator, all work in connection with hydraulic or general dredging operations; puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material or materials (where special protection is required); rubbing concrete; topper of standing trees; batter board man on pipe and ditch work; feeder man on wood pulverizers; board and willow mat weavers and cable tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 feet where compressed air is not used; abutment and pier hole men working six (6) feet or more below ground; men working in coffer dams for bridge piers and footings in the river; ditchliners; pressure groutmen; caulker; chain or concrete saw; cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground; mortarmen on brick or block manholes; toxic and hazardous waste work.

GROUP 2: Skilled Laborers - Head pipe layer on sewer work; laser beam man; Jackson or any other similar tamp; cutting torch man; form setters; liners and stringline men on concrete paving, curb, gutters; hot mastic kettleman; hot tar applicator; sandblasting and gunite nozzle men; air tool operator in tunnels; screed man on asphalt machine; asphalt raker; barco tamper; churn drills; air track drills and all similar drills; vibrator man; stringline man for electronic grade control; manhole builders-brick or block; dynamite and powder men; grade checker.

LAB00663-002 04/01/2019

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 30.73	15.98
GROUP 2.....	\$ 31.94	15.98

LABORERS CLASSIFICATIONS

GROUP 1: General laborers, Carpenter tenders, salamander tenders, loading trucks under bins, hoppers and conveyors, track men and all other general laborers, air tool operator, cement handler (bulk or sack), chain or concrete saw, deck hands, dump man on earth fill, Georgie Buggies man, material batch hopper man, scale man, material mixer man (except on manholes), coffer dams, abutments and pier hole men working below ground, riprap pavers rock, black or brick, signal man, scaffolds over ten feet not self-supported from ground up, skipman on concrete paving, wire mesh setters on concrete paving, all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipelines, power tool operator, all work in connection with hydraulic or general dredging operations, straw blower nozzleman, asphalt plant platform man, chuck tender, crusher feeder, men handling creosote ties on creosote materials, men working with and handling epoxy material or materials (where special protection is required), topper of standing trees, batter board man on pipe and ditch work, feeder man on wood pulverizers, board and willow mat weavers and cable tiers on river work, deck hands, pile dike and revetment work, all laborers working on underground tunnels less than 25 feet where compressed air is not used, abutment and pier hole men working six (6) feet or more below ground, men working in coffer dams for bridge piers and footings in the river, ditchliners, pressure groutmen, caulker and chain or concrete saw, cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet

above ground, mortarmen on brick or block manholes, signal man.

GROUP 2: Skilled Laborer - spreader or screed man on asphalt machine, asphalt raker, grade checker, vibrator man, concrete saw over 5 hp., laser beam man, barco tamper, jackson or any other similar tamp, wagon driller, churn drills, air track drills and other similar drills, cutting torch man, form setters, liners and stringline men on concrete paving, curb, gutters and etc., hot mastic kettleman, hot tar applicator, hand blade operators, mortar men on brick or block manholes, sand blasting and gunnite nozzle men, rubbing concrete, air tool operator in tunnels, head pipe layer on sewer work, manhole builder (brick or block), dynamite and powder men.

PAIN0002-002 09/01/2007

CLARK, FRANKLIN, JEFFERSON, LEWIS, LINCOLN, MARION, PIKE, RALLS, ST. CHARLES, ST. LOUIS (CITY & COUNTY), AND WARREN COUNTIES

Rates Fringes

Painters:

Brush and Roller; Taper.....	\$ 28.61	10.24
High work over 60 feet.....	\$ 29.11	10.24
Lead Abatement.....	\$ 29.36	10.24
Pressure Roller; High work under 60 ft.....	\$ 28.86	10.24
Spray & Abrasive Blasting; Water Blasting (Over 5000 PSI).....	\$ 30.61	10.24
Taper (Ames Tools & Bazooka).....	\$ 30.21	10.24

PAIN0002-006 04/01/2018

ADAIR, AUDRAIN, BOONE, CALLAWAY, CHARITON, COLE, GASCONADE

HOWARD, KNOX, LINN, MACON, MONROE, MONTGOMERY, OSAGE, PUTNAM,
RANDOLPH, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES and
the City of Booneville.

Rates Fringes

Painters:

Bridges, Dams, Locks or		
Powerhouses.....	\$ 25.93	12.79
Brush and Roll; Taping,		
Paperhanging.....	\$ 23.93	12.79
Epoxy or Any Two Part		
Coating; Sandblasting;		
Stage or other Aerial Work		
- Platforms over 50 feet		
high; Lead Abatement.....	\$ 24.93	12.79
Spray; Structural Steel		
(over 50 feet).....	\$ 24.93	12.79
Tapers using Ames or		
Comparable Tools.....	\$ 24.68	12.79

PAIN0003-004 04/01/2017

CASS, CLAY, CLINTON, JACKSON, JOHNSON, LAFAYETTE, PLATTE & RAY
COUNTIES

Rates Fringes

Painters:

Bridgeman; Lead Abatement;		
Sandblast; Storage Bin &		
Tanks.....	\$ 31.96	16.96
Brush & Roller.....	\$ 29.34	16.96
Drywall.....	\$ 30.34	16.96
Paper Hanger.....	\$ 29.84	16.96
Stageman; Beltman;		
Steelman; Elevator Shaft;		
Bazooka, Boxes and Power		
Sander; Sprayman; Dipping...\$	30.96	16.96

Steeplejack.....\$ 35.53 16.96

PAIN0003-011 04/01/2011

BATES, BENTON, CALDWELL, CARROLL, COOPER, DAVIESS, GRUNDY, HARRISON, HENRY, LIVINGSTON, MERCER, MONITEAU, MORGAN, PETTIS & SALINE COUNTIES

Rates Fringes

Painters:

Bridgeman; Lead Abatement; Sandblast; Storage Bin & Tanks.....\$ 24.06 14.04 Brush & Roller.....\$ 22.67 14.04 Drywall.....\$ 22.84 14.04 Paper Hanger.....\$ 23.07 14.04 Stageman; Beltman; Steelman; Elevator Shaft; Bazooka, Boxes and Power Sander; Sprayman; Dipping...\$ 23.56 14.04 Steeplejack.....\$ 26.82 14.04

PAIN0203-001 04/01/2012

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, and WRIGHT COUNTIES

Rates Fringes

Painters:

Finisher.....\$ 20.18 11.33 Painter.....\$ 19.75 11.76 Sandblaster, High Man, Spray Man, Vinyl Hanger, Tool Operator.....\$ 21.18 11.33

PAIN1265-003 07/01/2013

CAMDEN, CRAWFORD, DENT, LACLEDE, MARIES, MILLER, PHELPS,
PULASKI AND TEXAS COUNTIES

Rates Fringes

Painters:

Brush and Roller.....	\$ 25.64	13.27
Floor Work.....	\$ 26.14	13.27
Lead Abatement.....	\$ 27.89	13.27
Spray.....	\$ 27.14	13.27
Structural Steel, Sandblasting and All Tank Work.....	\$ 26.89	13.27
Taping, Paperhanging.....	\$ 26.64	13.27

PAIN1292-002 09/01/2016

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN,
MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, REYNOLDS,
RIPLEY, SCOTT, SHANNON, STODDARD and WAYNE COUNTIES

Rates Fringes

Painters:

Bridges, Stacks & Tanks.....	\$ 30.85	11.64
Brush & Roller.....	\$ 25.35	11.64
Spray & Abrasive Blasting; Waterblasting (over 5000 PSI).....	\$ 28.95	11.64

Height Rates (All Areas):

Over 60 ft. \$0.50 per hour.
Under 60 ft. \$0.25 per hour.

PAIN1292-003 09/01/2017

IRON, MADISON, ST. FRANCOIS, STE. GENEVIEVE and WASHINGTON
COUNTIES

Rates Fringes

Painters:

Bridges, Stacks & Tanks.....	\$ 31.05	12.74
Brush & Roller.....	\$ 25.70	12.74
Spray & Abrasive Blasting; Waterblasting (Over 5000 PSI).....	\$ 28.70	12.74

Height Rates (All Areas):

Over 60 ft. \$0.50 per hour
Under 60 ft. \$0.25 per hour.

* PAIN2012-001 04/01/2019

ANDREW, ATCHISON, BUCHANAN, DE KALB, GENTRY, HOLT, NODAWAY &
WORTH COUNTIES

Rates Fringes

Painters:

Brush & Roller.....	\$ 31.26	17.26
Sandblaster.....	\$ 32.76	17.26
Steeplejack.....	\$ 36.33	17.26

PLA50518-006 03/01/2019

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,
HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK,
POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, AND WRIGHT
COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 24.30 11.61

PLAS0518-007 04/01/2019

CASS (Richards-Gebaur AFB only), CLAY, JACKSON, PLATTE AND RAY
COUNTIES

Rates Fringes

Cement Masons:.....\$ 32.32 17.89

PLAS0518-011 04/01/2019

ANDREW, ATCHISON, BATES, BUCHANNAN, CLINTON, DEKALB, GENTRY,
HENRY, HOLT, JOHNSON, LAFAYETTE, NODAWAY & WORTH COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 32.00 20.13

PLAS0527-001 04/01/2018

Rates Fringes

CEMENT MASON

FRANKLIN, LINCOLN AND

WARREN COUNTIES.....\$ 30.74 18.07

JEFFERSON, ST. CHARLES

COUNTIES AND ST. LOUIS

(City and County).....\$ 32.66 18.62

PLAS0527-004 06/01/2017

CRAWFORD, DENT, IRON, MADISON, MARION, PHELPS, PIKE, PULASKI,
RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SHANNON, TEXAS,
WASHINGTON COUNTIES

Rates Fringes

CEMENT MASON.....\$ 28.10 18.07

PLAS0908-001 05/01/2017

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, HOWELL,
MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, RIPLEY,
SCOTT, STODDARD, AND WAYNE COUNTIES

Rates Fringes

CEMENT MASON.....\$ 27.60 15.73

PLAS0908-005 05/01/2017

BENTON, CALDWELL, CALLAWAY, CAMDEN, CARROLL, COLE, DAVIESS,
GASCONADE, GRUNDY, HARRISON, LIVINGSTON, MACON, MARIES, MERCER,
MILLER, MONTGOMERY, MORGAN, OSAGE, PETTIS & SALINE COUNTIES

Rates Fringes

CEMENT MASON.....\$ 27.60 15.73

PLUM0008-003 06/01/2018

CASS, CLAY, JACKSON, JOHNSON, AND PLATTE COUNTIES

Rates Fringes

Plumbers.....\$ 45.34 21.39

PLUM0008-017 06/01/2018

BATES, BENTON, CARROLL, HENRY, LAFAYETTE, MORGAN, PETTIS, RAY,
ST. CLAIR, SALINE AND VERNON COUNTIES

Rates Fringes

Plumbers.....\$ 45.34 21.39

PLUM0045-003 08/01/2019

ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB,
GENTRY, HARRISON, HOLT, NODAWAY AND WORTH COUNTIES

Rates Fringes

Plumbers and Pipefitters.....\$ 37.75 23.65

PLUM0178-003 11/01/2018

BARRY, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,
HICKORY, LACLEDE, LAWRENCE, POLK, STONE, TANEY, WEBSTER AND
WRIGHT COUNTIES

Rates Fringes

Plumbers and Pipefitters.....\$ 30.90 15.35

PLUM0178-006 11/01/2018

BARTON, JASPER, MCDONALD AND NEWTON COUNTIES

Rates Fringes

Plumbers and Pipefitters

Projects \$750,000 & under...\$ 27.93 15.35

Projects over \$750,000.....\$ 30.90 15.35

PLUM0533-004 06/01/2019

BATES, BENTON, CARROLL, CASS, CLAY, HENRY, HICKORY, JACKSON,
JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY, SALINE, ST.
CLAIR AND VERNON COUNTIES

Rates Fringes

Pipefitters.....\$ 46.68 22.55

PLUM0562-004 07/01/2019

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY,CAMDEN, CAPE
GIRARDEAU,CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD,
DENT, DUNKLIN, FRANKLIN, GASCONADE, GRUNDY, HOWARD, HOWELL,
IRON, JEFFERSON, KNOX, LEWIS, LINCOLN, LINN, LIVINGSTON, MACON,
MADISON, MARIES, MARION, MERCER, MILLER, MISSISSIPPI, MONITEAU,
MONROE, MONTGOMERY, NEW MADRID, OREGON, OSAGE, PEMISCOTT,
PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH,
REYNOLDS, RIPLEY, ST. CHARLES, ST.FRANCOIS, STE. GENEVIEVE, ST.
LOUIS, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD,
SULLIVAN, TEXAS, WARREN, WASHINGTON,AND WAYNE COUNTIES.

Rates Fringes

Plumbers and Pipefitters

Mechanical Contracts

including all piping and
temperature control work

\$7.0 million & under.....\$ 40.41 21.49

Mechanical Contracts

including all piping and
temperature control work

over \$7.0 million.....\$ 41.85 27.85

PLUM0562-016 07/01/2019

CAMDEN, COLE, CRAWFORD, FRANKLIN, JEFFERSON, MARIES, MILLER,
MONITEAU, OSAGE, PHELPS, PULASKI, ST. CHARLES, ST. LOUIS (City
and County), WARREN and WASHINGTON COUNTIES

Rates Fringes

Plumbers

Mechanical Contracts

including all piping and

temperature control work
 \$7.0 million & under.....\$ 40.41 21.49
 Mechanical Contracts
 including all piping and
 temperature control work
 over \$7.0 million.....\$ 41.85 27.85

TEAM0013-001 05/01/2019

Rates Fringes

Truck drivers (ADAIR, BUTLER,
 CLARK, DUNKIN, HOWELL, KNOX,
 LEWIS, OREGON, PUTNAM,
 RIPLEY, SCHUYLER AND SCOTLAND
 COUNTIES)

GROUP 1.....	\$ 30.34	13.75
GROUP 2.....	\$ 30.49	13.75
GROUP 3.....	\$ 30.61	13.75
GROUP 4.....	\$ 30.50	13.75

Truck drivers (AUDRAIN,
 BOLLINGER, BOONE, CALLAWAY,
 CAPE GIRARDEAU, CARTER, COLE,
 CRAWFORD, DENT, GASCONADE,
 IRON, MACON, MADISON, MARIES,
 MARION, MILLER, MISSISSIPPI,
 MONROE, MONTGOMERY, NEW
 MADRID, OSAGE, PEMISCOT,
 PERRY, PHELPS, PIKE, PULASKI,
 RALLS, REYNOLDS, ST.
 FRANCOIS, STE. GENEVIEVE,
 SCOTT, SHANNON, SHELBY,
 STODDARD, TEXAS, WASHINGTON
 AND WAYNE COUNTIES)

GROUP 1.....	\$ 31.07	13.75
GROUP 2.....	\$ 31.22	13.75
GROUP 3.....	\$ 31.34	13.75
GROUP 4.....	\$ 31.23	13.75

Truck drivers (FRANKLIN,
 JEFFERSON and ST. CHARLES
 COUNTIES)

GROUP 1.....	\$ 33.43	13.75
GROUP 2.....	\$ 33.58	13.75
GROUP 3.....	\$ 33.65	13.75
GROUP 4.....	\$ 33.54	13.75

Truck drivers (LINCOLN and WARREN COUNTIES)

GROUP 1.....	\$ 32.08	13.75
GROUP 2.....	\$ 33.23	13.75
GROUP 3.....	\$ 32.30	13.75
GROUP 4.....	\$ 32.19	13.75

TRUCK DRIVERS CLASSIFICATIONS:

GROUP 1: Flat Bed Trucks, Single Axle; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon, Single Axle

GROUP 2: Agitator and Transit Mix Trucks

GROUP 3: Flat Bed Trucks, Tandem Axle; Articulated Dump Trucks; Material Trucks, Tandem Axle; Tank Wagon, Tandem Axle

GROUP 4: Semi and/or Pole Trailers; Winch, Fork & Steel Trucks; Distributor Drivers and Operators; Tank Wagon, Semi-Trailer; Insley Wagons, Dumpsters, Half-Tracks, Speedace, Euclids and other similar equipment; A-Frame and Derrick Trucks; Float or Low Boy

TEAM0056-001 05/01/2019

Rates Fringes

Truck drivers (ANDREW, BARTON, BATES, BENTON, CALDWELL, CAMDEN, CARROLL, CEDAR, CHARITON, CHRISTIAN, CLINTON, COOPER, DADE, DALLAS, DAVIESS, DEKALB, DOUGLAS, GREENE, HENRY,

HICKORY, HOWARD, JASPER,
LACLEDE, LAWRENCE, LINN,
LIVINGSTON, MONITEAU, MORGAN,
NEWTON, PETTIS, POLK,
RANDOLPH, ST. CLAIR, SALINE,
VERNON, WEBSTER AND WRIGHT

COUNTIES)

GROUP 1.....	\$ 30.77	13.75
GROUP 2.....	\$ 30.92	13.75
GROUP 3.....	\$ 31.04	13.75
GROUP 4.....	\$ 30.93	13.75

Truck drivers: (ATCHISON,
BARRY, GENTRY, GRUNDY,
HARRISON, HOLT, MCDONALD,
MERCER, NODAWAY, OZARK,
STONE, SULLIVAN, TANEY AND
WORTH COUNTIES)

GROUP 1.....	\$ 30.04	13.75
GROUP 2.....	\$ 30.19	13.75
GROUP 3.....	\$ 30.31	13.75
GROUP 4.....	\$ 30.20	13.75

Truck drivers; (BUCHANAN,
JOHNSON AND LAFAYETTE

COUNTIES)

GROUP 1.....	\$ 31.98	13.75
GROUP 2.....	\$ 32.13	13.75
GROUP 3.....	\$ 32.20	13.75
GROUP 4.....	\$ 32.09	13.75

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Flat bed trucks single axle; station wagons; pickup
trucks; material trucks single axle; tank wagons single
axle.

GROUP 2: Agitator and transit mix-trucks.

GROUP 3: Flat bed trucks tandem axle; articulated dump
trucks; material trucks tandem axle; tank wagons tandem
axle.

GROUP 4: Semi and/or pole trailers; winch, fork & steel trucks; distributor drivers & operators; tank wagons semi-trailer; insley wagons, dumpsters, half-tracks, speedace, euclids & other similar equipment; A-frames and derrick trucks; float or low boy.

TEAM0245-001 03/26/2012

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DALLAS, DENT, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LACLEDE, LAWRENCE, MCDONALD, MILLER, NEWTON, OZARK, PHELPS, POLK, PULASKI, SHANNON, STONE, TANEY, TEXAS, VERNON, WEBSTER AND WRIGHT COUNTIES

Rates Fringes

Truck drivers:

Traffic Control Service

Driver.....\$ 20.45 0.00

PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, employee's birthday and 2 personal days.

TEAM0541-001 04/01/2019

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

Rates Fringes

Truck drivers:

GROUP 1.....\$ 33.01 15.75

GROUP 2.....\$ 32.44 15.75

GROUP 3.....\$ 31.92 15.75

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Mechanics and Welders, Field; A-Frame Low Boy-Boom ruck Driver.

GROUP 2: Articulated Dump Truck; Insley Wagons: Dump Trucks, Excavating, 5 cu yds and over; Dumpsters; Half-Tracks: Speedace: Euclids & similar excavating equipment Material trucks, Tandem Two teams; Semi-Trailers; Winch trucks-Fork trucks; Distributor Drivers and Operators; Agitator and Transit Mix; Tank Wagon Drivers, Tandem or Semi; One Team; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon Drivers, Single Axle

GROUP 3: Oilers and Greasers - Field

TEAM0682-002 05/01/2017

ST LOUIS CITY AND COUNTY

Rates Fringes

Truck drivers:

GROUP 1.....	\$ 33.30	13.79+a+b+c+d
GROUP 2.....	\$ 33.50	13.79+a+b+c+d
GROUP 3.....	\$ 33.60	13.79+a+b+c+d

a. PENSION: 5/1/2012 - \$182.20 per week.

b. HAZMAT PREMIUM: If Hazmat certification on a job site is required by a state or federal agency or requested by project owner or by the employer, employees on that job site shall receive \$1.50 premium pay.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Pick-up trucks; forklift, single axle; flatbed trucks; job site ambulance, and trucks or trailers of a water level capacity of 11.99 cu. yds. or less

GROUP 2 - Trucks or trailers of a water level capacity of 12.0 cu yds. up to 22.0 cu yds. including euclids, speedace and similar equipment of same capacity and compressors

GROUP 3 - Trucks or trailers of a water level capacity of 22.0 cu. yds & over including euclids, speedace & all floats, flatbed trailers, boom trucks, winch trucks, including small trailers, farm wagons tilt-top trailers, field offices, tool trailers, concrete pumps, concrete conveyors & gasoline tank trailers and truck mounted mobile concrete mixers

FOOTNOTE FOR TRUCK DRIVERS:

c. PAID HOLIDAYS: Christmas Day, Independence Day, Labor Day, Memorial Day, Veterans Day, New Years Day, Thanksgiving Day

d. PAID VACATION: 3 days paid vacation for 600 hours of service in any one contract year; 4 days paid vacation for 800 hours of service in any one contract year; 5 days paid vacation for 1,000 hours of service in any one contract year. When such an employee has completed 3 years of continuous employment with the same employer and then works the above required number of hours, he shall receive double the number of days of vacation specified above. When such an employee has completed 10 years of continuous employment with the same employer and then works the above required number of hours, he shall receive triple the number of days of vacation specified above. When such an employee has completed 15 years of continuous employment with the same employer and then works the above required number of hours, he shall receive 4 times the number of days of vacation specified above.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any

solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example:
PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this

classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the w

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

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CULTURAL RESOURCE ASSESSMENT Section 106 Review

CONTACT PERSON/ADDRESS

C:

Tom Sanders
Director of Public Works
101 West Reed Street
Moberly, Missouri 65270

Raegan Ball, FHWA
Roopa Banerjee, FHWA
Michael Meinkoth, MoDOT

PROJECT:

Morley Street Sidewalk Project STP-4500(207), Moberly

FEDERAL AGENCY

COUNTY:

FHWA

RANDOLPH

The State Historic Preservation Office has reviewed the information submitted on the above referenced project. Based on this review, we have made the following determination:

- After review of initial submission, the project area has a low potential for the occurrence of cultural resources. A cultural resource survey, therefore, is not warranted.
- Adequate documentation has been provided (36 CFR Section 800.11). There will be "no historic properties affected" by the current project.
- An adequate cultural resource survey of the project area has been previously conducted. It has been determined that for the proposed undertaking there will be "no historic properties affected".

For the above checked reason, the State Historic Preservation Office has no objection to the initiation of project activities. PLEASE BE ADVISED THAT, IF THE CURRENT PROJECT AREA OR SCOPE OF WORK ARE CHANGED, A BORROW AREA IS INCLUDED IN THE PROJECT, OR CULTURAL MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, APPROPRIATE INFORMATION MUST BE PROVIDED TO THIS OFFICE FOR FURTHER REVIEW AND COMMENT. Please retain this documentation as evidence of compliance with Section 106 of the National Historic Preservation Act, as amended.

By: Toni M. Pawl, Ph.D., Deputy State Historic Preservation Officer

September 29, 2016
Date

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
P.O. Box 176, Jefferson City, Missouri 65102

For additional information, please contact Judith Deel, (573) 751-7862. Please be sure to refer to the project number:

014-RN-16

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FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION

Application No.: 001 Date: September 14, 2016

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in the Special Flood Hazard Area (SFHA) or "floodplain." The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be in accordance with the requirements of the Floodplain Management Ordinance and with all other applicable county/city ordinances, federal programs, and the laws and regulations of the State of Missouri.

City of Moberly 9/14/2016 N/A
Owner or Agent Date Builder
101 West Reed Street, Moberly, MO 65270 N/A
Address Address
(660)269-8705 N/A
Telephone Number Telephone Number

SITE DATA

1. Location: SE 1/4; SW 1/4; Section 36; Township 54N; Range 14W
Street Address: 669 N Morley St
2. Type of Development: Filling, Grading, Excavation, Minimum Improvement, Routine Maintenance, Substantial Improvement, New Construction, Other
3. Description of Development: Existing sidewalks to be replaced with ADA approved sidewalks, and new sidewalk to be constructed where no sidewalk exists. Enhancements to commercial and residential driveways, along with roadway surface improvements at adjoining side streets will be made.
4. Premises: Structure Size N/A ft. By N/A ft. Area of Site N/A Sq. Ft.
Principal Use: N/A Accessory Uses (storage, parking, etc.): N/A
5. Value of Improvement (fair market): \$ N/A Pre-Improvement/Assessed Value of Structure: \$ N/A
6. Is the Property Located in a Designated FLOODWAY? Yes No
IF ANSWERED YES, CERTIFICATION MUST BE PROVIDED PRIOR TO THE ISSUANCE OF A PERMIT TO DEVELOP, THAT THE PROPOSED DEVELOPMENT WILL RESULT IN NO INCREASE IN THE BASE (1%) FLOOD ELEVATIONS.
7. Is the Property Located in a Designated Floodplain FRINGE or a Floodplain (SFHA) without a Designated FLOODWAY? Yes No
8. Elevation of the 1% Base Flood (ID source) 854.7 feet (LOMA 15-07-2289A) NGVD/NAVD
9. Elevation of the Proposed Development Site 853.5 feet NGVD/NAVD
10. Community Ordinance Elevation/Floodproofing Requirement N/A NGVD/NAVD
11. NFIP Flood Insurance Rate Map Panel(s) Number(s) 2903050001 B
12. Other Permits Required? Corps of Engineer 404 Permit: Yes No Provided
State Department of Natural Resources 401 Permit: Yes No Provided
Environmental Protection Agency NPDES Permit: Yes No Provided

All Provisions of Ordinance Number, the "Floodplain Management Ordinance", shall be in Compliance.

PERMIT APPROVAL/DENIAL

Plans and Specifications Approved/Denied this 20 Day of January, 20 17

Signature of Property Owner or Agent
Print Name and Title
Rick Ridgway Floodplain Administrator
City of Moberly

THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED FOOT/FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED FOOT/FEET ABOVE THE BASE FLOOD ELEVATION.

THIS PERMIT IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY IMPROVED BUILDING COVERED BY THIS PERMIT.

(MISSOURI) August 1, 2015

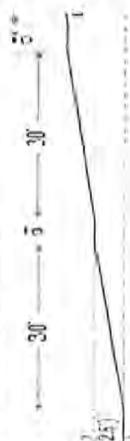
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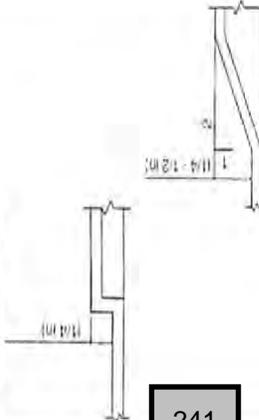
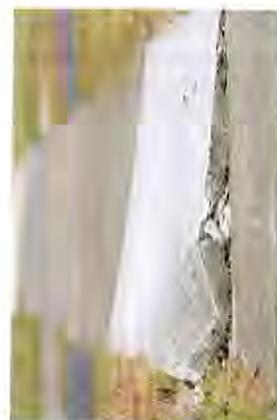
ADA CHECKLIST

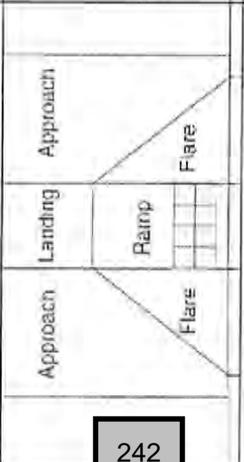
Revised April 22, 2015

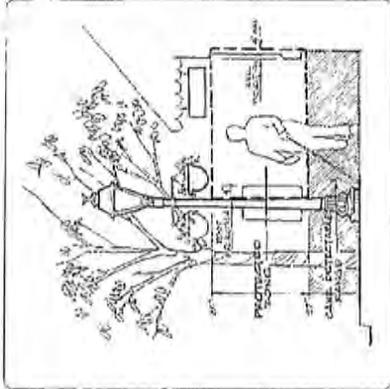
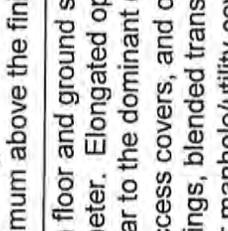
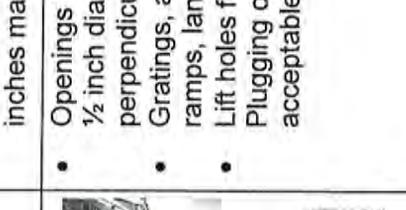
Job No. _____ Route _____ County _____ Location _____

Pedestrian Access Route (PROWAG R204)		YES	NO	NA
<p>Figures/Examples</p> <p>Sidewalk Width</p> 	<p>Requirements¹</p> <ul style="list-style-type: none"> The minimum continuous and unobstructed clear width of a pedestrian access route shall be 4.0 feet, exclusive of the width of the curb. The continuous clear width of pedestrian access routes for medians and pedestrian refuge islands must be 5 feet minimum in order to allow for passing space. MoDOT Sidewalks shall be 5 feet wide minimum.² MoDOT Sidewalks located within 2 feet of the back of curb are to be constructed 6 feet wide minimum and constructed adjacent to the back of the curb.² Exception: an unaltered, existing sidewalk shall be 3 feet wide minimum and shall provide 5 foot x 5 foot passing spaces at intervals of 200 feet maximum.² Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street. Where commercial driveways are provided with traffic control devices or otherwise are permitted to operate like public streets, detectable warnings should be provided at the junction between the pedestrian route and the street. Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route. Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush. 			
<p>Passing Spaces</p>	<ul style="list-style-type: none"> Walkways in pedestrian access routes that are less than 5 feet in clear width shall provide passing spaces at intervals of 200 feet maximum. Pedestrian access routes at passing spaces shall be 5 feet wide for a distance of 5 feet. 			
<p>Sidewalk Running Slope</p> <p>The grade that is parallel to the direction of travel, expressed as a ratio of rise to run or as a percent.</p>	<ul style="list-style-type: none"> The running slope of a pedestrian access route shall be 5 percent maximum. <p>Roadway Grade Exception: Where pedestrian access routes are contained within a street or highway right-of-way, the grade of the pedestrian access route is permitted to equal the general grade established for the adjacent street or highway.</p> <ul style="list-style-type: none"> Running Slopes shall be measured using a calibrated 2 foot long digital level. 			

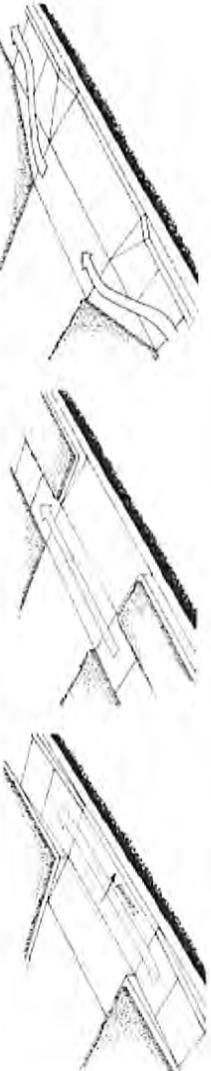
Figures/Examples	Requirements ¹	YES	NO	NA
<p>Sidewalk Cross Slope The grade that is perpendicular to the direction of accessible pedestrian travel, measured perpendicular to the curb line or edge of the street or highway, or measured perpendicular to the running grade.</p> <p>Sidewalk Ramps For example, a ramp segment with the maximum allowed running slope of 8.33% would require 5' x 5' landing after every 30' of run.</p> 	<ul style="list-style-type: none"> The cross slope of the walkway of a pedestrian access route shall be 2 percent maximum. (Roadway Grade Exception may be considered) 2010 ADA/ABA allows for cross slopes of up to ¼ inch per foot (2.08 percent). In either case, a cross slope measurement of 2.1 percent or greater is not ADA compliant. Cross Slopes shall be measured using a calibrated 2 foot long digital level. A sidewalk segment (not contained within a street or highway border) with a running grade in excess of 5 percent but less than 8.33 percent is by definition a sidewalk ramp. The clear width of landings, blended transitions, and curb ramps, excluding flares, shall be 4.0 feet minimum. Cross slope of ramp runs shall be 2 percent maximum. The rise for any ramp run shall be 30 inches maximum. Ramps shall have landings at the top and the bottom of each ramp run. Ramp runs with a rise greater than 6 inches shall have handrails. Handrails shall be provided on both sides of stairs and ramps. Edge protection shall be provided on each side of ramp runs. Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street. Gratings, access covers, and other appurtenances shall not be located on ramps, landings, blended transitions, and gutters within the pedestrian access route. Grade breaks shall not be permitted on the surface of ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush. 			

Requirements 1		YES	NO	NA
<p>Figures/Examples</p> <p>Vertical Alignment</p>	<p>Vertical Alignment</p> <ul style="list-style-type: none"> Vertical alignment shall be planar within curb ramp runs, blended transitions, landings, and gutter areas within the pedestrian access route, and within clear spaces required for accessible pedestrian signals, street furniture, and operable parts. Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Grade breaks shall be flush. Running Slopes and Cross Slopes shall be measured using a calibrated 2 foot long digital level. Where the pedestrian access route crosses rail tracks at grade, the surface of the pedestrian access route shall be level and flush with the top of the rail at the outer edges of the rail. The surface between the rails shall be aligned with the top of the rail. 			
<p>Changes in Level</p>  	<ul style="list-style-type: none"> Changes in level at grade breaks shall be flush. Changes in level of 1/4 inch high maximum shall be permitted to be vertical. Changes in level between 1/4 inch high maximum and 1/2 inch high maximum shall be beveled with a slope not steeper than 1v:2h. The bevel shall be applied across the entire level change. Changes in level greater than 1/2 inch high shall be ramp grade or flatter, a slope of 8.33 percent or less. 			

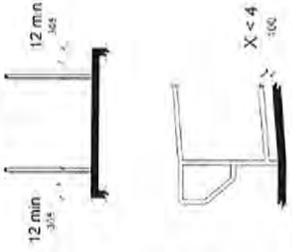
	Requirements ¹	YES	NO	NA
<p>Figures/Examples</p> <p>Landing A required level space required at both ends of a ramp. An area 5' x 5' with no slope greater than 2 percent. This space can be used as a place to rest, turn or pass another user.</p> <p>Landings that are contained within a street or highway border are permitted to use the Roadway Grade Exception for running slopes or cross slopes in the direction of the roadway travel being matched.</p>  <p>The diagram shows a cross-section of a roadway. From left to right, it is divided into sections: 'Approach', 'Landing', 'Ramp', 'Flare', and 'Gutter'. The 'Landing' is a flat rectangular area. The 'Ramp' is a sloped area. The 'Flare' is a sloped area on both sides of the ramp. The 'Gutter' is a horizontal line at the bottom.</p>	<ul style="list-style-type: none"> • The landing clear width shall be at least as wide as the widest ramp run leading to the landing. • The clear width of landings, blended transitions, and curb ramps, excluding flares, shall be 4 feet minimum. • The landing clear length shall be 5 feet long minimum. • Landing slopes shall be 2 percent maximum. • Changes in level at grade breaks shall be flush. • Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street. Detectable warning shall be located on the landing or blended transition at the back of curb. • Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route. • Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush. <p>Roadway Grade Exception: The grade of pedestrian access routes within sidewalks is permitted to equal the general grade established for the adjacent street or highway. The cross slope of curb ramps, blended transitions, landings, and turning spaces at pedestrian street crossings without yield or stop control where vehicles can proceed through the intersection without slowing or stopping, and at midblock pedestrian street crossings are permitted to equal the street or highway grade.</p> <ul style="list-style-type: none"> • Running Slopes and Cross Slopes shall be measured using a calibrated 2 foot long digital level. 			

Figures/Examples	Requirements ¹	YES	NO	NA
 	<ul style="list-style-type: none"> • Protruding objects on sidewalks and other pedestrian circulation paths shall not reduce the clear width required for pedestrian accessible routes. • Objects with leading edges more than 27 inches and not more than 80 inches above the finish floor or ground shall protrude 4 inches maximum horizontally into the circulation path. • Free-standing objects mounted on posts or pylons shall overhang circulation paths 4 inches maximum measured horizontally from the post or pylon base when located 27 inches minimum and 80 inches maximum above the finish floor or ground. The base dimension shall be 2.5 inches thick minimum. (2011 PROWAG R402.3) • Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches, the lowest edge of such sign or obstruction shall be 27 inches maximum or 80 inches minimum above the finish floor or ground. • Vertical clearance shall be 80 inches high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches high. The leading edge of such guardrail or barrier shall be located 27 inches maximum above the finish floor or ground. • Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches high. The leading edge of such guardrail or barrier shall be located 27 inches maximum above the finish surface or ground. • Openings in floor and ground surfaces shall not allow passage of a sphere more than 1/2 inch diameter. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel. • Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route. • Lift holes for manhole/utility covers shall not have an opening greater than 1/2 inch. Plugging of holes greater than 1/2 inch with a material approved by the engineer is acceptable as long as it complies with the changes in level requirements. 			
  <p>Wrong Installation</p>				

ENTRANCES (PROWAG R301)

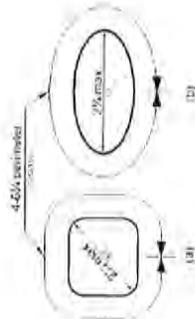
		YES	NO	NA
<p>Figures/Examples</p> 	<p>Requirements¹</p> <ul style="list-style-type: none"> The minimum continuous and unobstructed clear width of a pedestrian access route provided across commercial and residential entrances shall be 4 feet minimum. Cross slope shall be 2 percent maximum. Be cautious with the transition from the driveway to the roadway to avoid grade combinations that will cause vehicles to bottom out when driving over the transition.² 			

EDGE PROTECTION (PROWAG R406.8)

		YES	NO	NA
<p>Figures/Examples</p> 	<p>Requirements¹</p> <ul style="list-style-type: none"> Edge protection shall be provided on each side of ramp runs and at each side of ramp landings. A curb or barrier shall be provided that prevents the passage of a 4 inch diameter sphere, where any portion of the sphere is within 4 inches of the finish floor or ground surface. Edge-protection shall not be required when the floor or ground surface of the ramp run or landing extends 12 inches minimum beyond the inside face of a handrail. Edge protection shall not be required on curb ramps and their landings. Edge protection shall not be required on ramps that are not required to have handrails and have flares not steeper than 1:10. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2 inch maximum within 10 inches horizontally of the minimum landing area. 			

HANDRAIL AND PEDESTRIAN GUARDRAIL (PROWAG R408)

Figures/Examples



Requirements 1

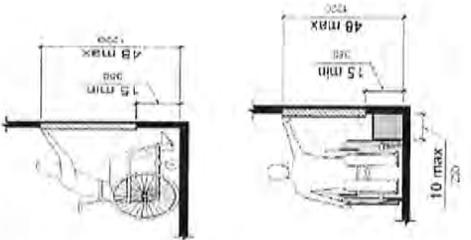
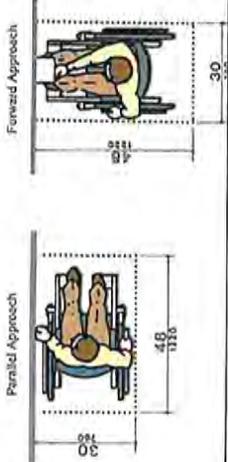
- The clear width of walking surfaces shall be 4.0 feet minimum.
- Handrails are required on ramp runs with a rise greater than 6 inches and on certain stairways. Handrails are not required on walking surfaces with running slopes less than 1:20. Where required, handrails shall be provided on both sides of stairs and ramps.
- Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs and ramps shall be continuous between flights or runs.
- Top of gripping surfaces of handrails shall be 34 inches minimum and 38 inches maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.
- Clearance between handrail gripping surfaces and adjacent surfaces shall be 1 1/2 inches minimum.
- Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1 1/4 inches minimum and 2 inches maximum.
- Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 inches minimum and 6 1/4 inches maximum, and a cross-section dimension of 2 1/4 inches maximum.
- Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive elements and shall have rounded edges.
- Handrails shall not rotate within their fittings.
- Ramp handrails shall extend horizontally above the landing for 12 inches minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent ramp run.
- At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.
- At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing. Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.
- See Edge Protection section above (also PROWAG 406.8) for additional details.

YES

NO

NA

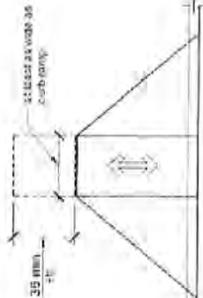
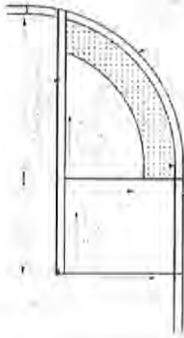
STAIRWAYS (PROWAG R407)				
Requirements ¹		YES	NO	NA
<p>Figures/Examples</p> 	<ul style="list-style-type: none"> All steps on a flight of stairs shall have uniform riser heights and uniform tread depths. Risers shall be 4 inches high minimum and 7 inches high maximum. Treads shall be 11 inches deep minimum. Open risers are not permitted. The radius of curvature at the leading edge of the tread shall be 1/2 inch maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall extend 1 1/2 inches maximum over the tread below. Stairs shall have handrails complying with PROWAG 2005 R408. 			

UNOBSTRUCTED REACH RANGES (PROWAG R404)				
Requirements ¹		YES	NO	NA
<p>Figures/Examples</p> 	<p>Forward Reach</p> <ul style="list-style-type: none"> Where a forward reach is unobstructed, the high forward reach shall be 48 inches maximum and the low forward reach shall be 15 inches minimum above the finish floor or ground. <p>Side Reach</p> <ul style="list-style-type: none"> Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches maximum and the low side reach shall be 15 inches minimum above the finish floor or ground. EXCEPTION: An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches maximum. (2011 PROWAG R406.3) 			
				

CURB RAMPS (PROWAG R303)

Figures/Examples

A curb ramp, blended transition, or a combination of curb ramps and blended transitions shall connect the pedestrian access routes at each pedestrian street crossing.



15 Foot Rule: For a compliant curb ramp to exceed 8.33 percent running grade, its constructed length must exceed 15.0 feet.

Requirements 1

- The clear width of ramps, excluding the flares, shall be 4.0 feet minimum.
 - Ramp runs shall have a running slope between 5 percent minimum and 8.33 percent maximum but shall not require the ramp length to exceed 15.0 feet.
- Exception: 15 Foot Rule:** The running slope for a curb ramp is not limited to 8.33 percent maximum if the constructed curb ramp length exceeds 15 feet in length.
- Cross slope of ramp runs shall be 2 percent maximum. (Roadway Grade Exception may be considered)
 - The cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.
 - Ramps shall have landings at the top and the bottom of each ramp run.
 - The landing clear width shall be at least as wide as the widest ramp run leading to the landing.
 - The landing clear length shall be 5.0 feet long minimum.
 - Ramps that change direction between runs at landings shall have a clear landing 5.0 feet minimum by 5.0 feet minimum.
 - Handrails and Edge protection shall not be required on curb ramps and their landings.
 - Curb height = 0 inches within curb ramp spaces. 2
 - Curb ramps must be flush with street.
 - The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transition shall be 5 percent maximum. (R303.3.5)
 - The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
 - Flared sides with a slope of 10 percent maximum, measured parallel to the curb line, shall be provided where a pedestrian circulation path crosses the curb ramp.
 - In alterations, where there is no landing at the top of curb ramps, curb ramp flares shall be provided and shall not be steeper than 1:12.
 - Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street.
 - Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route.
 - Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.
 - Grade Breaks at the top and bottom of curb ramp runs shall be perpendicular to the direction of the ramp run.

YES NO NA

Figures/Examples

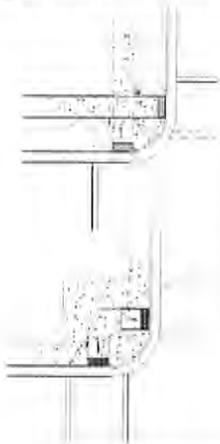
Requirements 1

YES NO NA

- Perpendicular curb ramps shall have a running slope that cuts through or is built up to the curb at right angles or meets the gutter grade break at right angles.
- The clear width of landings, blended transitions, and curb ramps, excluding flares, shall be 4.0 feet minimum.
- The running slope shall be 5 percent minimum and 8.33 percent maximum but shall not require the ramp length to exceed 15.0 feet.
- The cross slope at intersections shall be 2 percent maximum. (Roadway Grade Exception may be considered)
- The cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.

Roadway Grade Exception: The grade of pedestrian access routes within sidewalks is permitted to equal the general grade established for the adjacent street or highway. The cross slope of curb ramps, blended transitions, landings, and turning spaces at pedestrian street crossings without yield or stop control where vehicles can proceed through the intersection without slowing or stopping, and at midblock pedestrian street crossings are permitted to equal the street or highway grade.

- A landing 4.0 feet minimum by 4.0 feet minimum shall be provided at the top of the curb ramp and shall be permitted to overlap other landings and clear space.
- Flared sides with a slope of 10 percent maximum, measured parallel to the curb line, shall be provided where a pedestrian circulation path crosses the curb ramp.
- If the flared sides are not in the pathway (grass next to ramp), then there is no maximum slope and can be vertical curbs. (See adjacent figure for further explanation.)
- Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street.
- Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route.
- Grade breaks at the top and bottom of perpendicular curb ramps shall be perpendicular to the direction of ramp run. At least one end of the bottom grade break shall be at the back of curb.
- Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.
- Where both ends of the bottom grade break are 5.0 feet or less from the back of curb, the detectable warning shall be located on the ramp surface at the bottom grade break. Where either end of the bottom grade break is more than 5.0 feet from the back of curb, the detectable warning shall be located on the lower landing.



Perpendicular Ramps

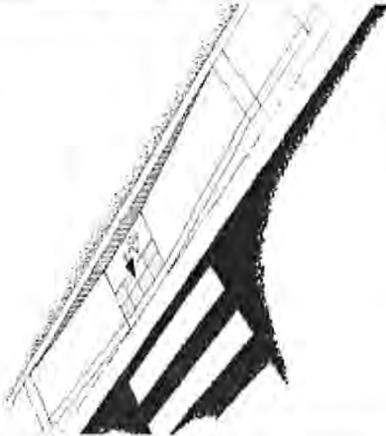


Flared Sides in Pathway
Flared Sides in Pathway

Roadway Grade Exception:

Where curb ramps, landings and blended transitions are contained within a street or highway right-of-way, the grade of the pedestrian access route is permitted to be modified to equal the general grade established for the adjacent street or highway.

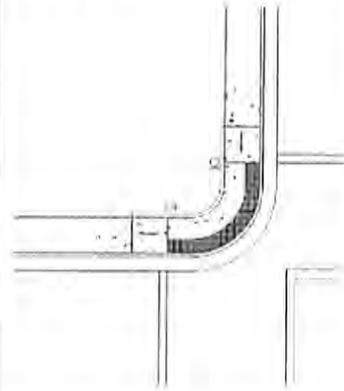
Figures/Examples



Curb Ramps and landings that are contained within a street or highway border may use the Roadway Grade Exception for slopes or cross slopes in the direction of the roadway travel if matched.

Requirements 1

- **Parallel curb ramps** shall have a running slope that is in-line with the direction of sidewalk travel.
 - The clear width of landings, blended transitions, and curb ramps, excluding flares, shall be 4.0 feet minimum.
 - The running slope shall be 5 percent minimum and 8.33 percent maximum but shall not require the ramp length to exceed 15.0 feet.
 - The cross slope shall be 2 percent maximum. (Roadway Grade Exception may be considered)
- Roadway Grade Exception:** The grade of pedestrian access routes within sidewalks is permitted to equal the general grade established for the adjacent street or highway. The cross slope of curb ramps, blended transitions, landings, and turning spaces at pedestrian street crossings without yield or stop control where vehicles can proceed through the intersection without slowing or stopping, and at midblock pedestrian street crossings are permitted to equal the street or highway grade.
- A landing 4.0 feet minimum by 4.0 feet minimum shall be provided at the bottom of the ramp run and shall be permitted to overlap other landings and clear floor or ground space.
 - Where a parallel curb ramp does not occupy the entire width of a sidewalk, drop-offs at diverging segments shall be protected.
 - Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street.
 - Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route.
 - Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.
 - **Blended Transitions** shall have a running slope of 5 percent maximum and cross slope shall be 2 percent maximum.
 - The clear width blended transitions, excluding flares, shall be 4.0 feet minimum.
 - Detectable warning surfaces shall be provided where a blended transition connects to a street.
 - Gratings, access covers, and other appurtenances shall not be located on blended transitions within the pedestrian access route.
 - Grade breaks at the top and bottom of perpendicular curb ramps shall be perpendicular to the direction of ramp run. At least one end of the bottom grade break shall be at the back of curb. Grade breaks shall not be permitted on the surface of blended transitions and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.



YES

NO

NA

Figures/Examples



Requirements 1

- Diagonal Curb Ramps or corner type curb ramps are no longer preferred design types. A design that provides individual ramps for each crossing direction is recommended by the US Access Board.
 - Diagonal Curb Ramps or corner type curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow.
 - The bottom of diagonal curb ramps shall have a clear space 48 inches minimum outside active traffic lanes of the roadway.
 - Diagonal curb ramps provided at marked crossings shall provide the 48 inches minimum clear space within the markings.
 - Diagonal curb ramps with flared sides shall have a segment of curb 24 inches long minimum located on each side of the curb ramp and within the marked crossing.
- Roadway Grade Exception:** The grade of pedestrian access routes within sidewalks is permitted to equal the general grade established for the adjacent street or highway. The cross slope of curb ramps, blended transitions, landings, and turning spaces at pedestrian street crossings without yield or stop control where vehicles can proceed through the intersection without slowing or stopping, and at midblock pedestrian street crossings are permitted to equal the street or highway grade.
- Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street.
 - Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route.
 - Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.
 - Running and cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.

YES

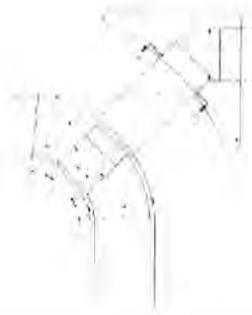
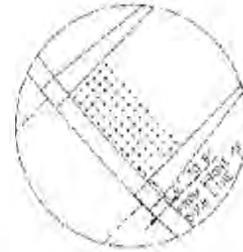
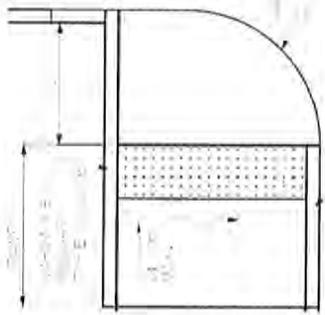
NO

NA

DETECTABLE WARNINGS DEVICES (TRUNCATED DOMES) (PROWAG R304)

Figures/Examples

A surface feature of truncated dome material built in or applied to the walking surface to advise of an upcoming change from pedestrian to vehicular way.



Requirements¹

- Detectable warnings shall consist of a surface of truncated domes aligned in a square or radial grid pattern complying with 2010 ADA Standards. Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or walkway surfaces, either light-on-dark or dark-on-light.
- Detectable warning surfaces shall extend 24 inches minimum in the direction of travel and the full width of the curb ramp (exclusive of flares), the landing, or the blended transition. Detectable warning surfaces are required where curb ramps, blended transitions, or landings provide a flush pedestrian connection to the street.
- Sidewalk crossings of residential driveways should not generally be provided with detectable warnings, since the pedestrian right-of-way continues across most driveway aprons and overuse of detectable warning surfaces should be avoided in the interests of message clarity. However, where commercial driveways are provided with traffic control devices or otherwise are permitted to operate like public streets, detectable warnings should be provided at the junction between the pedestrian route and the street.
- Perpendicular Curb Ramps: Where both ends of the bottom grade break are 5 feet or less from the back of curb, the detectable warning shall be located on the ramp surface at the bottom grade break. Where either end of the bottom grade break is more than 5 feet from the back of curb, the detectable warning shall be located on the lower landing.
- Landings and Blended Transitions: The detectable warning shall be located on the landing or blended transition at the back of curb.
- Rail Crossings: The detectable warning surface shall be located so that the edge nearest the rail crossing is 6 feet minimum and 15 feet maximum from the centerline of the nearest rail. The rows of truncated domes in a detectable warning surface shall be aligned to be parallel with the direction of wheelchair travel.
- Detectable warnings at cut-through islands shall be located at the curb line in-line with the face of curb and shall be separated by a 2.0 foot minimum length of walkway without detectable warnings. Where the island has no curb, the detectable warning shall be located at the edge of roadway.
- Exception, when detectable warnings are required by a manufacturer's installation specifications to be embedded into concrete with a surrounding edge, domes may be installed at less than the required full width. Under this exception, the detectable warning surface shall never be more than 2 inches from the edge of the curb ramp, the landing, or the blended transition.²
- Detectable warnings shall not be stamped into concrete.

YES NO NA

ISLANDS AND MEDIANS (PROWAG R305.4)

Requirements ¹

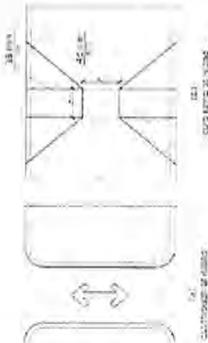
Figures/Examples

YES NO NA

- Medians and pedestrian refuge islands in crosswalks shall contain a pedestrian access route, including passing space and connecting to each crosswalk.
- Raised islands in crossings shall be cut through level with the street or have curb ramps and required landings at both sides.
- All median island passage spaces shall provide a clear width of 5 feet minimum. ²
- Medians and pedestrian refuge islands shall be 6.0 feet minimum in length in the direction of pedestrian travel.

Roadway Grade Exception: The grade of pedestrian access routes within sidewalks is permitted to equal the general grade established for the adjacent street or highway. The cross slope of curb ramps, blended transitions, landings, and turning spaces at pedestrian street crossings without yield or stop control where vehicles can proceed through the intersection without slowing or stopping, and at midblock pedestrian street crossings are permitted to equal the street or highway grade.

- Each curb ramp shall have a level area 48 inches long minimum by 36 inches wide minimum at the top of the curb ramp in the part of the island intersected by the crossings.
- Each 48 inch minimum by 36 inch minimum area shall be oriented so that the 48 inch minimum length is in the direction of the running slope of the curb ramp it serves. The 48 inch minimum by 36 inch minimum areas and the accessible route shall be permitted to overlap.
- Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street. Medians and pedestrian refuge islands shall have detectable warnings at curb ramps and blended transitions.
- Detectable warnings at cut-through islands shall be located at the curb line in-line with the face of curb and shall be separated by a 2.0 foot minimum length of walkway without detectable warnings. Where the island has no curb, the detectable warning shall be located at the edge of roadway.
- Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route.
- Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.



ACCESSIBLE PEDESTRIAN SIGNALS (PUSHBUTTONS) (PROWAG R306)

Figures/Examples

Requirements 1

YES NO NA

- Each crosswalk with pedestrian signal indication shall have an accessible pedestrian signal which includes audible and vibrotactile indications of the WALK interval. Where a pedestrian pushbutton is provided, it shall be integrated into the accessible pedestrian signal. ← ON HOLD waiting for MoDOT Specs and APL
- Accessible pedestrian signals shall be located so that the vibrotactile feature can be contacted from the level landing serving a curb ramp, if provided, or from a clear floor or ground space that is in line with the crosswalk line adjacent to the vehicle stop line.
- Accessible pedestrian pushbuttons shall be located within a reach range complying with PROWAG 2005 R404.
- A clear floor or ground space shall be provided at the pushbutton and shall connect to or overlap the pedestrian access route.

Roadway Grade Exception: Clear spaces required at accessible pedestrian signals and pedestrian pushbuttons and at other accessible elements are permitted to have a running slope or cross slope consistent with the grade of the adjacent pedestrian access route.

- Pedestrian signals shall comply with PROWAG 2005 R306.
 - Pushbuttons are a minimum 2 inches across in one dimension, raised (not recessed), contrast visually with the housing or mounting, and have a maximum force of 5 pounds to activate operable parts.
 - The control face of the pushbuttons is installed parallel to the direction of the crosswalk it serves.
 - The location of pushbuttons for new construction are within a longitudinal distance of 5 feet maximum from the crosswalk line, and 30 inches minimum to 6 feet maximum from the curb line.
 - For audible pedestrian signal devices only, pushbuttons are a minimum 10 feet apart at crossings and a minimum 5 feet apart at islands or medians. This minimum distance may be waived for audible pushbuttons in medians and islands with the use of voice commands.
 - Pushbuttons are located no higher than 42 inches from the ground and within 10 inch reach from a level paved landing with minimum dimensions of 48 inches x 30 inches positioned for a parallel approach to the pushbutton. For a forward approach space (30 x 48 inches) the allowed reach range is 0 inches.
 - Where pushbuttons for the visually impaired are installed, tactile signs are to be provided that meet ADA requirements.



PEDESTRIAN STREET CROSSINGS (PROWAG R305)

Figures/Examples



Requirements¹

- Crosswalks shall contain a pedestrian access route that connects to departure and arrival walkways through any median or pedestrian refuge island.
- Marked crosswalks shall be 6 feet wide minimum.
- The grade of the pedestrian access route is permitted to equal the general grade established for the adjacent street or highway, except that where pedestrian access routes are contained within pedestrian street crossings a maximum grade of 5 percent is required.
- A 5 percent maximum cross slope is specified for pedestrian access routes contained within pedestrian street crossings without yield or stop control.
- Crossings with Stop Control: The cross slope shall be 2 percent maximum.
- The cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.
- The running slope shall be 5 percent maximum, measured parallel to the direction of pedestrian travel in the crosswalk.
- Where pedestrian signals are provided at pedestrian street crossings, they shall include accessible pedestrian signals and pedestrian pushbuttons complying with sections 4E.08 through 4E.13 of the MUTCD. Operable parts shall comply with R403. (2011 PROWAG R209.1) **← ON HOLD waiting for MoDOT Specs and APL**
- Crosswalk pavement marking is 6 inches wide white.
- Stop bar is at minimum 4 feet from the crosswalk.
- Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.
- Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route.
- Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.
- Beyond the curb face, a clear space of 4.0 feet minimum by 4.0 feet minimum shall be provided within the width of the crosswalk and wholly outside the parallel vehicle travel lane.

YES

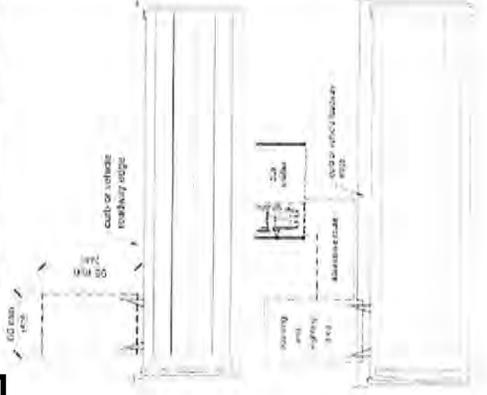
NO

NA

ALTERNATE CIRCULATION PATH (PROWAG R302)

Requirements ¹		YES	NO	NA
<p>Figures/Examples</p> 	<ul style="list-style-type: none"> • Alternate circulation paths shall contain a pedestrian access route. • To the maximum extent feasible, the alternate circulation path shall be provided on the same side of the street as the disrupted route. • Where the alternate circulation path is exposed to adjacent construction, excavation drop-offs, traffic, or other hazards, it shall be protected with a pedestrian barricade or channelizing device complying with MUTCD 6F-58, 6F-63, and 6F-66. • Pedestrian barricades and channelizing devices shall be continuous, stable, and non-flexible and shall consist of a wall, fence, or enclosures specified in section 6F-58, 6F-63, and 6F-66 of the MUTCD (incorporated by reference; see PROWAG 2005 R104.2.4). • A detectable continuous bottom edge shall be provided 2 inches maximum above the ground or walkway surface. • Devices shall provide a continuous surface or upper rail at 3.0 feet minimum above the ground or walkway surface. • Support members shall not protrude into the alternate circulation path. 			

BUS BOARDING AND ALIGHTING AREAS (PROWAG R410)

Requirements ¹		YES	NO	NA
<p>Figures/Examples</p> 	<ul style="list-style-type: none"> • Bus stop boarding and alighting areas shall have a firm, stable surface. • Bus stop boarding and alighting areas shall provide a clear length of 8 feet minimum, measured perpendicular to the curb or vehicle roadway edge, and a clear width of 5 feet minimum, measured parallel to the vehicle roadway. • Bus stop boarding and alighting areas shall be connected to streets, sidewalks, or pedestrian paths by an accessible route. • Parallel to the roadway, the slope of the bus stop boarding and alighting area shall be the same as the roadway, to the maximum extent practicable. Perpendicular to the roadway, the slope of the bus stop boarding and alighting area shall not be steeper than 2 percent. • Bus shelters shall provide a minimum 30 inch by 48 inch clear floor or ground space entirely within the shelter. • Bus shelters shall be connected by an accessible route to a boarding and alighting area. 			

¹ Any "NO" answer means that location is ADA non-compliant and needs to be corrected before final acceptance of the work, except as follows. Although exceptions listed in the above requirements may not meet MoDOT current policy standards, work that does meet the minimum ADA standards will be accepted as ADA compliant. Where it is technically infeasible to correct deficiencies as part of the current work, those locations will be labeled as non-compliant and marked "NO". These items will be added to the Transition Plan Inventory for correction at a later date. (Guidance is provided in ADA documents and in the EPG on what may be considered as technically infeasible.)

² A MoDOT requirement.

Unless otherwise noted, all notes on this form are direct ADA requirements as published in either the PROWAG dated November 23, 2005 or ADA/ABA Standards from 2010.

All exceptions and technically infeasible locations should be discussed with the project manager and/or area engineer prior to acceptance of the work. All exceptions and technically infeasible locations will need to be thoroughly documented by the engineer, and that documentation will be attached to this form and retained as part of the final acceptance records.

All slope and grade measurements for ADA compliance will be made using a calibrated 2 foot long digital level.

US Access Board PROWAG

R202.3.1 Prohibited Reduction in Required Access. An alteration shall not decrease or have the effect of decreasing the accessibility of a facility or an accessible connection to an adjacent building or site below the requirements for new construction in effect at the time of the alteration.

Inspector Name: _____	Date: _____
Inspector Signature: _____	Date: _____
Resident Engineer or Area Engineer Name: _____	Date: _____
Resident Engineer or Area Engineer Signature: _____	Date: _____
Distribution: <input type="checkbox"/> Project Office <input type="checkbox"/> District Permit Office	

SAMPLE

ADA EXCEPTIONS DOCUMENTATION

Job No. _____ Route _____ County _____ Location _____

<u>Item</u>	<u>Location</u>	<u>Standard</u> 5' wide	<u>As Built</u> Exist 3' wide	<u>Discussion</u>
Sidewalk Width	Third Street Sta 3+00 to 7+00 RT	8.33%	11.2%	Required 5' x 5' Passing Space added at 5+00
Curb Ramp Grade	SE Quad of Main & First	2.00%	2.6%	As-built Curb Ramp is 16.0' long
Parallel Ramp Landing running grade (turning space)	Sta 35+20 to 35+25 Rt Rte 14	5.0%	8.4%	Landing running grade matches existing roadway grade
Sidewalk Grade	Sta 23+45 to 23+52			Match existing floor at two exist doorways, Straight grade between fixed elevations

Inspector Name: _____	Date: _____
Inspector Signature: _____	Date: _____
Resident Engineer or Area Engineer Name: _____	Date: _____
Resident Engineer or Area Engineer Signature: _____	Date: _____
Distribution:	
<input type="checkbox"/> Project Office	
<input type="checkbox"/> District Permit Office	

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This RER has been completed, only administrators may edit this document now, they will contact you if any information changes.

Date Completed: 06/28/2017

Completed By: Jo Dent (mailto:Jo.Dent@modot.mo.gov)

Request for Environmental Review Form#: 2017-07-00006

Project Information

Prefix: STP

Project Number: 4500207

Bridge Number: N/A

District: Northeast

County: Randolph

Sponsor: Moberly

TIP Number: N/A

Rte/Street: N. MORLEY, HWY 24

MoDOT Job Number: N/A

TIGER Grant Funds: N/A

Is this project on or adjacent to MoDOT Right of Way: No

Location/Stream Crossing : NORTH MORLEY - BUS 63

TMS Project Description - termini (no stations): REPLACE SIDEWALKS ON N.MORLEY IN CITY OF MOBERLY, RANDOLPH CO

Describe RER project improvements in full detail: Existing sidewalks will be replaced with ADA approved sidewalks in areas with existing sidewalk (the southern portion of Morley Street/Business 63), and new sidewalk will be constructed where sidewalks do not exist.. Enhancements to commercial and residential

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approaches will be made throughout the corridor, along with some roadway surface improvements at various adjoining side streets. The project corridor begins at the intersection of N. Morley and E. Coates St. and extends north to the intersection of N. Morley and Hwy 24. Improvements will then continue eastbound from the intersection of N. Morley and Hwy 24 to the signalized intersection Hwy 24 and E. Outer Road.

#10.

District Liason: WATTSR -

Contact: None selected

Contact: None selected

Contact: None selected

Date Desired: 08/19/2016

Submit Date: 07/20/2016

Desired A-Date:

Responsible Individual: Robby Miles - (7/20/2016 1:59:41 PM) (mailto:robbymiles@bartwest.com) - 618-447-4656

Submitted By: Robby Miles - (7/20/2016 12:00:00 AM) (mailto:robbymiles@bartwest.com) - 618-447-4656

Existing Condition

ADT: 12942

Speed Limit: 35

Number of Travel Lanes: 4

Lane Width: 12'

Shoulder Width: 0'-4'

Curb and Gutter: Yes

Bridge width, measured from gutterline to gutterline: 0

Sidewalks: Both

Proposed Design Improvement

ADT: 12942

Speed Limit: 35

Design Speed: 35

Number of Travel Lanes: 4

Lane Width: 0'-4'

Shoulder Width: 12'

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8/26/2019 Curb and Gutter: Yes

RER

#10.

Bridge width, measured from gutterline to gutterline: 0

Sidewalks: Both

Bridge Length: 0

Roadway length: 2.11 Miles

Railroad Crossing No

Drainage District (If Applicable): Northeast

Program Year:

Preliminary Engineering: 2016

Right of Way: 2016

Construction: 2017

Has the district documented that the project has: 1. Independent utility, 2. Logical termini, and 3. Does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements?: Yes No

Project breakout from previous or larger project? *If checked explain:*

Acres - From all sources (e.g. donated from public or private entities):

Additional RW: 0

Temp Easement: 2.25

Permanent Easement: 0

ROW may be needed, but, not yet determined? Not Specified

Is ANY Federally-owned land impacted by the project? Yes No

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Land Disturbance:

Will project involve 1 acre but less than 5 acres of land disturbance: Yes No

Will project involve 5 acres or more of land disturbance: Yes No

Acres of Tree Clearing: 0 acres

Number of Displacements(do not include partial takes that do not displace):

Residential: Yes No

Commercial: Yes No

No. of People:

Residences:

No. of Employees:

Businesses:

Public Hearing/Meeting Information:

Average Daily Traffic:

ADT Construction Year: 12942

ADT Design Year: 19230

Traffic Impacts:

Road Closure Planned: Yes No

Bridge Closure Planned: Yes No

Detour Info:

Days/Months Closed:

Bicycle / Pedestrian Consideration

RER

#10.

Pedestrian facilities considered: Yes

Bicycle facilities considered: Yes

National Flood Insurance Program (NFIP) and Hydraulic Design Data:

Project is in a FEMA-identified zone "subject to 100-year flooding": *If so, what zone?:*

Project is in a FEMA-defined "floodway" No

Project involves land purchased through FEMA Hazard Mitigation Grant Program (Flood buyout property)

If checked, give details:

Is ANY construction taking place on MoDOT owned property under this project?

Yes No

Is highway improvement located within 4 miles of an existing airport?

Please note that **the LPA** is responsible for obtaining the necessary permits for the project. See the following Airport Link (http://epg.modot.mo.gov/index.php?title=Category:235_Preliminary_Plans#235.8_Airports)

Known Concerns: Provide information you have about these resources that you have observed in the area.

Parkland: No known parkland in the area

Wetland/404 Permit: No USACE impacts are expected on this project

Stormwater/Water Quality: No known stormwater or water quality issues

Farmland: No farmland present along roadway

Threatened & Endangered Species: No known threatened or endangered species in the area

Migratory Birds: Are there birds nesting on the structure?

263

8/26/2019 Hazardous Waste: No known hazardous waste in the area ^{RER}

#10.

Cultural Resources: No known cultural resource concerns

LPA Comments:

Project Attachments:

****NOTE: If making updates to an attachment, please use a different filename than the original.**

****The combined size of attachments in one upload must be less than 100MB**

Upload Attachments: Attachments will be saved when you click the upload attachments button

Choose File No file chosen

Upload Attachments

Attachments: Moberly Project Area.pdf

Required Information to be attached for each RER stage:

Location map (county map, topographic map or aerial map) showing the project limits, plan sheets, KMZ files showing tree clearing limits and/or plans, permits/documentation as required(floodplain, farmland form, NWP, asbestos & lead based paint inspection reports, Section 106 Project Information Form for review, SHPO concurrence letter, USFWS IPac Official Species List, MDC Heritage Review Report, Effects determination).

RER Environmental Screenings

Collapse

All

Farmland Impact

Status Information:

N/A Pending Cleared

Clearance Date:

Environmental Response: The project is located in the urbanized area of the city of Moberly. Therefore, the project is not subject to the Farmland Protection Policy Act and there will be no impacts to farmland.

LPA Action: None

Attachments:

264

Floodplain/Regulatory Floodway

#10.

Status Information:

N/A Pending Cleared

Clearance Date:

01/20/2017

Environmental Response: UPDATE: Floodplain development permit submitted on 6/28/2017. Permit is attached. According to current FEMA flood insurance rate maps, a small portion of the project is located in Flood Zone A, the 1% floodplain, requiring a floodplain development permit from the city of Moberly.

LPA Action: COMPLETE: Obtain a floodplain development permit from the city of Moberly and submit to MoDOT's environmental specialist.

Attachments:

Moberly STP Floodplain Permit_Aproved.pdf

Moberly Morley Sidewalk Project Floodplain Map.pdf

Stormwater/Water Quality

Status Information:

N/A Possible Issues Noted

Clearance Date:

Environmental Response: UPDATE: Moberly is an MS4 community and have their own stormwater management plan. If the project is in a regulated MS4 area, you must adhere to the MS4 requirements as defined in the respective MS4 permit specific to that municipality. Stormwater routed into MoDOT's drainage system (e.g., ditches and stormwater conveyance systems) must be treated for water quality and/or quantity before entering the system.

LPA Action: UPDATE: Moberly should follow the requirements outlined in their stormwater management plan. Contact the MoDOT Environmental Office if any land disturbance on MoDOT property is 1 acre or more.

Attachments:

265

FEMA/SEMA Buyout

#10.

Status Information:

N/A Pending Cleared

Clearance Date:

Environmental Response: According to the TMS FEMA buyout layer, there are no FEMA/SEMA buyout sites in the vicinity of the project area. The project will have no impact on FEMA/SEMA buyout sites.

LPA Action: None

Attachments:

Socioeconomic Impact

Status Information:

N/A Possible Issues Noted

Clearance Date:

Environmental Response: There will be no significant socioeconomic impacts associated with this project. The project requires temporary easements that are subject to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

LPA Action: Conduct the acquisition of affected properties in accordance with the procedures established in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

Attachments:

Threatened & Endangered Species

#10.

Status Information:

No Effect Pending Cleared

Clearance Date:

10/12/2016

Environmental Response: UPDATE: MoDOT's T&E specialist reviewed all T&E documentation submitted including the MDC Natural Heritage Review Report, USFWS IPaC Official Species List, maps, and species determinations. Review information and determinations are as follows: Gray bats are cave obligate species year-round, and Indiana and Northern long-eared bats spend winter in caves and spend summer in forested areas of the state. The review of MDC Heritage database (March 2016) and the MO Speleological Survey cave information (current to 2015) do not indicate any known bat or cave resources within several miles of the project area. There will be no removal of potential summer roost habitat for forest bats. Acting as the designated non-federal representative of FHWA for Section 7 Endangered Species Act coordination and consultation, MoDOT has determined this project will have No Effect on Gray, Indiana, or Northern long-eared bats, or any critical habitat. Impacts to threatened and endangered species must be assessed for this project.

LPA Action: UPDATE: T&E documentation was submitted by the consultant on 9/26 & 9/27/2016 and provided to MoDOT's T&E specialist on 9/27/2016 for review and determinations. No tree clearing is proposed and construction is anticipated in Spring of 2017. 1. Access the US Fish and Wildlife Service (USFWS) IPAC online tool at <http://ecos.fws.gov/ipac/> to obtain the official list of species for your county. 2. Access the MO Department of Conservation (MDC) online Natural Heritage Review website at <https://naturalheritagereview.mdc.mo.gov/> and generate a report. Contact MDC if the report indicates to do so. Submit the report, and MDC response, if required, to MoDOT. 3. Provide the amount, location, and time of year for tree clearing, or indicate there will be no tree clearing. 4. If there will be tree clearing, photograph the trees so that bark characteristics of the main trunk and large branches, along with any cavities, are clearly illustrated. 5. If the project involves bridgework, photograph the undersides of bridges illustrating any bird nests or unusual staining on the substructure or underside of the deck. 6. It is the responsibility of the LPA to make a written determination of their project impacts on each species listed from the IPaC. Further, the LPA must assess effects on any MDC listed species (endangered or species of conservation concern). If no effects are anticipated for a particular species, state the reason(s) why. For example: This project does not involve any tree clearing so there will be no effects on summer roosting habitat for listed bat species or this project does not impact any aquatic habitats so there will be no effects on listed fish or mussel species. 7. Submit the full project limits, easements, access, construction date, and ground disturbance information.

Attachments:

Migratory Birds

Status Information:

N/A Pending Cleared

Clearance Date:

Environmental Response: UPDATE: There are no bridges in the project; therefore, there will be no impact to migratory birds. Determine whether any bridges could be impacted by the project. Swallows and other bird species protected by the Migratory Bird Treaty Act (MBTA) may be nesting under the bridge that will be demolished during this project. To comply with the MBTA, nests of protected species cannot be disturbed when active (eggs or young are present). Generally, nests are active between April 1 and July 31, but active nests can be present outside of these dates.

LPA Action: Determine whether any bridges could be impacted by the project and indicate this in the T&E documentation that is submitted to MoDOT. If any bridges could be impacted by the project, assess for the presence of migratory birds under the bridge prior to demolition of the bridge. Take photographs of underneath the bridge and provide an explanation as to whether there are nests and/or unusual staining on the bridge, and submit along with the remaining T&E documentation as instructed under the T&E section of the RER.

Attachments:

Hazardous Waste Impact

Status Information:

N/A Pending Cleared

Clearance Date:

Environmental Response: Based on the project description and observation, there should be no hazardous waste site concerns. The potential to encounter wastes from sites unknown to the LPA and MoDOT should always be a consideration.

LPA Action: Any unknown sites that are found during project construction will be addressed by the LPA in accordance with Federal and State Laws and Regulations. If any hazardous waste concerns arise, notify MoDOT's environmental specialist as soon as possible.

Attachments:

Wetland Impact (Section 404/401)

#10.

Status Information:

N/A Pending Cleared

Clearance Date:

Environmental Response: UPDATE: In an email on 9/23/2016, the consultant confirmed that no wetlands, streams, ponds, or lakes are located within the project limits. The project construction will not result in any temporary or permanent wetland impacts, and no fills will be placed within the waters of the U.S. Additionally, the projects limits are above the ordinary high water elevation. According to the USFWS National Wetlands Inventory Mapper and Google Earth, there are no wetlands, streams, ponds, or lakes within the project limits.

LPA Action: COMPLETE: Although MoDOT staff conducted a desktop review, the LPA/consultant should field verify the presence of wetlands and waters of the U.S. within the project area. If temporary or permanent wetland impacts will result, or if fills will be placed within waters of the U.S, then the project will require submittal to the US Army Corps of Engineers (USACE) for a jurisdictional determination and permit approval. If permanent fill is less than 0.5 acre, the project should qualify for a Nationwide Permit (NWP). Most NWPs are automatically certified for 401 Water Quality Certification. These general water quality conditions as well as USACE NWP regional conditions, and any other conditions, must be followed during project construction.

Wetland Permit 404 Permit Number
Information: Permit Submitted
Permit Received

| *

Permit Expiration
Compliance Certification Sent
Compliance Certification Received

Attachments:

Noise Impact

#10.

Status Information:

N/A Pending Cleared

Clearance Date:

Environmental Response: This is a Type III project and a noise analysis is not required.

LPA Action: None

Attachments:

Cultural Resources Impact (Section 106)

Status Information:

Pending Cleared

Clearance Date:

09/29/2016

Environmental Response: UPDATE: The Section 106/SHPO letter was submitted on 6/28/2017 - No Historic Properties Affected for Morley Street Sidewalk Project in Moberly, SHPO Project #014-RN-16. SHPO letter is attached. This project requires a Section 106 Review in consultation with the State Historic Preservation Office (SHPO) for identifying potential cultural resources that may be impacted by this project.

LPA Action: COMPLETE: The LPA should submit the Section 106 Project Information Form, located in the EPG manual at section 136.6.4.1.1, and associated attachments to the SHPO for review and comment.

Attachments:

Section 106 Approval Moberly.pdf

Public Land Impact (Section 4f/6f)

#10.

Status Information:

N/A Pending Cleared

Clearance Date:

Environmental Response: According to Google Earth and ArcMap Public Lands layers, there are no Section 4(f) or Section 6(f) protected resources in the vicinity of the project area. The project will have no impact on Section 4(f) or Section 6(f) protected resources.

LPA Action: None

Attachments:

- Based on the review of the project location and description noted above, there are no identified 4(f) or 6(f) resources affected that would preclude the setting of an A-date.

Checked by: Jo Ann Dent

on 07/21/2016

NEPA Classification

#10.

NEPA Right-Of-Way Permission: Can Proceed to Buy R/W

as determined or approved by: JOANN.DENT@MODOT.MO.GOV

NEPA Approval/Proceed to A-date Request: 08/09/2016

NEPA Classification: PCE

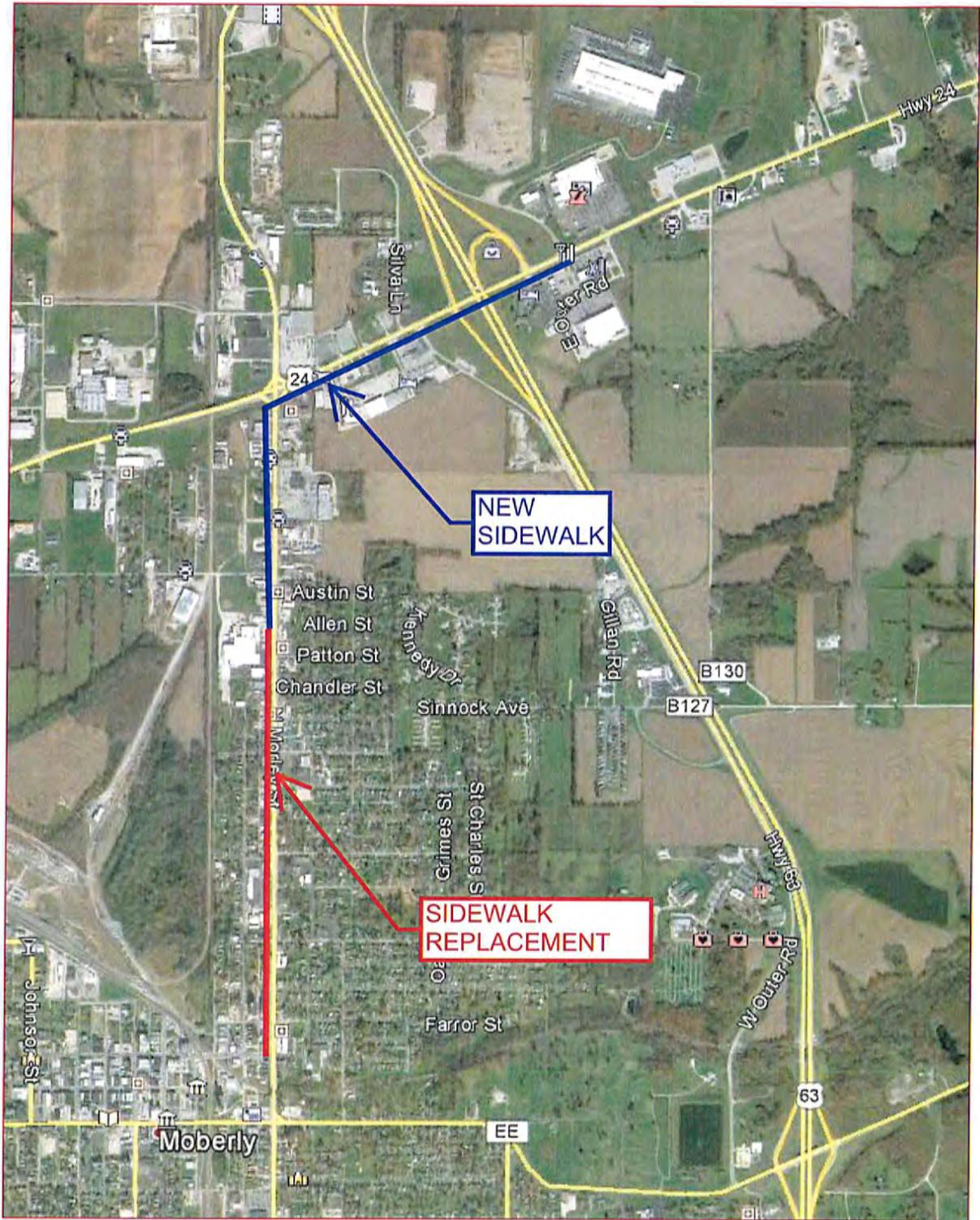
This project qualifies for the programmatic categorical exclusion under Item#: 2

All Environmental Issues Cleared: 06/28/2017

Comments To District: The project no longer requires new right of way, and temporary easement amounts are under 3 acres. Therefore, a CE2 document is no longer required. The LPA/consultant should review all sections above including those marked cleared/green. If there are any changes in the scope of the project, the Environmental Section should review those changes. The sponsor is ultimately responsible for complying with all applicable state and federal laws.

Attachments:

MISSOURI MOVES MOBERLY PROJECT AREA



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FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION

Application No.: 001

Date: September 14, 2016

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in the Special Flood Hazard Area (SFHA) or "floodplain." The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be in accordance with the requirements of the Floodplain Management Ordinance and with all other applicable county/city ordinances, federal programs, and the laws and regulations of the State of Missouri.

City of Moberly	9/14/2016	N/A
Owner or Agent	Date	Builder
101 West Reed Street, Moberly, MO 65270		N/A
Address		Address
(860)269-8705		N/A
Telephone Number		Telephone Number

SITE DATA

- Location: SE 1/4; SW 1/4; Section 35; Township 54N; Range 14W
Street Address: 668 N Morley St
- Type of Development: Filling Grading Excavation Minimum Improvement
Routine Maintenance Substantial Improvement New Construction Other
- Description of Development: Existing sidewalks to be replaced with ADA approved sidewalks, and new sidewalk to be constructed where no sidewalk exists. Enhancements to commercial and residential driveways, along with roadway surface improvements at adjoining side streets will be made.
- Premises: Structure Size N/A ft. By N/A ft. Area of Site N/A Sq. Ft.
Principal Use: N/A Accessory Uses (storage, parking, etc.): N/A
- Value of Improvement (fair market): \$ N/A Pre-Improvement/Assessed Value of Structure: \$ N/A
- Is the Property Located in a Designated FLOODWAY? Yes No
IF ANSWERED YES, CERTIFICATION MUST BE PROVIDED PRIOR TO THE ISSUANCE OF A PERMIT TO DEVELOP, THAT THE PROPOSED DEVELOPMENT WILL RESULT IN NO INCREASE IN THE BASE (1%) FLOOD ELEVATIONS.
- Is the Property Located in a Designated Floodplain FRINGE or a Floodplain (SFHA) without a Designated FLOODWAY? Yes No
- Elevation of the 1% Base Flood (LD source) 854.7 feet (LOMA 15-07-2289A) NGVD/NAVD
- Elevation of the Proposed Development Site 853.5 feet NGVD/NAVD
- Community Ordinance Elevation/Floodproofing Requirement N/A NGVD/NAVD
- NFIP Flood Insurance Rate Map Panel(s) Number(s) 2803050001 B
- Other Permits Required?

Corps of Engineer 404 Permit:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Provided <input type="checkbox"/>
State Department of Natural Resources 401 Permit:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Provided <input type="checkbox"/>
Environmental Protection Agency NPDES Permit:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Provided <input type="checkbox"/>

All Provisions of Ordinance Number _____, the "Floodplain Management Ordinance", shall be in Compliance.

PERMIT APPROVAL/DENIAL

Plans and Specifications Approved/Denied this 20 Day of January, 2017

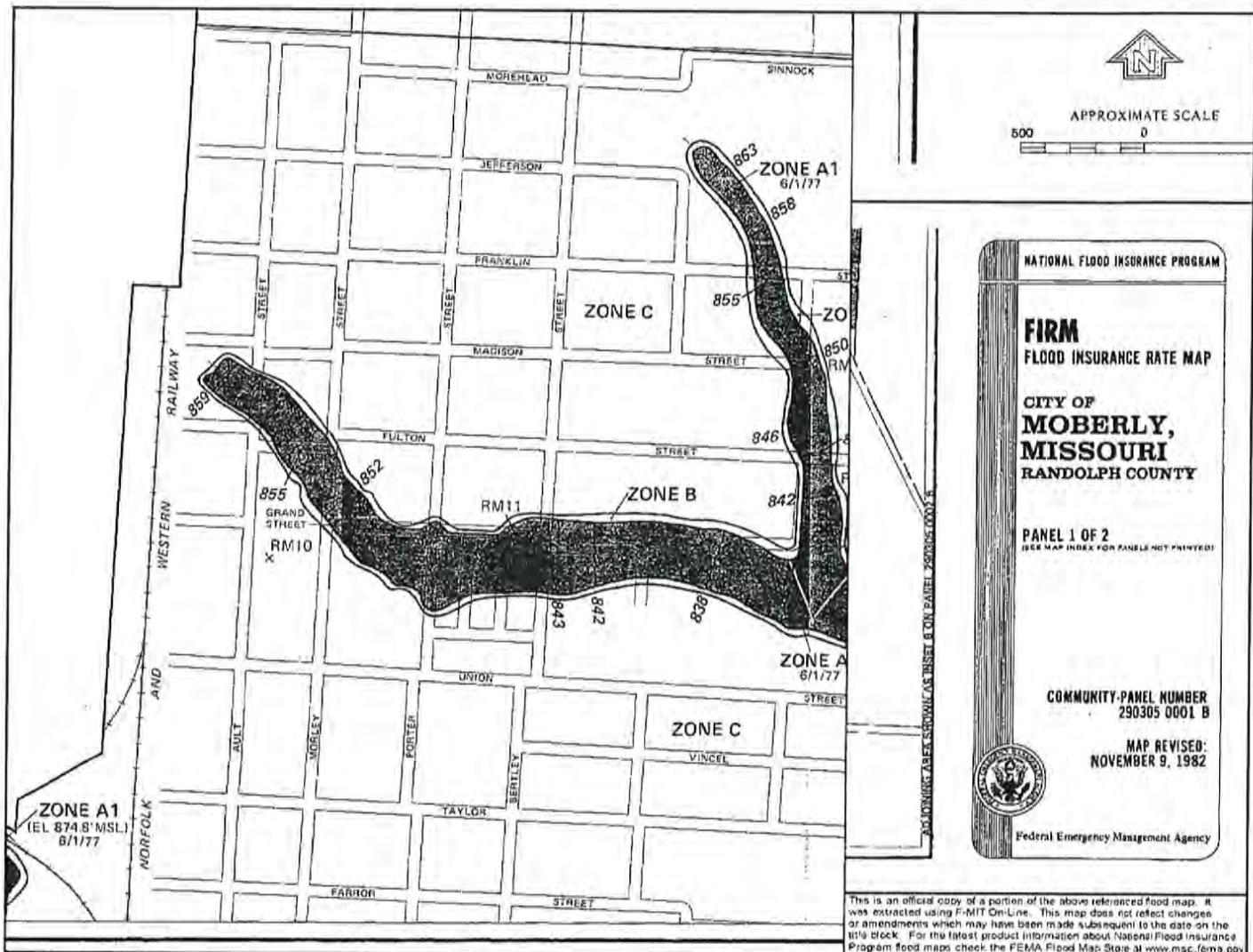
Signature of Property Owner or Agent _____

Signature of Authorizing Official: *Rich Ridgway*
 Authorizing Official: *Rich Ridgway*
 Print Name and Title: *Rich Ridgway Floodplain Administrator City of Moberly*

THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED _____ FOOT/FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED _____ FOOT/FEET ABOVE THE BASE FLOOD ELEVATION.

THIS PERMIT IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY IMPROVED BUILDING COVERED BY THIS PERMIT.

(MISSOURI)
August 1, 2015



CULTURAL RESOURCE ASSESSMENT

Section 106 Review

CONTACT PERSON/ADDRESS

C:

Tom Sanders
Director of Public Works
101 West Reed Street
Moberly, Missouri 65270

Raegan Ball, FHWA
Roopa Banerjee, FHWA
Michael Meinkoth, MoDOT

PROJECT:

Morley Street Sidewalk Project STP-4500(207), Moberly

FEDERAL AGENCY

COUNTY:

FHWA

RANDOLPH

The State Historic Preservation Office has reviewed the information submitted on the above referenced project. Based on this review, we have made the following determination:

After review of initial submission, the project area has a low potential for the occurrence of cultural resources. A cultural resource survey, therefore, is not warranted.

Adequate documentation has been provided (36 CFR Section 800.11). There will be "no historic properties affected" by the current project.

An adequate cultural resource survey of the project area has been previously conducted. It has been determined that for the proposed undertaking there will be "no historic properties affected".

For the above checked reason, the State Historic Preservation Office has no objection to the initiation of project activities. PLEASE BE ADVISED THAT, IF THE CURRENT PROJECT AREA OR SCOPE OF WORK ARE CHANGED, A BORROW AREA IS INCLUDED IN THE PROJECT, OR CULTURAL MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, APPROPRIATE INFORMATION MUST BE PROVIDED TO THIS OFFICE FOR FURTHER REVIEW AND COMMENT. Please retain this documentation as evidence of compliance with Section 106 of the National Historic Preservation Act, as amended.

By: Toni M. Prawl
Toni M. Prawl, Ph.D., Deputy State Historic Preservation Officer

September 29, 2016
Date

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
P.O. Box 176, Jefferson City, Missouri 65102

For additional information, please contact Judith Deel, (573) 751-7862. Please be sure to refer to the project number:

014-RN-16

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City of Moberly City Council Agenda Summary

Agenda Number: _____ #11.
 Department: Public Utilities
 Date: April 6, 2020

Agenda Item: An Ordinance Adopting Standardized Specifications for Sanitary Sewer Systems And Water Main Construction.

Summary: The current Water System Standard Specifications and Construction details for the water system were put into place in November of 2012. The current Standard Specifications for Sanitary Gravity Sewer System was put into place on August 19th, 2005. Updating the Standard Specifications and Construction details for the water and sanitary sewer system, as well as getting them approved with Missouri Department of Natural Resources will eliminate the process of getting permits through Missouri Department of Natural Resources. Additionally, this will speed up the pan review process when required.

Recommended

Action: Approve the ordinance.

Fund Name: N/A

Account Number: N/A

Available Budget \$: N/A

ATTACHMENTS:		Roll Call	Aye	Nay
___ Memo	___ Council Minutes	Mayor		
___ Staff Report	<u>x</u> Proposed Ordinance	M___ S___ Jeffrey	___	___
___ Correspondence	___ Proposed Resolution			
___ Bid Tabulation	___ Attorney's Report	Council Member		
___ P/C Recommendation	___ Petition	M___ S___ Brubaker	___	___
___ P/C Minutes	___ Contract	M___ S___ Kimmons	___	___
___ Application	___ Budget Amendment	M___ S___ Davis	___	___
___ Citizen	___ Legal Notice	M___ S___ Kyser	___	___
___ Consultant Report	___ Other _____		Passed	Failed

BILL NO. _____

ORDINANCE NO. _____

An Ordinance Adopting Standardized Code Specifications For Sanitary Sewer Systems And Water Main Construction.

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MOBERLY, MISSOURI, TO-WIT:

SECTION ONE: On November 18, 2019 this council adopted Resolution No. R867 approving the filing with City Clerk of a copy of 2019 Standard Code Specifications for Sanitary Sewer Systems and Water Main Construction in accordance with Rules of the Missouri Department of Natural Resources, Division 20 – Clean Water Commission, Chapter 8 – Design Guides, Gravity Sewer Design – Title 10, CSR 20-8.120 and Sewage Pumping Station and Force Main Design -Title 10 CSR 20-8.130 (the “Code”).

SECTION TWO: A copy of the Code has now been on file with the City Clerk for more than ninety (90) days and pursuant to Section 67.280 RSMo. said Code may now be adopted by reference without setting forth provisions of the Code in full.

SECTION THREE: The Code is hereby adopted by reference and incorporated in the city code as follows:

Chapter 42, Article V.

Sec. 42-900. Technical Codes Adopted.

(a) The City Council has adopted by reference, as though fully set forth in this Article, the 2019 Standard Specifications for Sanitary Sewer Systems and Water Main Construction.

Sec. 42.901. Violations and Penalties. The violation of any of the terms adopted in this Article shall be punished by a fine not exceeding \$200.00. Each day that a violation continues shall constitute a separate offense.

SECTION FOUR: The City Council hereby adopts the Code by reference and directs that one copy of the Code remain on file with City of Moberly, Missouri, City Clerk.

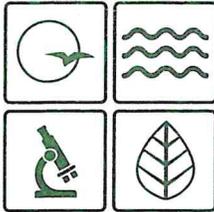
SECTION SIX: This Ordinance shall be in full force and effect from and after its passage and adoption by the Council of the City of Moberly, Missouri, and its signature by the officer presiding at the meeting at which it was passed and adopted.

PASSED AND ADOPTED by the Council of the City of Moberly, Missouri, this 6th day of April, 2020.

ATTEST:

Presiding Officer at Meeting

City Clerk



Missouri Department of dnr.mo.gov

#11.

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

MAR 03 2020

Mary E. West-Calcagno
City of Moberly
101 West Reed Street
Moberly, MO 65270-1551

RE: Moberly PWS, MO2010533, Randolph County, Review Number 2000008-20

Dear Mary E. West-Calcagno:

The Missouri Department of Natural Resources has completed the review of the standard specifications of waterline construction for the City of Moberly. These specifications generally comply with our design standards for waterline construction. You may consider this letter an approval of the proposed standard specifications. The specifications will be filed in our office and can be used for future reference of water distribution system construction.

If you have any questions concerning this approval or if you need any further assistance, please contact Diane Muenks by phone at 573-751-5924, or contact the engineer by email at sharon.stock@dnr.mo.gov, or email me at maher.jaafari@dnr.mo.gov. You may also reach us by mail at Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, MO 65102. Thank you for your continued support in our journey and pursuit to enhance Missouri's natural resources.

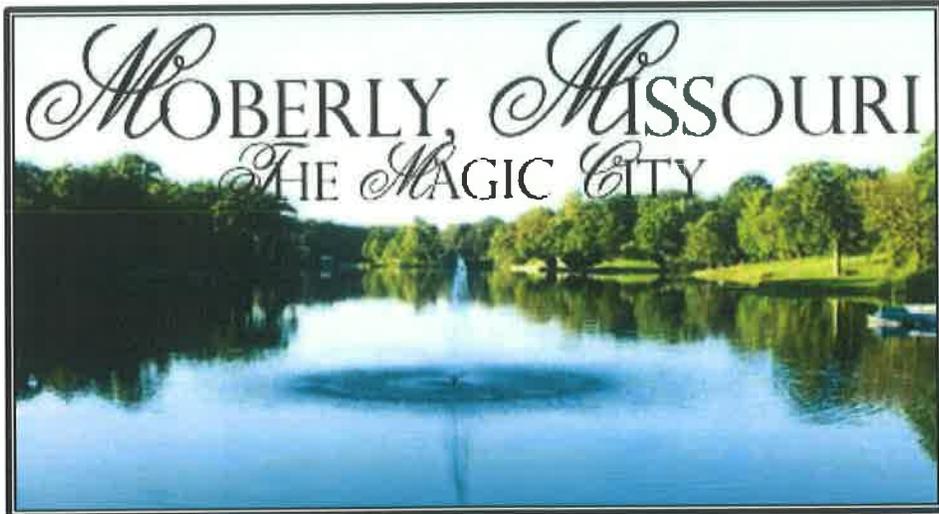
Sincerely,

WATER PROTECTION PROGRAM

Maher Jaafari, Ph.D., P.E.
Infrastructure Permits and Engineering Section Chief
Public Drinking Water Branch

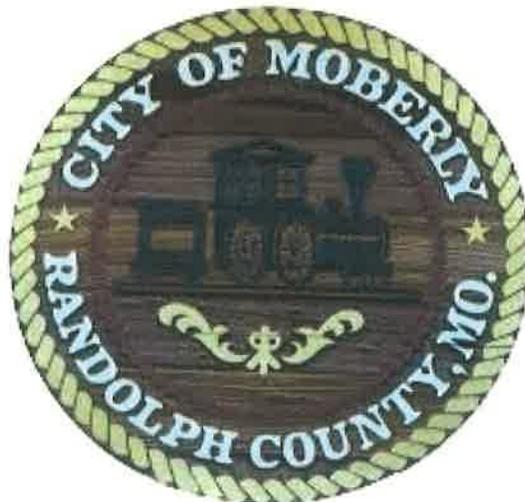
MJ:ssm

c: Poepping, Stone, Bach & Assoc., Inc.
Northeast Regional Office



CITY OF MOBERLY, MISSOURI

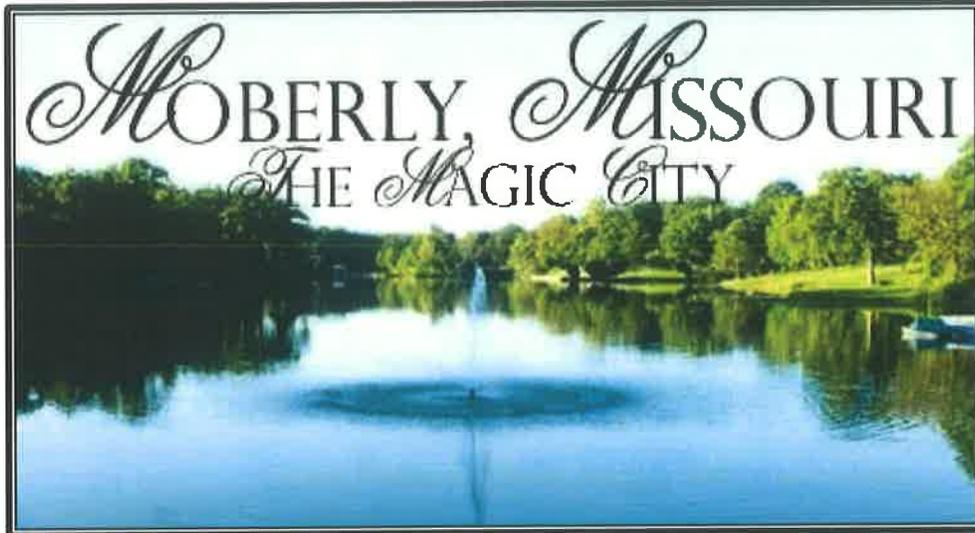
**STANDARD SPECIFICATIONS
FOR SANITARY SEWER SYSTEMS**



PSBA

Poepping, Stone, Bach & Associates, Inc.

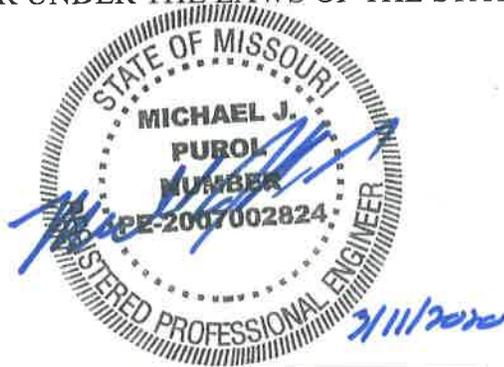
Engineers, Architects, Surveyors, GIS



CITY OF MOBERLY, MISSOURI

**STANDARD SPECIFICATIONS
FOR SEWER MAIN CONSTRUCTION**

I HEREBY CERTIFY THAT THESE SPECIFICATIONS AND DETAILS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI.



MICHAEL J. PUROL, PE
MISSOURI LICENSED PROFESSIONAL ENGINEER NO. PE-2007002824
EXPIRES 12-31-2021

THIS SEAL COVER STANDARD SPECIFICATION SECTIONS 01000 THRU 01006 AND STANDARD DETAIL SHEETS 02001 THRU 02005.



#11.

CITY OF MOBERLY, MISSOURI
STANDARD SPECIFICATIONS FOR SANITARY SEWER SYSTEMS

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02002	Typical Sanitary Sewer Manhole	
02003	Typical Service Connection and Cleanout	
02004	Typical Sewer Main in Casing	
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#11.

SECTION 01000 APPROVAL AND ACCEPTANCE

PART 1 – GENERAL

1.01 SUMMARY

- A. These specifications are for the construction, replacement, extension, and alteration of sewer systems intended to be maintained under authority of the City of Moberly, Missouri.
- B. The intent of these specifications and details is to specify the type and quality of sanitary sewer system materials, installation, inspection, testing, and final acceptance by the City for all improvements, replacements, and extensions to be included as a part of the City's sanitary sewer system.
- C. All design, permitting, materials, and work shall be in accordance with applicable sections of:
 - 1. City of Moberly Standard Specifications for Sanitary Sewer Systems
 - 2. City of Moberly, Missouri – Code of Ordinances, Chapter 42-Utilities
 - 3. Missouri Department of Natural Resources - Minimum Design Standards.
 - 4. Missouri Standard Specification for Highway Construction, current edition
 - 5. Approved, Project-Specific Special Provisions, Specifications, and Plans
- D. The work shall consist of obtaining all required permits, approvals, and legal easements before beginning work. Work includes furnishing all labor, materials, and equipment for the complete installation of sewer line extension and/or alterations, and appurtenances, in conformance with approved construction documents.
- E. Proposed modifications, alterations, or changes to City of Moberly, Missouri Standard Specifications and Details must be submitted to the City for approval prior to implementing changes.

1.02 DEFINITIONS

- A. City: City of Moberly, Missouri.
- B. Wastewater Department: City Wastewater Department.
- C. Enforcement Officer: City Director of Public Utilities or designated representative.
- D. Engineer: Licensed Professional Engineer in responsible charge for the project and licensed to perform services in the State of Missouri.
- E. Developer: Entity requesting sewer service construction, modifications, extensions, and/or alteration to the city sewer system. The Developer could be a public or private entity, such as the City or private Developer.
- F. Contractor: Entity contracted by Developer to perform work on water main and services. The Contractor is responsible for constructing approved plans.

- G. Owner: Entity who is responsible for long term performance, maintenance, and operation of sanitary sewer systems. The City will typically become the Owner upon final approval and acceptance by City. The Developer will be responsible for the project until final approval and acceptance.
- H. Standard Specifications: City of Moberly, Missouri Standard Specifications for Sanitary Sewer Systems.

1.03 DESIGN - GENERAL

- A. All sewer system extensions or alterations shall be designed, signed, and sealed by an Engineer.
- B. Sanitary Sewer Systems shall be designed to meet City of Moberly, Missouri Specifications and minimum design requirements in accordance with Rules of Missouri Department of Natural Resources, Division 20 – Clean Water Commission, Chapter 8 – Design Guides (MoDNR Design Guides). Gravity Sewer Design shall be in accordance with Title 10 CSR 20-8.120. Sewage pumping station and force main design shall be in accordance with Title 10 CSR 20-8.130.
- C. Design considerations shall include, but are not limited to:
 - 1. Design capacity and flow; flow velocity, flow depth, and solids deposition;
 - 2. Future extensions, service connections and system expansion;
 - 3. Depth of bury; flowline gradient;
 - 4. Topography; subsurface soil, rock, and groundwater conditions; flood plains
 - 5. Construction means and methods; construction and maintenance accessibility;
 - 6. Excavation support systems; Dewatering and water control;
 - 7. Pipe anchorage for steep gradients or installations below groundwater;
 - 8. Excavation depths; external loading; differential ground and pipe movement;
 - 9. Road, highway, and street crossings; pavement repair;
 - 10. Pipe alignment and gradient; location; public and private easements; competing uses;
 - 11. Manhole sizes and locations; flow channel configurations, water tightness; inverted siphons; relationship to waterbodies; aerial crossings; water supply protection;
 - 12. Relative location of utilities, structures; roads, and stream crossings.
- D. Sanitary sewers shall be polyvinyl chloride (PVC), unless otherwise specified in the Standard Specifications. Clay tile sewer mains and taps shall be replaced with SDR26 PVC, or greater.
- E. Service lateral connections shall be at least 6 inches with a minimum gradient of 0.60%.
- F. The minimum diameter pipe for sanitary sewer mains shall be 8-inch. Size shall not decrease with increasing length downstream in direction of flow.
- G. Pavement Structure Crossings: In accordance with authority having jurisdiction with a design vehicle loading no less than AASHTO HS-20.

H. Sanitary Sewer Alignment Best Practice:

1. Linear pipe with no gradient or angular changes between structures.
2. Consistent and regular gradient changes at structures.
3. Pipe parallel to existing road/street centerlines.
4. Pipe perpendicular to existing road/street centerlines at crossings.
5. Manholes at all gradient and angular changes.
6. Angular changes in direction of flow less than 90 degrees at manholes.
7. Hydraulic grade line below the inside diameter crown of the pipe.
8. Concrete anchorage cradle or collar if gradient is 20% or greater. Conditional approval is required for gradients exceeding 50 %.

I. Sanitary Sewer Location Best Practice:

1. To serve all property conveniently.
2. In unimproved or unpaved areas when possible.
3. In public streets, roads, alleys, rights-of-way, or City sewer easements.
4. To avoid crossing private property.
5. To avoid interference between house, foul water, sanitary sewer, and storm sewer connections.
6. At a sufficient distance from existing/proposed structures, foundations, and underground utilities to limit encroachment and potential instabilities during construction.
7. To avoid karst features, water bodies, and storm water overflow; no sanitary lateral cleanouts or sewer vents shall be placed within an overflow path of stormwater.

J. Sanitary Sewer Manholes Best Practice:

1. Provide access to sewers for inspection, maintenance, and repair. New manholes shall not have steps.
2. Provide junction structures for connecting lines and alignment changes.
3. Distance between manholes shall not exceed 400 feet for pipe sizes less than 15 inches
4. Distance between manholes shall not exceed 500 feet for pipe sizes greater than 15 inches. Conditional approval may be given for increased spacing on a project specific basis
5. Minimum inside diameter for manholes is 48 inches.
6. Manholes with sewer pipe diameters greater than 36 inches are considered special structures and shall be designed by an engineer licensed in Missouri and approved by the City.

7. Manholes shall be installed on each side of a stream, creek, or water body crossing and installed at least 10 feet laterally behind top of bank.
8. Manholes within FEMA mapped 100-year flood limits, within storm water overflow paths, or other areas subject to flooding shall be water-tight and include a lock-type water-tight manhole cover.

K. Sanitary Sewer Design Flow Best Practice:

1. Hydraulic calculations shall be included in submittal packages to be reviewed by the City.
2. Sewer flows shall be based on the design peak hourly flow in accordance with MoDNR Design Guides 10 CSR 20-8-110 and shall be designed to prevent sanitary sewer overflows. If actual flow data is available, it may be used in lieu of the design average daily wastewater flow. In no case shall the ratio of peak hourly flow to design average flow be less than 4.
3. Population factors shall be determined from the most recent United States Census Tracts. In lieu of census data, 3.7 persons per household may be used for residential applications.
4. Project-specific flow design for non-residential, unconventional, or other applications may be considered in lieu 10 CSR 20-8-110, Table 1, on a project-specific basis and subject to review and approval by the City and MoDNR.

L. Sanitary Sewer Gradient Best Practice:

1. The following minimum pipe and flowline gradients shall be used. These values assume a minimum velocity of 2.0 feet per second, flowing full, and are based on a Manning "n" value of 0.013.

Nominal Pipe Size (inches)	Percent Slope
8	0.40
10	0.28
12	0.22
15	0.15
18	0.12
21	0.10
24	0.08
27	0.067
30	0.058
36	0.046

2. Field verification of as-built pipe gradient is required. Submittal of revised hydraulic calculations for lines with as-built gradients less than the approved design gradient by more than 0.1% is required. Removal and replacement of sewer lines and structures will be required if sufficient hydraulic capacity and cleansing velocity of the system is not met.

M. Sanitary Sewer Minimum Depth and Cover Best Practice:

1. 9 feet below finish grade to flowline for new sewers with reasonable expectation of future expansion or extension. The City will review this requirement on a project-specific basis. In some cases, upstream topography may indicate shallower burial is more economical.
2. 3 feet to top of pipe for sewer mains.
3. 2.5 feet to top of pipe for service lateral connections. Service laterals shall be at least 2.5 feet below low-floor or basement-floor elevations. This elevation shall determine recommended depth of new sewer mains.
4. At stream and channel crossings, streambanks shall be protected with a grouted rock blanket in accordance with MoDNR Design Guides 10 CSR 20-8.120 (8) "Sewers in Relation to Streams".
5. Deviations from Best Practices will be reviewed by the City on a project-specific basis.

N. Sanitary Sewer Manhole and Sewer Line Connections Best Practice:

1. All connections to manholes are subject to City review and approval. Connections to existing structures may require rehabilitation or reconstruction. Rehabilitation or reconstruction shall be included in the scope of a proposed project, where appropriate.
2. Service connections shall be made to sewer lines with a factory tee, Inserta Tee or approved equal. All service connections shall be made to sewer lines. Service connections to manholes will be reviewed by the City on a project-specific basis.
3. Drop type manhole connections shall be provided for a sewer line entering a manhole 24 inches or more above the invert.
 - a. Drop Pipe size shall be 12 inches or less.
 - b. Outside drops shall be fully encased in concrete.
 - c. Inside drops connections are allowed if manhole inside diameter is at least 48 inches and the incoming sewer gradient is less than 1%. Only one inside drop is allowed in a manhole.
 - d. Drop connections shall not be made through manhole joints or the transition conical section.
 - e. Manhole inverts shall be shaped to provide proper flow through the manhole
4. Force main connections to manholes shall be made within 12 inches of the manhole flowline and the invert shall be shaped to allow proper flow through the structure.
5. Pipes entering and exiting manholes at the flowline should project through the center of the structure and the manhole invert shall be shaped to ensure proper flow through the structure.
6. The number of lines entering a manhole, either new or existing, shall be kept to a minimum.

7. All replaced or repaired sewer mains shall be re-connected with a Shear Guard type fitting, or approved equal, to mitigate effects of differential pipe movement at joint and connections to dissimilar pipe materials.

O. Adjusting Manholes to Grade

1. If a proposed project requires manhole adjustment to grade, the proposed grade and method of adjustment shall be included in the project plans and is subject to City approval.

1.04 DESIGN - SEPARATION REQUIREMENTS

A. Public health is paramount. To protect the public health, the following separation requirements shall be met for water lines near sanitary and storm sewer lines. These requirements apply to both conventional trench-type construction methods and trenchless construction methods including but not limited to directional drilling and utility jacking and boring. These requirements shall be considered minimum requirements. Additional requirements may be required as conditions of required permits.

B. The following factors should be design considerations for separation requirements:

1. Materials and type of joints for water and non-potable fluid pipes.
2. Soil conditions.
3. Service and branch connections into the water main and non-potable fluid.
4. Compensating variations in the horizontal and vertical separations.
5. Space for repair and alterations of water and non-potable fluid pipes.
6. Routing water mains around manholes.

C. Horizontal Separation Requirements

1. See Standard Details.
2. Water lines shall be located at least ten (10) feet horizontally from any existing or proposed line carrying non-potable fluids such as, but not limited to, drains, storm sewers, sanitary sewers, combined sewers, sewer service connections, inlets, manholes, and process waste or product lines. The distance shall be measured edge to edge.
3. Water mains may be located closer than ten (10) feet when:
 - a. Local conditions prevent lateral separation.
 - b. The water main invert is at least 18 inches above the crown of non-potable fluid lines.
 - c. The water main is either in a separate trench or in an adjacent trench on an undisturbed earth shelf located on one side of the non-potable fluid line.
4. If separation requirements listed above cannot be met, the water line shall be placed in casing suitable for potable water in accordance with City Standard Specifications or the non-potable fluid line shall be re-constructed using pipe suitable for potable water use in accordance with Section 01001 – Standard Specification for Water Mains.

D. Vertical Separation Requirements

1. See Standard Details. The minimum vertical separation from water lines and non-potable fluid lines shall be 18 inches.
 - a. If the 18-inch vertical separation cannot be met for water lines above non-potable fluid lines, the water line shall be placed in casing suitable for potable water in accordance with City Standard Specifications and Details. Casing pipe shall be placed no closer than 4 inches above non-potable fluid pipe.
 - b. For water lines placed 18 inches or more below a non-potable fluid line, the water line shall be placed in casing suitable for potable water in accordance with City Standard Specifications and Details. Adequate support shall be provided to prevent damage to utilities located above the water line.
 - c. Where required, protective casing shall extend a minimum of 10 feet from non-potable fluid line measured perpendicular to the non-potable fluid line. Casing shall be sealed at each end according to City Standard Specifications.

1.05 PRE – CONSTRUCTION SUBMITTALS

- A. **Preliminary Submittal:** Project-specific special provisions, specifications, and plans shall be submitted to the City for review and approval of any public sewer main alteration or extension. The submittal shall be prepared by an Engineer. Submittal shall include but may not be limited to:
1. A completed MoDNR Application for Construction Permit – Sewer Extension, Form MO 780-1632.
 2. Proposed alignment, grade and locations of new structures and connections to existing sewer systems.
 3. Materials list and manufacturer data sheets, catalog data, and illustrations for all proposed materials to be used for the project. Material test certificates and affidavits of compliance with applicable standards.
 4. A work plan describing construction means, methods, sequencing, and scheduling.
 5. Plan showing all existing utilities and identifying potential conflicts with proposed work. If utility relocation is required, the Developer and their Engineer, in conjunction with respective utility owners, shall provide a proposed utility relocation plan for approval. The relocation of existing utilities shall be incorporated into the overall construction project as well as appropriate demolition plan of abandoned utility facilities.
 6. Other submittals detailed in other sections of City Standard Specifications
- B. **Preliminary Submittal Review(s):** Project-specific special provisions, specifications, and plans shall be submitted to the City of Moberly for review and approval of any public sewer main alteration or extension. The submittal shall be prepared by a professional licensed to practice in the State of Missouri. Submittal shall include:
1. At discretion of City, multiple iterations of the preliminary submittal review will be performed until all design and pertinent modifications are complete.

C. Final Submittal:

1. Final submittal to the City shall include Engineer's official seal, current date stamp, and signature on project-specific special provisions, specifications, and plans. Three (3) hard copies and one (1) electronic copy in .pdf format.
2. Submit approved MoDNR Application for Construction Permit – Sewer Extension, Form MO 780-1632. No work may begin until a copy of the approved permit has been provided to City.
3. Submit legally recorded copies of required utility easements, if any. No work may begin within proposed easements without having legally recorded permanent easements.
4. Submit approved Missouri Department of Transportation Highways and Transportation Commission, Permit to Work on Right of Way, if applicable.

1.06 INSPECTION

- A. In general, all work shall be inspected by the Enforcement Officer. Inspection for acceptance of materials will be conducted as soon as practical after materials arrive on the job site. Inspections will be performed as work progresses.
- B. The Enforcement Officer shall always have access for observation and inspection during the work. Access will be coordinated with the Contractor. The Contractor shall furnish all reasonable aid and assistance required by the Enforcement Officer for the proper inspection and examination of work and materials. The Enforcement Officer shall be notified at least two (2) working days in advance of all testing for inspection and observation. Notifications are required in accordance with other Standard Specifications.
- C. The Enforcement Officer reserves the right to reject materials and work not in compliance or accordance with approved plans and specifications.
- D. The Enforcement Officer reserves the right to suspend work.
- E. Under no circumstance shall service connections be made to existing mains without approval. All service connections will be coordinated by Contractor and conducted in the presence of Enforcement Officer.

1.07 POST – CONSTRUCTION FINAL SUBMITTAL

- A. Upon successful completion of construction and obtaining required testing results meeting or exceeding performance requirements, the Developer shall submit:
 1. Copies of all test reports, including failed tests.
 2. Submit two (2) copies of as-built drawings to City showing all changes, deviations, or modifications to original plans. As-built drawings shall include reference swing tie measurements from identifiable landmarks to all service connections. Each service connection shall have at least two (2) reference swing tie measurements.
 3. As-built drawings shall be completed by Engineer, dated and clearly marked with the name and company of the person illustrating the changes.

1.08 ACCEPTANCE

- A. After Final Submittal and City Approval, the City will conditionally accept the work.
- B. The Owner and Contractor shall warranty all work and materials for a period of one year. The Owner and Contractor will be responsible for repairing and replacing failures or damages resulting from poor workmanship and defective materials.
- C. The Enforcement Officer will inspect the work periodically during the warranty period, document conditions, and notify Developer of repairs required, if any.
- D. Final acceptance will be given when the warranty period ends, and all work and site conditions are to the satisfaction of the City.

END OF SECTION 01000

#11.

SECTION 01001 SEWER LINES AND MANHOLES

PART 1 – GENERAL

1.01 SUMMARY

- A. The design and construction of sewer main replacements, extensions, and alterations shall be in conformance with the City of Moberly Standard Specifications and Missouri Department of Natural Resources Minimum Design Standards for Sewer Systems.
- B. The work shall consist of furnishing all labor, materials, and equipment for complete installation of sewer main replacements, extensions, alterations, and appurtenances, in conformance with the lines and grades shown on the plans, as established by the Engineer, or otherwise specified.
- C. The Contractor shall employ skilled, qualified workers and supervision to perform work following generally accepted industry practices. The City reserves the right to suspend work if, in the opinion of the Enforcement Officer, this requirement is not being met.

1.02 DEFINITIONS

- A. City: City of Moberly, Missouri
- B. Sewer Department: City Sewer Department
- C. Enforcement Officer: City Director of Public Utilities or designated representative
- D. Engineer: Licensed Professional Engineer in responsible charge for the project licensed to perform services in the State of Missouri.
- E. Developer: Entity requesting sewer service construction, modifications, extensions, or alterations to the City sewer system. The Developer could be a public or private entity, such as the City of Moberly or a private Developer.
- F. Contractor: Entity contracted by Developer to perform work on sewer main and services. The Contractor is responsible for constructing approved plans.
- G. Owner: Entity who is responsible for long term performance, maintenance, and operation of new sewer mains. The City will typically become the Owner upon final approval and acceptance by City. The Developer will be responsible for the project until final approval and acceptance.

1.03 RELATED WORK

- A. Section 01000 – Approval and Acceptance
- B. Section 01002 - Earthwork
- C. Section 01003 - Directional Drilling
- D. Section 01004 - Utility Jacking and Boring
- E. Section 01005 - Pavement Repair

1.04 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least five (5) business days prior to commencing work.

1.05 SUBMITTALS

- A. See Section 1000 – Approval and Acceptance
- B. Material product data
- C. Work Plan detailing means, methods, equipment, sequencing, schedule, and testing for.
- D. Testing Reports and documentation of repairs

1.06 JOB CONDITIONS

- A. Interrupting Utility Service:
 - 1. Utility services to the City and existing customers shall not be interrupted unless approved by the Enforcement Officer and existing utility provider.
 - 2. If approval for an interruption of service is obtained, the Contractor shall provide an eight-hour notification to the Enforcement Officer and all affected occupants. The City Fire Department shall be notified at least 24-hours in advance.
 - 3. The Contractor shall provide standby service, if required. Outages shall not exceed 6 hours and will be coordinated with the Enforcement Officer.
 - 4. The Water Department is responsible for operation of in-service water valves, including closure as needed. Closure by other entities will not be permitted.
 - 5. The Contractor shall be responsible for preventing contamination of existing lines.
- B. New sewer mains must be fully tested and approved before installing service line connections.
- C. Whenever pipe laying is not actively in progress, open ends of all installed pipe and fittings shall be sealed water tight.

1.07 MATERIAL DELIVERY, STORAGE, AND HANDLING

- A. Means and methods for material shipping, loading, transporting, unloading, storing, and placing shall prevent damage. Damaged and/or defective materials shall not be installed. The City reserves the right to reject all damaged or defective materials.
- B. All materials shall be packaged, labeled, or otherwise marked with adequate, identifiable information to determine suitability for intended project application.
- C. Materials shall be stored at a mutually agreed upon location. Materials shall not be stored directly on the ground or in direct sunlight. They shall be stored in a manner to ensure they are kept clean, dry, and free of foreign debris.
- D. Materials shall be protected in a manner to prevent entrance of contamination or foreign debris.

1.08 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Gravity Sewer Systems
1. **Sewer main** will be measured and paid by the lineal foot of pipe along pipe centerline, including all labor, equipment, and materials required for installation. Unless otherwise identified as a bid item, unit cost shall include: excavation, backfill, fittings, joints, tracer wire, warning tape, erosion control, dewatering, pavement repair, seeding, and cleanup.
 2. **Manholes** will be counted as a single unit and be paid on a per-each basis, including all labor, equipment, and materials required for installation. Costs for pipe insertion, grouting, sealing; invert forming, frames and lids shall be included in the unit costs.
 3. **Service Lines and Connections** will be paid for on a per each basis, including all labor, equipment, and materials required for installation. Unit cost will include connections at sewer main, connections to service lines (new and existing), and cleanout installation where specified.
 4. **Separation Casing Pipe** will be measured and paid by the lineal foot along casing centerline. Unit cost shall include insulating spacers and end seals. Casing required for trenchless construction methods will be paid for separately.
 5. Estimated quantities for bid items could change. If quantities increase, additional materials and associated work will be paid for at contract unit cost. Purchasing additional materials and performing additional work shall not be done without prior written approval from the Enforcement Officer.
 6. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
 7. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - PRODUCTS

2.01 POLYVINYL CHLORIDE PIPE (PVC) AND FITTINGS

- A. Unless otherwise specified or shown on the plans, the following type of pipe shall be used for gravity sewers:
1. PVC pipe less than 18 inches shall meet requirements of ASTM D3034, with minimum SDR26. PVC pipe 18 inches and greater shall be in accordance with ASTM F679.
 2. All pipe shall have a minimum stiffness of 46 psi.
 3. Pipe shall be bell and spigot type. Wall thickness in pipe bell shall not be less than pipe barrel.
 4. Pipe shall have reference marks on male end indicating proper seating into bell.
- B. Fittings shall be of the same material and strength as sewer pipe. Fittings shall be compatible with pipe manufacturer.

C. Joints and Gaskets:

1. Finish joints shall be in accordance with ASTM D3212
2. Gaskets shall be in accordance with ASTM F477
3. Wall thickness in pipe bell shall not be less than pipe barrel. Pipe shall have reference marks on male end indicating proper seating into bell.
4. Buried joints shall be push-on type unless restrained or mechanical joints are required, specified, or as shown on the drawings.

D. Adapters and Couplings:

1. All sewer main replaced or repaired shall be re-connected. Connection of dissimilar material or different size materials shall be made with an approved, flexible, pre-formed elastomeric material conforming to ASTM - D3212, mechanical or compression seal type and also be equipped with a Shear Guard type fitting or approved equal. Stainless steel bands shall be used.

2.02 MANHOLES

A. Pre-cast concrete manholes: In accordance with ASTM C478 with provisions for gasketed joints between barrel and conical sections. Special design is required for manholes with incoming pipe diameter greater than 36 inches.

B. Size:

1. Base Section: 6-inch minimum floor thickness with 5-inch minimum thickness for wall and base riser.
2. Riser Sections: 5-inch minimum thickness and 48-inch inside diameter with lengths to provide depth/elevations indicated.
3. Top Section: Concentric cone type; top of cone shall match grade ring size.

C. Drop Type Manhole: Same as above. See standard details.

1. Drop pipe shall be PVC pipe with solvent welded elbow at bottom. Pipe shall be installed below flow line of incoming pipe.
2. Inside Drop: Pipe gradient for inside drops shall be less than 1%. Drop pipe shall be same size as incoming line. Use prefabricated or field-fit drop bowl. Solvent weld 90 degree elbow at bottom to match flowline. Drop pipe shall be attached to the inside face of manhole with at least three "Flared-Leg Brack-it" type D021 or approved equal, with 3-inch x 3/8-inch stainless steel bolt. Bracket shall be fastened to concrete with stainless steel anchor, wedge-type or grouted. A 3/4-inch stainless steel band shall be wrapped around the pipe and attached to the bracket. At least two bracket/band assemblies shall be used with a maximum spacing of 3 feet.
3. Outside drops shall be either pre-cast with the manhole or fully encased in concrete. Maximum pipe size for outside drops is 12 inches.

D. Gaskets:

1. In accordance with ASTM C923, rubber or mastic sealant. Ram-Nek, E-Z Stik, or approved equal.

E. Grade Rings:

1. Pre-cast concrete, Cretex Pro Ring, or approved equal and compatible with 24-inch manhole frames and covers. Maximum thickness for grade rings and frame shall be 18 inches.

F. Concrete Manhole Collar:

1. Where specified and shown on the drawings install concrete manhole collars for manholes installed within existing pavement structures in accordance with standard details.

G. Steps:

1. No steps shall be installed in manholes, unless otherwise specified or shown on the drawings.

H. Pipe Connections:

1. In accordance with ASTM C923, resilient, of size required for each pipe connecting to manhole. Pipe connections shall be A-Loc, Z-Loc, or approved equal.

I. Frames and Covers:

1. In accordance with either ASTM A48 - Standard Specification for Gray Iron Castings or ASTM A536 Standard Specification for Ductile Castings manufactured by Neenah Foundry Company or approved equal with machined bearing surface and self-sealing gasket.
2. Frames shall be secured to the manhole with at least four connections. Connections may be wedge anchor or grout type with at least 1/2-inch x 4-inch bolts.
3. 22-inch minimum inside diameter
4. 7-inch to 9-inch riser with 4-inch minimum flange width
5. 24-inch diameter cover, checkered or knobbed surface finish with "SANITARY SEWER" cast into cover
6. The frame shall be compatible with chimney seal installations.
7. Watertight manhole frames and covers shall be provided where indicated on the plans, manufactured by Neenah Foundry Company or approved equal and installed according to manufacturer recommendations. Covers shall have concealed pickholes.

J. Chimney Seals:

1. Where indicated on the plans, an external or internal chimney seal shall be installed between the manhole frame and masonry chimney in accordance with manufacturer's recommendations and specifications. Seals shall be Cretex or approved equal.

K. External Joint Sealing Bands:

1. External joint seals shall be installed on each manhole section joint. Seals shall be CretexWrap or approved equal meeting requirements of ASTM C877, Type II, and installed according to manufacturer's recommendations and specifications.

L. Protective Coatings:

1. Surfaces shall be clean, dry, and contaminant free. Remove surface protrusions and fill air pockets, lifting lug holes, and other surface imperfections with hydraulic cement grout or other approved filler compatible with coating application. Supply written confirmation of material compatibility with selected coating.
2. All exterior manhole surfaces shall have a waterproof protective coating either factory or field applied.
 - a. 1 or 2 coat asphalt waterproofing conforming to ASTM D449, Type C, 15-mil thickness unless otherwise specified or shown on the drawings.
3. Provide protective interior surface coatings where specified or indicated on the plans. Protective coating shall be applied according to manufacturer's recommendations and specifications.
 - a. SewerGard polymer lining, or approved equal
 - b. Tnemec Series 66 Epoxoline barrier coat and Tnemec Series 46H-413 finish coat, or approved equal
 - c. The material shall be an impermeable, high strength, corrosion-resistant, fiber-filled or aggregate-filled epoxy material specifically designed to protect concrete surfaces of municipal wastewater treatment structures and collection systems.
 - d. The material shall prohibit water infiltration and shall have proven resistance to corrosive chemicals, including sulfuric acid as well as other chemicals typically found in sanitary sewers.
 - e. The material shall be suitable for application over damp or dry concrete surfaces without the use of a primer.
 - f. The material shall have a non-sagging consistency to permit application on vertical and overhead surfaces.

2.03 CONCRETE

- A. Cast-in-place according to ACI 318, ACI 350R
- B. Cement: ASTM C150, Type I or II
- C. Fine Aggregate: ASTM C33 Sand
- D. Coarse Aggregate: ASTM C33, Crushed Grave, 1-inch maximum particle size
- E. Water: Potable
- F. Reinforcement: ASTM A185, steel, welded wire fabric, plain

- G. Reinforcement: ASTM A615, Grade 60, deformed steel
- H. Water Cement Ratio: 0.45 maximum
- I. Unconfined Compression Strength: 4,000 psi minimum
- J. Air Entrainment: 3% to 6%

2.04 GROUT

- A. ASTM C1107 Standard Specification for Packaged Dry, Hydraulic Cement Grout (Non-shrink)
- B. Quikrete commercial grade non-shrink precision grout or approved equal.

2.05 SEPARATION CASING PIPE

- A. This section applies when casing is required around water mains to comply with sanitary and storm sewer separation requirements. Casing materials, including joints, shall be suitable for potable water. Casing size shall be large enough to allow unrestricted installation of product pipe, including casing spacers, pipe fittings, and joints.
- B. Casing materials may be PVC, Steel, or High-Density Polyethylene (HDPE)
 - 1. PVC casing shall be in accordance with this section.
 - 2. Steel casing shall conform to AWWA C200 and AWWA M11, joined by fully welding in accordance with AWWA C206. Casing shall have a minimum wall thickness of 0.25-inch for casing up to 24 inches.
 - 3. HDPE casing shall be in accordance with Section 01003 – Directional Drilling.
- C. Projection type, non-metallic insulating spacers shall be used to support sewer main inside casing. Insulating spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.
- D. Synthetic rubber end seals shall be installed on each end of the casing pipe. End seals shall be Advanced Model Products – Model AC pull-on or approved equal fastened tightly with stainless steel bands.
- E. See Standard Details.

2.06 TRACER WIRE

- A. Tracer wire shall be green HDPE insulated single strand #12 AWG continuous copper clad steel tracer wire. Tracer wire shall be manufactured by Copperhead Industries LLC or approved equal.

2.07 WARNING TAPE

- A. Warning tape shall be "green" non-metallic, 3-inches wide and at least 5 mil thick. Warning tape shall have "Caution Buried Sewer Line" or similar warning printed on the tape. Tape shall be buried at least 2 feet above top of pipe.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Notify utility providers at least 3 business days prior to performing work adjacent to existing utilities. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.
- B. Coordinate Utility interruptions with service provider. For city-owned utilities, a written approval and two day notification is required before interrupting service.
- C. Document existing conditions including distress to existing features within project limits and footprint of construction. Document conditions at adjoining properties.
- D. When connecting to existing sewer lines, verify invert elevation of existing sewer prior to constructing new sewer.
- E. Establish survey control and verify governing dimensions and elevations. Locate existing structures and piping scheduled for abandonment and/or decommissioning.
- F. Prior to laying pipe, prepare trench subgrade and bedding in accordance with Section 01002 – Earthwork.
- G. Trench excavations shall be protected in accordance with applicable Federal, State, and local regulations, Laws, and rules in accordance with OSHA 29 CFR part 1926. Trench and excavation stability shall be the responsibility of the Contractor.
- H. If surface or ground contamination is suspected or encountered, notify the City immediately. The Developer and Contractor, in communication with the City, shall assess conditions and develop a plan for continued work including but not limited to: removal and disposal of contamination, specifying different sewer line materials and/or sewer line realignment.
- I. All pipe, fittings, and joints shall be clean, and free of foreign debris.
- J. Exclude entrance of foreign material if work is suspended or stopped.
 - 1. Close ends of pipe with snug-fitting closures such as end caps.
 - 2. Do not let water fill the trench. Include provisions to prevent flotation if water control measures are inadequate.
 - 3. Remove water, sand, mud, and other undesirable material from trench before removal of end cap.

3.02 WATER CONTROL

- A. Develop and implement an approved stormwater pollution prevention plan including erosion control measures. Prevent surface water and subsurface or ground water from entering excavations.
- B. If required, dewater to lower groundwater elevation a sufficient depth below pipe and structures to allow specified subgrade preparation, pipe laying, backfilling, and testing.

1. If dewatering is required, the contractor shall submit a project-specific dewatering plan prepared by an Engineer with at least 10 years' experience designing dewatering systems. Develop and implement site specific studies as needed to assist with the design.
- C. Water from surface runoff, downspouts, and subsurface drains shall be managed and controlled by the Contractor through an approved site drainage system. Equipment and materials required to remove water from excavations shall be on-site and available for uses throughout construction.
- D. Water disposal shall be the responsibility of the Contractor and completed in accordance with applicable federal, state, and local regulations.

3.03 INSTALLATION

A. Pipe Laying

1. In accordance with ASTM D2321 – Standard Practice for Underground Installation of thermoplastic pipe sewers and other gravity flow applications.
2. Perform only when weather and trench conditions are suitable. Do not lay in water.
3. Remove trash, debris, vegetation, snow, ice, water or other unsatisfactory materials from excavations.
4. All materials shall be carefully lowered into the trench using means and methods to prevent damage and entrance of foreign debris. Rolling or dropping materials will not be permitted. End hooks will not be permitted.
5. Commence laying at the downstream end of line and install pipe with spigot ends in the direction of flow. Bells shall be in the direction of the laying operations.
6. Open ends of sewer lines shall be adequately sealed to prevent intrusion of foreign debris during all work stoppages.
7. Clean piping and structures; remove all foreign debris. Maintain drag or swab line and pull past each joint as it is completed.
8. Install concrete cradles, encasement, and anchors in accordance with approved plans. Provide temporary support as required to position or anchor the pipe. Concrete shall be worked beneath pipe to eliminate all voids. Place concrete evenly on both sides of pipe.

B. Manhole Installation:

1. In accordance with ASTM C891 – Standard Practice for Installation of Underground Concrete Utility Structures.
2. Install manholes at locations and orientation and of type as shown on the plans and Standard Details.
3. Seal joints between manhole sections, conical sections, grade rings and frames. Provide water tight manhole covers where specified or shown on the plans.
4. Install and seal pipe connections as specified.
5. Place concrete inverts and benches. Inverts shall be shaped to the incoming and outgoing pipes and smoothly shaped from pipe to pipe to the top of invert at springline. Form smooth, curved channels. Slope benches from manhole wall down to channel at 1 in/ft.

6. Set top of frames and covers at specified elevations. In general, flush with surface in pavement structures and 1 inch above finished surface in all other area, unless otherwise specified.
7. Fill all voids, holes, and defects with hydraulic cement non-shrink grout. If interior protective coatings are specified, ensure compatibility of filler and coating materials.
8. If field applied, apply waterproof protective coating to exterior surfaces. If factory installed, repair damaged coatings.
9. Apply interior protective coating where specified and shown on the plans.
10. Install external joint sealing bands according to manufacturer's recommendations and specifications.
11. Where indicated, install chimney seals as specified and shown on the plans.

C. Service Connections

1. See Standard Details
2. Provide wye or tee type fitting on sewer main at service connections as shown on Standard Details. Inserta Tee type fittings require City approval.
3. No connections shall have bends greater than 45 degrees.
4. Where indicated, install service line cleanouts according to Standard Details.
5. Re-connect services in accordance with these specifications.
6. If existing service lines will be disconnected and abandoned, the service line shall be plugged with a water-tight seal.
7. Document connection locations relative to manhole locations. Document offset location to existing service line and clean out location. Provide documentation to City.

D. Joining

1. Join pipe in accordance with manufacturer's recommendations
 - a. Clean and lubricate all joint and gasketed surfaces.
 - b. Employ means and methods to prevent damage during jointing.
 - c. Inspect joint openings and deflection for compliance with specifications.
2. Install gaskets, seals, sleeves, couplings, and other fittings according to manufacturer recommendations.
3. Pipe expansion and contraction due to changes in temperature shall be monitored during construction. Previously joined pipe shall be inspected to ensure joints have not separated due to expansion and contraction.

E. Cutting Pipe

1. Cut neatly without damage to pipe. Surfaces shall be perpendicular to pipe centerline.

2. Remove burrs and sharp edges and smooth the pipe end by grinding.

F. Casing Pipe

1. Where required, install casing to satisfy separation requirements.
2. When typical trench-type construction techniques are used, subgrade preparation, bedding, initial backfill, and final backfill shall be in accordance with Standard Specification Section 01002 – Earthwork
3. When trenchless construction techniques are used, installation shall be in accordance with Standard Specifications Section 01003 – Directional Drilling and Section 01004 – Utility Jacking and Boring

G. Furnish and install plugs where necessary to properly complete required testing.

H. Tracer Wire

1. Attach continuous tracer wire to top of sewer line or force main, either taped, banded, or strapped at 5 feet to 7 feet intervals. Install according to manufacturer's recommendations.
2. Tracer wire shall be looped to the surface at all Manholes and service line cleanouts, and locations specified or as shown on the plans.
3. All sewer service lines shall have a tracer wire from the sewer main tap to the cleanout at Right-Of-Way.
4. Prior to acceptance, Contractor shall perform conductivity testing for all tracer wire. Full continuity must be established prior to final acceptance.

I. Warning Tape:

1. Install continuous warning tape at least 2 feet directly above all sewer lines.

J. Backfilling and Pavement Repair:

1. Backfill and finish surface in accordance with Standard Specification Section 01002 – Earthwork, and Standard Specification Section 01005 – Pavement Structure Repair.

K. Connections to Existing Manholes:

1. Where specified and shown on the drawings, connect new sewer main to existing manholes. Provide inside or outside drop type in accordance with drawings and specifications.
2. Cut holes in manhole wall to permit pipe insertion, alignment and gradient establishment and a minimum 2-inch annular space between pipe and wall across full circumference. Remove all debris prior to bedding pipe and placing grout. For smaller pipe (four (4) inch to six (6) inch), the manhole shall be core drilled and a link seal installed. This work is subject to approval of the City of Moberly
3. Coat surface of hole with grout prior to setting pipe. Place grout bedding prior to inserting pipe. Place pipe in grout bedding and allow to set.

4. After setting, completely fill annular space with grout and provide smooth surface flush with manhole wall.
5. Construct new inverts between new and existing flowlines in accordance with manhole installation section of this specification.
6. The Enforcement Officer shall observe all connections to existing manholes. If, in the opinion of the City, manhole repair and replacement is required, subsequent mitigation work will be the responsibility of the Contractor.

3.04 QUALITY CONTROL

A. General

1. All work shall be inspected and approved by the Enforcement Officer prior to backfilling. Contractor shall notify the Enforcement Officer and arrange for inspection and observation of all testing prior to commencing.
2. Contractor shall obtain approval from Enforcement Officer prior to making any connections to existing manholes. The Enforcement Officer or representative must be present during any connection activities.
3. The Contractor shall furnish all equipment, labor and other materials and services necessary to perform pressure testing, deflection testing, and pipe gradient verification.
4. All pipe being tested shall have backfill placed in accordance with specifications, except in pavement structure areas. Placement of pavement structure base and surface courses shall be completed after all pressure, leak, deflection, and distortion testing requirements are met. Prior to backfill, verify pipe is to grade and alignment along entire length. Care should be taken during backfill to avoid moving the pipe.
5. Manhole water tightness testing shall be performed prior to backfilling.
6. Submit results of each test to Enforcement Officer.
7. Test failures require repair of failed portions of system until satisfactory test results are achieved.

B. Deflection/Distortion Testing

1. Deflection/Distortion testing shall be performed on all pipe at least 30 days after backfilling.
2. A go/no-go mandrel shall be used. The diameter of the mandrel shall be at least 95% (i.e. 5% Deflection Mandrel) of the pipe base inside diameter determined in accordance with ASTM D3034 or ASTM F679. Base inside diameter is established by subtracting a statistically derived tolerance package from the PVC sewer pipe in accordance with ASTM standard the pipe was manufactured.
3. The device shall be manually pulled through the pipe section being tested. Where possible, begin testing at downstream end of pipe. Mechanical pulling devices are not allowed.
4. Failure to advance the mandrel through the pipe constitutes a failed test.

C. Low Pressure Air Test for Pipe Sections

1. Perform test in accordance with ASTM F1417 - Installation Acceptance of Plastic Gravity Sewer Lines Using Low Pressure Air. During joining, ASTM F3058 – Standard Practice for Preliminary Field Testing of Thermoplastic Pipe Joints for Gravity Flow (Non-Pressure) Sewer Lines may be used to test individual joints. Final testing for acceptance will be in accordance with ASTM F1417 methods.
2. Seal ends of pipe and openings air and watertight.
3. Minimum test pressure shall be 5 psig above average groundwater pressure, if any, at pipe springline.
4. Pressurize pipe and allow pressure to stabilize at least 4 minutes. Adjust pressure to 5 psig and begin recording time. Measure the amount of elapsed time it takes for the pressure to drop 1 psi. in minutes and seconds.
5. Reference Table 1 in ASTM F1417 Minimum Time for a 1 psig Pressure Drop for Size and Length of Pipe for $Q = 0.0015 \text{ ft}^3/\text{min}/\text{ft}^2$ of Internal Surface. Measured time greater than those listed in the table for a particular pipe size and length constitute a passing test.

D. Manhole Water Tightness

1. Vacuum testing and acceptance shall be in accordance with ASTM C1244 – Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill. These testing requirements do not apply to existing manholes, unless otherwise specified or shown on project drawings.
2. Seal manhole. Apply 10 in/Hg vacuum. This creates a pressure differential of approximately 5 psi from outside to inside when test is conducted under normal atmospheric pressure conditions. Maintain vacuum for at least 5 minutes.
 - a. De-water as necessary to remove additional hydrostatic pressure. Vacuum testing a manhole system subject to hydrostatic pressure may induce a pressure differential in excess of design limits of critical flexible connectors.
3. Begin recording time. Measure the amount of elapsed time it takes for the pressure to drop 1 in/HG in minutes and seconds.
4. Reference Table 1 in ASTM C1244 for minimum elapsed time for a drop in vacuum of 1 in/Hg. Measured time greater than those listed in the table for a particular manhole size and depth constitute a passing test.

END OF SECTION 01001

SECTION 01002 EARTHWORK

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for earthwork, trenching, backfilling and compacting. The work shall consist of all labor, materials, and equipment required to install sewer main and appurtenances in accordance with contract documents, drawings, and specifications.
- B. The Contractor shall employ skilled, qualified workers and supervision to perform work following generally accepted industry practices. The City reserves the right to suspend work if, in the opinion of the Enforcement Officer, this requirement is not being met.

1.02 DEFINITIONS

- A. City: City of Moberly, Missouri
- B. Sewer Department: City Sewer Department
- C. Enforcement Officer: City Director of Public Utilities or designated representative.
- D. Engineer: Licensed Professional Engineer in responsible charge for the project licensed to perform services in the State of Missouri.
- E. Developer: Entity requesting sewer service construction, modifications, extensions, or alterations to the City sewer system. The Developer could be a public or private entity, such as the City of Moberly or a private Developer.
- F. Contractor: Entity contracted by Developer to perform work on sewer main and services. The Contractor is responsible for constructing approved plans.
- G. Owner: Entity who is responsible for long term performance, maintenance, and operation of new sewer mains. The City will typically become the Owner upon final approval and acceptance by City. The Developer will be responsible for the project until final approval and acceptance.
- H. ASTM: American Society for Testing and Materials

1.03 RELATED WORK

- A. Section 01000 – Approval and Acceptance
- B. Section 01005 - Pavement Repair
- C. Section 01006 - Seeding

1.04 REFERENCE STANDARDS

- A. ASTM D698 - Moisture-Density Relations of Soils and Soil Aggregate Mixtures, Using 5.5 lb. Rammer and 12-inch Drop.
- B. ASTM D6938 – Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (shallow depth).

- C. Missouri Standard Specification for Highway Construction.

1.05 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least five (5) business days prior to commencing work.

1.06 SUBMITTALS

- A. See Section 1000 – Approval and Acceptance.
- B. Work Plan detailing means, methods, equipment, sequencing, and schedule for Earthwork.
- C. Traffic control plan and required permits from jurisdictions having authority.

1.07 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Trenching, backfilling, and compacting shall be included in the Contract unit cost of sewer main pipe.
- C. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - PRODUCTS

- 2.01** Materials shall be in accordance with Contract Documents, plans, specifications, and approved submittals.

2.02 BEDDING AND INITIAL BACKFILL

- A. Granular bedding containing no clods, muck, sod, frozen material, roots or other deleterious material with a plasticity index not greater than 6 and meeting the following gradation requirements.

Sieve Size	Percent Passing
1.5 inch	100
#4	20-60
#200	0-6

2.03 FINAL BACKFILL

- A. **Excavation Spoils:** suitable silt, sand, gravel, lean clay or combinations thereof containing no clods, muck, organics, frozen material, or other deleterious material from excavations. Maximum particle size shall be 3 inches.
 - 1. If sufficient quantity of suitable materials is not available from excavation spoils, the Contractor shall identify and import suitable materials for backfill. Contractor shall dispose of all unsuitable material.

- B. **Select Granular Backfill**, Section 1010, Missouri Standard Specification for Highway Construction. Material shall meet the following gradation:

Sieve Size	Percent Passing
3 inches	100
#40	20-60
#200	0-6

2.04 AGGREGATE BASE AND SURFACE

- A. **Aggregate Base:** Type 5, Section 1007, Missouri Standard for Highway Construction.
- B. **Aggregate Surface:** Grade A or B, Section 1006, Missouri Standards for Highway Construction.

2.05 CONTROLLED LOW-STRENGTH MATERIAL (FLOWABLE FILL)

- A. Controlled Low-Strength Material: Self-compacting, flowable concrete material produced from the following:
 - 1. Portland Cement: ASTM C150/C150M, Type I or Type II.
 - 2. Fly Ash: ASTM C618, Class C or F.
 - 3. Normal-Weight Aggregate: ASTM C33/C33M, 3/4-inch nominal maximum aggregate size.
 - 4. Water: ASTM C94/C94M.
 - 5. Air-Entraining Admixture: ASTM C260/C260M.
- B. Produce conventional-weight, controlled low-strength material with 100-psi compressive strength when tested according to ASTM C495/C495M and placed in the field with a slump between 9 and 11 inches tested in accordance with ASTM C143..

PART 3 - EXECUTION

3.01 GENERAL

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.
- B. Establish line and grade to maintain minimum burial and separation requirements in coordination with Enforcement Officer and Engineer. Notify Enforcement Officer and Engineer if conflicts with existing utilities or structures exist.
- C. Trench excavations shall be protected in accordance with applicable Federal, State, and local regulations, Laws, and rules in accordance with OSHA 29 CFR part 1926. Trench and excavation stability shall be the responsibility of the Contractor.
- D. Implement and maintain traffic control plan

3.02 WATER CONTROL

- A. Develop and implement stormwater pollution prevention plan including erosion control measures. Prevent surface water and subsurface or ground water from entering excavations. Dewater to remove all water a sufficient depth below pipe and structures to allow specified subgrade preparation, pipe laying, and backfilling. The plan shall address water disposal if dewatering is required.

- B. Water from surface runoff, downspouts, and subsurface drains shall be managed and controlled by the Contractor through an approved site drainage system. Equipment and materials required to remove water from excavations shall be on-site and available for uses throughout construction.
- C. Water disposal shall be the responsibility of the Contractor and completed in accordance with applicable federal, state, and local regulations.

3.03 PREPARATION

- A. Clear and grub areas of excavation.
- B. Backfilling and compaction shall not occur until the following conditions are satisfied:
 - 1. Subgrade proof-compacting, required inspection, testing and acceptance by Enforcement Officer.
 - 2. Soft, rutting, pumping, frozen or otherwise unsuitable soils in base of excavations shall be removed at direction of Enforcement Officer. Notify Enforcement Officer once subgrade elevations are reached. Excavate unsuitable soils within directed limits and replace with suitable materials approved by Enforcement Officer. Suitable materials could include but are not limited to bedding, initial backfill, and final backfill.
 - 3. All trash, debris, vegetation, snow, ice, water or other unsatisfactory materials shall be removed from excavations.

3.04 EXCAVATION

- A. Excavate trenches to approved subgrade elevations. Unless otherwise specified, the minimum trench width shall be at least one (1) foot greater than the outside diameter of the pipe.
- B. If rock is encountered, it shall be excavated at least 12 inches wider than the outside diameter of the pipe and at least 6 inches deeper than planned subgrade elevation. Alternatively, pipe alignment and grade could be adjusted to avoid rock excavation if separation, burial, and joint restraint requirements are satisfied. If additional excavation is required, bedding material shall be used as backfill.
 - 1. For City projects, notify Enforcement Officer and Engineer immediately if rock is encountered within excavation limits, and earthwork progress significantly slows or stops. Excavation in rock shall not progress unless approved by Enforcement Officer. The Enforcement Officer will provide guidance and specifications for rock excavation and backfilling on a case by case basis.
 - 2. For City projects, unless identified as a bid item, additional cost for rock excavation will be paid for as additional work in accordance with Contract Documents regarding changes.
 - 3. For City projects, unless identified as a bid item or otherwise addressed on a project specific basis, if surface or ground contamination is suspected or encountered, notify the City immediately. The Contractor, in communication with the City, shall assess conditions and develop a plan for continued work including but not limited to: removal and disposal of contamination, specifying different sewer line materials, and sewer line realignment. Additional work, will be paid for as additional work in accordance with Contract Documents.
- C. Stockpile materials acceptable for use as backfill and topsoil. Stockpile locations relative to excavations shall be incorporated into Contractor's responsibility for excavation stability. Place,

grade, and shape stockpiles to promote positive drainage with adequate erosion control. Dispose unsuitable materials.

3.05 BACKFILLING

- A. Proof-compact subgrade prior to placing bedding or laying pipe. Proof-compacting shall be performed in the presence of Enforcement Officer; approval is required before placing bedding to receive pipe.
- B. Shape and compact bedding to provide uniform bearing of the pipe. Excavate bell holes to allow for unobstructed assembly of the joint. Make bell hole as small as practical. After the joint has been made, carefully fill bell hole with bedding material and compact.
- C. After pipe laying, joining and aligning, place and compact bedding and initial backfill as shown on the plans. Ensure material is worked under the haunch of the pipe to provide adequate side support. Take precautions to prevent movement of the pipe during placement and compaction of haunching material.
- D. Place and compact initial backfill to provide cover over the pipe. Use methods to prevent pipe damage or displacement.
- E. In unpaved areas, place final backfill using methods to prevent pipe damage or displacement. Place final backfill in 6-inch loose lifts and compact. Leave material neatly mounded over the trench. Maintain trench and fill settled areas as they occur. Finish grade to eliminate uneven areas. Seed areas where required.
- F. In paved areas, place and compact base and surface repairs in accordance with details and project specification Section 01005 - Pavement Repair. Place final backfill using methods to prevent pipe damage or displacement.
- G. Jetting or water-settling backfill is prohibited, unless permitted by Enforcement Officer and Engineer.

3.06 COMPACTION

- A. Compact materials in accordance with ASTM D698 and ASTM 6938 and according to the following table:

Material	Minimum Compaction	Maximum Loose Lift Thickness
Bedding and Initial Backfill	90%	4 inches
Suitable Excavation Spoils	90%	6 inches
Select Granular Backfill	95%	6 inches
Aggregate Base	95%	6 inches
Aggregate Surface	95%	6 inches
Bituminous Surface	98%	3 inches

- B. Moisture condition (wetting or drying) fill as needed to achieve optimum moisture contents and required compaction.
- C. Use compaction equipment capable of achieving required densities and avoid damage to pipe, adjacent utilities, and adjacent structures. Self-propelled, "heavy" roller or pad type vibratory rollers shall not be operated within 2 feet from top of pipe.

3.07 QUALITY CONTROL

- A. Compaction quality control shall be provided by Contractor and will be incidental to Contract Unit costs. Quality control technicians and testing organizations shall be trained and certified to perform required testing in accordance with ASTM standards and specifications.
- B. Quality control density testing frequency shall be in accordance with the following table:

Material	Testing Frequency per lift
Bedding and Initial Backfill	One test every 300 linear feet of trench
Suitable Excavation Spoils	One test every 300 linear feet of trench
Select Granular Backfill	One test at each pavement structure crossing
Aggregate Base	One test at each pavement structure crossing
Aggregate Surface	One test at each pavement structure crossing
Bituminous Surface	One test at each pavement structure crossing

- C. Areas where testing indicates insufficient compaction shall be re-compacted, re-conditioned, re-worked, and/or moisture conditioned until requirements are met and to satisfaction of Owner and Engineer.
- D. Controlled low strength material shall be tested in the field for slump and samples collected for comprehensive strength testing. Slump and comprehensive testing shall be in accordance with ASTM C143 and ASTM C495, respectively. Testing frequency shall be 1 set of tests per 100 cubic yards of material used. Slump shall be between 9 and 11 inches. Minimum compressive strength is 100 psi.

3.08 MAINTENANCE

- A. The Contractor will demobilize equipment and restore the work site to the original condition. All excavations will be backfilled, and surfaces restored according to specifications and project drawings.
- B. Remove all leftover materials, including unsuitable excavation spoils, trash, debris, and other construction waste in accordance with applicable federal and state laws and regulations.
- C. Protect newly graded areas from traffic (except pavement crossings) and erosion. Keep free of trash and debris See Section 01005- Pavement Repair for pavement area maintenance.
- D. Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances during warranty period and to satisfaction of Enforcement Officer.
- E. Where differential movement is measurable or observable along excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add appropriate backfill material, compact, and replace surface treatment according to project specifications and plans. Restore appearance, quality, and condition of surface or finish to match adjacent work to satisfaction of Enforcement Officer.

END OF SECTION 01002

SECTION 01003 DIRECTIONAL DRILLING

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for directional drilling installation methods for High Density Polyethylene (HDPE) pipe casing or steel pipe casing beneath traveled ways or at locations shown on the drawings. The Contractor shall provide all labor, materials, and equipment required to install casing in accordance with these specifications.

1.02 SUBMITTALS

- A. Submit work plans, shop drawings, and product data for approval. Submittals shall include:
1. Detailed work plan and sequencing including procedures and schedule;
 2. Proposed line and grade of casing pipe to maintain minimum burial depth, minimum separation requirements from existing utilities, and radius of curvature;
 3. Proposed equipment including but not limited to: drilling rig, rotary torque capacity, thrust/pullback pressures, tensile load limit calculations, drill bits, mud system including pump and motor size, down-hole tools, guidance system with stated accuracy, and safety systems;
 4. Pit locations;
 5. Design, means, methods and materials for pit excavation support;
 6. Pit dimensions showing relative location to traveled ways;
 7. Dewatering methods;
 8. Spoil removal methods;
 9. Drilling fluids including water source;
 10. Methods for monitoring drill fluid volumes and losses;
 11. Product data;
 12. Casing pipe material and size;
 13. Casing pipe segment joining methods and procedures;
 14. Product pipe spacers and casing pipe end seal materials;
 15. Erosion control and stormwater pollution prevention plan;
 16. Adverse conditions plan:
 - a. Plan shall address means and methods of work, especially HDPE fusion welding, in adverse conditions such as freezing temperatures, precipitation, and wind and mitigation measures to eliminate resulting effect on pipe fusion and installation;
 17. Remediation plan:
 - a. Identify means and methods to remove obstructions at the boring face;
 - b. Identify remedial measures for mitigating damage to existing facilities, and impacts to traveled ways, including ground subsidence and heaving;
 - c. Identify remedial measures for excessive drill fluid loss;
 18. Experience:
 - a. Submit a list of at least five (5) successfully completed directional drilling projects using HDPE pipe sizes of at least 18 inches and lengths greater than 150 feet within the last five (5) years. Include project owner contact information references substantiating Contractor's experience; and,
 19. As-Built Drawings showing horizontal and vertical alignment of completed casing installation. This submittal shall also include pullback pressure logs, volume of drilling fluid, and fluid losses, if any.

1.03 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least two (2) business days prior to commencing work. All work shall be performed in the presence of the Enforcement Officer.

1.04 BASIS OF PAYMENT

- A. Directional drilling shall be paid for by the lineal footage of casing installed along casing centerline. The unit price shall include:
1. Excavation, use, and backfilling of all pits;
 2. Removal and disposal of spoils and drilling fluid;
 3. Traffic control;
 4. Verifying location and depth of all utilities within impacted area;
 5. Casing pipe installation; and,
 6. All labor, equipment, and materials required to complete the work.
- B. The unit cost shall be for casing pipe and shall not include product pipe and installation.
- C. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
- D. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 – PRODUCTS

2.01 HIGH DENSITY POLYETHYLENE PIPE CASING

- A. Materials shall be in accordance with Contract Documents, plans, specifications, and approved submittals.
- B. All HDPE shall be manufactured from PE 4710 resin listed as TR-4 by the Plastic Pipe Institute (PPI). The resin shall meet ASTM D3350 with a minimum 445474C cell classification. The manufacturer shall certify the specified cell classification.
- C. HDPE casing shall conform to ASTM F 714, ANSI and AWWA C906, and have an NSF-61 listing.
- D. All pipe, fittings, and fusion equipment shall be provided by one supplier. Fusion equipment must be in satisfactory working order. All fusion equipment operators shall be qualified to perform heat fusing procedures.

2.02 STEEL PIPE CASING

- A. Materials shall be in accordance with approved submittals.

- B. Steel casing pipe shall meet or exceed ASTM A-139, Grade B with a minimum wall thickness of 0.25 inches and minimum yield strength of 35,000 psi. Steel casing shall be joined by fully welding around the entire circumference of the pipe. Welding shall conform to AWWA Standard C206.

2.03 CASING END SEALS

- A. Synthetic rubber end seals shall be installed on each end of the casing pipe. End seals shall be Advanced Model Products – Model AC Pull-on or approved equal and fastened tightly with stainless steel bands.

2.04 INSULATING SPACERS

- A. Projection type, non-metallic spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.

2.05 DIRECTIONAL DRILLING EQUIPMENT

- A. Directional drilling equipment shall consist of a hydraulically-powered directional drilling rig of sufficient capacity to perform the bore and pullback the casing pipe, a drilling fluid mixing, delivery and recovery system of sufficient capacity to successfully complete the crossing, a drilling fluid recycling system to remove solids from the drilling fluid, a guidance system to accurately guide boring operations, a vacuum truck of sufficient capacity to handle drilling fluid volume, and qualified personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project.
- B. The directional drilling rig shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at a variable angle while recirculating pressurized drilling fluid mixture to a guidable drill head. The rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The rig shall be electrically grounded during drilling and pull-back operations. There shall be a system to detect electrical current from the drill string and an audible alarm that automatically sounds when an electrical current is detected.
- C. Drilling fluid shall be composed of clean water and appropriate bentonite clay additives in accordance with approved submittals. Water shall be from source approved by Enforcement Officer and be contaminant free. Drilling fluids shall be thoroughly mixed and free of clumps or clods.

PART 3 - EXECUTION

3.01 GENERAL

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.
- B. Construction means, methods, and materials shall be in accordance with approved submittals.
- C. Entry and exit pit excavations shall be constructed in accordance with approved submittals. Excavations should be protected in accordance with applicable Federal, State, and Local regulations, laws, and rules. Excavation protection shall not be less than the standards and regulations established by OSHA 29 CFR Part 1926. Trench safety and stability shall be the responsibility of the Contractor, including placement of excavation spoils and control of water intrusion.

3.02 HANDLING OF MATERIAL

- A. Handle pipes, conduits, casing, and ancillary items in such a manner as not to damage the material. Pipe rollers or other approved means shall be used during pullback operations to avoid damage to casing pipe and product pipe.
- B. Damage to material shall be repaired to the satisfaction of the Enforcement Officer and, if required, replaced.
- C. The Enforcement Officer maintains the authority to reject materials damaged or otherwise unsuitable for project use.

3.03 DRILLING FLUID

- A. Disposal of drilling fluid and spoils will be the responsibility of the Contractor and shall be done in compliance with all Federal, State, and local regulations.
- B. All drilling fluids and loose cuttings shall be contained in access pits or holding tanks for recycling and disposal. Drilling fluid returns into or on other areas shall be cleaned up and disposed of immediately. The Contractor shall notify the Enforcement Officer immediately if drilling fluid returns occur or are spilled in areas other than approved holding structures.
- C. The Contractor shall provide adequate means and equipment for removing drilling fluid and spoils from access pits to mitigate potential overflows and provide for final disposal. Disposal equipment shall be present during all directional drilling operations.

3.04 DIRECTIONAL DRILLING

- A. Perform directional drilling operations in accordance with approved submittals. The Contractor shall provide all material, equipment, and facilities required to perform directional drilling.
- B. The drill path shall be accurately staked with alignment and entry/exit pits.
- C. Pipe, conduit, and casing installation under traveled ways shall progress on a continuous basis without stoppage, except for adding sections, until the leading edge has reached the receiving pit. Engineering approval is required for variations from this specification.
- D. Stop operations if ground movement is detected and implement the remediation plan in accordance with approved submittals. Immediately report movement to the Enforcement Officer. Repair any damages to traveled ways, including displacement (up or down) resulting from construction operations. Corrective actions shall be approved by the responsible authority. Mitigating repairs and associated costs will be the responsibility of the Contractor.

3.05 PILOT HOLE BORING

- A. The entry angle, pilot hole, and boring process shall maintain a curvature that does not exceed allowable bending radius of casing or product pipe and in accordance with approved submittals.
- B. The pilot hole shall be drilled along the Contractor submitted, and approved line, grade, and radius of curvature. No curves will be accepted with a radius more than approved curvature.
- C. Drilling fluid pressures shall be monitored at all times during operations. Pressures shall be controlled to avoid hydraulic fracturing of subsurface materials and prevent structure and ground surface heaving.

- D. Drilling fluid and cutting return shall be monitored at all times during operations. The volume of drilling fluids and spoil return anticipated shall be estimated based on subsurface conditions encountered. Excessive drilling fluid loss or excess spoil return shall be reported immediately to the Enforcement Officer. The Enforcement Officer will, in consultation with the Contractor, determine if corrective actions are required.
- E. Contractor shall provide adequate containment, drilling fluid and spoil removal equipment and other means required to contain all fluid and spoils and/or remove it from site. No additional compensation will be allowed for containment or cleanup resulting from spillage, hydraulic fracturing, or other means leading to release of drilling fluids.
- F. Alignment Adjustments and Restarts
 - 1. The Contractor shall follow the approved alignment within specifications. If adjustments or restarts are required, the Contractor shall notify the Enforcement Officer for approval prior to adjusting.

3.06 CASING PIPE INSTALLATION

- A. After the pilot hole is completed and approved, the enlarging phase of installation shall begin. The borehole diameter shall be increased to accommodate the pullback operations for the specified casing pipe size. The type of reamer shall be determined by subsurface soil conditions encountered during pilot hole drilling. The reamer type shall be selected by the Contractor and must be equipped with a swivel.
- B. The maximum hole diameter shall be 1.25 times the casing pipe outside diameter. The Contractor may elect to perform multiple reaming passes. Multiple reaming passes will be completed at Contractor's expense.
- C. Borehole stability shall be the responsibility of the Contractor. Open boreholes shall be stabilized using appropriate means to prevent collapse while still maintaining ability to perform work.
- D. Once pullback operations have commenced, operations must continue without interruption until pipe is completely pulled into borehole. During pullback operations, Contractor will not apply more than the maximum safe pipe pull pressure at any time. If casing pipe becomes stuck, Contractor will cease pulling operations and allow any potential "suction lock" to subside and resume pulling operations. If pipe remains stuck, Contractor will notify Engineer. Engineer and Contractor will review available options and proceed accordingly.
- E. Drilling fluid pressures shall be monitored at all times during operations. Pressures shall be controlled to avoid hydraulic fracturing of subsurface materials and avoid structure and ground surface heaving. Contractor shall provide adequate containment, drilling fluid and spoil removal equipment and other means required to contain all fluid and spoils and/or remove it from site. No additional compensation will be allowed for containment or cleanup resulting from spillage, hydraulic fracturing, or other means leading to release of drilling fluids.
- F. Drilling fluid and cutting return shall be monitored at all times during operations. The volume of drilling fluids and spoil return anticipated shall be estimated based on subsurface conditions encountered. Excessive drilling fluid loss or excess spoil return shall be reported immediately to the Enforcement Officer. The Enforcement Officer will, in consultation with the Contractor, determine if corrective actions are required.
- G. The casing pipe shall be protected and supported during pullback operations using rollers or other approved means to minimize damage.

3.07 OBSTRUCTIONS

- A. The Enforcement Officer must be notified immediately if any obstruction is encountered that stops progress of operations. The Contactor shall review the situation with the Enforcement Officer and determine the feasibility of continuing drilling operations, switching to alternative methods, and/or modifying alignment/location of the jack and bore.
- B. If continuing is deemed unfeasible or impractical, the obstructed pilot hole or casing shall be abandoned in place and filled completely with grout or other approved materials.
- C. For City projects, substantiated cost of abandoned work resulting from unforeseen obstructions encountered will be paid for as additional work in accordance with Contract documents.

3.08 ALIGNMENT

- A. The Contractor shall provide an accurate means to monitor horizontal and vertical positions of the casing during construction operations. The Enforcement Officer shall always have access to this information during the directional drilling process. If a magnetic guidance system is used, the Contractor shall identify any surface geo-magnetic anomalies and take appropriate corrective measures to ensure accurate spatial tracking of the drill stem.
- B. The casing shall be installed within a tolerance of 6 inches from approved, line and grade over 100 feet. The tolerance will be adjusted proportionally for shorter or longer casing lengths; however, the maximum deviation for casing lengths longer than 150 feet shall be no more than 1 foot.
- C. The alignment of casing shall be established to allow unrestricted insertion of the product pipe, including spacers, pipe bells, and restrained joints. If product pipe cannot be installed, the casing shall be abandoned and filled with grout or other approved materials. The Contractor shall establish another casing at a location approved by Enforcement Officer.

3.09 PRODUCT PIPE INSTALLATION

- A. The product pipe shall be the size and type as specified or shown on the plans.
- B. The end of product pipe shall be protected from damage during installation into the casing.
- C. Product pipe shall have restrained joints within the casing.
- D. The product pipe shall be supported in the casing pipe using projection-type non-metallic casing spacers.
 - 1. The minimum number of spacer projections around the product pipe circumference shall equal the pipe diameter (i.e. a nominal 10-inch pipe shall have minimum of 10 projections). Refer to manufacturer's product data for spacer type and size.
 - 2. Casing spacers shall fasten tightly onto the product pipe to prevent movement during installation.
 - 3. The insulator spacing shall be installed to support the weight of the product pipe and contents. Spacers shall be placed a maximum of 2 feet from each side of a joint and evenly spaced along the product pipe at intervals not to exceed manufacturer's recommendations or 6 feet, whichever is less.
 - 4. Double spacers shall be installed one foot from each end of the casing.
 - 5. Projection type spacers shall be RACI, Advance Products & Systems, or approved equal.

3.10 SITE RESTORATION

- A. The Contractor will demobilize equipment and restore the work site to the original condition. All excavations will be backfilled according to specifications and project drawings. Surface restoration shall be completed in accordance with Section 01005 – Pavement Repair and Section 01006 - Seeding.
- B. Remove all excess spoils and dispose of in accordance with all federal, state, and local regulations.

END OF SECTION 01003

#11.

SECTION 01004 UTILITY JACKING AND BORING

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for jack and bore installation of steel casing. The Contractor shall provide all labor, materials, and equipment required to install casing in accordance with these specifications. This work shall consist of pushing/jacking a steel casing pipe with a boring auger rotating within the pipe to remove spoils as casing is advanced.

1.02 SUBMITTALS

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Submit work plans, shop drawings, and product data for Engineer approval. Submittals shall include:
1. Work plan and sequencing;
 2. Proposed line and grade of casing pipe to maintain minimum burial depth and separation requirements from existing utilities;
 3. Equipment and site configuration;
 4. Jacking and receiving pit locations;
 5. Design, means, methods and materials for pit excavation support;
 6. Pit dimensions showing relative location to traveled ways;
 7. Dewatering methods;
 8. Differential movement monitoring methods;
 9. Excavation face loss prevention methods;
 10. Spoil removal methods;
 11. Drilling fluids;
 12. Product data;
 13. Casing pipe material and size;
 14. Casing pipe segment joining methods and procedures;
 15. Product pipe spacers and casing pipe end seal materials;
 16. Erosion control and stormwater pollution prevention plan;
 17. Remediation plan:
 - a. Identify means and methods to remove obstructions at the boring face;
 - b. Identify remedial measures for mitigating damage to existing facilities, and impacts to traveled ways, including ground subsidence and heaving;
 18. Experience:
 - a. Submit a list of at least five (5) successfully completed jack and bore projects greater than 50 feet within the last five (5) years including project owner contact information references substantiating jack and bore installer's experience; and,
 19. As-Built Drawings showing horizontal and vertical alignment of completed jack and bore.

1.03 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least two (2) business days prior to commencing work. All work shall be performed in the presence of the Enforcement Officer.

1.04 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Jack and Bore shall be paid for by the lineal footage of casing measured along casing centerline. The unit price shall include:
 - 1. Excavation, use, and backfilling of all pits;
 - 2. Removal and disposal of spoils and drilling fluid;
 - 3. Traffic control;
 - 4. Verifying location and depth of all utilities within impacted area;
 - 5. Casing pipe installation; and,
 - 6. All labor, equipment, and materials required to complete the work.
- C. The unit cost shall not include sewer pipe and installation.
- D. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
- E. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials shall be in accordance with Contract Documents, plans, specifications, and approved submittals.
- B. Steel casing pipe shall meet or exceed ASTM A-139, Grade B with a minimum wall thickness of 0.25 inches and minimum yield strength of 35,000 psi. Steel casing shall be joined by fully welding around the entire circumference of the pipe. Welding shall conform to AWS requirements for the specific applications.
- C. Synthetic rubber end seals shall be installed on each end of the casing pipe. End seals shall be Advanced Model Products – Model AC Pull-on or approved equal fastened tightly with stainless steel bands.
- D. Projection type spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.

PART 3 - EXECUTION

3.01 GENERAL

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.
- B. Construction means, methods, and materials shall be in accordance with approved submittals.

- C. Excavations shall be constructed in accordance with approved submittals. Excavations should be protected in accordance with applicable Federal, State, and local regulations. Excavations must meet or exceed regulations established by OSHA 29 CFR Part 1926. Trench safety and stability shall be the responsibility of the Contractor.
- D. Disposal of excess spoils removed from the casing pipe shall be the responsibility of the Contractor and shall be done in compliance with all Federal, State, and local regulations.

3.02 HANDLING OF MATERIAL

- A. Handle pipes, conduits, casing, and ancillary items in such a manner as not to damage the material.
- B. Damage to material shall be repaired to the satisfaction of the Engineer or replaced at Contractor's expense.
- C. The Enforcement Officer maintains the authority to reject materials damaged or otherwise unsuitable for project use.

3.03 JACK AND BORE

- A. Perform jack and bore operations in accordance with approved submittals and the following requirements:
 - 1. Unsupported excavation (open-hole) ahead of the casing will not be permitted. Mechanical arrangements or other devices shall be provided at the leading end of the carrier to prevent drilling ahead of the casing.
 - 2. The use of water or slurry under pressure (jetting) or puddling shall not be permitted to facilitate boring, pushing, or jacking operations. Non-pressurized water or slurry is acceptable for use as a lubricant behind the cutter head.
 - 3. Pipe, conduit, and casing installation shall progress on a continuous basis without stoppage, except for adding sections, until the leading edge has reached the receiving pit. Engineering approval is required for variations from this specification.
- B. Employ methods to prevent loss of the excavation face in accordance with approved submittals.
- C. Stop operations if ground displacement is detected and implement the remediation plan in accordance with approved submittals. Repair any damages to traveled ways, including displacement (up or down) resulting from construction operations. Corrective actions shall be approved by the Engineer. Mitigating repairs and associated costs will be the responsibility of the Contractor.

3.04 OBSTRUCTIONS

- A. The Enforcement Officer must be notified immediately if any obstruction is encountered that stops progress of operations. The Contractor shall review the situation with the Enforcement Officer and determine the feasibility of continuing operations, switching to alternative methods, and/or modifying alignment/location of the jack and bore.
- B. If continuing is deemed unfeasible or impractical, the obstructed pilot hole or casing shall be abandoned in place and filled completely with grout or other approved materials.
- C. For City projects, substantiated cost of abandoned work resulting from unforeseen obstructions encountered will be paid for as additional work in accordance with Contract documents

3.05 ALIGNMENT

- A. The Contractor shall provide an accurate means to monitor horizontal and vertical positions of the casing during construction operations. The Enforcement Officer shall always have access to this information during the jack and bore process. If a magnetic guidance system is used, the Contractor shall identify any surface geo-magnetic anomalies and take appropriate corrective measures to ensure accurate spatial tracking of casing.
- B. Extreme care shall be exercised by the Contractor to maintain line and grade during jacking operations and casing installation. Modifications to means and methods may be required to maintain correct gradient and alignment or correct deviations when deemed necessary by the Enforcement Officer.
- C. The casing shall be installed within a tolerance that allows unrestricted sewer pipe installation at design gradient and alignment.
- D. The alignment of casing shall be established to allow unrestricted insertion of the sewer pipe, including spacers, pipe bells, and restrained joints.

3.06 SEWER PIPE INSTALLATION

- A. The sewer pipe shall be the size and type as specified or shown on the plans.
- B. The end of sewer pipe shall be protected from damage during installation into the casing.
- C. Sewer pipe shall have restrained joints within the casing.
- D. The carrier pipe shall be supported in the casing pipe using projection-type non-metallic casing spacers.
 - 1. The minimum number of spacer projections around the sewer pipe circumference shall equal the pipe diameter (i.e. a nominal 10-inch pipe shall have minimum of 10 projections). Refer to the manufacturer's product data for spacer type and size.
 - 2. Casing spacers shall fasten tightly onto the sewer pipe to prevent movement during installation.
 - 3. The insulator spacing shall be installed to support the weight of the sewer pipe and contents. Spacers shall be placed a maximum of 2 feet from each side of a joint and evenly spaced along the sewer pipe at intervals not to exceed manufacturer's recommendations or 6 feet, whichever is less.
 - 4. Double spacers shall be installed one foot from each end of the casing.
 - 5. Projection type spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.
- E. Adjust pipe grade as needed by changing the thickness of spacers to compensate for gradient or alignment variations of the casing.

3.07 SITE RESTORATION

- A. The Contractor will demobilize equipment and restore the work site to the original condition. All excavations will be backfilled according to specifications and project drawings.

- B. Surface restoration shall be completed in accordance with contract requirements, Section 01005 – Pavement Repair, and Section 01006 – Seeding.
- C. All excess spoils and materials shall be removed and disposed of in accordance with applicable federal, state, and local regulations.

END OF SECTION 01004

SECTION 01005 PAVEMENT STRUCTURE REPAIR

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for repairing and restoring aggregate, concrete, and asphalt concrete pavement structures in areas where trenches cross these features. The Contractor shall provide all labor, materials, and equipment required to perform work in accordance with these specifications.

1.02 RELATED WORK

- A. Section 01002 – Earthwork
- B. Section 01003 – Directional Drilling
- C. Section 01004 – Utility Jacking and Boring

1.03 REFERENCE STANDARDS

- A. ASTM D698 - Moisture-Density Relations of Soils and Soil Aggregate Mixture, using 5.5 lb Rammer and 12 in Drop.
- B. Missouri State Highway and Transportation Commission: Missouri Standard Specifications for Highway Construction, current edition, including Section 613 Pavement Repair

1.04 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Pavement Structure Repair shall be paid for by the lineal foot at Contract unit cost for surfaces listed on bid form and plan quantities table. Culvert, mailbox, or other surface features required to be removed as a result of construction shall be included in Contract unit cost.
- C. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
- D. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - MATERIALS

2.01 AGGREGATE BASE AND SURFACE COURSE MATERIALS

- A. Aggregate Base: Type 5, Section 1007, Missouri Standard Specifications for Highway Construction.
- B. Aggregate Surface: Grade A or B, Section 1006, Missouri Standard Specifications for Highway Construction.

2.02 BITUMINOUS SURFACE COURSE AND PATCHING MATERIALS

- A. Prime Coat: Liquid Asphalt RC-MC Grade 30, Section 1015, Missouri Standard Specifications for Highway Construction.
- B. Base Mix: MoDOT Base, Section 401, Missouri Standard Specifications for Highway Construction.
- C. Tack Coat: SS-1 or SS-1H, Section 1015 Missouri Standard Specifications for Highway Construction.
- D. Surface Mix: Type BP-1, Section 401, Missouri Standard Specifications for Highway Construction.

2.03 PORTLAND CEMENT CONCRETE

- A. Portland Cement: Type I or Type II
- B. Concrete Mix: Portland Cement Concrete Base and Pavement, class B-1, non-air entrained with material conforming to Section 502 and 1000, Missouri Standard Specifications for Highway Construction with a slump between 3 and 6 inches.
- C. Water: potable
- D. Reinforcement: #4 rebar placed 12 inches on center each way. Concrete shall be dowelled into existing with drilled and epoxy set #4 rebar dowels placed 18 inches on center, 24 inches long.

PART 3 - EXECUTION

3.01 REPAIR

- A. All trenches in traveled ways shall be repaired with either Bituminous Surface Course and Patching Materials or Concrete Material according to standard details.
- B. All trenches in concrete sidewalk, driveways and roadways shall be repaired/replaced with concrete material according to standard details.
- C. All trenches in aggregate surfaced pavement structures shall be replaced with Aggregate Base and Surface Course according to standard details.
- D. Pavement replaced shall adhere to the following procedures:
 - 1. Place granular backfill to provide temporary surface over trenches across traveled ways. Open to traffic for at least one week. Repair all potholes and level surface daily, adding additional material as needed. Base under the pavement shall be 8 inches thick.
 - 2. After pavement has been open to traffic for one week, saw cut and remove existing pavement on both sides of trench, remove sufficient base course material, level, compact, and construct pavement patch per the project details.

3.02 COMPACTION

- A. In accordance with Section 01002 Earthwork.

3.03 MAINTENANCE

- A. Maintain surface repairs until final acceptance. Replace and repair areas where excessive displacement, rutting, raveling, or other unacceptable damages occur as a result of construction.
- B. Repaired areas will be accepted at end of maintenance period and all pavement repairs are performing well without further damages.

END SECTION 01005

#11.

SECTION 01006 SEEDING

PART 1 – GENERAL

1.01 RELATED WORK

- A. Section 01002 - Earthwork
- B. Section 01003 – Directional Drilling
- C. Section 01004 – Utility Jacking and Boring

1.02 REFERENCE STANDARDS

- A. Missouri Standard Specification for Highway Construction, current edition.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging. Damaged packages are not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.04 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Seeding cost shall be included in Contract unit cost for sewer pipe.

PART 2 - MATERIALS

2.01 SEED

- A. Seed shall meet the following minimum percentages for purity and germination, and maximum percentage for weed seed. Vendor certification for each lot number of numbers with testing statement. Seed that has not been tested and certified within the last 1 year will be rejected

Type	Purity	Germination	Weed
Kentucky Blue Grass	85	80	<1.0
Perennial Rye	98	85	<1.0
Red Fescue	97	85	<1.0

2.02 FERTILIZER

- A. Standard commercial fertilizer supplied separately or in mixtures and furnished in water tight containers. Each container shall be marked with weight and manufacturer's guaranteed analysis showing ingredient percentages.
- B. Furnish a mixture of chemical ingredients providing total nitrogen, phosphoric acid, and potassium required based on soil analysis or as otherwise specified. Chemical ingredient tolerances shall be within 2 percent.

2.03 MULCH

- A. Fresh wheat, rye, or oat straw, air dried. Non-toxic to vegetation and to the germination of seed, free from noxious seeds and weed seeds.

2.04 APPLICATION RATES

- A. **Fertilizer:** provide total nitrogen, phosphoric acid, and potassium required based on soil analysis or as otherwise specified.

- B. **Seed**

- 1. Kentucky Blue Grass: 1.10 lbs/1,000 sq. ft.
- 2. Perennial Rye: 0.60 lbs/1,000 sq. ft.
- 3. Redtop: Red Fescue: 0.40 lbs/1,000 sq. ft.

PART 3 - EXECUTION

3.02 PREPARATION

- A. When soil is in a tillable condition, cultivate to a depth of 4 inches, reducing soil particles to a size not larger than 2 inches. Moisture condition surface to receive seed.
- B. Assure seed bed is level, smooth, and free of weeds, clods, stones, roots, and sticks. Moisture condition as needed.
- C. Apply fertilizer and mix into the top 2 inches of soil. Apply within 48 hours prior to seeding.

3.03 SEEDING AND MULCHING

- A. Uniformly sow seeds in two operations at right angles to each other. Within 12 hours after seeding roll areas at right angles to runoff with a lawn type roller. Do not over compact.
- B. Within 24 hours of seeding apply mulch at 2 1/2 tons per acre. Stabilize vegetative mulch by embedding in soil to prevent mulch loss by wind or water erosion.

3.04 MAINTENANCE

- A. Maintain surfaces until final acceptance and supply additional topsoil, seed, and fertilizer where necessary, including areas affected by erosion.
- B. Replant damaged grass areas showing root growth failure, deterioration, bare or thin spots, and eroded areas.
- C. Seeded areas will be accepted at end of maintenance period when seeded areas are properly established and otherwise acceptable.

END OF SECTION 01006

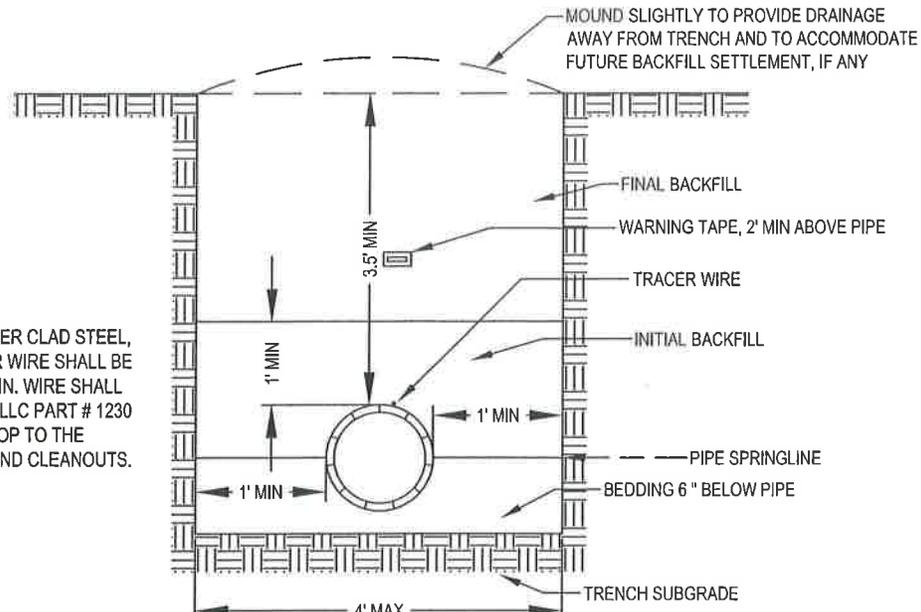
CITY OF MOBERLY, MISSOURI
STANDARD SPECIFICATIONS FOR SANITARY SEWER SYSTEMS

SECTION 2 – STANDARD DETAILS FOR SANITARY SEWER SYSTEMS

- 02001 Typical Sewer Trench Installations
- 02002 Typical Sanitary Sewer Manhole
- 02003 Typical Service Connection and Cleanout
- 02004 Typical Sewer Main in Casing
- 02005 Typical Water/Sewer Main Separation Requirements

#11.

TRACER WIRE SHALL BE COPPER CLAD STEEL, CCS, (12 GAUGE AWG) TRACER WIRE SHALL BE ATTACHED TO THE SEWER MAIN. WIRE SHALL BE COPPERHEAD INDUSTRIES LLC PART # 1230 HS OR EQUAL, WIRE SHALL LOOP TO THE SURFACE AT ALL MANHOLES AND CLEANOUTS.

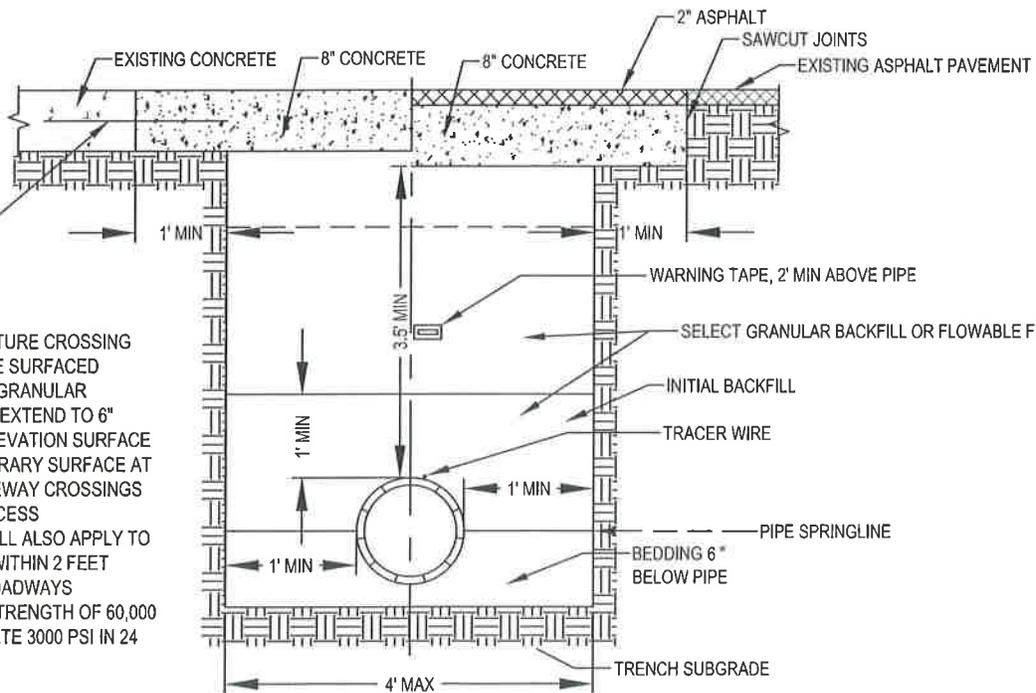


TYPICAL TRENCH INSTALLATION DETAIL-UNPAVED AREAS

#4 REBARS - 24" LONG
GROUTED INTO EXISTING
PAVEMENT 8" @ 18" O.C.

NOTES: PAVEMENT STRUCTURE CROSSING

1. FOR AGGREGATE SURFACED AREAS, SELECT GRANULAR BACKFILL SHALL EXTEND TO 6" BELOW FINAL ELEVATION SURFACE
2. PROVIDE TEMPORARY SURFACE AT ROAD AND DRIVEWAY CROSSINGS TO MAINTAIN ACCESS
3. THIS DETAIL SHALL ALSO APPLY TO ALL TRENCHES WITHIN 2 FEET PARALLELING ROADWAYS
4. REBARS YIELD STRENGTH OF 60,000 PSI AND CONCRETE 3000 PSI IN 24 HOURS.



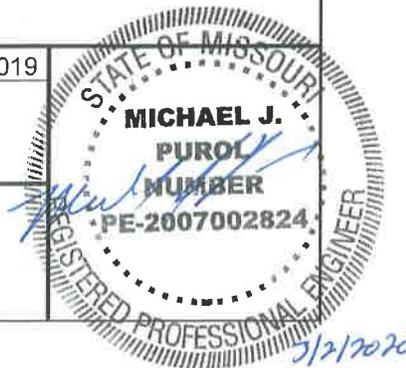
TYPICAL TRENCH INSTALLATION DETAIL-PAVEMENT STRUCTURE CROSSINGS

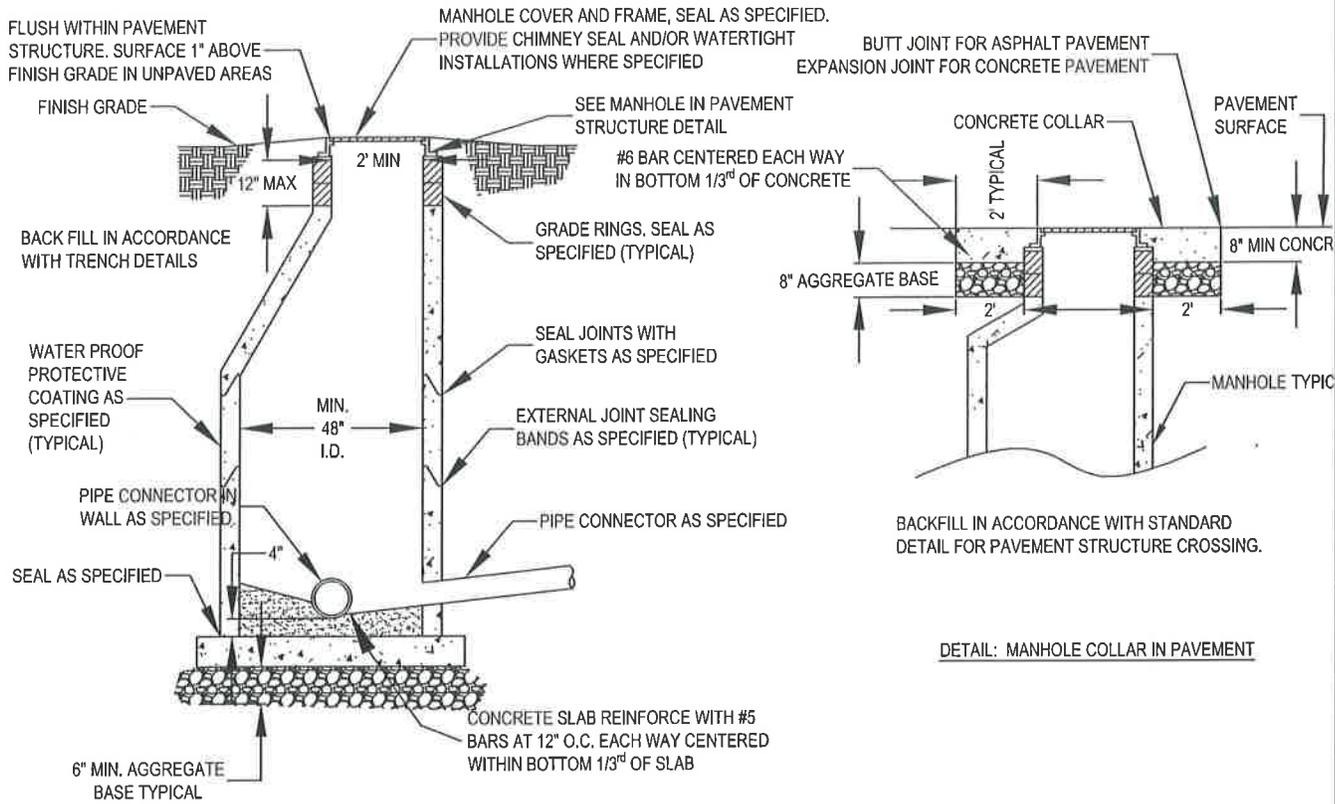
STANDARD DETAIL No. 02001

REVISION DATE: 10-08-2019

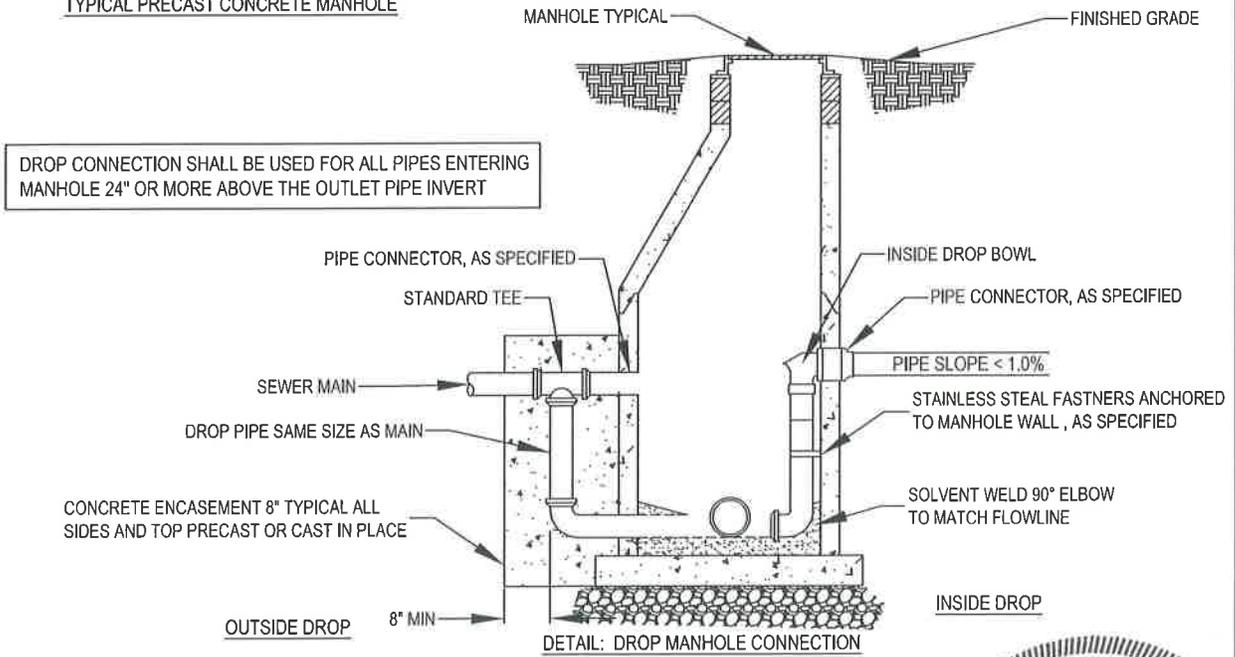
SANITARY SEWER CONSTRUCTION
TYPICAL SEWER MAIN IN TRENCH INSTALLATIONS
CITY OF MOBERLY, MISSOURI

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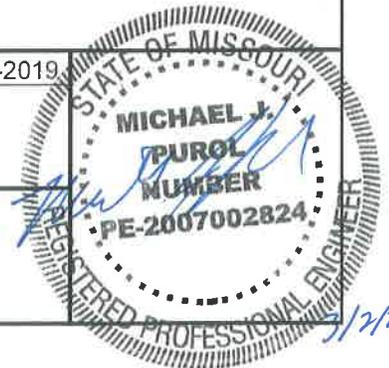
TYPICAL PRECAST CONCRETE MANHOLE



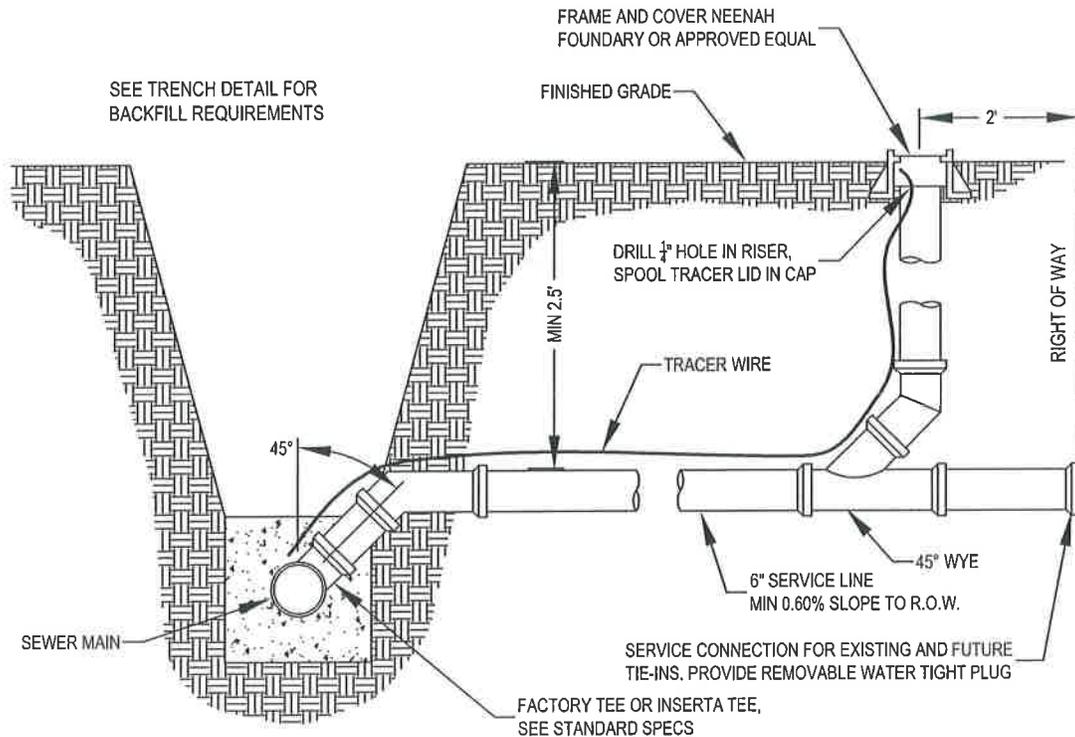
STANDARD DETAIL No. 02002

REVISION DATE: 10-08-2019

SANITARY SEWER CONSTRUCTION
TYPICAL SANITARY SEWER MANHOLE
CITY OF MOBERLY, MISSOURI



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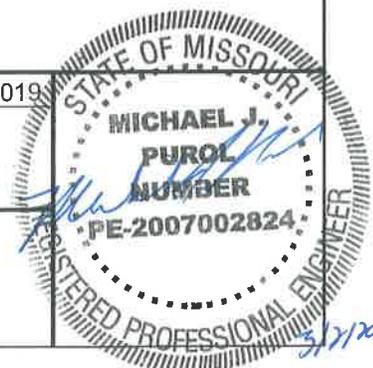
NOTES:

1. CONTRACTOR TO RECORD SERVICE LOCATION RELATIVE TO MANHOLES FOR ALL SERVICE CONNECTIONS AND PROVIDE TO THE CITY PRIOR TO PROJECT COMPLETION.
2. MINIMUM SERVICE LINE SHALL BE 6", UNLESS OTHERWISE APPROVED.
3. SERVICE WYE TO BE INSTALLED, SUBJECT TO ALL TEST REQUIREMENTS.
4. SERVICE WYE AND SERVICE LINE TO BE THE SAME MATERIAL AS SEWER MAIN, UNLESS OTHERWISE APPROVED.
5. PROVIDE TRACER WIRE AND WARNING TAPE FROM WYE TO CLEANOUT.
6. MARK TIE-IN LOCATION AT GROUND SURFACE WITH SURVEY LATHE OR STEEL POST.

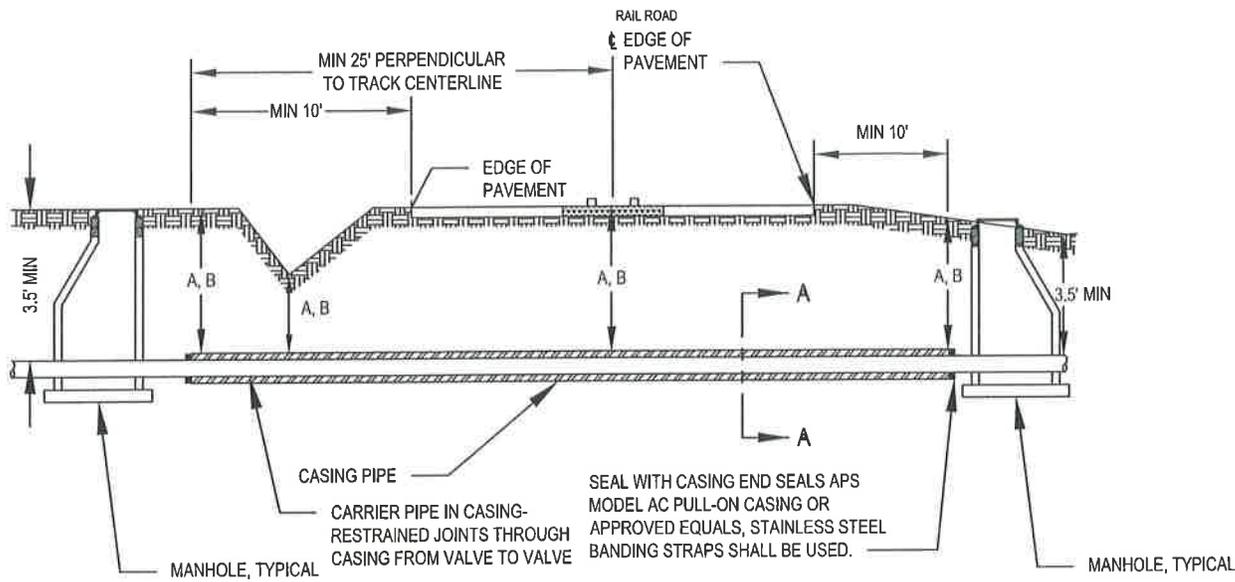
STANDARD DETAIL No. 02003

REVISION DATE: 10-08-2019

SANITARY SEWER CONSTRUCTION
TYPICAL SERVICE CONNECTION AND CLEANOUT
CITY OF MOBERLY, MISSOURI



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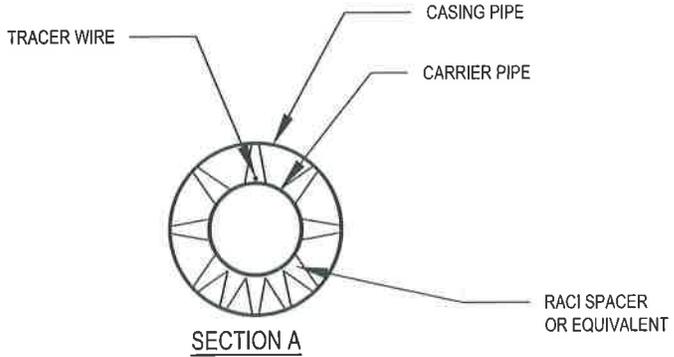


NOTES:

1. CONTRACTOR MEANS AND METHODS FOR TRENCHLESS CONSTRUCTION METHOD MUST BE APPROVED.
2. IF DIRECTIONAL DRILLING METHOD IS USED, THE MINIMUM EMBEDMENT DEPTH TO TOP OF FINISHED CASING SHALL BE 8 FEET.
3. SEE STANDARD SPECIFICATIONS FOR ALLOWABLE CASING PIPE MATERIALS.
4. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND APPROVALS FROM APPROPRIATE REGULATORY AUTHORITY. ALL WORK SHALL MEET ALL REQUIREMENTS OF RESPONSIBLE REGULATORY AUTHORITY
5. CASING SPACERS SHALL BE RACI OR APPROVED EQUAL WITH STAINLESS STEEL BOLTS AND NUTS. CASING SPACERS SHALL BE INSTALLED AT INTERVALS NOT TO EXCEED MANUFACTURER'S SPECIFICATIONS OR 6' WHICHEVER IS LESS. DOUBLE SPACERS SHALL BE INSTALLED 1' FROM EACH END OF THE CASING. ONE CASING SPACER MUST BE WITHIN 2' OF EACH SIDE OF A PIPE JOINT. SPACERS SHALL HAVE A MINIMUM HEIGHT THAT EXCEEDS THE PIPE BELL HEIGHT AND RESTRAINED JOINT HEIGHT.
6. ALL JOINTS BETWEEN GATE VALVES SHALL BE RESTRAINED JOINTS.

NOTES:

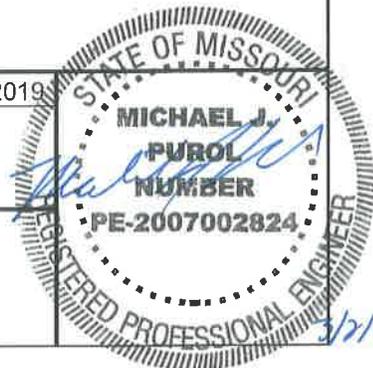
- A. MINIMUM COVER OVER CASING FOR ROADWAY CROSSINGS SHALL BE 4 FEET WITHIN LIMITS SHOWN
- B. MINIMUM COVER OVER CASING FOR RAILWAY CROSSING SHALL BE 6 FEET WITHIN LIMITS SHOWN
- C. COVER DEPTH GREATER THAN MINIMUMS MAY BE REQUIRED AS A CONDITION OF AUTHORITY HAVING JURISDICTION FOR ROAD OR RAILROAD



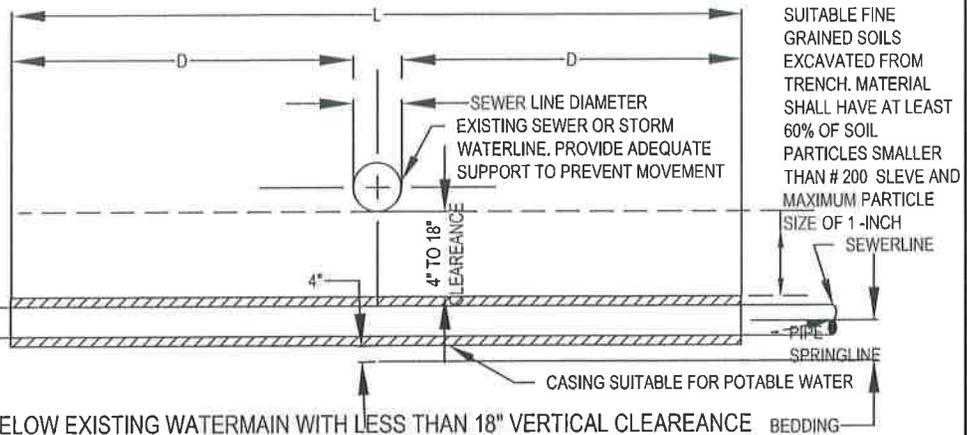
STANDARD DETAIL No. 02004

REVISION DATE: 10-08-2019

SANITARY SEWER CONSTRUCTION
TYPICAL SEWER MAIN IN CASING
CITY OF MOBERLY, MISSOURI

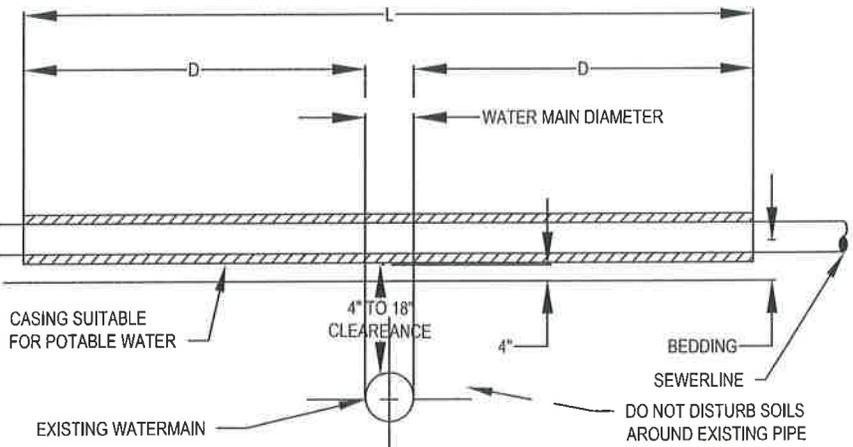


1. BACKFILL FROM 1' ABOVE PIPE UP TO SURFACE IN ACCORDANCE WITH TYPICAL TRENCH DETAILS
2. IN NO CASE SHALL WATER MAIN BE LESS THAN 1.5' BELOW STORM WATER OR SEWER LINE
3. D= DISTANCE REQUIRED TO PROVIDE 10 FEET SEPARATION MEASURED PERPENDICULAR TO EXISTING STORMWATER OR SEWER LINE
4. L= LENGTH OF CASING REQUIRED
5. JOINTS SHALL BE RESTRAINED WITHIN CASING
6. USE PROJECTION TYPE CASING SPACERS, RACI OR APPROVED EQUAL



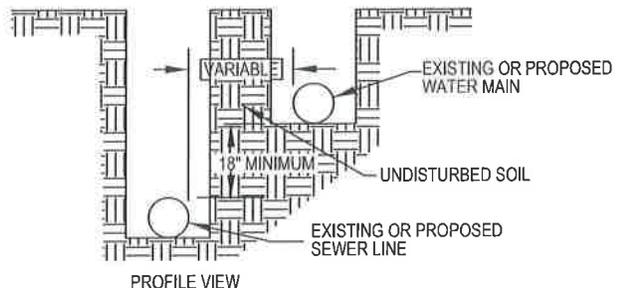
PROPOSED SEWERLINE BELOW EXISTING WATERMAIN WITH LESS THAN 18" VERTICAL CLEARANCE

1. JOINTS SHALL BE RESTRAINED WITHIN CASING BEDDING AND BACKFILL FOR WATER MAIN IN ACCORDANCE WITH TYPICAL TRENCH DETAILS
3. USE PROJECTION TYPE CASING SPACERS RACI OR APPROVED EQUAL
4. MINIMUM SEPARATION BETWEEN CASING PIPE AND EXISTING LINE SHALL BE NO LESS THAN 4"
5. D= DISTANCE REQUIRED TO PROVIDE 10' SEPARATION MEASURED PERPENDICULAR TO EXISTING STORMWATER OR SEWERLINE PIPE.
6. L= LENGTH OF CASING REQUIRED

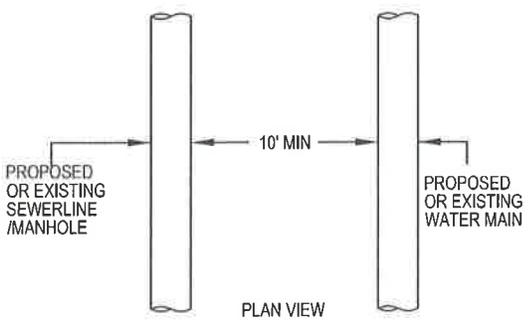


PROPOSED SEWERLINE ABOVE EXISTING WATERMAIN WITH LESS THAN 18" VERTICAL SEPARATION

PROPOSED SEWER (OR WATER) IS LOCATED 10 FEET OR LESS FROM EXISTING WATER (OR SEWER).



WATER AND NON-POTABLE SEPARATION REQUIREMENTS (VERTICAL SEPARATION)



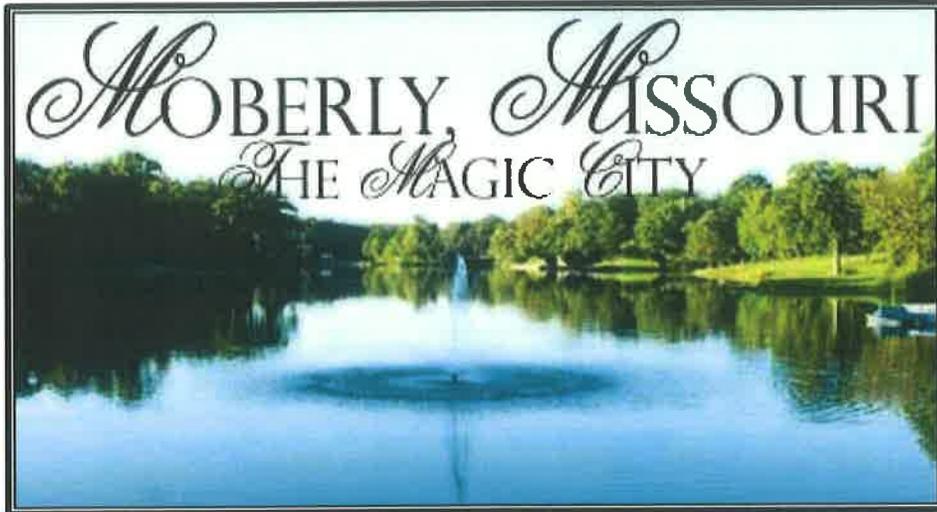
WATER AND SEWER SEPARATION REQUIREMENTS (HORIZONTAL SEPARATION)

STANDARD DETAIL No. 02005
 SANITARY SEWER CONSTRUCTION
 TYPICAL SEWER MAIN SEPARATION REQUIREMENTS
 CITY OF MOBERLY, MISSOURI

REVISION DATE: 10-08-2019

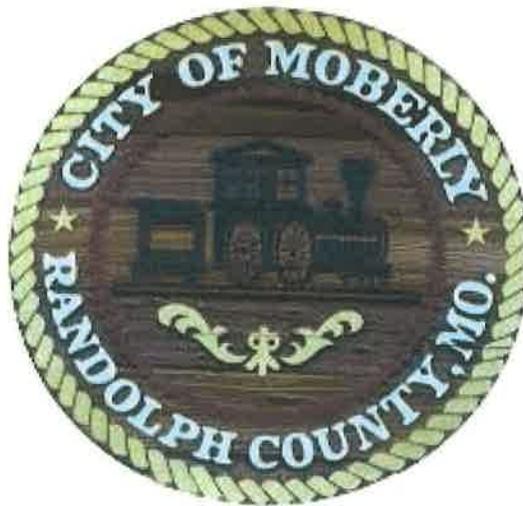
PSBA
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 801 Broadway St., Suite 248, Hannibal, MO 63401

STATE OF MISSOURI
 MICHAEL J. PUROL
 REGISTERED PROFESSIONAL ENGINEER
 NUMBER
 PE-2007002824
 5/27/2020

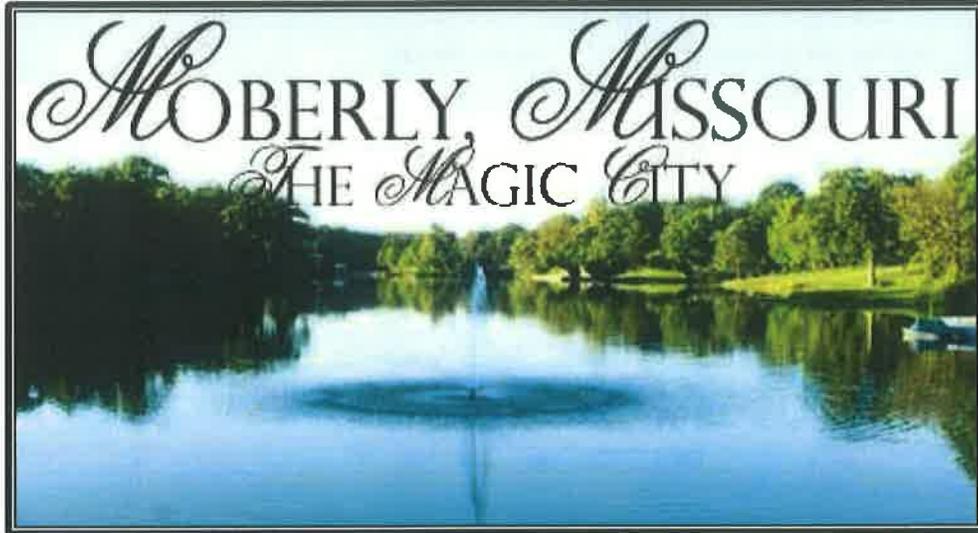


CITY OF MOBERLY, MISSOURI

**STANDARD SPECIFICATIONS
FOR WATER MAIN CONSTRUCTION**



#11.



CITY OF MOBERLY, MISSOURI

**STANDARD SPECIFICATIONS
FOR WATER MAIN CONSTRUCTION**

I HEREBY CERTIFY THAT THESE SPECIFICATIONS AND DETAILS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI.



MICHAEL J. PUROL, PE
MISSOURI LICENSED PROFESSIONAL ENGINEER NO. PE-2007002824
EXPIRES 12-31-2021

THIS SEAL COVER STANDARD SPECIFICATION SECTIONS 01000 THRU 01006
AND STANDARD DETAIL SHEETS 02001 THRU 02009.



#11.

CITY OF MOBERLY, MISSOURI
STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

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#11.

SECTION 01000 APPROVAL AND ACCEPTANCE

PART 1 – GENERAL

1.01 SUMMARY

- A. These specifications are for the construction, replacement, extension, and alteration of water mains and water services under authority of the City of Moberly, Missouri.
- B. The intent of these specifications and details is to specify the type and quality of all water main and service materials, installation, inspection, testing, and final acceptance by the City for all improvements, replacements, and extensions intended to be included as a part of the City's water distribution system.
- C. All design, permitting, materials, and work shall be in accordance with applicable sections of:
 - 1. City of Moberly Standard Specifications for Water Main Construction
 - 2. City of Moberly, Missouri – Code of Ordinances, Chapter 42-Utilities
 - 3. Missouri Department of Natural Resources Minimum Design Standards for Community Water Systems.
 - 4. Missouri Standard Specification for Highway Construction, current edition
 - 5. Approved, Project-Specific Special Provisions, Specifications, and Plans
- D. The work shall consist of obtaining all required permits, approvals, and legal easements before beginning work. Work also includes furnishing all labor, materials, and equipment for the complete installation of water main extension and/or alterations, and appurtenances, in conformance with the approved lines and grades.
- E. Modifications, alterations, or changes to City of Moberly, Missouri Standard Specifications and Details during the course of work must be submitted to the City for approval prior to performing work.

1.02 DEFINITIONS

- A. City: City of Moberly, Missouri
- B. Water Department: City Water Department
- C. Enforcement Officer: City Director of Public Utilities or designated representative
- D. Engineer: Licensed Professional Engineer in responsible charge for the project and licensed to perform services in the State of Missouri
- E. Developer: Entity requesting water service construction, modifications, extensions, and/or alteration to the city water system. The Developer could be a public or private entity, such as the City or private Developer.
- F. Contractor: Entity contracted by Developer to perform work on water main and services. The Contractor is responsible for constructing approved plans

- G. Owner: Entity who is responsible for long term performance, maintenance, and operation of new water mains. The City will typically become the Owner upon final approval and acceptance by City. The Developer will be responsible for the project until final approval and acceptance.
- H. Standard Specifications: City of Moberly, Missouri Specifications for Water Main Construction

1.03 DESIGN - GENERAL

- A. All water main extensions or alterations shall be designed, signed, and sealed by an Engineer.
- B. Water pressure in distribution systems below 20 pounds per square inch (psi) violate Missouri Safe Drinking Water Regulation 10 CSR 60-4.080 (9). The Missouri Department of Natural Resources considers pressures below 20 psi to be an imminent hazard to public health.
- C. All water mains and systems shall be sized in accordance with a hydraulic analysis based on flow demands and pressure requirements. Distribution systems shall be designed to maintain at least 35 psi normal working pressure at ground level at all points in the distribution system under all conditions of design flow.
- D. Systems designed for fire protection shall provide a minimum flow of 250 GPM for a duration of two hours. Water mains that are not designed to provide fire protection shall not have fire hydrants connected to them.
- E. All water lines shall be buried a minimum 3.5 feet below grade, unless otherwise approved.
- F. Water main dead ends shall be avoided, if possible. If unavoidable, dead ends shall have a fire hydrant, flushing hydrant, or other approved assembly for flushing purposes.
 - 1. Flush assemblies shall have a gate valve and box the same size as the water main. Flush assembly details (other than fire hydrant) shall be included in the project specific plans.
- G. Restrained joints, where specified, shall have thrust reinforcement using properly designed concrete thrust blocks or manufactured mechanical and harness restraints. All thrust restraint shall be designed based on the working pressure of the pipe and bearing pressure of the soil. Manufactured restraint is City preferred method for restraint. Concrete thrust blocking may be used in conjunction with manufactured restraint.
- H. Generally, valves shall be located at intersections with other water mains, on both sides of railway, waterway, and bridge crossings.

1.04 DESIGN - SEPARATION REQUIREMENTS

- A. Public health is paramount. To protect the public health, the following separation requirements shall be met for water lines near sanitary and storm sewer lines. These requirements apply to both conventional trench-type construction methods and trenchless construction methods including but not limited to directional drilling and utility jacking and boring. These requirements shall be considered minimum requirements. Additional requirements may be required as conditions of required permits.
- B. The following factors should be design considerations for separation requirements:
 - 1. Materials and type of joints for water and non-potable fluid pipes.
 - 2. Soil conditions.

3. Service and branch connections into the water main and non-potable fluid.
4. Compensating variations in the horizontal and vertical separations.
5. Space for repair and alterations of water and non-potable fluid pipes.
6. Routing water mains around manholes.

C. Horizontal Separation Requirements

1. See Standard Details.
2. Water lines shall be located at least ten (10) feet horizontally from any existing or proposed line carrying non-potable fluids such as, but not limited to, drains, storm sewers, sanitary sewers, combined sewers, sewer service connections, inlets, manholes, and process waste or product lines. The distance shall be measured edge to edge.
3. Water mains may be located closer than ten (10) feet when:
 - a. Local conditions prevent lateral separation.
 - b. The water main invert is at least 18 inches above the crown of non-potable fluid lines.
 - c. The water main is either in a separate trench or in an adjacent trench on an undisturbed earth shelf located on one side of the non-potable fluid line.
4. If separation requirements listed above cannot be met, the water line shall be placed in casing suitable for potable water in accordance with City Standard Specifications or the non-potable fluid line shall be re-constructed using pipe suitable for potable water use in accordance with Section 01001 – Standard Specification for Water Lines.

D. Vertical Separation Requirements

1. See Standard Details. The vertical separation from water lines and non-potable fluid lines shall be 18 inches.
 - a. If the 18-inch vertical separation cannot be met for water lines above non-potable fluid lines, the water line shall be placed in casing suitable for potable water in accordance with City Standard Specifications and Details. Casing pipe shall be placed no closer than 4 inches above non-potable fluid pipe.
 - b. For water lines placed 18 inches or more below a non-potable fluid line, the water line shall be placed in casing suitable for potable water in accordance with City Standard Specifications and Details. Adequate support shall be provided to prevent damage to utilities located above the water line.
 - c. Where required, protective casing shall extend a minimum of 10 feet from non-potable fluid line measured perpendicular to the non-potable fluid line. Casing shall be sealed at each end according to City Standard Specifications and Details.

1.05 PRE – CONSTRUCTION SUBMITTALS

- A. **Preliminary Submittal:** Project-specific special provisions, specifications, and plans shall be submitted to the City of Moberly for review and approval of any public water main alteration or extension. The submittal shall be prepared by an Engineer. Submittal shall include:
1. Design parameters based on flow demands and pressure requirements.
 2. Proposed alignment and grade, details of connections to existing water systems, construction locations, location of valves, hydrants and other facilities, and proposed location of water services.
 3. Materials list and manufacturer data sheets, catalog data, and illustrations for all proposed materials to be used for the project. Material test certificates and affidavits of compliance with applicable standards.
 4. A work plan describing construction means, methods, sequencing, and scheduling.
 5. Plan showing all existing utilities and identifying potential conflicts with proposed work. If utility relocation is required, the Developer and their Engineer, in conjunction with respective utility owners, shall provide a proposed utility relocation plan for approval. The relocation of existing utilities shall be incorporated into the overall construction project as well as appropriate demolition plan of abandoned utility facilities, as required.
 6. If perception of or potential exists for contamination due to cross-connections or backflow, the design must include mitigation measures for control and prevention.
 7. Other submittals detailed in other sections of City Standard Specifications
- B. **Preliminary Submittal Review(s):** Project-specific special provisions, specifications, and plans shall be submitted to the City of Moberly for review and approval of any public water main alteration or extension. The submittal shall be prepared by an engineer licensed to practice in the State of Missouri. Submittal shall include:
1. At discretion of City, multiple iterations of the preliminary submittal review will be until all design and pertinent modifications are complete.
- C. **Final Submittal:**
1. Final submittal to the City shall include Engineer's official seal, current date stamp, and signature on project-specific special provisions, specifications, and plans. Three (3) hard copies and one (1) electronic copy in .pdf format.
 2. Submit approved Missouri Department of Natural Resources, Water Protection Program, Construction Permit including all stipulations. No work may begin until a copy of the approved permit has been provided to City.
 3. Submit legally recorded copies of required utility easements, if any. No work may begin within proposed easements without having legally recorded permanent easements.
 4. Submit approved Missouri Department of Transportation Highways and Transportation Commission, Permit to Work on Right of Way, if applicable.

1.06 INSPECTION

- A. In general, all work shall be inspected by the Enforcement Officer. Inspection for acceptance of materials will be conducted as soon as practical after materials arrive on the job site. Inspections will be performed as work progresses.
- B. The Enforcement Officer shall always have access for observation and inspection during the work. Access will be coordinated with the Contractor. The Contractor shall furnish all reasonable aid and assistance required by the Enforcement Officer for the proper inspection and examination of work and materials.
- C. The Enforcement Officer reserves the right to reject materials and work not in compliance or accordance with approved plans and specifications.
- D. The Enforcement Officer reserves the right to suspend work.
- E. The Enforcement Officer shall be notified a minimum of two (2) working days for inspection and observation of all testing. Notifications are also required in accordance with other Standard Specifications.
- F. Under no circumstance shall taps or connections be made to existing mains without approval. All taps will be coordinated by Contractor and conducted in the presence of Enforcement Officer.

1.07 POST – CONSTRUCTION FINAL SUBMITTAL

- A. Upon successful completion of construction and obtaining required testing results meeting or exceeding performance requirements, the Developer shall submit:
 - 1. Copies of all test reports, including failed tests.
 - 2. Submit two (2) copies of as-built drawings to City showing all changes, deviations, or modifications to original plans. As-built drawings shall include reference swing tie measurements from identifiable landmarks to all valves. Each valve shall have at least two (2) reference swing tie measurements.
 - 3. As-built drawings shall be completed by Engineer, dated and clearly marked with the name and company of the person illustrating the changes.

1.08 ACCEPTANCE

- A. After Final Submittal and City Approval, the City will conditionally accept the work.
- B. The Owner and Contractor shall warranty all work and materials for a period of one year. The Owner and Contractor will be responsible for repairing and replacing failures or damages resulting from poor workmanship and defective materials.
- C. The Enforcement Officer will inspect the work periodically during the warranty period, document conditions, and notify Developer of repairs required, if any.
- D. Final acceptance will be given when the warranty period ends, and all work and site conditions are to the satisfaction of the City.

END OF SECTION 01000

#11.

SECTION 01001 WATER LINES

PART 1 – GENERAL

1.01 SUMMARY

- A. The design and construction of water main replacements, extensions, and alterations shall be in conformance with the City of Moberly Standard Specifications and Missouri Department of Natural Resources Minimum Design Standards for Missouri Community Water Systems.
- B. The work shall consist of furnishing all labor, materials, and equipment for complete installation of water main replacements, extensions, alterations, and appurtenances, in conformance with the lines and grades shown on the plans, as established by the Engineer, or otherwise specified.
- C. The Contractor shall employ skilled, qualified workers and supervision to perform work following generally accepted industry practices. The City reserves the right to suspend work if, in the opinion of the Enforcement Officer, this requirement is not being met.
- D. If surface or ground contamination is suspected or encountered, notify the City immediately. The Developer and Contractor, in communication with the City, shall assess conditions and develop a plan for continued work including but not limited to: removal and disposal of contamination, specifying different water line materials and/or water line realignment.

1.02 DEFINITIONS

- A. City: City of Moberly, Missouri
- B. Water Department: City Water Department
- C. Enforcement Officer: City Director of Public Utilities or designated representative
- D. Engineer: Licensed Professional Engineer in responsible charge for the project licensed to perform services in the State of Missouri.
- E. Developer: Entity requesting water service construction, modifications, extensions, or alterations to the city water system. The Developer could be a public or private entity, such as the City of Moberly or a private Developer.
- F. Contractor: Entity contracted by Developer to perform work on water main and services. The Contractor is responsible for constructing approved plans.
- G. Owner: Entity who is responsible for long term performance, maintenance, and operation of new water mains. The City will typically become the Owner upon final approval and acceptance by City. The Developer will be responsible for the project until final approval and acceptance.
- H. AWWA: American Water Works Association
- I. ASTM: American Society for Testing and Materials
- J. ANSI: American National Standards Institute
- K. MSS: Manufacturers Standardization Society of the Valve and Fitting Industry

1.03 RELATED WORK

- A. Section 01000 – Approval and Acceptance
- B. Section 01002 - Earthwork
- C. Section 01003 - Directional Drilling
- D. Section 01004 - Utility Jacking and Boring
- E. Section 01005 - Pavement Repair

1.04 REFERENCES

- A. American Water Works Association (AWWA)

- C104 – Cement Mortar Lining for Ductile Iron Pipe and Fittings
- C105 – Polyethylene Encasement for Ductile Iron Pipe Systems
- C110 – Ductile Iron and Gray Iron Fittings
- C111 – Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings
- C115 – Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
- C150 – Thickness Design of Ductile Iron Pipe
- C151 – Ductile Iron Pipe, Centrifugally Cast
- C153 – Ductile Iron Compact Fittings
- C200 – Steel Water Pipe, 6 in. and larger
- C207 – Steel Pipe Flanges for Water Works Service, sizes 4 in. through 144 in.
- C600 – Installation of Ductile Iron Mains and their Appurtenances
- C651 – Disinfecting Water Mains
- C800 – Underground Service Line Valves and Fittings
- C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 in. through 60 in.
- M11 – Steel Pipe, A guide for Design and Installation
- M23 – PVC Pipe Design and Installation

- B. American Society for Testing and Materials (ASTM)

- B88 – Seamless Copper Water Tube
- D1248 – Polyethylene Plastics Extrusion Materials for Wire and Cable
- D1784 – Rigid PVC Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
- D3139 – Standard Specification: Plastic Pressure Pipe Joints Using Flexible Elastomeric seals
- F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

- C. American National Standards Institute (ANSI)

- B16.22 – Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings

- D. Manufacturers Standardization Society of the Valve and Fitting Industry (MSS)

- SP-60 – Connecting Flange Joint Between Tapping Sleeves and Tapping Valves

1.05 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least five (5) business days prior to commencing work.

1.06 SUBMITTALS

- A. See Section 1000 – Approval and Acceptance
- B. Work Plan detailing means, methods, equipment, sequencing, and schedule for pressure and leakage testing, disinfection and chlorination, and flushing.

1.07 JOB CONDITIONS

- A. Interrupting Utility Service:
 - 1. Utility Service to existing City customers shall not be interrupted unless approved by the Enforcement Officer and the existing utility provider.
 - 2. If approval for an interruption of service is obtained, the Contractor shall provide an eight-hour notification to the Enforcement Officer and all affected occupants. The City Fire Department shall be notified at least 24-hours in advance.
 - 3. The Contractor shall provide standby service, if required. Outages shall not exceed 6 hours and will be coordinated with the Enforcement Officer.
 - 4. The Water Department is responsible for operation of in-service valves, including closure as needed. Closure by other entities will not be permitted.
 - 5. The Contractor shall be responsible for preventing contamination of existing lines.
- B. New water mains must be fully tested, disinfected, and approved before installing service line connections.
- C. Whenever pipe laying is not actively in progress, open ends of all installed pipe and fittings shall be sealed water tight.

1.08 MATERIAL DELIVERY, STORAGE, AND HANDLING

- A. Means and methods for material shipping, loading, transporting, unloading, storing, and placing shall prevent damage. Damaged and/or defective materials shall not be installed. The City reserves the right to reject all damaged or defective materials.
- B. All materials shall be packaged, labeled, or otherwise marked with adequate, identifiable information to determine suitability for intended project application.
- C. Materials shall be stored at a mutually agreed upon location. Materials shall not be stored directly on the ground. They shall be stored in a manner to ensure they are kept clean, dry, and free of foreign debris.
- D. Materials shall be protected in a manner to prevent entrance of contamination or foreign debris.

1.09 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.

B. Water Mains:

1. **Water main** will be measured and paid by the lineal foot of pipe along pipe centerline, including all labor, equipment, and materials required for installation. Unless otherwise identified as a bid item, unit cost shall include: excavation, backfill, fittings, joints, thrust blocks, tracer wire, erosion control, pavement repair, seeding, and cleanup.
2. **Valve and Valve Box** will be counted as a single unit and be paid on a per-each basis, including all labor, equipment, and materials required for installation. See Standard Details.
3. **Meter Setting and Meter Box** will be counted as a single unit and be paid on a per-each basis, including all labor, equipment, and materials required for installation. See Standard Details.
4. **Service Lines and Connections** will be paid for on a per each basis, including all labor, equipment, and materials required for installation. Unit cost will include connections at water main and connections on City side of meter setting. Unit cost shall include all taps, saddles, sleeves, corporation stops, curb stops, etc... See Standard Details.
5. **Fire Hydrants** will be paid for on a per each basis including, all labor, equipment, and materials required for installation. Valves and valve boxes will be paid for separately. Pipe and joints required from main to hydrant shall be included in unit cost.
6. **Casing Pipe** will be measured and paid by the lineal foot along casing centerline. Unit cost shall include insulating spacers and end seals. Product pipe will be paid for separately. Casing required for trenchless construction methods will be paid for separately.
7. Estimated quantities for bid items could change. If quantities increase, additional materials and associated work will be paid for at contract unit cost. Purchasing additional materials and performing additional work shall not be done without prior written approval from the Enforcement Officer.
8. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
9. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All materials shall conform to the latest AWWA, ASTM, ANSI, and MSS standards and specifications, and, where applicable, shall be certified by National Sanitation Foundation (NSF) or underwriters' laboratories (UL) for drinking water use.
- B. All materials shall be suitable for use in potable drinking water systems.
- C. All buried iron pipe and fittings shall be coated with manufacturer's standard exterior enamel coating.
- D. Water mains shall be six (6) inches or greater.

2.02 DUCTILE IRON PIPE (DIP) AND FITTINGS

A. DIP Pipe:

1. Conform to AWWA C115, C150, and C151 unless otherwise specified.
2. Acceptable Manufacturers: American Cast Iron Pipe Company, U.S. Pipe Supply, EBBA Iron Sales, Inc., or approved equal.
3. Ductile iron pipe shall be used in commercial and industrial areas and may be used in residential areas.

B. DIP Joints:

1. Conform to AWWA C111 and C115, mechanical joints with ductile iron glands.
2. Conform to AWWA C110 and AWWA C115 push-on joints with neoprene gaskets.
3. Buried joints shall be push-on type unless restrained or mechanical joints are required, specified, or as shown on the drawings.
4. Restrained mechanical joints shall be EBBA Iron Megalug Series 1100 or approved equal. Bell harness joint restraint shall be EBBA Megalug Series 1700 or approved equal. Restrained joints will be required at all fittings, including bends, tees, crosses, fire hydrants, caps, plugs, and all pipe specified for joint restraint.

C. DIP Fittings:

1. Conform to AWWA C110 or C153, ductile iron with a pressure rating of 250 psi for flanged joint and pressure rating of 350 psi for mechanical joints.

D. DIP Lining:

1. Conform to AWWA C104, cement mortar for all DIP pipe and fittings.

2.03 POLYVINYL CHLORIDE PIPE (PVC) AND FITTINGS

A. PVC Pipe:

1. PVC pressure pipe shall conform to AWWA C900, Class DR 14 for pipe 12 inches or less and AWWA C905, class DR 14 for pipe greater than 12. PVC pipe and fittings shall be compatible and interchangeable with ductile iron pipe.
2. Acceptable Manufacturers: Certainteed Corporation, J-M Manufacturing Company, Inc., Diamond Plastics, Clow Corp, or approved equal.
3. PVC pipe materials shall be uniformly blended with un-plasticized PVC. Materials and finished product shall not be hazardous to humans. Materials shall not impact or alter taste, odor, or chemical composition of potable water.
4. PVC pipe shall have National Sanitation Foundation (NSF) seal and be made of virgin components in accordance with ASTM D1784 Class 12454-A or Class 12454-B. Manufacturer shall provide certifications of conformance with these requirements.

B. Joints:

1. ASTM D3139 with ASTM F477 Gaskets. Wall thickness in pipe bell shall not be less than pipe barrel. Pipe shall have reference marks on male end indicating proper seating into bell.
2. Buried joints shall be push-on type unless restrained or mechanical joints are required, specified, or as shown on the drawings.
3. Mechanical joint restraint shall be EBBA Iron Megalug Series 2000PV or approved equal. Bell harness joint restraint shall be EBBA Series 1900 or approved equal.

C. Fittings:

1. C900 and C905 PVC pipe shall use ductile iron pipe fittings. Fittings shall have a minimum pressure rating equal to or greater than the pipe.

2.04 GATE VALVES

A. Gate Valves shall conform to AWWA C509 with minimum design working pressure of 200 psi.

1. Gate valves shall be iron body, bronze trim, super seal or resilient seated, non-rising stem, opening counter clockwise, mechanical joint flanges with stainless steel hardware, and double O-ring stuffing seals.
2. Valves shall have a 2-inch operating nut for below ground applications and a hand-wheel for above ground applications.
3. Acceptable Manufacturers: Mueller, American, U.S. Pipe Valve and Hydrant, or approved equal.

2.05 VALVE BOXES

A. Three-section cast iron screw-type shaft adjustment, minimum 5-inch inside diameter with lid marked "water". See Standard Details.

B. Valve boxes must be compatible with valves.

2.06 TAPPING VALVES

A. Tapping valves shall meet requirements for gate valves except tapping valve shall be equipped with a raised lip constructed in accordance with MSS SP-60 for valve centering on the tapping saddle.

B. Acceptable Manufacturers: Mueller, American, U.S. Pipe Valve and Hydrant, or approved equal.

2.07 TAPPING SLEEVES

A. Tapping sleeves shall be stainless steel including all hardware. The seal shall be fully circumferential and gridded. Outlet flange dimensions and drilling shall comply with ANSI B16.1, class 150 and indexed according to MSS SP-60 to accept tapping valve.

B. Acceptable Manufacturers: American Darling 5 ¼ inch B-84-B, or approved equal.

2.08 FIRE HYDRANTS

- A. Hydrants shall be dry barrel type with lubricating reservoir, 3 way, opening counter clockwise, and minimum 250 psi working pressure.
- B. Hydrants shall have two (2) standard 2 ½ inch male hose connections and one (1) standard 4 ½ inch male pumper connection.
- C. Acceptable Products: American Darling B-84-B, 5 ¼ inch or approved equal.

2.09 CASING PIPE

- A. This section applies when casing is required around water mains to comply with sanitary and storm sewer separation requirements. Casing materials, including joints, shall be suitable for potable water. Casing size shall be large enough to allow unrestricted installation of product pipe, including casing spacers, pipe fittings, and joints.
- B. Casing materials may be PVC, Steel, or High-Density Polyethylene (HDPE)
 - 1. PVC casing shall be in accordance with this section.
 - 2. Steel casing shall conform to AWWA C200 and AWWA M11, joined by fully welding in accordance with AWWA C206. Casing shall have a minimum wall thickness of 0.25-inch for casing up to 24 inches.
 - 3. HDPE casing shall be in accordance with Section 01003 – Directional Drilling.
- C. Projection type, non-metallic insulating spacers shall be used to support water main inside casing. Insulating spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.
- D. Synthetic rubber end seals shall be installed on each end of the casing pipe. End seals shall be Advanced Model Products – Model AC Pull-on or approved equal fastened tightly with stainless steel bands.
- E. See Standard Details.

2.10 SERVICE FITTINGS

- A. Corporation Stops for copper water services shall be Mueller Company Number H15020, H15008 or Ford Company number F1000-3, or approved equal.
- B. Corporation stops for plastic services shall be Mueller Company number H15008, Haze Manufacturing Company number 5200-DF, Ford Company number F1000-4, or approved equal.
- C. Corporation stops on PVC pipe shall be made with a saddle.
- D. Copper shall be used under pavement structures or polyethylene tubing in casing pipe.

2.11 SERVICE TUBING

- A. Copper Tube and Fittings
 - 1. Copper service tubing ¾-inch through 1-inch shall conform to ASTM B88 - Type K annealed and soft tempered for buried installations.

2. Fittings shall be wrought copper in accordance with ANSI 816.22, flared or compression type.
3. All copper lines installed in granular soils shall be encased in schedule 40 pvc pipe with solvent welded or compression type joints.
4. All service lines with sizes between ¾-inch and 1-inch shall be copper (or poly line with tracer wire) between the water main and meter.

B. Plastic Tube and Fittings

1. Plastic service tubing shall be ¾" minimum inner diameter and shall be plastic, 250 CTS, copper size.
2. Fittings shall be flared or compression type with stainless steel stiffeners.

2.12 METERS

- A. Meters supplied by the City. See standard details for meter setting configurations and materials.

2.13 POLYETHYLENE ENCASEMENT

- A. In general, the City does not require polyethylene encasement of ductile iron water mains and fittings. When project specific specifications require, use eight (8) mil (minimum) polyethylene in accordance with AWWA C105.

2.14 THRUST BLOCKS

- A. Provide concrete thrust blocks where specified or shown on the plans. Concrete for thrust blocks may be from a City-approved locally available source with a minimum compressive strength of 3,000 psi.
- B. See standard details

2.15 TRACER WIRE

- A. Tracer wire shall be "blue" HDPE insulated single strand #12 AWG continuous copper clad steel tracer wire. Tracer wire shall be manufactured by Copperhead Industries LLC or approved equal.

2.16 WARNING TAPE

- A. Warning tape shall be "blue" non-metallic, 3-inches wide and at least 5 mil thick. Warning tape shall have "Caution Buried Water Line" or similar warning printed on the tape. Tape shall be buried at least 2 feet above top of pipe.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.

- B. Establish line and grade to maintain minimum burial and separation requirements in coordination with Enforcement Officer and Engineer. The minimum burial depth for water mains shall be 3.5 feet, unless otherwise approved by Enforcement Officer. Notify Enforcement Officer and Engineer if conflicts with existing utilities or structures exist.
- C. Prior to laying pipe, prepare trench subgrade and initial backfill in accordance with Section 01002 – Earthwork.
- D. Trench excavations shall be protected in accordance with applicable Federal, State, and local regulations, Laws, and rules in accordance with OSHA 29 CFR part 1926. Trench and excavation stability shall be the responsibility of the Contractor.
- E. All pipe, fittings, and joints shall be clean, and free of foreign debris. Pipe valves and fittings at existing line connections shall be swabbed with a 4 percent chlorine solution prior to connection.
- F. Exclude entrance of foreign material if work is suspended or stopped.
 - 1. Close ends of pipe with snug-fitting closures such as end caps.
 - 2. Do not let water fill the trench. Include provisions to prevent flotation if water control measures are inadequate.
 - 3. Remove water, sand, mud, and other undesirable material from trench before removal of end cap.

3.02 INSTALLATION

A. Pipe Laying

- 1. Perform only when weather and trench conditions are suitable. Do not lay in water.
- 2. Remove trash, debris, vegetation, snow, ice, water or other unsatisfactory materials from excavations.
- 3. All materials shall be carefully lowered into the trench using means and methods to prevent damage and entrance of foreign debris. Rolling or dropping materials will not be permitted. End hooks will not be permitted.
- 4. Commence laying at the downstream end of line and install pipe with spigot ends in the direction of flow. Bells shall be in the direction of the laying operations.
- 5. Open ends of water lines shall be adequately sealed to prevent intrusion of foreign debris during all work stoppages with a duration of 30 minutes or more.

B. Jointing

- 1. Join pipe in accordance with manufacturer's recommendations and AWWA specifications. Backfill in accordance with Section 01002 – Earthwork.
 - a. Clean and lubricate all joint and gasketed surfaces.
 - b. Employ means and methods to prevent damage during jointing.
 - c. Inspect joint openings and deflection for compliance with specifications.

2. All joint deflections shall be within manufacturers recommendations.
 - a. Ductile iron pipe joint deflection shall conform to AWWA C600.
 - b. PVC pipe may be deflected a maximum of 1.5 degrees per 20 feet.
3. Pipe expansion and contraction due to changes in temperature shall be monitored during construction. Previously joined pipe shall be inspected to ensure joints have not separated due to expansion and contraction.

C. Restrained Joints

1. Restrained joints shall be provided at all fittings, including bends, tees, crosses, fire hydrants, caps, plugs, and all pipe specified for joint restraint.
2. Restraint may be provided by properly designed thrust blocking, mechanical restraint, and bell harness restraint.
3. See Standard Details.

D. Cutting Pipe

1. Cut in neat manner without damage to pipe, even surfaces perpendicular to pipe centerline.
2. Ductile iron and steel pipe to be cut with carbide or diamond tip blade saw or other approved methods.
3. Remove burrs and sharp edges and smooth the pipe end by grinding.
4. Repair lining where required and as approved.

E. Closure Pieces

1. Connect two segments of pipeline or a pipeline segment and structure with short sections of pipe, fabricated for the purpose.
2. Location of joints, types of joints, pipe materials and strength classifications shall comply with specifications.
3. Sleeve couplings may be used:
 - a. Gaskets shall be at least 3 inches from pipe ends.
 - b. Spacer ring shall be identical to pipe end with clear space in closure less than ¼-inch.

F. Valves and Valve Boxes

1. Valves and valve boxes shall be set plumb
2. Valve box base section shall be centered over operating nut
3. Valve box upper section shall be set flush with finish grade

- G. Polyethylene Encasement
 - 1. When project specific specifications require use of polyethylene encasement, all valves and fittings shall be fully wrapped with polyethylene encasement in accordance with AWWA C105.
- H. Casing Pipe
 - 1. When typical trench-type construction techniques are used, subgrade preparation, bedding, initial backfill, and final backfill shall be in accordance with Standard Specification Section 01002 – Earthwork
 - 2. When trenchless construction methods are used, installation shall be in accordance with Standard Specifications Section 01003 – Directional Drilling and Section 01004 – Utility Jacking and Boring
- I. Remove plugs from existing pipe to complete connections to existing pipe. Removed plugs shall become the property of the City.
- J. Furnish and install test plugs where necessary to properly complete required testing.
 - 1. Test plugs shall be as manufactured by pipe supplier.
 - 2. Plugs shall be push-on, flanged, mechanical joint or restrained as required for ductile iron pipe and shall be watertight against heads equal to the specified test pressure. See Standard Details.
 - 3. Secure plugs in place to facilitate removal when required to connect pipe.
 - 4. Restrain plugs to fittings where indicated.
- K. Tracer Wire
 - 1. Attach continuous tracer wire to top of water line, either taped, banded, or strapped at 5 feet to 7 feet intervals. Install according to manufacturer's recommendations.
 - 2. Tracer wire shall be looped to the surface at all valve/valve boxes, fire hydrants, blow-air release chambers, and locations specified or as shown on the plans.
 - 3. Prior to acceptance, Contractor shall perform conductivity testing for all tracer wire. Full continuity must be established prior to final acceptance.
- L. Warning Tape
 - 1. Install continuous "blue" warning tape at least 2 feet above all water lines.

3.03 WATER MAIN PRESSURE TESTING

A. General

- 1. All work shall be inspected and approved by the Enforcement Officer prior to backfilling. Contractor shall notify the Enforcement Officer and arrange for inspection and observation of all testing prior to commencing.

2. Contractor shall obtain approval from Enforcement Officer prior to making any connections to existing water lines. The Enforcement Officer or representative must be present during any connection activities. The Contractor shall coordinate connections with the Water Department.
3. The Contractor shall furnish all pumps, piping, labor and other materials and services necessary to bring the piping up to the specified test pressure. Pipe in the sections to be tested shall be sufficiently backfilled or center loaded, with thrust blocks installed.

B. Hydrostatic Pressure Test

1. After the pipe has been laid and partially backfilled, test connections shall be made, and the pipe filled with water. After all air removal, water shall be pumped in to bring the pipe to the specified pressure.
2. Unless otherwise specified, testing pressure shall be:
 - a. 1.5 times the normal operating pressure (for the lowest point on the pipe line).
 - b. At least 150 pounds per square inch (psi).
 - c. Less than the rated pipe working pressure shall be used for testing for a period of one hour.
3. Pressure test period shall be at least one hour at testing pressure.
4. Any cracked or defective system components observed during this test shall be repaired or removed and replaced to satisfaction of City.

C. Leakage Test

1. After successful pressure test, leakage testing shall be performed.
2. Leakage test shall be maintained for a period of at least 3 hours. The maximum operating pressure of the pipe shall be used as leakage test pressure. Pressure shall be based on the elevation of the lowest point in the section being tested, corrected to test gauge elevation. Applicable provisions of AWWA C600 and C605 shall apply.
3. Allowable leakage in gallons per hour shall not be greater than the leakage defined by the following formula:

$$L = \frac{S * D * \sqrt{P}}{148,000}$$

L = Leakage allowance make-up water) - gallons per hour (gph)

S = length of pipe tested - feet

D = nominal diameter of the pipe - inches

P = average test pressure during hydrostatic test - pound per square inch (gauge)

4. All visible leaks shall be repaired regardless of leakage allowance.
5. All exposed pipe, fittings, valves, hydrants and joints shall be inspected and all evidence of moisture appearing on the surface of the ground during the test shall be investigated by the Contractor. Should the leakage test results exceed allowable leakage, the test

pressure shall be maintained for an additional period as directed by the City to facilitate location of leaks.

6. All pipe, fittings, valves, pipe joints, hydrants, and other materials which are found to be defective shall be removed and replaced with new, approved materials.
7. Pressure and leakage testing shall be repeated after repairing leaks and other defective work until results conform to specified requirements and approved by the City.

3.04 WATER MAIN DISINFECTION

- A. The Contractor shall furnish all pumps, piping, taps, labor and other materials and services necessary to perform work.
- B. One sampling tap shall be provided at the end of each line and a minimum of one tap per 1500 feet of pipe or as directed by the Enforcement Officer.
 1. Sampling tap shall be as shown in AWWA C651, Figure 1. Use of hose or fire hydrant for sample collection is not permitted.
 2. All disinfection, chlorination and flushing of the main will be done by the Contractor and in accordance with methods outlined in AWWA standard C651 – Disinfecting Water Mains.
 - a. Before being placed into service, all new mains and repaired portions of, or extensions to, existing mains shall be chlorinated so that the initial chlorine residual is greater than 50 mg/L and chlorine residual greater than 25 mg/L after 24 hours in the pipe.
 3. Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipe such that residual chlorine is less than 1 mg/L throughout the system or concentration directed by Enforcement Officer.
 4. Following disinfection and flushing, the Contractor will collect bacteriological samples. Water from the new main shall remain isolated from other waters of the City system and shall not be made available for consumption until bacteriological testing verifies acceptable water quality.
 - a. Bacteriological testing and sampling procedures will be in accordance with AWWA C651.
 - b. Testing shall verify water samples are free of coliform bacteria contamination and is equal to or better than water quality in the distribution system.
 - c. Water quality shall meet all drinking water standards of the Missouri Department of Natural Resources.

END OF SECTION 01001

SECTION 01002 EARTHWORK

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for earthwork, trenching, backfilling and compacting. The work shall consist of all labor, materials, and equipment required to install water main and appurtenances in accordance with contract documents, drawings, and specifications.
- B. The Contractor shall employ skilled, qualified workers and supervision to perform work following generally accepted industry practices. The City reserves the right to suspend work if, in the opinion of the Enforcement Officer, this requirement is not being met.
- C. If surface or ground contamination is suspected or encountered, notify the City immediately. The Developer and Contractor, in communication with the City, shall assess conditions and develop a plan for continued work including but not limited to: removal and disposal of contamination, specifying different sewer line materials, and line realignment.

1.02 DEFINITIONS

- A. City: City of Moberly, Missouri
- B. Water Department: City Water Department
- C. Enforcement Officer: City Director of Public Utilities or designated representative.
- D. Engineer: Licensed Professional Engineer in responsible charge for the project licensed to perform services in the State of Missouri.
- E. Developer: Entity requesting water service construction, modifications, extensions, or alterations to the City water system. The Developer could be a public or private entity, such as the City of Moberly or a private Developer.
- F. Contractor: Entity contracted by Developer to perform work on water main and services. The Contractor is responsible for constructing approved plans.
- G. Owner: Entity who is responsible for long term performance, maintenance, and operation of new water mains. The City will typically become the Owner upon final approval and acceptance by City. The Developer will be responsible for the project until final approval and acceptance.
- H. AWWA: American Water Works Association
- I. ASTM: American Society for Testing and Materials
- J. ANSI: American National Standards Institute
- K. MSS: Manufacturers Standardization Society of the Valve and Fitting Industry

1.03 RELATED WORK

- A. Section 01000 – Approval and Acceptance

- B. Section 01005 - Pavement Repair
- C. Section 01006 - Seeding

1.04 REFERENCE STANDARDS

- A. ASTM D698 - Moisture-Density Relations of Soils and Soil Aggregate Mixtures, Using 5.5 lb. Rammer and 12-inch Drop.
- B. ASTM D6938 – Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (shallow depth).
- C. Missouri Standard Specification for Highway Construction.

1.05 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least five (5) business days prior to commencing work.

1.06 SUBMITTALS

- A. See Section 1000 – Approval and Acceptance.
- B. Work Plan detailing means, methods, equipment, sequencing, and schedule for Earthwork.
- C. Traffic control plan and required permits from jurisdictions having authority.

1.07 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Trenching, backfilling, and compacting shall be included in the Contract unit cost of water main pipe.
- C. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - PRODUCTS

- 2.01 Materials shall be in accordance with Contract Documents, plans, specifications, and approved submittals.

2.02 BEDDING AND INITIAL BACKFILL

- A. Granular bedding containing no clods, muck, sod, frozen material, roots or other deleterious material with a plasticity index not greater than 6 and meeting the following gradation requirements.

Sieve Size	Percent Passing
1.5 inch	100
#4	20-60
#200	0-6

2.03 FINAL BACKFILL

- A. **Excavation Spoils:** suitable silt, sand, gravel, lean clay or combinations thereof containing no clods, muck, organics, frozen material, or other deleterious material from excavations. Maximum particle size shall be 3 inches.
 - 1. If enough quantity of suitable materials is not available from excavation spoils, the Contractor shall identify and import suitable materials for backfill. Contractor shall dispose of all unsuitable material.
- B. **Select Granular Backfill,** Section 1010, Missouri Standard Specification for Highway Construction. Material shall meet the following gradation:

Sieve Size	Percent Passing
3 inches	100
#40	20-60
#200	0-6

2.04 AGGREGATE BASE AND SURFACE

- A. **Aggregate Base:** Type 5, Section 1007, Missouri Standard for Highway Construction.
- B. **Aggregate Surface:** Grade A or B, Section 1006, Missouri Standards for Highway Construction.

2.05 CONTROLLED LOW-STRENGTH MATERIAL (FLOWABLE FILL)

- A. Controlled Low-Strength Material: Self-compacting, flowable concrete material produced from the following:
 - 1. Portland Cement: ASTM C150/C150M, Type I or Type II.
 - 2. Fly Ash: ASTM C618, Class C or F.
 - 3. Normal-Weight Aggregate: ASTM C33/C33M, 3/4-inch nominal maximum aggregate size.
 - 4. Water: ASTM C94/C94M.
 - 5. Air-Entraining Admixture: ASTM C260/C260M.
- B. Produce conventional-weight, controlled low-strength material with 100-psi compressive strength when tested according to ASTM C495/C495M and placed in the field with a slump between 9 and 11 inches tested in accordance with ASTM C143.

PART 3 - EXECUTION

3.01 GENERAL

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.
- B. Establish line and grade to maintain minimum burial and separation requirements in coordination with Enforcement Officer and Engineer. Notify Enforcement Officer and Engineer if conflicts with

existing utilities or structures exist.

- C. Trench excavations shall be protected in accordance with applicable Federal, State, and local regulations, Laws, and rules in accordance with OSHA 29 CFR part 1926. Trench and excavation stability shall be the responsibility of the Contractor.
- D. Implement and maintain traffic control plan

3.02 WATER CONTROL

- A. Develop and implement stormwater pollution prevention plan including erosion control measures. Prevent surface water and subsurface or ground water from entering excavations. The plan shall address water disposal if dewatering is required
- B. Water from surface runoff, downspouts, and subsurface drains shall be managed and controlled by the Contractor through an approved site drainage system. Equipment and materials required to remove water from excavations shall be on-site and available for uses throughout construction.
- C. Water disposal shall be the responsibility of the Contractor and completed in accordance with applicable federal, state, and local regulations.

3.03 PREPARATION

- A. Clear and grub areas of excavation.
- B. Backfilling and compaction shall not occur until the following conditions are satisfied:
 - 1. Subgrade proof-compacting, required inspection, testing and acceptance by Enforcement Officer.
 - 2. Soft, rutting, pumping, frozen or otherwise unsuitable soils in base of excavations shall be removed at direction of Enforcement Officer. Notify Enforcement Officer once subgrade elevations are reached. Excavate unsuitable soils within directed limits and replace with suitable materials approved by Enforcement Officer. Suitable materials could include but are not limited to bedding, initial backfill, and final backfill.
 - 3. All trash, debris, vegetation, snow, ice, water or other unsatisfactory materials shall be removed from excavations.

3.04 EXCAVATION

- A. Excavate trenches to approved subgrade elevations. Unless otherwise specified, the minimum trench width shall be at least one (1) foot greater than the outside diameter of the pipe.
- B. If rock is encountered, it shall be excavated at least 12 inches wider than the outside diameter of the pipe and at least 6 inches deeper than planned subgrade elevation. Alternatively, pipe alignment and grade could be adjusted to avoid rock excavation if separation, burial, and joint restraint requirements are satisfied. If additional excavation is required, bedding material shall be used as backfill.
 - 1. For City projects, notify Enforcement Officer and Engineer immediately if rock is encountered within excavation limits, and earthwork progress significantly slows or stops. Excavation in rock shall not progress unless approved by Enforcement Officer. The Enforcement Officer will provide guidance and specifications for rock excavation and backfilling on a case by case basis.

- 2. For City projects, unless identified as a bid item, additional cost for rock excavation will be paid for as additional work in accordance with Contract Documents regarding changes in work.
- C. Stockpile materials acceptable for use as backfill and topsoil. Stockpile locations relative to excavations shall be incorporated into Contractor's responsibility for excavation stability. Place, grade, and shape stockpiles to promote positive drainage with adequate erosion control. Dispose unsuitable materials.

3.05 BACKFILLING

- A. Proof-compact subgrade prior to placing bedding or laying pipe. Proof-compacting shall be performed in the presence of Enforcement Officer; approval is required before placing bedding to receive pipe.
- B. Shape and compact bedding to provide uniform bearing of the pipe. Excavate bell holes to allow for unobstructed assembly of the joint. Make bell hole as small as practical. After the joint has been made, carefully fill bell hole with bedding material and compact.
- C. After pipe laying, joining and aligning, place and compact bedding and initial backfill as shown on the plans. Ensure material is worked under the haunch of the pipe to provide adequate side support. Take precautions to prevent movement of the pipe during placement and compaction of haunching material.
- D. Place and compact initial backfill to provide cover over the pipe. Use methods to prevent pipe damage or displacement.
- E. In unpaved areas, place final backfill using methods to prevent pipe damage or displacement. Place final backfill in 6-inch loose lifts and compact. Leave material neatly mounded over the trench. Maintain trench and fill settled areas as they occur. Finish grade to eliminate uneven areas. Seed areas where required.
- F. In paved areas, place and compact base and surface repairs in accordance with details and project specification Section 01005 - Pavement Repair. Place final backfill using methods to prevent pipe damage or displacement.
- G. Jetting or water-settling backfill is prohibited, unless permitted by Enforcement Officer and Engineer.

3.06 COMPACTION

- A. Compact materials in accordance with ASTM D698 and ASTM 6938 and according to the following table:

Material	Minimum Compaction	Maximum Loose Lift Thickness
Bedding and Initial Backfill	90%	4 inches
Suitable Excavation Spoils	90%	6 inches
Select Granular Backfill	95%	6 inches
Aggregate Base	95%	6 inches
Aggregate Surface	95%	6 inches
Bituminous Surface	98%	3 inches

- B. Moisture condition (wetting or drying) fill as needed to achieve optimum moisture contents and required compaction.
- C. Use compaction equipment capable of achieving required densities and avoid damage to pipe, adjacent utilities, and adjacent structures. Self-propelled, "heavy" roller or pad type vibratory rollers shall not be operated within 2 feet from top of pipe.

3.07 QUALITY CONTROL

- A. Compaction quality control shall be provided by Contractor and will be incidental to Contract Unit costs. Quality control technicians and testing organizations shall be trained and certified to perform required testing in accordance with ASTM standards and specifications.
- B. Quality control density testing frequency shall be in accordance with the following table:

Material	Testing Frequency per lift
Bedding and Initial Backfill	One test every 300 linear feet of trench
Suitable Excavation Spoils	One test every 300 linear feet of trench
Select Granular Backfill	One test at each pavement structure crossing
Aggregate Base	One test at each pavement structure crossing
Aggregate Surface	One test at each pavement structure crossing
Bituminous Surface	One test at each pavement structure crossing

- C. Areas where testing indicates insufficient compaction shall be re-compacted, re-conditioned, re-worked until requirements are met to satisfaction of Owner and Engineer.
- D. Controlled low strength material shall be tested in the field for slump and samples collected for comprehensive strength testing. Slump and comprehensive testing shall be in accordance with ASTM C143 and ASTM C495, respectively. Testing frequency shall be 1 set of tests per 100 cubic yards of material used. Slump shall be between 9 and 11 inches. Minimum compressive strength is 100 psi.

3.08 MAINTENANCE

- A. The Contractor will demobilize equipment and restore the work site to the original condition. Backfill excavations and restore surfaces according to specifications and project drawings.
- B. Remove all leftover materials, including unsuitable excavation spoils, trash, debris, and other construction waste in accordance with applicable federal and state laws and regulations.
- C. Protect newly graded areas from traffic (except pavement crossings) and erosion. Keep free of trash and debris See Section 01005- Pavement Repair for pavement area maintenance.
- D. Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances during warranty period and to satisfaction of Enforcement Officer.
- E. Where differential movement is measurable or observable along excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add appropriate backfill material, compact, and replace surface treatment according to project specifications and plans. Restore appearance, quality, and condition of surface or finish to match adjacent work to satisfaction of Enforcement Officer.

END OF SECTION 01002

SECTION 01003 DIRECTIONAL DRILLING

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for directional drilling installation methods for High Density Polyethylene (HDPE) pipe casing or steel pipe casing beneath traveled ways or at locations shown on the drawings. The Contractor shall provide all labor, materials, and equipment required to install casing in accordance with these specifications.

1.02 SUBMITTALS

- A. Submit work plans, shop drawings, and product data for approval. Submittals shall include:
1. Detailed work plan and sequencing including procedures and schedule;
 2. Proposed line and grade of casing pipe to maintain minimum burial depth, minimum separation requirements from existing utilities, and radius of curvature;
 3. Proposed equipment including but not limited to: drilling rig, rotary torque capacity, thrust/pullback pressures, tensile load limit calculations, drill bits, mud system including pump and motor size, down-hole tools, guidance system with stated accuracy, and safety systems;
 4. Pit locations;
 5. Design, means, methods and materials for pit excavation support;
 6. Pit dimensions showing relative location to traveled ways;
 7. Dewatering methods;
 8. Spoil removal methods;
 9. Drilling fluids including water source;
 10. Methods for monitoring drill fluid volumes and losses;
 11. Product data;
 12. Casing pipe material and size;
 13. Casing pipe segment joining methods and procedures;
 14. Product pipe spacers and casing pipe end seal materials;
 15. Erosion control and stormwater pollution prevention plan;
 16. Adverse conditions plan:
 - a. Plan shall address means and methods of work, especially HDPE fusion welding, in adverse conditions such as freezing temperatures, precipitation, and wind and mitigation measures to eliminate resulting effect on pipe fusion and installation;
 17. Remediation plan:
 - a. Identify means and methods to remove obstructions at the boring face;
 - b. Identify remedial measures for mitigating damage to existing facilities, and impacts to traveled ways, including ground subsidence and heaving;
 - c. Identify remedial measures for excessive drill fluid loss;
 18. Experience:
 - a. Submit a list of at least five (5) successfully completed directional drilling projects using HDPE pipe sizes of at least 18 inches and lengths greater than 150 feet within the last five (5) years. Include project owner contact information references substantiating Contractor's experience; and,
 19. As-Built Drawings showing horizontal and vertical alignment of completed casing installation. This submittal shall also include pullback pressure logs, volume of drilling fluid, and fluid losses, if any.

1.03 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least two (2) business days prior to commencing work. All work shall be performed in the presence of the Enforcement Officer.

1.04 BASIS OF PAYMENT

- A. Directional drilling shall be paid for by the lineal footage of casing installed along casing centerline. The unit price shall include:
 - 1. Excavation, use, and backfilling of all pits;
 - 2. Removal and disposal of spoils and drilling fluid;
 - 3. Traffic control;
 - 4. Verifying location and depth of all utilities within impacted area;
 - 5. Casing pipe installation; and,
 - 6. All labor, equipment, and materials required to complete the work.
- B. The unit cost shall be for casing pipe and shall not include product pipe and installation.
- C. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
- D. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 – PRODUCTS

2.01 HIGH DENSITY POLYETHYLENE PIPE CASING

- A. Materials shall be in accordance with Contract Documents, plans, specifications, and approved submittals.
- B. All HDPE shall be manufactured from PE 4710 resin listed as TR-4 by the Plastic Pipe Institute (PPI). The resin shall meet ASTM D3350 with a minimum 445474C cell classification. The manufacturer shall certify the specified cell classification.
- C. HDPE casing shall conform to ASTM F 714, ANSI and AWWA C906, and have an NSF-61 listing.
- D. All pipe, fittings, and fusion equipment shall be provided by one supplier. Fusion equipment must be in satisfactory working order. All fusion equipment operators shall be qualified to perform heat fusing procedures.

2.02 STEEL PIPE CASING

- A. Materials shall be in accordance with approved submittals.

- B. Steel casing pipe shall meet or exceed ASTM A-139, Grade B with a minimum wall thickness of 0.25 inches and minimum yield strength of 35,000 psi. Steel casing shall be joined by fully welding around the entire circumference of the pipe. Welding shall conform to AWWA Standard C206.

2.03 CASING END SEALS

- A. Synthetic rubber end seals shall be installed on each end of the casing pipe. End seals shall be Advanced Model Products – Model AC Pull-on or approved equal and fastened tightly with stainless steel bands.

2.04 INSULATING SPACERS

- A. Projection type, non-metallic spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.

2.05 DIRECTIONAL DRILLING EQUIPMENT

- A. Directional drilling equipment shall consist of a hydraulically-powered directional drilling rig of sufficient capacity to perform the bore and pullback the casing pipe, a drilling fluid mixing, delivery and recovery system of sufficient capacity to successfully complete the crossing, a drilling fluid recycling system to remove solids from the drilling fluid, a guidance system to accurately guide boring operations, a vacuum truck of sufficient capacity to handle drilling fluid volume, and qualified personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project.
- B. The directional drilling rig shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at a variable angle while recirculating pressurized drilling fluid mixture to a guidable drill head. The rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The rig shall be electrically grounded during drilling and pull-back operations. There shall be a system to detect electrical current from the drill string and an audible alarm that automatically sounds when an electrical current is detected.
- C. Drilling fluid shall be composed of clean water and appropriate bentonite clay additives in accordance with approved submittals. Water shall be from source approved by Enforcement Officer and be contaminant free. Drilling fluids shall be thoroughly mixed and free of clumps or clods.

PART 3 - EXECUTION

3.01 GENERAL

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.
- B. Construction means, methods, and materials shall be in accordance with approved submittals.
- C. Entry and exit pit excavations shall be constructed in accordance with approved submittals. Excavations should be protected in accordance with applicable Federal, State, and Local regulations, laws, and rules. Excavation protection shall not be less than the standards and regulations established by OSHA 29 CFR Part 1926. Trench safety and stability shall be the responsibility of the Contractor, including placement of excavation spoils and control of water intrusion.

3.02 HANDLING OF MATERIAL

- A. Handle pipes, conduits, casing, and ancillary items in such a manner as not to damage the material. Pipe rollers or other approved means shall be used during pullback operations to avoid damage to casing pipe and product pipe.
- B. Damage to material shall be repaired to the satisfaction of the Enforcement Officer and, if required, replaced.
- C. The Enforcement Officer maintains the authority to reject materials damaged or otherwise unsuitable for project use.

3.03 DRILLING FLUID

- A. Disposal of drilling fluid and spoils will be the responsibility of the Contractor and shall be done in compliance with all Federal, State, and local regulations.
- B. All drilling fluids and loose cuttings shall be contained in access pits or holding tanks for recycling and disposal. Drilling fluid returns into or on other areas shall be cleaned up and disposed of immediately. The Contractor shall notify the Enforcement Officer immediately if drilling fluid returns occur or are spilled in areas other than approved holding structures.
- C. The Contractor shall provide adequate means and equipment for removing drilling fluid and spoils from access pits to mitigate potential overflows and provide for final disposal. Disposal equipment shall be present during all directional drilling operations.

3.04 DIRECTIONAL DRILLING

- A. Perform directional drilling operations in accordance with approved submittals. The Contractor shall provide all material, equipment, and facilities required to perform directional drilling.
- B. The drill path shall be accurately staked with alignment and entry/exit pits.
- C. Pipe, conduit, and casing installation under traveled ways shall progress on a continuous basis without stoppage, except for adding sections, until the leading edge has reached the receiving pit. Engineering approval is required for variations from this specification.
- D. Stop operations if ground movement is detected and implement the remediation plan in accordance with approved submittals. Immediately report movement to the Enforcement Officer. Repair any damages to traveled ways, including displacement (up or down) resulting from construction operations. Corrective actions shall be approved by the responsible authority. Mitigating repairs and associated costs will be the responsibility of the Contractor.

3.05 PILOT HOLE BORING

- A. The entry angle, pilot hole, and boring process shall maintain a curvature that does not exceed allowable bending radius of casing or product pipe and in accordance with approved submittals.
- B. The pilot hole shall be drilled along the Contractor submitted, and approved line, grade, and radius of curvature. No curves will be accepted with a radius more than approved curvature.
- C. Drilling fluid pressures shall be monitored at all times during operations. Pressures shall be controlled to avoid hydraulic fracturing of subsurface materials and prevent structure and ground surface heaving.

- D. Drilling fluid and cutting return shall be monitored at all times during operations. The volume of drilling fluids and spoil return anticipated shall be estimated based on subsurface conditions encountered. Excessive drilling fluid loss or excess spoil return shall be reported immediately to the Enforcement Officer. The Enforcement Officer will, in consultation with the Contractor, determine if corrective actions are required.
- E. Contractor shall provide adequate containment, drilling fluid and spoil removal equipment and other means required to contain all fluid and spoils and/or remove it from site. No additional compensation will be allowed for containment or cleanup resulting from spillage, hydraulic fracturing, or other means leading to release of drilling fluids.
- F. Alignment Adjustments and Restarts
 - 1. The Contractor shall follow the approved alignment within specifications. If adjustments or restarts are required, the Contractor shall notify the Enforcement Officer for approval prior to adjusting.

3.06 CASING PIPE INSTALLATION

- A. After the pilot hole is completed and approved, the enlarging phase of installation shall begin. The borehole diameter shall be increased to accommodate the pullback operations for the specified casing pipe size. The type of reamer shall be determined by subsurface soil conditions encountered during pilot hole drilling. The reamer type shall be selected by the Contractor and must be equipped with a swivel.
- B. The maximum hole diameter shall be 1.25 times the casing pipe outside diameter. The Contractor may elect to perform multiple reaming passes. Multiple reaming passes will be completed at Contractor's expense.
- C. Borehole stability shall be the responsibility of the Contractor. Open boreholes shall be stabilized using appropriate means to prevent collapse while still maintaining ability to perform work.
- D. Once pullback operations have commenced, operations must continue without interruption until pipe is completely pulled into borehole. During pullback operations, Contractor will not apply more than the maximum safe pipe pull pressure at any time. If casing pipe becomes stuck, Contractor will cease pulling operations and allow any potential "suction lock" to subside and resume pulling operations. If pipe remains stuck, Contractor will notify Engineer. Engineer and Contractor will review available options and proceed accordingly.
- E. Drilling fluid pressures shall be monitored at all times during operations. Pressures shall be controlled to avoid hydraulic fracturing of subsurface materials and avoid structure and ground surface heaving. Contractor shall provide adequate containment, drilling fluid and spoil removal equipment and other means required to contain all fluid and spoils and/or remove it from site. No additional compensation will be allowed for containment or cleanup resulting from spillage, hydraulic fracturing, or other means leading to release of drilling fluids.
- F. Drilling fluid and cutting return shall be monitored at all times during operations. The volume of drilling fluids and spoil return anticipated shall be estimated based on subsurface conditions encountered. Excessive drilling fluid loss or excess spoil return shall be reported immediately to the Enforcement Officer. The Enforcement Officer will, in consultation with the Contractor, determine if corrective actions are required.
- G. The casing pipe shall be protected and supported during pullback operations using rollers or other approved means to minimize damage.

3.07 OBSTRUCTIONS

- A. The Enforcement Officer must be notified immediately if any obstruction is encountered that stops progress of operations. The Contactor shall review the situation with the Enforcement Officer and determine the feasibility of continuing drilling operations, switching to alternative methods, and/or modifying alignment/location of the jack and bore.
- B. If continuing is deemed unfeasible or impractical, the obstructed pilot hole or casing shall be abandoned in place and filled completely with grout or other approved materials.
- C. For City projects, substantiated cost of abandoned work resulting from unforeseen obstructions encountered will be paid for as additional work in accordance with Contract documents.

3.08 ALIGNMENT

- A. The Contractor shall provide an accurate means to monitor horizontal and vertical positions of the casing during construction operations. The Enforcement Officer shall always have access to this information during the directional drilling process. If a magnetic guidance system is used, the Contractor shall identify any surface geo-magnetic anomalies and take appropriate corrective measures to ensure accurate spatial tracking of the drill stem.
- B. The casing shall be installed within a tolerance of 6 inches from approved, line and grade over 100 feet. The tolerance will be adjusted proportionally for shorter or longer casing lengths; however, the maximum deviation for casing lengths longer than 150 feet shall be no more than 1 foot.
- C. The alignment of casing shall be established to allow unrestricted insertion of the product pipe, including spacers, pipe bells, and restrained joints. If product pipe cannot be installed, the casing shall be abandoned and filled with grout or other approved materials. The Contractor shall establish another casing at a location approved by Enforcement Officer.

3.09 PRODUCT PIPE INSTALLATION

- A. The product pipe shall be the size and type as specified or shown on the plans.
- B. The end of product pipe shall be protected from damage during installation into the casing.
- C. Product pipe shall have restrained joints within the casing.
- D. The product pipe shall be supported in the casing pipe using projection-type non-metallic casing spacers.
 - 1. The minimum number of spacer projections around the product pipe circumference shall equal the pipe diameter (i.e. a nominal 10-inch pipe shall have minimum of 10 projections). Refer to manufacturer's product data for spacer type and size.
 - 2. Casing spacers shall fasten tightly onto the product pipe to prevent movement during installation.
 - 3. The insulator spacing shall be installed to support the weight of the product pipe and contents. Spacers shall be placed a maximum of 2 feet from each side of a joint and evenly spaced along the product pipe at intervals not to exceed manufacturer's recommendations or 6 feet, whichever is less.
 - 4. Double spacers shall be installed one foot from each end of the casing.
 - 5. Projection type spacers shall be RACI, Advance Products & Systems, or approved equal.

3.10 SITE RESTORATION

- A. The Contractor will demobilize equipment and restore the work site to the original condition. All excavations will be backfilled according to specifications and project drawings. Surface restoration shall be completed in accordance with Section 01005 – Pavement Repair and Section 01006 - Seeding.
- B. Remove all excess spoils and dispose of in accordance with all federal, state, and local regulations.

END OF SECTION 01003

#11.

SECTION 01004 UTILITY JACKING AND BORING

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for jack and bore installation of steel casing beneath traveled ways. The Contractor shall provide all labor, materials, and equipment required to install casing in accordance with these specifications. This work shall consist of pushing/jacking a steel casing pipe with a boring auger rotating within the pipe to remove spoils as casing is advanced.

1.02 SUBMITTALS

- A. Submit work plans, shop drawings, and product data for Engineer approval. Submittals shall include:
1. Work plan and sequencing;
 2. Proposed line and grade of casing pipe to maintain minimum burial depth and separation requirements from existing utilities;
 3. Equipment and site configuration;
 4. Jacking and receiving pit locations;
 5. Design, means, methods and materials for pit excavation support;
 6. Pit dimensions showing relative location to traveled ways;
 7. Dewatering methods;
 8. Differential movement monitoring methods;
 9. Excavation face loss prevention methods;
 10. Spoil removal methods;
 11. Drilling fluids;
 12. Product data;
 13. Casing pipe material and size;
 14. Casing pipe segment joining methods and procedures;
 15. Product pipe spacers and casing pipe end seal materials;
 16. Erosion control and stormwater pollution prevention plan;
 17. Remediation plan:
 - a. Identify means and methods to remove obstructions at the boring face;
 - b. Identify remedial measures for mitigating damage to existing facilities, and impacts to traveled ways, including ground subsidence and heaving;
 18. Experience:
 - a. Submit a list of at least five (5) successfully completed jack and bore projects greater than 50 feet within the last five (5) years including project owner contact information references substantiating jack and bore installer's experience; and,
 19. As-Built Drawings showing horizontal and vertical alignment of completed jack and bore.

1.03 NOTIFICATION

- A. The Contractor shall notify the Enforcement Officer at least two (2) business days prior to commencing work. All work shall be performed in the presence of the Enforcement Officer.

1.04 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.

- B. Jack and Bore shall be paid for by the lineal footage of casing measured along casing centerline. The unit price shall include:
 - 1. Excavation, use, and backfilling of all pits;
 - 2. Removal and disposal of spoils and drilling fluid;
 - 3. Traffic control;
 - 4. Verifying location and depth of all utilities within impacted area;
 - 5. Casing pipe installation; and,
 - 6. All labor, equipment, and materials required to complete the work.
- C. The unit cost shall not include product pipe and installation.
- D. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
- E. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials shall be in accordance with Contract Documents, plans, specifications, and approved submittals.
- B. Steel casing pipe shall meet or exceed ASTM A-139, Grade B with a minimum wall thickness of 0.25 inches and minimum yield strength of 35,000 psi. Steel casing shall be joined by fully welding around the entire circumference of the pipe. Welding shall conform to AWWA Standard C206.
- C. Synthetic rubber end seals shall be installed on each end of the casing pipe. End seals shall be Advanced Model Products – Model AC Pull-on or approved equal fastened tightly with stainless steel bands.
- D. Projection type spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.

PART 3 - EXECUTION

3.01 GENERAL

- A. Verify the actual locations (horizontal and vertical) of all utilities prior to beginning work. Protect all utilities from damage during construction. Damage to existing utilities shall be repaired to the satisfaction of the utility provider at Contractor's expense.
- B. Construction means, methods, and materials shall be in accordance with approved submittals.
- C. Excavations shall be constructed in accordance with approved submittals. Excavations should be protected in accordance with applicable Federal, State, and local regulations. Excavations must meet or exceed regulations established by OSHA 29 CFR Part 1926. Trench safety and stability shall be the responsibility of the Contractor.

- D. Disposal of excess spoils removed from the casing pipe shall be the responsibility of the Contractor and shall be done in compliance with all Federal, State, and local regulations.

3.02 HANDLING OF MATERIAL

- A. Handle pipes, conduits, casing, and ancillary items in such a manner as not to damage the material.
- B. Damage to material shall be repaired to the satisfaction of the Engineer or replaced at Contractor's expense.
- C. The Enforcement Officer maintains the authority to reject materials damaged or otherwise unsuitable for project use.

3.03 JACK AND BORE

- A. Perform jack and bore operations in accordance with approved submittals and the following requirements:
 - 1. Unsupported excavation (open-hole) ahead of the casing will not be permitted. Mechanical arrangements or other devices shall be provided at the leading end of the carrier to prevent drilling ahead of the casing.
 - 2. The use of water or slurry under pressure (jetting) or puddling shall not be permitted to facilitate boring, pushing, or jacking operations. Non-pressurized water or slurry is acceptable for use as a lubricant behind the cutter head.
 - 3. Pipe, conduit, and casing installation under traveled ways shall progress on a continuous basis without stoppage, except for adding sections, until the leading edge has reached the receiving pit. Engineering approval is required for variations from this specification.
- B. Employ methods to prevent loss of the excavation face in accordance with approved submittals.
- C. Stop operations if ground displacement is detected and implement the remediation plan in accordance with approved submittals. Repair any damages to traveled ways, including displacement (up or down) resulting from construction operations. Corrective actions shall be approved by the Engineer. Mitigating repairs and associated costs will be the responsibility of the Contractor.

3.04 OBSTRUCTIONS

- A. The Enforcement Officer must be notified immediately if any obstruction is encountered that stops progress of operations. The Contractor shall review the situation with the Enforcement Officer and determine the feasibility of continuing operations, switching to alternative methods, and/or modifying alignment/location of the jack and bore.
- B. If continuing is deemed unfeasible or impractical, the obstructed pilot hole or casing shall be abandoned in place and filled completely with grout or other approved materials.
- C. For City projects, substantiated cost of abandoned work resulting from unforeseen obstructions encountered will be paid for as additional work in accordance with Contract documents.

3.05 ALIGNMENT

- A. The Contractor shall provide an accurate means to monitor horizontal and vertical positions of the casing during construction operations. The Enforcement Officer shall always have access to this information during the jack and bore process. If a magnetic guidance system is used, the Contractor shall identify any surface geo-magnetic anomalies and take appropriate corrective measures to ensure accurate spatial tracking of casing.
- B. The casing shall be installed within a tolerance of 1 foot of approved line and grade over 100 feet. The tolerance may be adjusted proportionally for shorter or longer casing lengths; however, the maximum deviation for casing lengths longer than 150 feet shall be no more than 1.5 feet.
- C. The alignment of casing shall be established to allow unrestricted insertion of the product pipe, including spacers, pipe bells, and restrained joints. If product pipe cannot be installed, the casing shall be abandoned and filled with grout or other approved materials. The Contractor shall establish another casing at a location approved by Enforcement Officer.

3.06 PRODUCT PIPE INSTALLATION

- A. The product pipe shall be the size and type as specified or shown on the plans.
- B. The end of product pipe shall be protected from damage during installation into the casing.
- C. Product pipe shall have restrained joints within the casing.
- D. The product pipe shall be supported in the casing pipe using projection-type non-metallic casing spacers.
 - 1. The minimum number of spacer projections around the product pipe circumference shall equal the pipe diameter (i.e. a nominal 10-inch pipe shall have minimum of 10 projections). Refer to the manufacturer's product data for spacer type and size.
 - 2. Casing spacers shall fasten tightly onto the product pipe to prevent movement during installation.
 - 3. The insulator spacing shall be installed to support the weight of the product pipe and contents. Spacers shall be placed a maximum of 2 feet from each side of a joint and evenly spaced along the product pipe at intervals not to exceed manufacturer's recommendations or 6 feet, whichever is less.
 - 4. Double spacers shall be installed one foot from each end of the casing.
 - 5. Projection type spacers shall be RACI, Advance Products & Systems, or approved equal. Refer to manufacturer's product data for spacer type and size.

3.07 SITE RESTORATION

- A. The Contractor will demobilize equipment and restore the work site to the original condition. All excavations will be backfilled according to specifications and project drawings. Surface restoration shall be completed in accordance with contract requirements, Section 01005 – Pavement Repair, and Section 01006 – Seeding.

END OF SECTION 01004

SECTION 01005 PAVEMENT STRUCTURE REPAIR

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes specifications for repairing and restoring aggregate, concrete, and asphalt concrete pavement structures in areas where trenches cross these features. The Contractor shall provide all labor, materials, and equipment required to perform work in accordance with these specifications.

1.02 RELATED WORK

- A. Section 01002 – Earthwork
- B. Section 01003 – Directional Drilling
- C. Section 01004 – Utility Jacking and Boring

1.03 REFERENCE STANDARDS

- A. ASTM D698 - Moisture-Density Relations of Soils and Soil Aggregate Mixture, using 5.5 lb. Rammer and 12 in Drop.
- B. Missouri State Highway and Transportation Commission: Missouri Standard Specifications for Highway Construction, current edition, including Section 613 Pavement Repair

1.04 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Pavement Structure Repair shall be paid for by the lineal foot at Contract unit cost for surfaces listed on bid form and plan quantities table. Culvert, mailbox, or other surface features required to be removed as a result of construction shall be included in Contract unit cost.
- C. Cost associated with all work and materials not specifically identified as a bid item shall be considered as incidental to other pay items.
- D. Additional, extra, and/or changes in work must be approved by Enforcement Officer. Payment will be on basis of Contract documents regarding changes in work.

PART 2 - MATERIALS

2.01 AGGREGATE BASE AND SURFACE COURSE MATERIALS

- A. Aggregate Base: Type 5, Section 1007, Missouri Standard Specifications for Highway Construction.
- B. Aggregate Surface: Grade A or B, Section 1006, Missouri Standard Specifications for Highway Construction.

2.02 BITUMINOUS SURFACE COURSE AND PATCHING MATERIALS

- A. Prime Coat: Liquid Asphalt RC-MC Grade 30, Section 1015, Missouri Standard Specifications for Highway Construction.
- B. Base Mix: MoDOT Base, Section 401, Missouri Standard Specifications for Highway Construction.
- C. Tack Coat: SS-1 or SS-1H, Section 1015 Missouri Standard Specifications for Highway Construction.
- D. Surface Mix: Type BP-1, Section 401, Missouri Standard Specifications for Highway Construction.

2.03 PORTLAND CEMENT CONCRETE

- A. Portland Cement: Type I or Type II
- B. Concrete Mix: Portland Cement Concrete Base and Pavement, class B-1, non-air entrained with material conforming to Section 502 and 1000, Missouri Standard Specifications for Highway Construction with a slump between 3 and 6 inches.
- C. Water: potable
- D. Reinforcement: #4 rebar placed 12 inches on center each way. Concrete shall be dowelled into existing with drilled and epoxy set #4 rebar dowels placed 18 inches on center.

PART 3 - EXECUTION

3.01 REPAIR

- A. All trenches in traveled ways shall be repaired with either Bituminous Surface Course and Patching Materials or Concrete Material according to standard details.
- B. All trenches in concrete sidewalk, driveways and roadways shall be repaired/replaced with concrete material according to standard details.
- C. All trenches in aggregate surfaced pavement structures shall be replaced with Aggregate Base and Surface Course according to standard details.
- D. Pavement replaced shall adhere to the following procedures:
 - 1. Place granular backfill to provide temporary surface over trenches across traveled ways. Open to traffic for at least one week. Repair all potholes and level surface daily, adding additional material as needed. Base under the pavement shall be 8 inches thick.
 - 2. After pavement has been open to traffic for one week, saw cut and remove existing pavement on both sides of trench, remove enough base course material, level, compact, and construct pavement patch per the project details.

3.02 COMPACTION

- A. In accordance with Section 01002 Earthwork.

3.03 MAINTENANCE

- A. Maintain surface repairs until final acceptance. Replace and repair areas where excessive displacement, rutting, raveling, or other unacceptable damages occur as a result of construction.
- B. Repaired areas will be accepted at end of maintenance period and all pavement repairs are performing well without further damages.

END SECTION 01005

SECTION 01006 SEEDING

PART 1 – GENERAL

1.01 RELATED WORK

- A. Section 01002 - Earthwork
- B. Section 01003 – Directional Drilling
- C. Section 01004 – Utility Jacking and Boring

1.02 REFERENCE STANDARDS

- A. Missouri Standard Specification for Highway Construction, current edition.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging. Damaged packages are not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.04 BASIS OF PAYMENT

- A. This section applies to projects where the City of Moberly is the responsible Developer/Owner.
- B. Seeding cost shall be included in Contract unit cost for product pipe.

PART 2 - MATERIALS

2.01 SEED

- A. Seed shall meet the following minimum percentages for purity and germination, and maximum percentage for weed seed. Vendor certification for each lot number of numbers with testing statement. Seed that has not been tested and certified within the last 1 year will be rejected

Type	Purity	Germination	Weed
Kentucky Blue Grass	85	80	<1.0
Perennial Rye	98	85	<1.0
Red Fescue	97	85	<1.0

2.02 FERTILIZER

- A. Standard commercial fertilizer supplied separately or in mixtures and furnished in water tight containers. Each container shall be marked with weight and manufacturer's guaranteed analysis showing ingredient percentages.
- B. Furnish a mixture of chemical ingredients providing total nitrogen, phosphoric acid, and potassium required based on soil analysis or as otherwise specified. Chemical ingredient tolerances shall be within 2 percent.

2.03 MULCH

- A. Fresh wheat, rye, or oat straw, air dried. Non-toxic to vegetation and to the germination of seed, free from noxious seeds and weed seeds.

2.04 APPLICATION RATES

- A. **Fertilizer:** provide total nitrogen, phosphoric acid, and potassium required based on soil analysis or as otherwise specified.

- B. **Seed**

- 1. Kentucky Blue Grass: 1.10 lbs/1,000 sq. ft.
 - 2. Perennial Rye: 0.60 lbs/1,000 sq. ft.
 - 3. Redtop: Red Fescue: 0.40 lbs/1,000 sq. ft.

PART 3 - EXECUTION

3.02 PREPARATION

- A. When soil is in a tillable condition, cultivate to a depth of 4 inches, reducing soil particles to a size not larger than 2 inches. Moisture condition surface to receive seed.
- B. Assure seed bed is level, smooth, and free of weeds, clods, stones, roots, and sticks. Moisture condition as needed.
- C. Apply fertilizer and mix into the top 2 inches of soil. Apply within 48 hours prior to seeding.

3.03 SEEDING AND MULCHING

- A. Uniformly sow seeds in two operations at right angles to each other. Within 12 hours after seeding roll areas at right angles to runoff with a lawn type roller. Do not over compact.
- B. Within 24 hours of seeding apply mulch at 2 1/2 tons per acre. Stabilize vegetative mulch by embedding in soil to prevent mulch loss by wind or water erosion.

3.04 MAINTENANCE

- A. Maintain surfaces until final acceptance and supply additional topsoil, seed, and fertilizer where necessary, including areas affected by erosion.
- B. Replant damaged grass areas showing root growth failure, deterioration, bare or thin spots, and eroded areas.
- C. Seeded areas will be accepted at end of maintenance period when seeded areas are properly established and otherwise acceptable.

END OF SECTION 01006

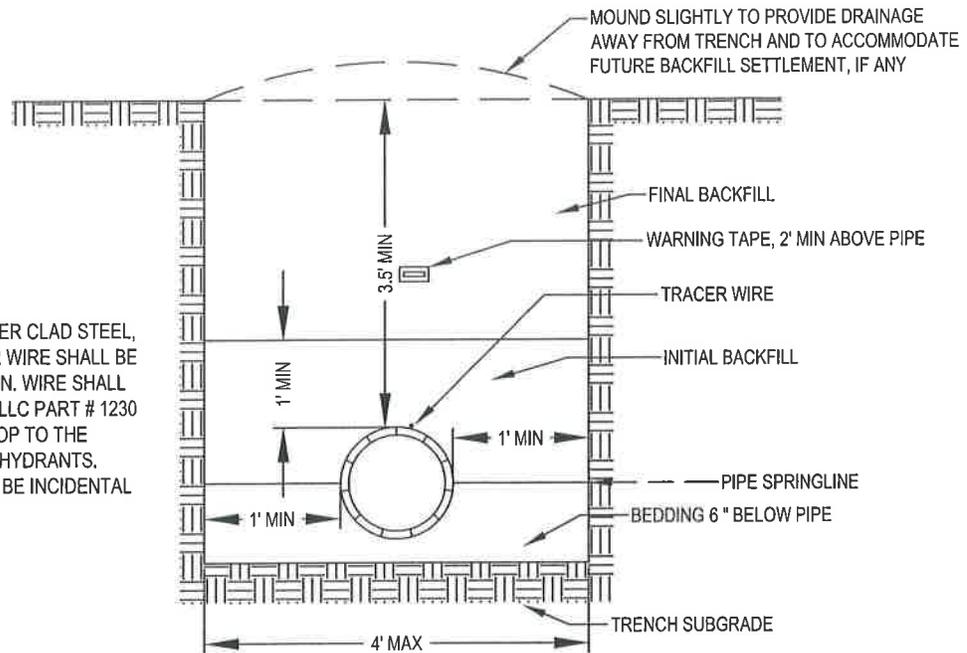
CITY OF MOBERLY, MISSOURI
STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

SECTION 2 – STANDARD DETAILS FOR WATER MAIN CONSTRUCTION

- 02001 Typical Water Main in Trench Installation
- 02002 Typical Fire Hydrant, Valve, and Valve Box
- 02003 Typical Hydrant and Valve Locations
- 02004 Typical Thrust Block Installations
- 02005 Typical Restrained Joint Installation
- 02006 Typical Water Main Creek Crossing
- 02007 Typical Water Main in Casing Installations
- 02008 Typical Service Connection and Meter Setting
- 02009 Typical Water Main Separation Requirements

#11.

TRACER WIRE SHALL BE COPPER CLAD STEEL, CCS, (12 GAUGE AWG) TRACER WIRE SHALL BE ATTACHED TO THE WATER MAIN. WIRE SHALL BE COPPERHEAD INDUSTRIES LLC PART # 1230 HS OR EQUAL, WIRE SHALL LOOP TO THE SURFACE AT ALL VALVES AND HYDRANTS. COST OF TRACER WIRE SHALL BE INCIDENTAL TO UNIT COST OF PIPE.

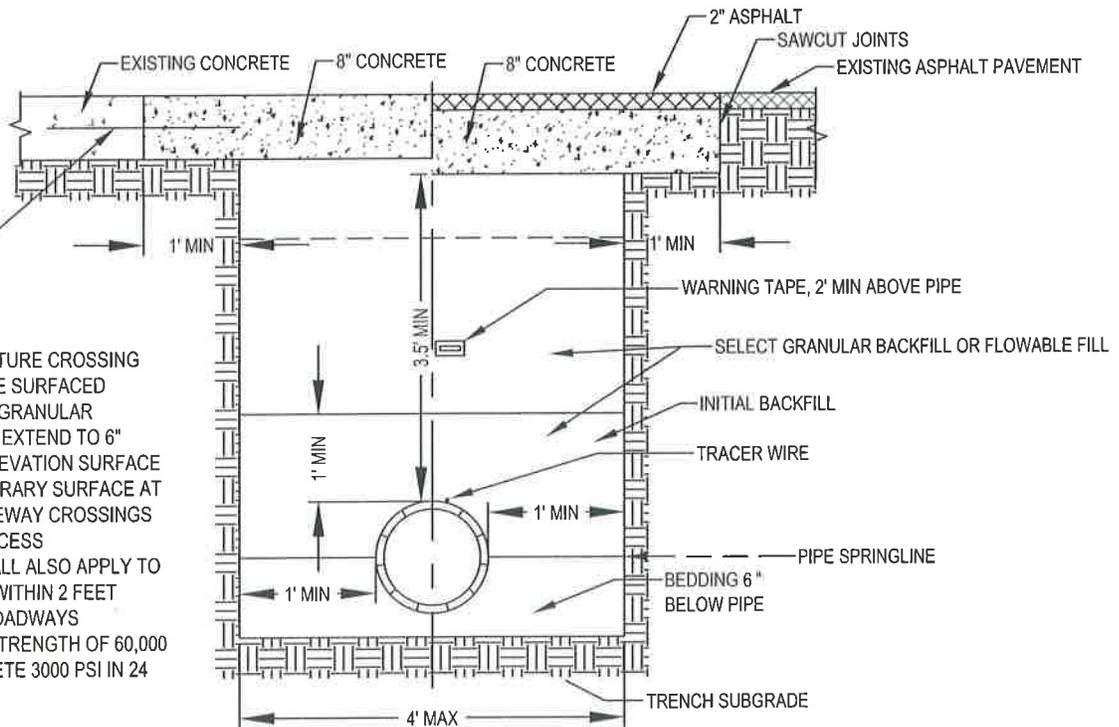


WATER MAIN IN TRENCH TYPICAL INSTALLATION DETAIL- SEEDED SOIL SURFACE

#4 REBARS - 24" LONG GROUDED INTO EXISTING PAVEMENT 8" @ 18" O.C.

NOTES: PAVEMENT STRUCTURE CROSSING

1. FOR AGGREGATE SURFACED AREAS, SELECT GRANULAR BACKFILL SHALL EXTEND TO 6" BELOW FINAL ELEVATION SURFACE
2. PROVIDE TEMPORARY SURFACE AT ROAD AND DRIVEWAY CROSSINGS TO MAINTAIN ACCESS
3. THIS DETAIL SHALL ALSO APPLY TO ALL TRENCHES WITHIN 2 FEET PARALLELING ROADWAYS
4. REBARS YIELD STRENGTH OF 60,000 PSI AND CONCRETE 3000 PSI IN 24 HOURS.

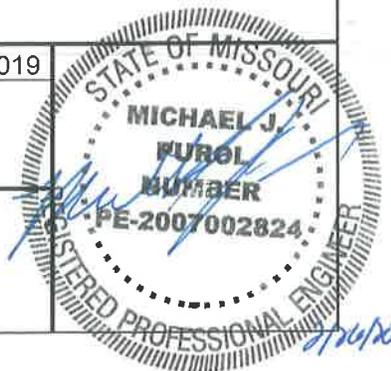


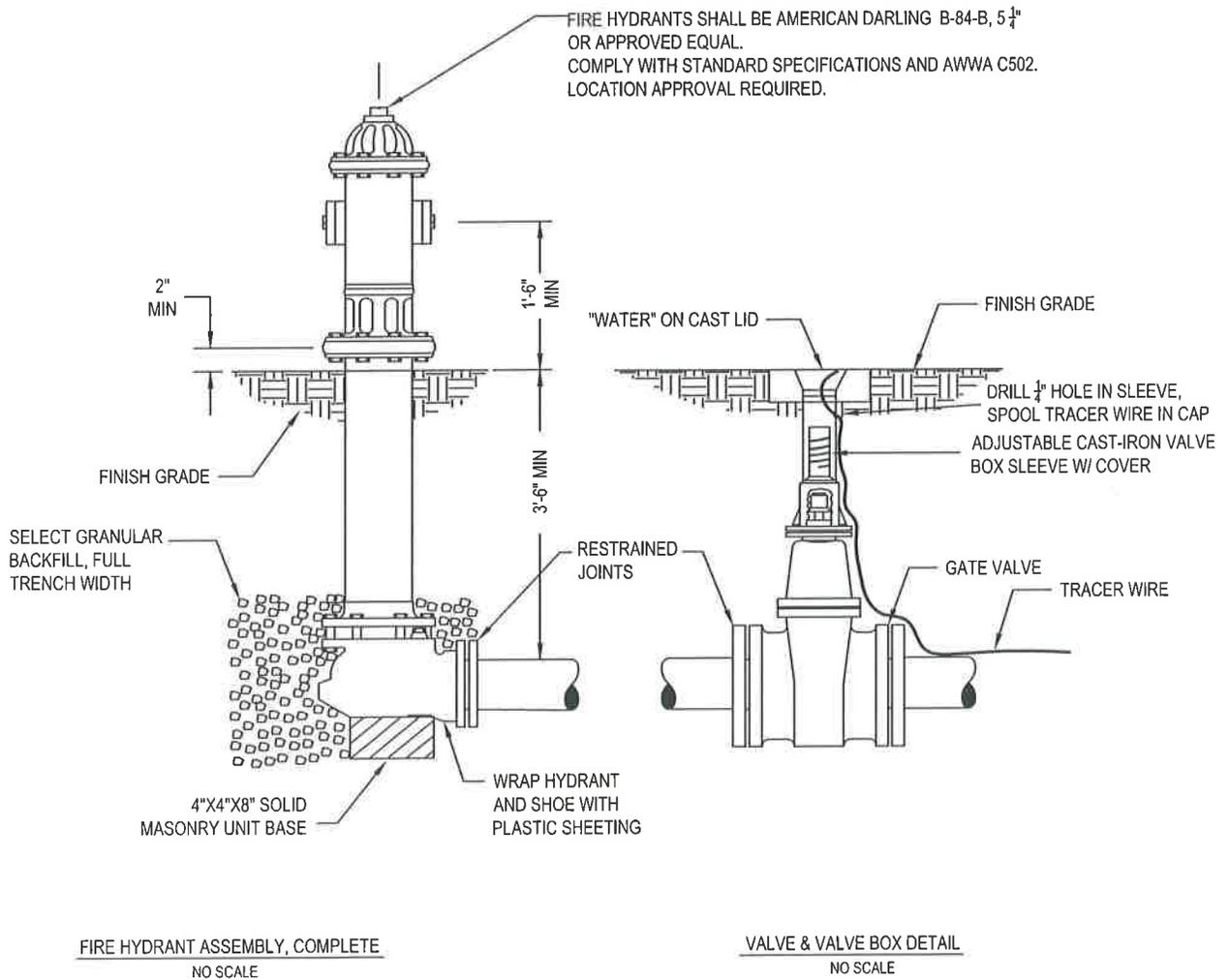
TYPICAL TRENCH INSTALLATION DETAIL-PAVEMENT STRUCTURE CROSSINGS

STANDARD DETAIL No. 02001

REVISION DATE: 10-08-2019

WATER MAIN CONSTRUCTION
TYPICAL WATER MAIN IN TRENCH INSTALLATIONS
CITY OF MOBERLY, MISSOURI

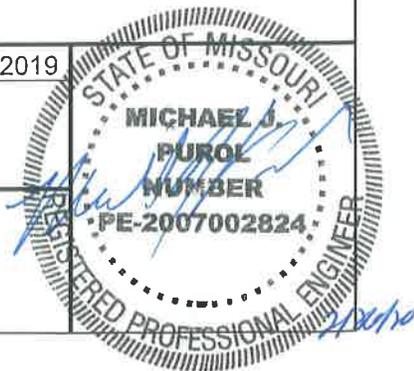


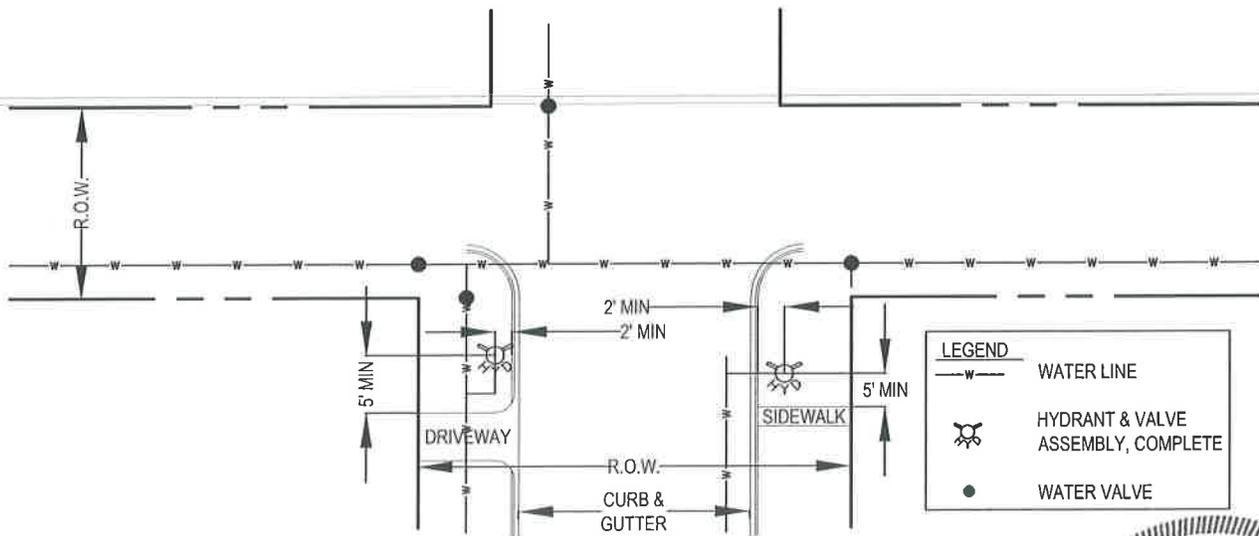
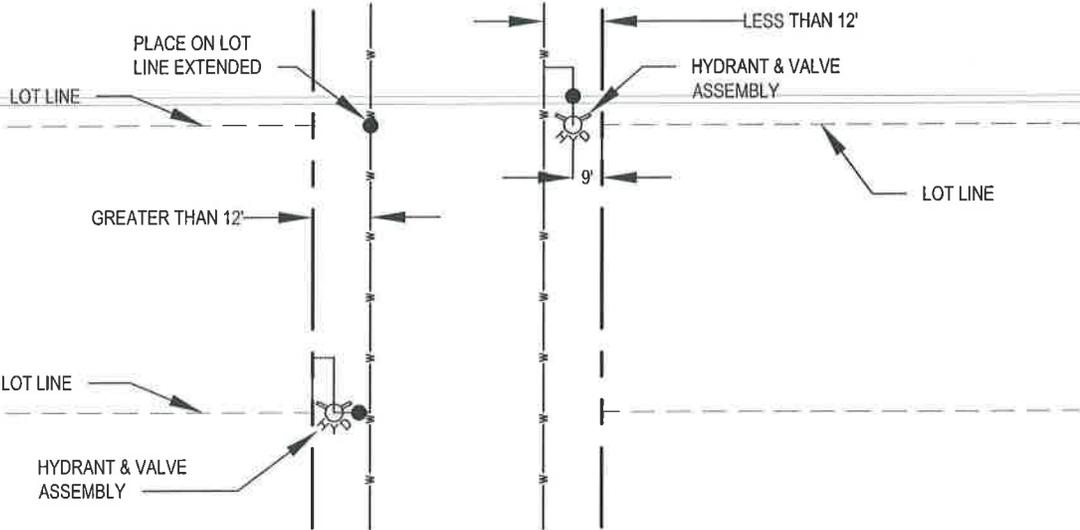
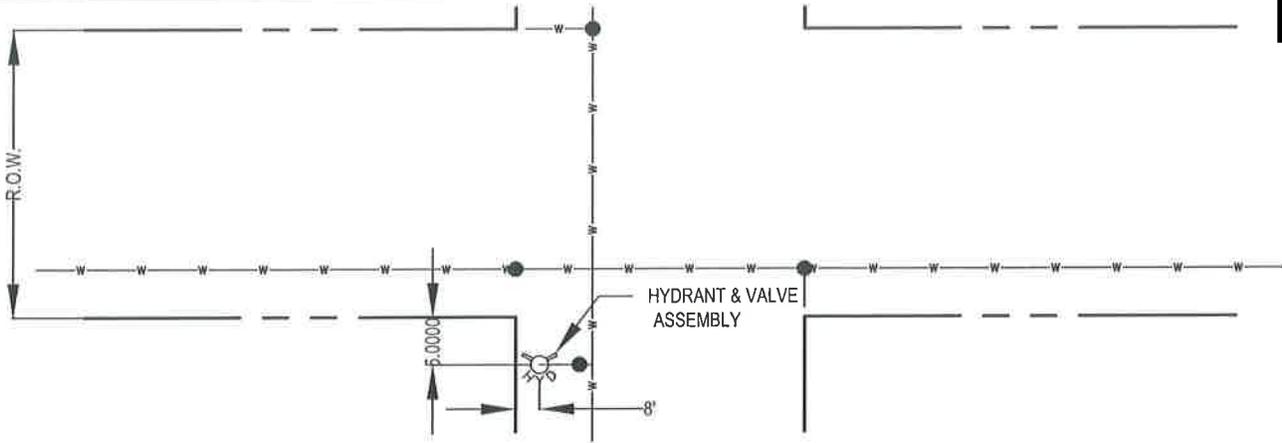


STANDARD DETAIL No. 02002

REVISION DATE: 10-08-2019

WATER MAIN CONSTRUCTION
TYPICAL FIRE HYDRANT, VALVE & VALVE BOX INSTALLATIONS
CITY OF MOBERLY, MISSOURI



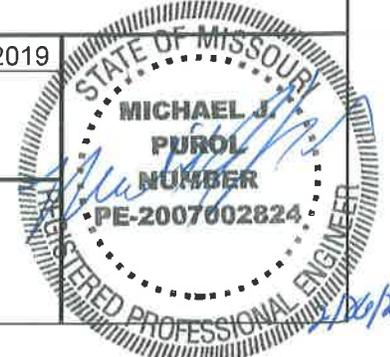


LEGEND	
	WATER LINE
	HYDRANT & VALVE ASSEMBLY, COMPLETE
	WATER VALVE

STANDARD DETAIL No. 02003

REVISION DATE: 10-08-2019

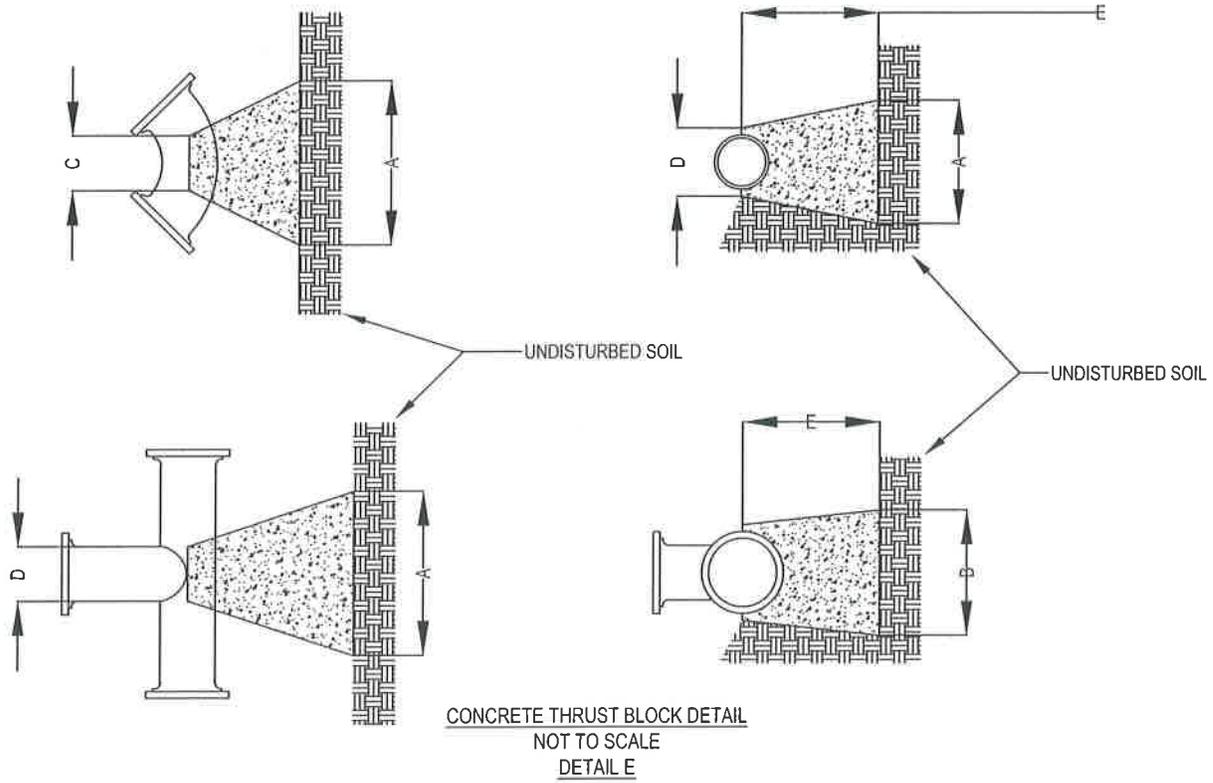
WATER MAIN CONSTRUCTION
TYPICAL FIRE HYDRANT AND VALVE LOCATIONS
CITY OF MOBERLY, MISSOURI



PIPE SIZE	FITTING	DISTANCE IN INCHES				
		A	B	C	D	E
6"	11.25 & 22.5°	12	12	8	10	12
	45°	27	12	8	10	12
	90°	33	18	8	10	12
	TEE/PLUG	24	18	8	10	12
8"	11.25 & 22.5°	18	15	8	10	12
	45°	33	15	8	10	18
	90°	42	24	8	10	18
	TEE/PLUG	30	24	12	10	18
10" & 12"	11.25 & 22.5°	27	24	12	12	18
	45°	51	24	12	12	24
	90°	63	36	12	12	30
	TEE/PLUG	45	36	12	12	24
14" & 16"	11.25 & 22.5°	33	33	12	16	18
	45°	69	33	12	16	30
	90°	84	48	12	16	36
	TEE/PLUG	60	48	12	15	30

NOTES: MANUFACTURED RESTRAINT IS THE CITY PREFERRED METHOD OF RESTRAINT. SEE STANDARD SPECIFICATIONS. CONCRETE THRUST BLOCKING MAY BE USED IN CONJUNCTION WITH MANUFACTURED RESTRAINTS.

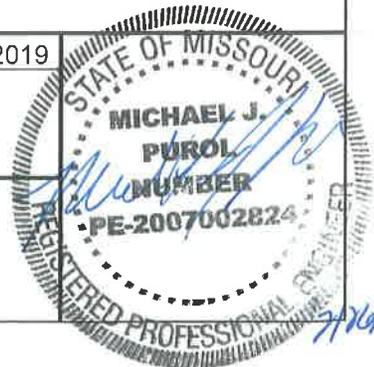
- THRUST BLOCKS ARE BASED ON A WORKING PRESSURE OF 200 P.S.I. & 2000 P.S.F. ALLOWABLE SOIL BEARING PRESSURE.
- USE DIMENSIONS FOR NEXT LARGER SIZE FOR PIPE SIZES NOT SHOWN.
- USE 3/8" PLYWOOD SEPARATOR BETWEEN BLOCKS AND PLUGS FOR EASE OF FUTURE REMOVAL.



STANDARD DETAIL No. 02004

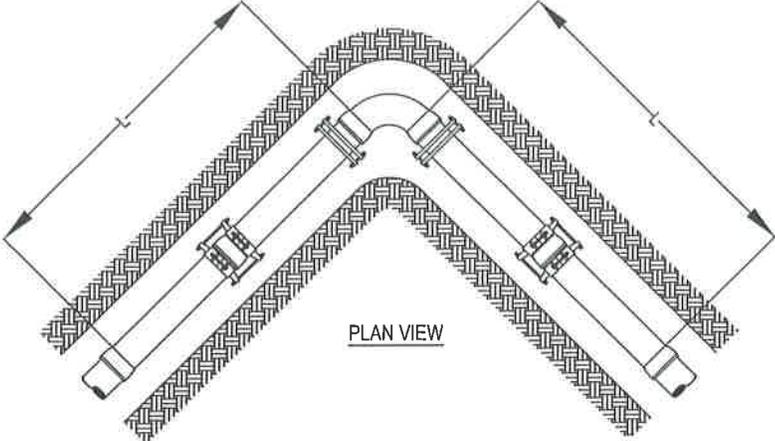
REVISION DATE: 10-08-2019

WATER MAIN CONSTRUCTION
 TYPICAL THRUST BLOCK INSTALLATIONS
 CITY OF MOBERLY, MISSOURI

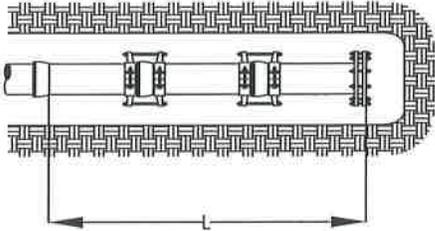


NOTES:

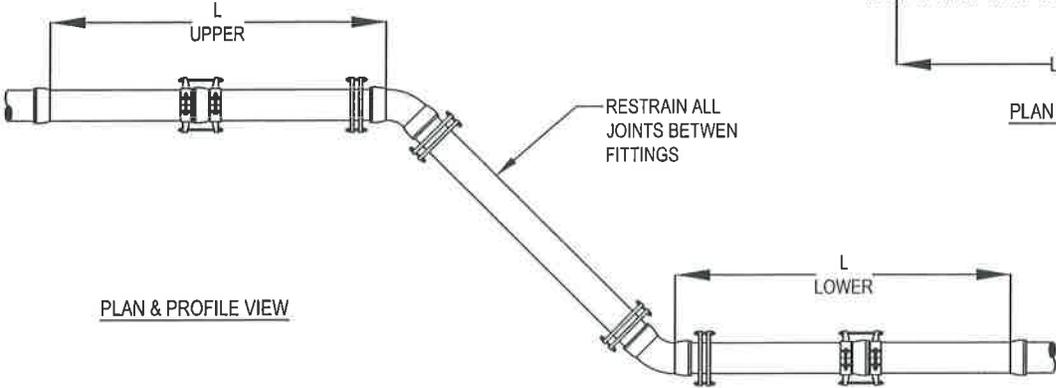
1. ALL JOINTS WITHIN LENGTH "L" OF FITTING MUST BE RESTRAINED
2. LENGTHS L, Lr, AND B TO BE SPECIFIED BY ENGINEER



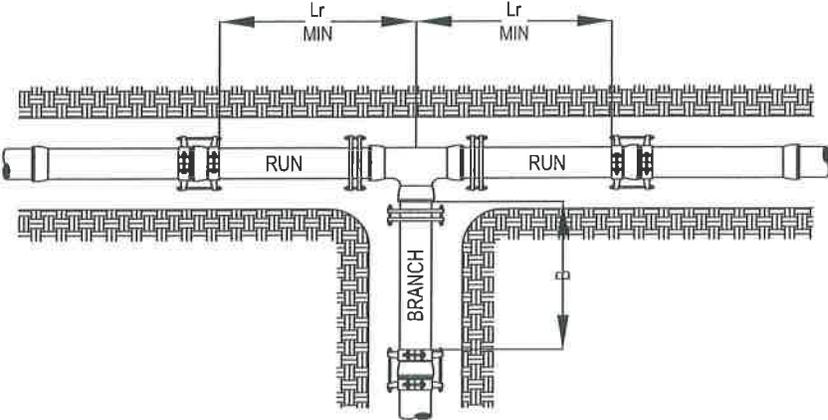
PLAN VIEW



PLAN VIEW



PLAN & PROFILE VIEW

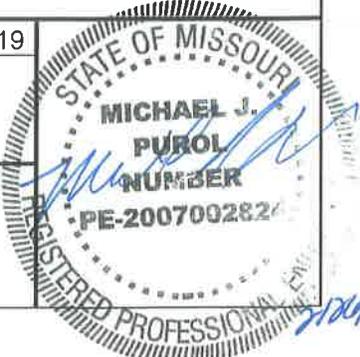


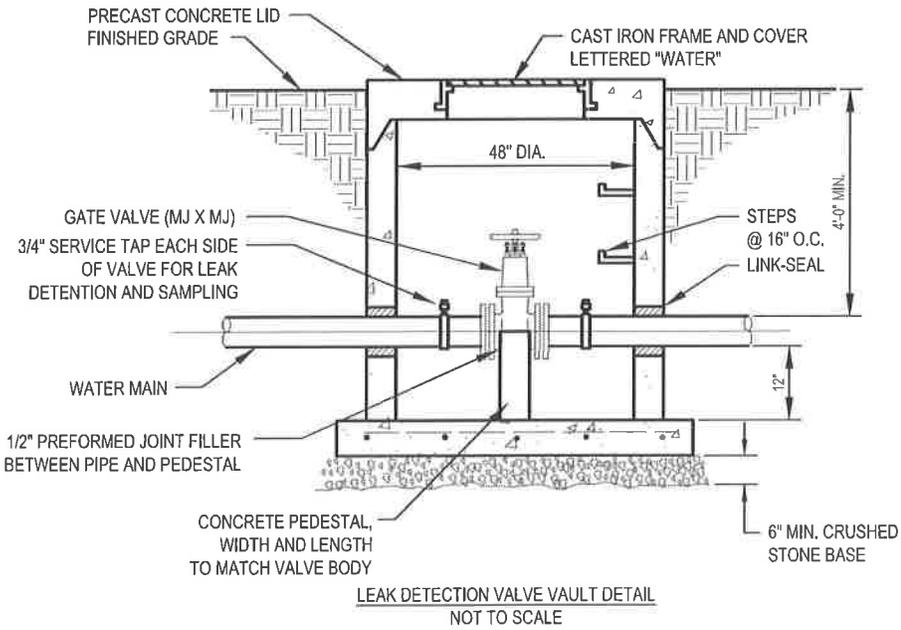
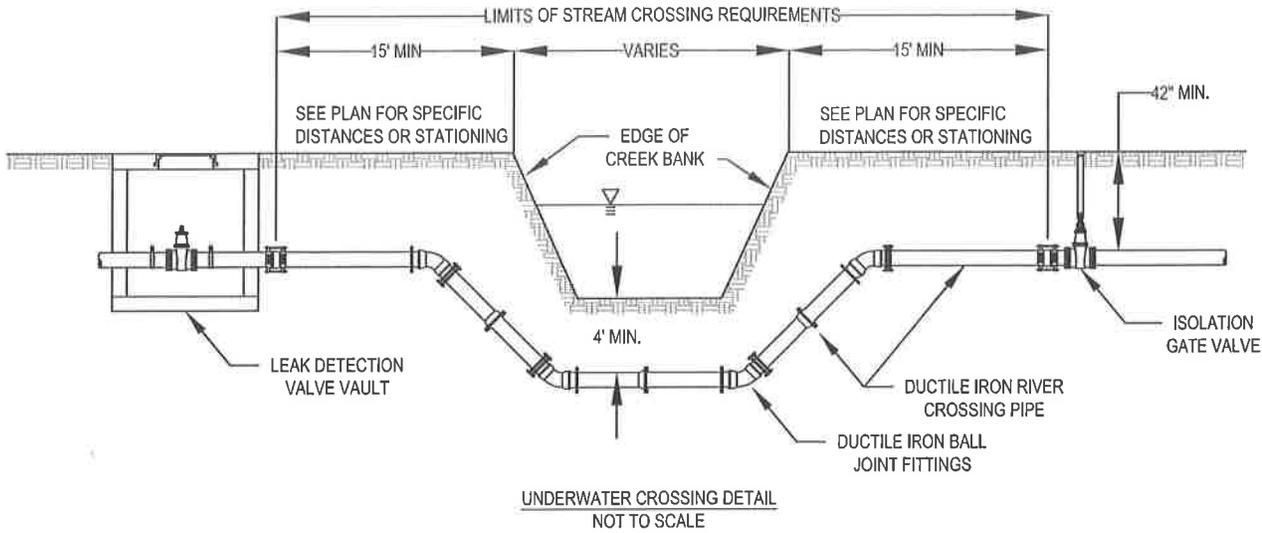
PLAN VIEW

STANDARD DETAIL No. 02005

REVISION DATE: 10-08-2019

WATER MAIN CONSTRUCTION
TYPICAL RESTRAINED JOINT INSTALLATIONS
CITY OF MOBERLY, MISSOURI





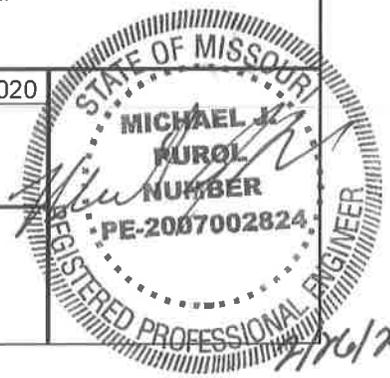
UNDERWATER CROSSINGS SHALL COMPLY WITH THESE DETAILS AND CHAPTER 8.7.2.a OF THE DEPARTMENT OF NATURAL RESOURCES, MINIMUM DESIGN STANDARDS FOR MISSOURI COMMUNITY WATER SYSTEMS, ADOPTED 2013 FOR CROSSING FLOWING STREAMS 15 FEET TO 500 FT.

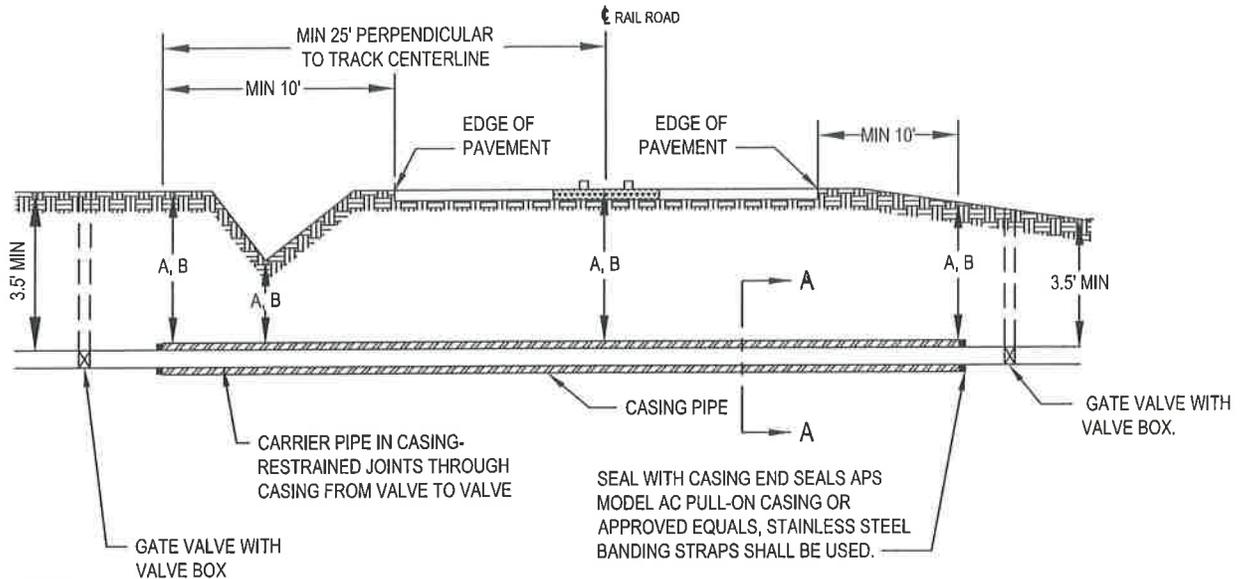
1. PIPE MATERIAL SHALL BE DUCTILE IRON RIVER CROSSING PIPE WITH FLEXIBLE WATERTIGHT JOINTS. MINIMUM 4-FT COVER OVER PIPE.
2. ADEQUATE SUPPORT / ANCHORAGE SHALL BE PROVIDED ON EACH SIDE OF STREAM. SEE PROJECT SPECIFIC REQUIREMENTS.
3. INSTALL EASILY ACCESSIBLE ISOLATION VALVES ON EACH SIDE OF CROSSING, NOT SUBJECT TO FLOODING.
4. PROVIDE AN ACCESSIBLE VALVE VAULT FOR INSTALLATION OF LEAK DETECTION EQUIPMENT.
5. TAP EACH SIDE OF VALVE IN VAULT TO ALLOW INSERTION OF A SMALL METER TO MEASURE LEAKAGE AND FOR SAMPLING.
6. PROTECT STREAM BANKS AT CROSSING. EXTEND RIVER CROSSING PIPE AT LEAST 15-FT BEYOND STREAM BANKS.

STANDARD DETAIL No. 02006

REVISION DATE: 02-26-2020

WATER MAIN CONSTRUCTION
TYPICAL WATER MAIN CREEK CROSSING
CITY OF MOBERLY, MISSOURI



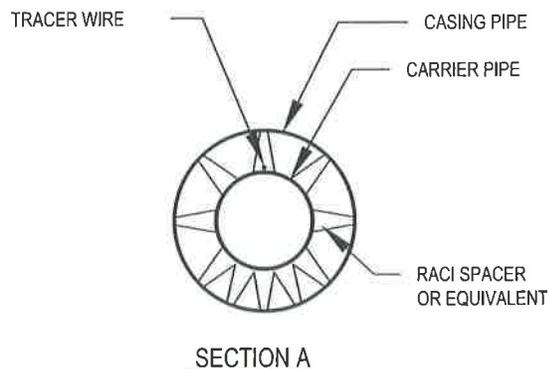


NOTES:

1. CONTRACTOR MEANS AND METHODS FOR TRENCHLESS CONSTRUCTION METHOD MUST BE APPROVED.
2. IF DIRECTIONAL DRILLING METHOD IS USED, THE MINIMUM EMBEDMENT DEPTH TO TOP OF FINISHED CASING SHALL BE 8 FEET.
3. SEE STANDARD SPECIFICATIONS FOR ALLOWABLE CASING PIPE MATERIALS.
4. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND APPROVALS FROM APPROPRIATE REGULATORY AUTHORITY. ALL WORK SHALL MEET ALL REQUIREMENTS OF RESPONSIBLE REGULATORY AUTHORITY
5. CASING SPACERS SHALL BE RACI OR APPROVED EQUAL WITH STAINLESS STEEL BOLTS AND NUTS. CASING SPACERS SHALL BE INSTALLED AT INTERVALS NOT TO EXCEED MANUFACTURER'S SPECIFICATIONS OR 6' WHICHEVER IS LESS. DOUBLE SPACERS SHALL BE INSTALLED 1' FROM EACH END OF THE CASING. ONE CASING SPACER MUST BE WITHIN 2' OF EACH SIDE OF A PIPE JOINT. SPACERS SHALL HAVE A MINIMUM HEIGHT THAT EXCEEDS THE PIPE BELL HEIGHT AND RESTRAINED JOINT HEIGHT.
6. ALL JOINTS BETWEEN GATE VALVES SHALL BE RESTRAINED JOINTS.

NOTES:

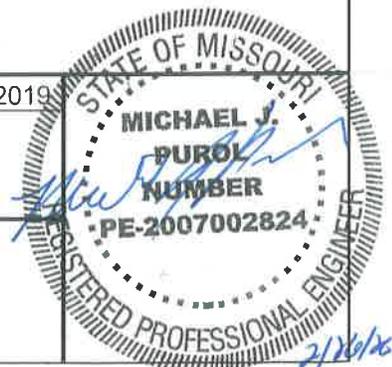
- A. MINIMUM COVER OVER CASING FOR ROADWAY CROSSINGS SHALL BE 4 FEET WITHIN LIMITS SHOWN
- B. MINIMUM COVER OVER CASING FOR RAILWAY CROSSINGS SHALL BE 6 FEET WITHIN LIMITS SHOWN
- C. COVER DEPTH GREATER THAN MINIMUMS MAY BE REQUIRED AS A CONDITION OF AUTHORITY HAVING JURISDICTION FOR ROAD OR RAILROAD



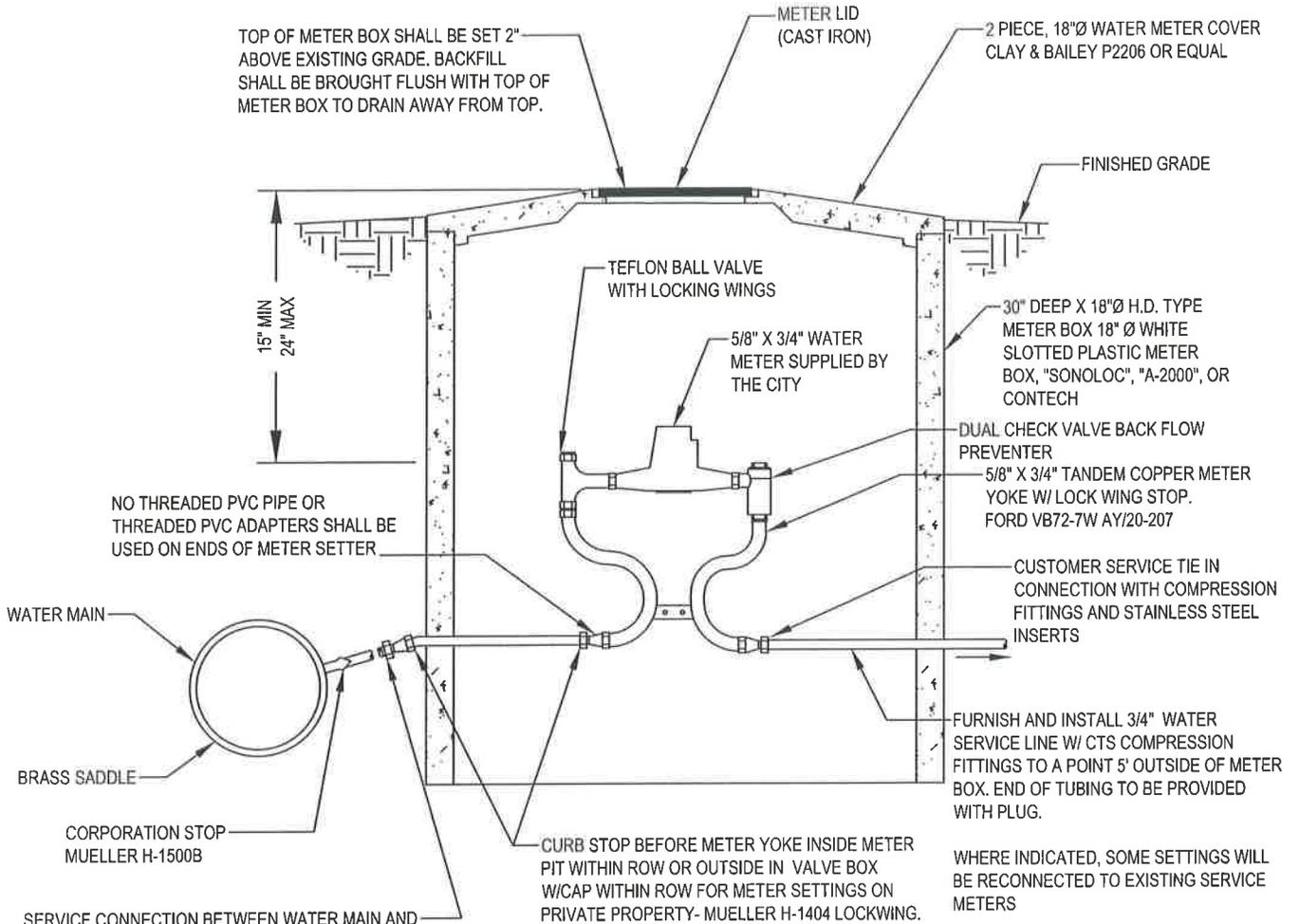
STANDARD DETAIL No. 02007

REVISION DATE: 10-08-2019

WATER MAIN CONSTRUCTION
TYPICAL WATER MAIN IN CASINGS
CITY OF MOBERLY, MISSOURI



NOTES: ALL SERVICE LINES GREATER THAN 10' IN LENGTH REQUIRES TRACER WIRE. WARNING TAPE SHALL BE PLACED OVER ALL SERVICE LINES CONSTRUCTED.



NO THREADED PVC PIPE OR THREADED PVC ADAPTERS SHALL BE USED ON ENDS OF METER SETTER

WATER MAIN

BRASS SADDLE

CORPORATION STOP
MUELLER H-1500B

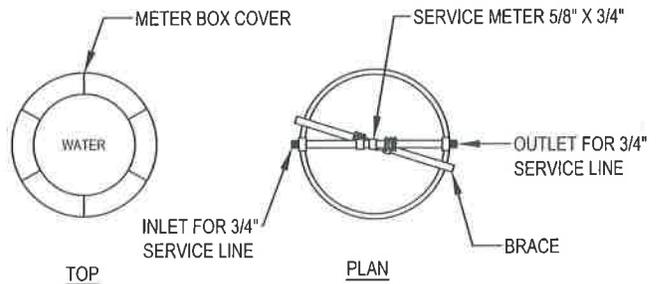
SERVICE CONNECTION BETWEEN WATER MAIN AND METER SHALL BE COPPER OR POLY TUBING. ALL COPPER LINES INSTALLED IN GRANULAR MATERIAL SHALL BE CASED. ALL POLY SERVICE LINES BETWEEN WATER MAIN AND METER SHALL BE CASED WITH TRACER WIRE. SADDLE CORPORATION STOPS SHALL HAVE STAINLESS STEEL STRAPS OR BE ALL BRASS

ON 1 1/2" OR LARGER SETTINGS A CURB STOP IS REQUIRED ON BOTH SIDES OF METER.

IN SOME INSTANCES, METER SETTINGS, GREATER THAN 3/4" X 5/8" MAY BE SPECIFIED. 1" SETTINGS SHALL UTILIZE THE SAME CONFIGURATION SHOWN FOR 3/4" X 5/8" SETTINGS. 1 1/2" AND 2" METER SETTINGS SHALL BE INSTALLED IN 30" DIA. X 36" PVC METER WELLS W/APPROPRIATE SETTER OR TUBE RISERS INCORPORATING ANGLE VALVE (W/PADLOCK WINGS) ON THE INLET.

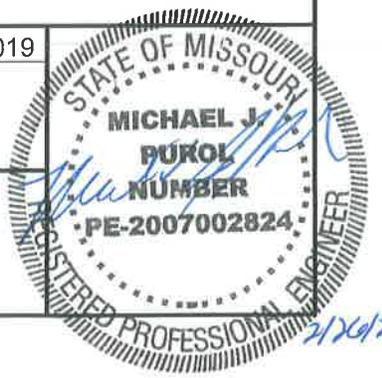
ADDITIONAL BRACING SHALL BE PROVIDED AS REQUIRED FOR METER SUPPORT. CAST IRON METER COVER AND LID SHALL BE INSTALLED FOR THE SPECIFIC METER WELL DIAMETER. CUSTOMER SERVICE LINE SIZED TO MATCH THE SPECIFIC METER REQUIREMENTS SHALL BE INSTALLED TO A POINT 1'-0" OUTSIDE OF THE METER WELL. ALL METERS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR EXCEPT WHERE OTHERWISE NOTED ON THE PLANS.

TYPICAL 5/8" X 3/4" METER SETTING AND SERVICE CONNECTION NOT TO SCALE



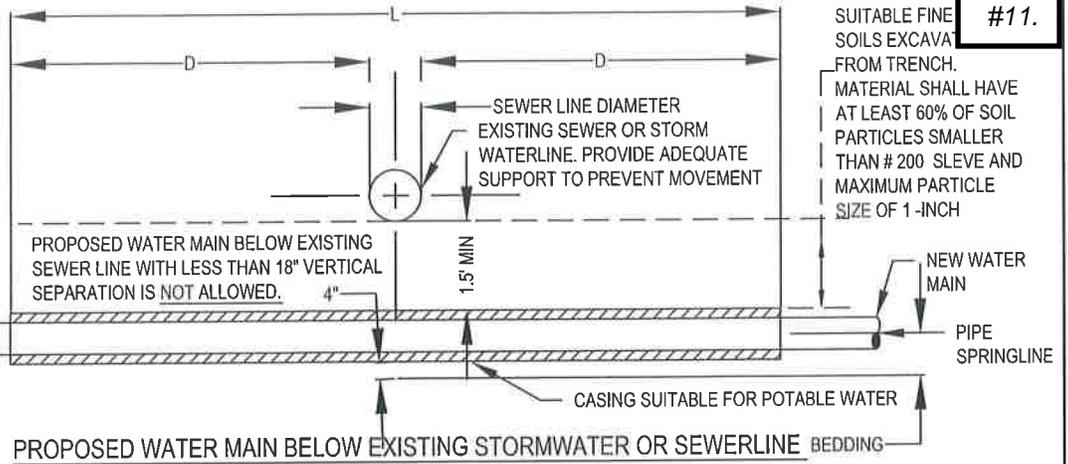
STANDARD DETAIL No. 02008
WATER MAIN CONSTRUCTION
TYPICAL SERVICE CONNECTION AND METER SETTING
CITY OF MOBERLY, MISSOURI

REVISION DATE: 10-08-2019



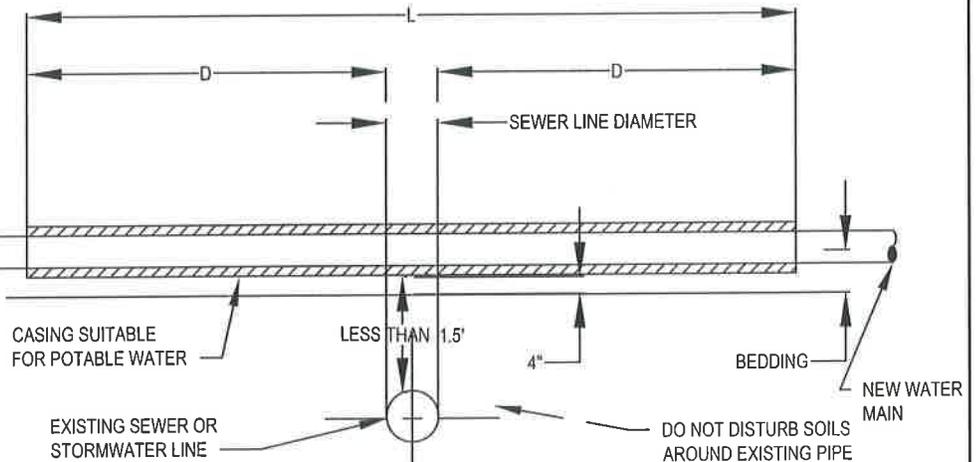
#11.

BACKFILL FROM 1' ABOVE PIPE UP TO SURFACE IN ACCORDANCE WITH TYPICAL TRENCH DETAILS
 IN NO CASE SHALL WATER MAIN BE LESS THAN 1.5' BELOW STORM WATER OR SEWER LINE
 D= DISTANCE REQUIRED TO PROVIDE 10 FEET SEPARATION MEASURED PERPENDICULAR TO EXISTING STORMWATER OR SEWER LINE
 L= LENGTH OF CASING REQUIRED
 JOINTS SHALL BE RESTRAINED WITHIN CASING
 USE PROJECTION TYPE CASING SPACERS, RACI OR APPROVED EQUAL



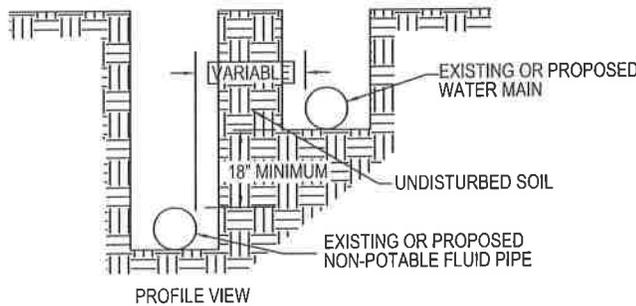
SUITABLE FINE SOILS EXCAVATED FROM TRENCH. MATERIAL SHALL HAVE AT LEAST 60% OF SOIL PARTICLES SMALLER THAN # 200 SIEVE AND MAXIMUM PARTICLE SIZE OF 1-INCH

JOINTS SHALL BE RESTRAINED WITHIN CASING BEDDING AND BACKFILL FOR WATER MAIN IN ACCORDANCE WITH TYPICAL TRENCH DETAILS
 USE PROJECTION TYPE CASING SPACERS RACI OR APPROVED EQUAL
 MINIMUM SEPARATION BETWEEN CASING PIPE AND EXISTING LINE SHALL BE NO LESS THAN 4"
 D= DISTANCE REQUIRED TO PROVIDE 10' SEPARATION MEASURED PERPENDICULAR TO EXISTING STORMWATER OR SEWERLINE PIPE.
 L= LENGTH OF CASING REQUIRED

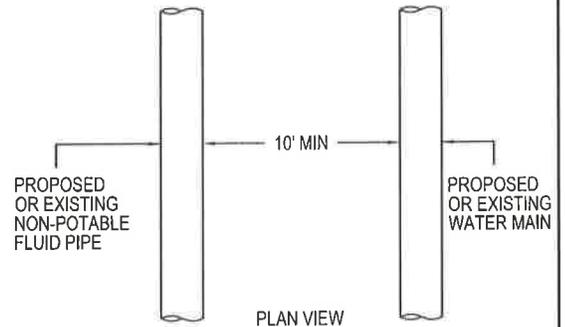


PROPOSED WATER MAIN ABOVE EXISTING STORMWATER OR SEWERLINE WITH LESS THAN 18" VERTICAL SEPARATION

PROPOSED SEWER (OR WATER) IS LOCATED 10 FEET OR LESS FROM EXISTING WATER (OR SEWER).



WATER AND NON-POTABLE SEPARATION REQUIREMENTS (VERTICAL SEPARATION)



WATER AND NON-POTABLE SEPARATION REQUIREMENTS (HORIZONTAL SEPARATION)

SEE CHAPTER 8.6.2 OF MINIMUM DESIGN STANDARDS FOR MISSOURI COMMUNITY WATER SYSTEMS, EFF. 12-10-2013 WHEN NOT PRACTICAL TO MAINTAIN 10-FOOT SEPARATIONS. Mo DNR APPROVAL REQUIRED ON CASE BY CASE BASIS. WATER MAIN MUST BE PLACED IN SEPARATE TRENCH AND 18-INCHES ABOVE TOP OF NON-POTABLE LINE WHILE MAINTAINING MINIMUM COVER REQUIREMENTS. WHEN SEPARATION REQUIREMENTS CANNOT BE OBTAINED, EITHER THE WATERLINE OR THE NON-POTABLE LINE SHALL BE CONSTRUCTED OF MECHANICAL OR MANUFACTURED RESTRAINED JOINT PIPE, FUSION WELDED PIPE, OR CASED IN A CONTINUOUS CASING. CASING PIPE MATERIAL SHALL MUST BE A MATERIAL THAT IS APPROVED FOR USE AS WATER MAIN. CAST-IN-PLACE CONCRETE IS NOT AN ACCEPTABLE ENCASEMENT.

STANDARD DETAIL No. 02009

REVISION DATE: 10-08-2019

WATER MAIN CONSTRUCTION
 TYPICAL WATER MAIN SEPARATION REQUIREMENTS
 CITY OF MOBERLY, MISSOURI



PSBA

Poepping, Stone, Bach & Associates, Inc.
 Engineers • Architects • Surveyors • www.psba.com
 801 Broadway St., Suite 248, Hannibal, MO 63401

City of Moberly City Council Agenda Summary

Agenda Number: _____ #12.
 Department: Public Utilities
 Date: April 6, 2020

Agenda Item: An Ordinance Authorizing Execution Of An Letter Agreement With Jacobs Engineering Group, Inc., For Engineering Services.

Summary: The facility plan will utilize information developed in the City of Moberly Wastewater Facilities Improvement Preliminary Engineering Report (PER), and add additional information required for SRF loan application and other potential funding sources.

Recommended

Action: Approve this resolution and sign the authorization to proceed

Fund Name: Capital Improvement Sales Tax Fund

Account Number: 304.000.5408

Available Budget \$: 115,653.06

ATTACHMENTS:		Roll Call	Aye	Nay
___ Memo	___ Council Minutes	Mayor		
___ Staff Report	<input checked="" type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
___ Correspondence	___ Proposed Resolution			
___ Bid Tabulation	___ Attorney's Report	Council Member		
___ P/C Recommendation	___ Petition	M___ S___ Brubaker	___	___
___ P/C Minutes	___ Contract	M___ S___ Kimmons	___	___
___ Application	___ Budget Amendment	M___ S___ Davis	___	___
___ Citizen	___ Legal Notice	M___ S___ Kyser	___	___
___ Consultant Report	___ Other _____		Passed	Failed

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE AUTHORIZING EXECUTION OF AN LETTER AGREEMENT WITH JACOBS ENGINEERING GROUP, INC., FOR ENGINEERING SERVICES.

WHEREAS, Jacobs Engineering Group, Inc., (“Jacobs”) submitted a proposal by way of a Letter Agreement (a copy of which is attached hereto) for engineering services to prepare a Facility Plan for the Morley Street Pump Station and Force Main Extension; and

WHEREAS, the Facility Plan will utilize information developed in the City of Moberly Wastewater Facilities Improvement Preliminary Engineering Report, and add additional information required for a SRF loan application and other potential funding sources; and

WHEREAS, the Letter Agreement provides for a lump sum fee of \$24,828.00 for all professional services to be provided by Jacobs.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MOBERLY, MISSOURI, TO WIT:

SECTION ONE. That the Letter Agreement is hereby approved in all respects.

SECTION TWO. That the City Manager or his designee is hereby directed to execute the Agreement on behalf of the City.

SECTION THREE. That this ordinance will be in full force and effect upon passage by the City Council.

PASSED AND ADOPTED this 6th day of April, 2020, by the Council of the City of Moberly, Missouri.

Presiding Officer at Meeting

ATTEST:

City Clerk

Stifel Tower
501 North Broadway
St. Louis, Missouri 63102
United States
T +1.314.335.4000
F +1.314.335.5104
F +1.314.335.5141
www.jacobs.com

February 27, 2020

Mary West-Calcagno
Director of Utilities
City of Moberly
101 West Reed Street
Moberly, MO 65270

**Subject: Morley Pump Station and Force Main Extension Facility Plan
Proposal for Engineering Services**

Dear Mary

Jacobs Engineering Group, Inc. (Jacobs) is pleased to present our proposal to provide the City of Moberly (City) with Professional Engineering Services to prepare a Facility Plan for the Morley Street Pump Station and Force Main Extension to accompany funding applications. This Facility Plan will utilize information developed in the City of Moberly Wastewater Facilities Improvement Preliminary Engineering Report (PER), and add additional information required for SRF loan application and other potential funding sources.

SCOPE

- **Facility Plan Preparation** – Jacobs will perform the following tasks to prepare the Facility Plan:
 1. **Introduction** – Provide basic information for the City of Moberly using existing reports.
 2. **Location and Population** – Prepare maps showing locations of Moberly and pertinent facilities.
 3. **Existing Facilities** – Utilize existing reports to outline pertinent facilities and capacities.
 4. **Description of Need** – Develop a description of the need for the facility.
 5. **Design Criteria** – Describe design criteria including:
 - Design Period – 20 years, from existing reports
 - Hydraulic and Organic Load Projections – from existing reports, taking into account potential flows from Project Emerald
 - I/I Analysis and Evaluation – use info from NW sewer study as applicable
 - Anti-degradation (AD) Review – explanation that AD review is not needed
 6. **Alternative Evaluation with Economic Analysis** – Evaluation of two alternatives:
 - Convert lift station to a submersible lift station – Develop scope and cost estimate.

- Replace existing pumps and modify piping between wet pit and dry pit – Develop conceptual scope and cost estimate.
 - Both alternatives will include force main extension – Develop scope and cost estimate, including evaluation of capacity of existing sewers downstream of new connection point.
- 7. **Recommended Alternative** – Describe recommended alternative, including economic and environmental considerations.
- **Facility Plan Finalization** – Jacobs will perform the following tasks to finalize the Facility Plan:
 1. Submit the requested number of copies of the draft report to the City for review, not to exceed 5 copies.
 2. Conduct a report review meeting via telephone to review the report and capture comments from the City.
 3. Based on the report review meeting, finalize the report. Submit the requested number of copies of the final report to the City, not to exceed 5 copies.
 4. Sign and Seal approved report for submittal to MDNR
- **Preparation of Environmental Clearance Letters** – Jacobs will prepare and submit Environmental Clearance requests to the following agencies as required for SRF application:
 1. Army Corps of Engineers
 2. Department of Natural Resources, Historic Preservation
 3. Department of Conservation
 4. United States Fish and Wildlife
 5. Department of Natural Resources, Geological Survey
 6. Federal Assistance Clearinghouse
 7. Division of State Parks
- **Address comments from MDNR**– Jacobs will address review comments that do not require a significant scope change or additional study. Examples of comments that will need additional funds to address include (but are not limited to) rerouting of gravity sewer or force mains, relocation of the pump station, additional hydraulic analysis of the existing system, etc.

FEE PROPOSAL

Our proposed fee for the work described herein is a lump sum cost of \$24,828. This fee includes only those services outlined in our proposal. Additional services can be provided if requested by the City.

SCHEDULE

If the City agrees with this approach, we would provide a schedule upon notice of acceptance of our proposal.

ASSUMPTIONS / CLARIFICATIONS:

This proposal is based on the following assumptions and clarifications:

February 27, 2020
Proposal for Engineering Services

1. Flow monitoring of existing wastewater facilities and sewerage systems is not included.
2. Any additional studies or reexamination of alternatives required for clearance from state and federal agencies is not included in this scope and will require a change order.
3. Wetlands delineation and wetlands permitting services are not included in Jacobs' scope.
4. Additional work created by funding sources is not included in Jacobs' scope.
5. No stream sampling or water quality testing is included in Jacobs' scope.
6. Public meeting attendance and preparation is not included in Jacobs' scope.
7. The Environmental review under this scope only includes preparing and submitting clearance letters to the agencies listed. Jacobs's scope does not include any additional efforts that may be necessary for a CATEX or FONSI determination at the discretion of MDNR.
8. All review and other meetings will be done remotely; no travel expenses are included.

This work will be performed as a modification to our existing contract with the City of Moberly, dated January 3, 2001. We will endeavor to be as efficient as we can in performing the work, to minimize costs.

If you agree, please sign both copies of this letter and return one copy to us at your convenience.

Very truly yours,

Jacobs Engineering Group, Inc.



Tobin Lichti, P.E.
Project Manager
314.335.4550
tobin.lichti@jacobs.com

Authorization to Proceed:

City of Moberly

Jacobs Engineering Group, Inc.

By _____

By _____

Title _____

Title _____

Date _____

Date _____

City of Moberly City Council Agenda Summary

Agenda Number: _____ #13.
 Department: Administration
 Date: April 6, 2020

Agenda Item: A Resolution Authorizing And Ratifying The City Manager’s Execution On Behalf Of The City Of Moberly That Certain Commercial And Industrial Sale Contract.

Summary: Currently, the City of Moberly has a lease on a privately-owned parking lot on the corner of Rollins and Sturgeon. The property is owned by Homecare of Mid-Missouri. With the closing of this business, the healthcare company asked if we would be interested in purchasing the lot. If not, the company was going to sell it on the open market. After discussions with the Parks and Recreation Department and the Public Works Department, it was decided this should be seriously considered by the city council. Due to the location between Depot Park and the Auditorium, it was determined the parking lot was worth securing. With the increase in activities at the auditorium and the planned pavilion at Depot Park, losing parking at this point did not seem appropriate.

Recommended

Action: Approve this resolution.

Fund Name: N/A

Account Number: N/A

Available Budget \$: N/A

ATTACHMENTS:		Roll Call	Aye	Nay
___ Memo	___ Council Minutes	Mayor		
___ Staff Report	___ Proposed Ordinance	M___ S___ Jeffrey	___	___
___ Correspondence	<u> x </u> Proposed Resolution	Council Member		
___ Bid Tabulation	___ Attorney’s Report	M___ S___ Brubaker	___	___
___ P/C Recommendation	___ Petition	M___ S___ Kimmons	___	___
___ P/C Minutes	___ Contract	M___ S___ Davis	___	___
___ Application	___ Budget Amendment	M___ S___ Kyser	___	___
___ Citizen	___ Legal Notice		Passed	Failed
___ Consultant Report	___ Other_____			

BILL NO: _____

RESOLUTION NO: _____

A RESOLUTION AUTHORIZING AND RATIFYING THE CITY MANAGER’S EXECUTION ON BEHALF OF THE CITY OF MOBERLY OF THAT CERTAIN COMMERCIAL AND INDUSTRIAL SALE CONTRACT.

WHEREAS, Homecare of Mid-Missouri, Inc., owns a parking lot consisting of Lots 21-24 of Block 12 of Original Town of Moberly at the intersection of Rollins and Sturgeon Streets in Moberly, Missouri (the “Parking Lot”); and

WHEREAS, the city has a long-term lease on the Parking Lot and due to its location between Depot Park and the Auditorium it is useful for patron parking at city events and activities; and

WHEREAS, the City Council has determined that purchasing the described property is in the best interest of the city; and

WHEREAS, the City Manager has executed a Commercial and Industrial Sale Contract (the “Contract” a copy of which is attached hereto) dated March 24, 2020 to purchase the Parking Lot for the sum of \$20,000.00; and

WHEREAS, the City Manager executed the Agreement prior to the passage of this Resolution.

NOW, THEREFORE, the City of Moberly agrees to the terms of the Contract and hereby ratifies the signature of the City Manager to the Contract on behalf of the City and hereby authorizes the City Manager to proceed according to the terms of the Contract with the purchase of the Parking Lot.

RESOLVED this 6th day of April, 2020, by the Council of the City of Moberly, Missouri.

Presiding Officer at Meeting

ATTEST:

City Clerk

City of Moberly City Council Agenda Summary

Agenda Number: _____ #14.
 Department: Public Works
 Date: April 6, 2020

Agenda Item: A Resolution Authorizing The City Manager To Enter Into An Agreement With Wiedeman Dozing, LLC For Removal Of The Fennel Building Roof.

Summary: This is a portion of the renovation work approved by the council for the fennel building. It is to tear off the asbestos and other roofing and rotten boards off the roof and inner structure of the fennel building, and haul materials to the Macon landfill. The price can fluctuate to a max of \$36+K depending on the difficulty of the rafter removal.

It's critical that we move quickly to get the weight off the remaining structure and move to get a roof back on.

Recommended

Action: Approve this resolution.

Fund Name: Structure Demolition

Account Number: 100.005.5418

Available Budget \$: 39,280.17

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M__ S__ Jeffrey	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Correspondence	<input checked="" type="checkbox"/> Proposed Resolution	Council Member		
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	M__ S__ Brubaker	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M__ S__ Kimmons	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M__ S__ Davis	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M__ S__ Kyser	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice			
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other_____			
		Passed	Failed	

BILL NO: _____

RESOLUTION NO: _____

A RESOLUTION AUTHORIZING THE CITY MANAGER TO ENTER INTO AN AGREEMENT WITH WIEDEMAN DOZING, LLC FOR REMOVAL OF THE FENNEL BUILDING ROOF.

WHEREAS, by Resolution No. R-902 this council approved bids for work related to the Fennel and Pro Auto buildings; and

WHEREAS, Wiedeman Dozing LLC (“Wiedeman”) was the lowest responsible bidder for the roof removal and asbestos removal associated therewith for the Fennel building; and

WHEREAS, attached hereto is a Public Works Contract with Wiedeman for removal of the Fennel roof for a sum not to exceed \$36,146.00.

NOW, THEREFORE, the Moberly, Missouri, City Council hereby authorizes the City Manager to enter into the Public Works Contract attached hereto.

RESOLVED this 6th day of April, 2020, by the Council of the City of Moberly, Missouri.

Presiding Officer at Meeting

ATTEST:

City Clerk

**PUBLIC WORKS CONTRACT
FOR ROOF REMOVAL**

THIS CONTRACT by and between the City of Moberly, Missouri, a municipal corporation, (hereinafter called "City") and Wiedeman Dozing, LLC a Missouri Limited Liability Corporation, (hereinafter called "Contractor") is made and entered into as of the ____ day of April, 2020 (hereinafter the "Effective Date"). City and Contractor are each individually referred to herein as a "Party" or collectively as the "Parties".

WHEREAS, the City owns a historic building commonly known as the "Fennel Building" and is in need of a contractor to remove the existing roof and the asbestos within the roof; and

WHEREAS, the City sought bids from interested contractors for the roof work and received proposals from various contractors including the Contractor; and

WHEREAS, the City Council approved the bid of Contractor and authorized funding for the roof work by adopting Resolution No. R-902.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein, the Parties agree as follows:

1. PROJECT DESCRIPTION AND SCOPE OF WORK.

Project Description.

The Fennel Building is a historically significant downtown building which the City hopes to save and restore for some useful commercial or public purpose. The next step in this restoration process is to safely remove the deteriorated roof materials and asbestos materials. Contractor is qualified to perform this work.

Scope of Work.

Contractor shall remove approximately 6,572 square feet of roof materials with contain high levels of asbestos. Contractor shall install safety cables around the top and down the center of the roof. Once the safety cables are in place the Contractor shall remove metal roofing materials. Next the contractor shall water down the roof and start removing the remaining materials. The roof materials shall be bagged and lowered to the second floor and then loaded in a dump truck. Finally the bagged materials shall be delivered to the landfill for disposal.

Contractor is solely responsible for determining the process for removing the roof and asbestos.

2. CONTRACT AMOUNT.

Not to Exceed.

Under no circumstance shall the payment from City to Contractor for the described project exceed the amount of Thirty-Six Thousand, one hundred and forty-six dollars and no cents (\$36,146.00).

The not to exceed amount is subject to a final determination of the work performed by Contractor and may be less than the amount stated.

Dumping Fees.

City agrees to pay dumping fees for bagged materials at the landfill.

Payment.

Payment of the agreed upon contract amount will be made within ten (10) days of the date the Contractor’s final invoice is received by City.

3. COMPLETION TIME.

Contractor will start work promptly upon the effective date. Contractor shall complete work within thirty (30) calendar days thereafter subject to any agreed upon extensions which may be necessitated by weather or public health orders related to COVID-19. Any extensions will be reduced to writing and executed by the Parties.

4. INSURANCE.

Contractor shall maintain on a primary basis and at its sole expense, at all times during the life of this contract the following insurance coverages, limits and endorsements described herein.

- a. Workers’ Compensation and Employer Liability coverage in accordance with Missouri Revised Statutes.
- b. Commercial General Liability. Contractor shall maintain Commercial General Liability at a limit of not less than \$1,000,000.00 for each occurrence and \$2,000,000.00 aggregate.
- c. City of Moberly, its elected officials and employees are to be Additional Insureds with respect to the coverage described in b., above. A certificate of insurance evidencing all coverages is required to be provided prior to work beginning on the project.

5. HOLD HARMLESS AGREEMENT AND IMMUNITIES.

Hold Harmless.

To the fullest extent not prohibited by law, Contractor shall indemnify and hold harmless the City of Moberly, its elected officials, officers, agents and employees from and against all claims, damages, losses, and expenses (including but not limited to attorneys and fees) arising by reason of any act or failure to act, negligence or otherwise of Contractor, of any subcontractor, or anyone directly or indirectly employed by Contractor or any subcontractor, in connection with this contract. These provisions do not, however, require Contractor to indemnify, hold harmless, or defend City from its own negligence.

Immunities.

The Parties hereto understand and agree City is relying on and does not waive or intend to waive by any provision of this Contract any monetary limitations, or any other rights, immunities and

protections provided by the State of Missouri, as from time to time amended, or otherwise available to the City, or its elected officials and employees.

6. DEFAULT.

Contractor shall be in default for failure to comply with any provision of this Contract. In addition Contractor shall be in default for failing to begin work within the time specified for completion of the project or for failing to complete the project within the time specified for completing the project provided no written extensions of the completion date have been executed by the parties. City may immediately terminate the contract based upon the events of default described herein with or without notice to Contractor. At City’s option in the event of default it may provide Contractor with ten (10) days’ notice and allow Contractor to cure the default within that time.

7. GOVERNING LAW AND VENUE.

This Contract shall be governed, interpreted, and enforced in accordance with the laws of the State of Missouri. The venue for all litigation arising or relating to the Contract shall be in the Circuit Court of Randolph County, Missouri.

8. CONSTRUCTION SAFETY.

Contractor shall comply with all safety requirements imposed upon public works contracts as provided in Chapter 292 of the Missouri Revised Statutes. In addition, Contractor shall comply with Section 285.530 RSMo., prohibiting knowingly hiring an unauthorized alien.

9. ENTIRE CONTRACT.

This document represents the entire contract between the Parties. All previous or contemporaneous representations, promises and conditions relating to Contractor’s services are superseded.

IN WITNESS WHEREOF, the Parties have hereunto set their hands the day and year first above written.

CITY OF MOBERLY

By: _____
Brian Crane, City Manager

Attest: _____
Kay Galloway, City Clerk

WIEDEMAN DOZING, LLC

By: _____

#14.

City of Moberly City Council Agenda Summary

Agenda Number: _____ #15.
 Department: Police
 Date: April 6, 2020

Agenda Item: A Resolution Repealing Resolution R863 And Adopting A New Resolution Authorizing The Purchase Of Police Vehicles

Summary:

Resolution R863 was passed by the Moberly City Council on November 4, 2020 accepting the bid of Moberly Motors and authorized the purchase of two 2020 Dodge Charger AWD V-8 police package 4-door sedans for the police department. Due to more orders being received than the production run could produce, our order was refused by Ford Motor Company. Moberly Motors began looking for new or used 2019 Dodge Chargers AWD V-8 Police Package vehicles. One was found in New York but was not AWD, but due to the difficulty in finding suitable vehicles, it was purchased. Moberly Motors was unable to purchase a second charger as prices for these vehicles continued to rise due to the shortage. Moberly Motors was able to locate a Dodge Durango Pursuit SUV, which is police package and was able to purchase it for the Police Department. At present the purchase price of the two vehicles is 2,359.95 dollars more than what was authorized in R863. The new purchase price is 56,249.95 dollars

Recommended

Action: Approve this resolution

Fund Name:

Account Number:

Available Budget \$:

ATTACHMENTS:		Roll Call	Aye	Nay
___ Memo	___ Council Minutes	Mayor		
___ Staff Report	___ Proposed Ordinance	M___ S___ Jeffrey	___	___
___ Correspondence	<u> x </u> Proposed Resolution	Council Member		
___ Bid Tabulation	___ Attorney's Report	M___ S___ Brubaker	___	___
___ P/C Recommendation	___ Petition	M___ S___ Kimmons	___	___
___ P/C Minutes	___ Contract	M___ S___ Davis	___	___
___ Application	___ Budget Amendment	M___ S___ Kyser	___	___
___ Citizen	___ Legal Notice		Passed	Failed
___ Consultant Report	___ Other_____			

BILL NO: _____

RESOLUTION NO: _____

A RESOLUTION REPEALING RESOLUTION R863 AND ADOPTING A NEW RESOLUTION AUTHORIZING THE PURCHASE OF POLICE VEHICLES.

WHEREAS, on November 4, 2019 this council adopted Resolution R863 which accepted a bid from Moberly Motors for two 2020 Dodge Charger police vehicles for a combined purchase price of \$53,890.00; and

WHEREAS, Moberly Motors was unable to provide the vehicles due to a shortage in production by Ford Motor Company; and

WHEREAS, Moberly Motors was able to locate two vehicles suitable for use as police vehicles, a 2019 Dodge Charger and a Dodge Durango Pursuit SUV, for a total cost of \$56,249.95

THEREFORE, the Moberly, Missouri, City Council repeals Resolution R863 and approves the purchase of the two vehicles located by Moberly Motors and authorizes the City Manager or his designee to purchase the vehicles for the sum of \$56,249.95

RESOLVED this 6th day of April, 2020, by the Council of the City of Moberly, Missouri.

Presiding Officer at Meeting

ATTEST:

City Clerk

City of Moberly City Council Agenda Summary

Agenda Number: _____ #16.
 Department: Public Utilities
 Date: April 6, 2020

Agenda Item: A Resolution Accepting The Bid Of Moberly Motors For A 2020 Ford F150, Crew Cab, 4x4 Xl Trim For The Water Department.

Summary: The City of Moberly advertised for bids for a new truck and bids were opened March 4th, 2020 at 10:00 am. Two bids were received from Moberly Motors one in the amount of \$31,074 and another in the amount of \$31,382 and one bid was received from W-K Ford in the amount of \$30,813.28. It is the staff's recommendation to proceed with purchase of the 2020 Ford F150 4X4 Crew Cab Pickup-XL trim level from Moberly Motors for \$31,382.

Recommended

Action: Accept this resolution.

Fund Name: Capital Improvement Plan

Account Number: 301.112.5502

Available Budget \$: 118,943.25

ATTACHMENTS:		Roll Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input type="checkbox"/> Proposed Resolution	Council Member		
<input checked="" type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Kimmons	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Davis	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Kyser	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice			
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____		Passed	Failed

BILL NO: _____

RESOLUTION NO: _____

A RESOLUTION ACCEPTING THE BID OF MOBERLY MOTORS FOR A 2020 FORD F150, CREW CAB, 4X4 XL TRIM FOR THE WATER DEPARTMENT.

WHEREAS, the City of Moberly sought bids for a 2020 Ford F150 4X4 Crew Cab for use in the Water department; and

WHEREAS, three bids were received with a bid from Moberly Motors being the lowest responsible bid; and

WHEREAS, the Moberly Motors bid is for \$31,382.00.

THEREFORE, the Moberly, Missouri, City Council accepts the bid of Moberly Motors in the amount of \$31,382.00.

RESOLVED this 6th day of April, 2020, by the Council of the City of Moberly, Missouri.

Presiding Officer at Meeting

ATTEST:

City Clerk

moberly motors

Driven by tradition.

City of Moberly
101 West Reed
Moberly, Mo 65270

February 27, 2020

RE: Bid for (1) 2020 Ford F150 Crew Cab 4X4 Pickup - (1/2) Ton

Moberly Motor Company would like to submit the following bid specifications and pricing for your consideration.

2020 Ford F150 4X4 Crew Cab Pickup - XL Trim Level

W1E - 4 Wheel Drive
995 - 5.0L V8 Engine
XL6 - 3.73 Electric Lock Rear Axle
101A Pkg - XL Trim Series
YZ - White Exterior Color
Factory Air Conditioner
50S - Factory Cruise Control
Power Steering
AM/FM Radio
Black Vinyl Floor Covering
3 year / 36,000 mile warranty
67T - Trailer Brake Controller
Front Tow Hooks
Painted Front & Rear Bumpers
Dr & Pass Air Bag System
17" Silver Steel Wheels
53B - Class IV trailer hitch receiver
Max **6,000 lb Capacity**
4-pin/7-pin wiring harness
Smart Trailer Tow Connector

157" wheelbase - 6.5 ft Box

44G - 10-Speed Automatic Transmission
7,000# GVWR
\$10.00 Gasoline
Power Brakes 4-Wheel Disc w/ABS
Pickup Bed Cargo Light
Ford SYNC Communications Sys
Tilt Steering Column
WG - 40/Console/40 Front Bucket Seat - Gray Cloth
Manual-folding, Power Glass Side view Mirrors
(5) 265/70R 17 OWL All-terrain A/T tires
17" Silver Steel Wheels
XL Power Equipment Group (Incl w/101A)
Power Windows - Power Door Locks with
Flip Key and Integrated Key Transmitter
keyless-entry (includes Autolock), Power
Tailgate Lock, Perimeter Alarm, Illuminated
Entry, Mirrors Manual-folding, Power Glass

(1) - 2020 F150 Crew Cab 4X4 \$31,382

Amount Due at Time of Delivery - Check - No Credit Cards

Optional for your consideration :



1520 North Morley, P.O. Box 249, Moberly, MO 65270

T (660) 263.6000 | T (800) 798.6006 | F (660) 263.1

424

rd@moberlymotors.com | www.moberlymotors.com

53A - Trailer Tow Package **\$732 extra**
Max 11,300 lb Capacity
 Class IV trailer hitch receiver
 4-pin/7-pin wiring harness
 Smart Trailer Tow Connector
 Engine Oil Cooler
 Pro Trailer Backup Assist
 Tailgate LED
 Upgraded front stabilizer bar

53C – MAX Trailer Tow Package **\$799 extra**
Max 13,200 lb Capacity
Requires 944 - 3.5 Eco-Boost Engine
XL9 – 3.55 Electric Lock Rear Axle
 Class IV trailer hitch receiver
 4-pin/7-pin wiring harness
 Smart Trailer Tow Connector
 Engine Oil Cooler
 Pro Trailer Backup Assist
 Tailgate LED
 Upgraded front stabilizer bar
655 - 36 Gallon Fuel Tank
67T - Integrated Brake Controller
 Upgraded Rear Bumper

T7C - (5) LT245/70R 17E BSW 10-Ply A/T tires **\$260 extra**

Thank You for the opportunity to give you pricing on the above unit. Please let me know how you would like me to proceed from this point. Warranty is 3 year / 36,000 mile plus Power Train 5 year / 60,000 miles. Build date will be as soon as possible by the manufacture.

Sincerely,



Dean Miller
 Moberly Motor Company

CITY OF MOBERLY, MISSOURI

BID FORM

Bid Due Date: March 4, 2020 at 10:00am

The City of Moberly is requesting a Bid Quotations for:

New 2020 Ford F150, Crew Cab, 4X4 (Large Door) XL Trim

\$ 31,382 157" WB 6.5 Ft Box

Dealer Name: Moberly Motor Company

Brand Name & Model: 2020 Ford F150 4X4 Crew Cab

Authorized Signature: 

Delivery Date: as soon as possible from the manufacture production

Bid submission deadline 10:00 a.m. Wednesday, March 4, 2020, to City Clerk's Office, Moberly City Hall, 101 West Reed Street, Moberly, Missouri 65270.

City of Moberly is requesting quotes on a 2020 Ford F150, Crew Cab, 4x4
(Large Door) XL trim

Color (White)

5.0 V8 Engine

Automatic 6 Speed Transmission

Limited Slip Axle (3.73)

145" Wheelbase

6'5" Bed

4 Wheel ABS Brakes

265/70/17 All Terrain Tires + Spare

Power Steering

Heating/Air Conditioning

AM/FM Radio

Speed Control/Tilt Wheel

Power Windows/Power Locks

(Grey) Cloth Bucket Seat w/Center Console, Rear cloth bench

Vinyl flooring

Tow Package

Trailer Brake Controller

***Quote due by 10 AM 3/4/2020**

Mail to: City of Moberly Att: Tim Patrick Contact Number 660-998-0127

101 West Reed St.

Moberly, Mo 65270

City of Moberly City Council Agenda Summary

Agenda Number: _____
Department: City Clerk
Date: April 6, 2020

Agenda Item: A Resolution appropriating money out of the Treasury of the City of Moberly, Missouri.

Summary: Appropriation Resolution.

Recommended

Action: Please approve this Resolution.

Fund Name: N/A

Account Number: N/A

Available Budget \$: N/A

ATTACHMENTS:		Role Call	Aye	Nay
<input type="checkbox"/> Memo	<input type="checkbox"/> Council Minutes	Mayor		
<input type="checkbox"/> Staff Report	<input type="checkbox"/> Proposed Ordinance	M___ S___ Jeffrey	___	___
<input type="checkbox"/> Correspondence	<input checked="" type="checkbox"/> Proposed Resolution			
<input type="checkbox"/> Bid Tabulation	<input type="checkbox"/> Attorney's Report	Council Member		
<input type="checkbox"/> P/C Recommendation	<input type="checkbox"/> Petition	M___ S___ Brubaker	___	___
<input type="checkbox"/> P/C Minutes	<input type="checkbox"/> Contract	M___ S___ Kimmons	___	___
<input type="checkbox"/> Application	<input type="checkbox"/> Budget Amendment	M___ S___ Davis	___	___
<input type="checkbox"/> Citizen	<input type="checkbox"/> Legal Notice	M___ S___ Kyser	___	___
<input type="checkbox"/> Consultant Report	<input type="checkbox"/> Other _____		Passed	Failed

A RESOLUTION APPROPRIATING MONEY OUT OF THE TREASURY OF THE CITY OF MOBERLY, MISSOURI IN THE AMOUNT OF \$687,305.45.

WHEREAS, the funds are to be disbursed as follows;

- SECTION 1: There is hereby appropriated out of the **General Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$132,202.44.
- SECTION 2: There is hereby appropriated out of the **Non-Resident Lodging Tax Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$7,500.00.
- SECTION 3: There is hereby appropriated out of the **Payroll Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$82,782.07.
- SECTION 4: There is hereby appropriated out of the **Solid Waste Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$25,027.18.
- SECTION 5: There is hereby appropriated out of the **Heritage Hills Golf Course Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$8,826.98.
- SECTION 6: There is hereby appropriated out of the **Parks and Recreation Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$41,033.36.
- SECTION 7: There is hereby appropriated out of the **Airport Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$131,351.06.
- SECTION 8: There is hereby appropriated out of the **Veteran Memorial Flag Project Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$19.96.
- SECTION 9: There is hereby appropriated out of the **Utilities Collection Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$5,580.51.
- SECTION 10: There is hereby appropriated out of the **Utilities OP & Maintenance Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$132,373.95.
- SECTION 11: There is hereby appropriated out of the **Utilities OP Reserve Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$9,727.44.
- SECTION 12: There is hereby appropriated out of the **2004B SRF Bonds Debt Service Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$37,639.16.
- SECTION 13: There is hereby appropriated out of the **2006A SRF Bonds Debt Service Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$27,007.38.
- SECTION 14: There is hereby appropriated out of the **2004C Bonds Debt Service Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$26,016.96.
- SECTION 15: There is hereby appropriated out of the **Emergency Telephone Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$8,391.02.
- SECTION 16: There is hereby appropriated out of the **Transportation Trust Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$4,804.41.
- SECTION 17: There is hereby appropriated out of the **Street Improvement Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$1,021.57.
- SECTION 18: There is hereby appropriated out of the **Downtown CID Sales Tax Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$1,000.00.
- SECTION 19: There is hereby appropriated out of the **Downtown CID Property Tax Fund** of the Treasury of the City of Moberly, Missouri to pay expenses due April 6, 2020 in the amount of \$5,000.00.

NOW, THEREFORE, the Moberly City Council authorizes these expenditures.

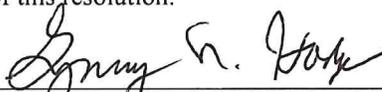
RESOLVED this 6th day of April 2020 by the Council of the City of Moberly, Missouri.

ATTEST:

Presiding Officer

City Clerk

I hereby certify that there is sufficient money standing to the credit of the City of Moberly, Missouri, unappropriated in the several funds covered by this resolution to meet the requirements of this resolution.



City Treasurer, City of Moberly, Missouri

**EXPENSES PAID MARCH 14, 2020 - APRIL 1, 2020 FOR THE
FOLLOWING FUNDS ARE TO BE INCLUDED WITH THE
APRIL 6, 2020 APPROPRIATION RESOLUTION TOTAL.**

General Fund	\$	132,202.44
Non-Resident Lodging Tax	\$	7,500.00
Payroll Fund	\$	82,782.07
Solid Waste Fund	\$	25,027.18
Heritage Hills Golf Course Fund	\$	8,826.98
Parks and Recreation Fund	\$	41,033.36
Airport Fund	\$	131,351.06
Veteran Memorial Flag Project Fund	\$	19.96
Utilities Collection Fund	\$	5,580.51
Utilities OP & Maintenance Fund	\$	132,373.95
Utilities OP Reserve Fund	\$	9,727.44
2004B SRF Bonds Debt Service Fund	\$	37,639.16
2006A SRF Bonds Debt Service Fund	\$	27,007.38
2004C Bonds Debt Service Fund	\$	26,016.96
Emergency Telephone Fund	\$	8,391.02
Transportation Trust Fund	\$	4,804.41
Street Improvement Fund	\$	1,021.57
Downtown CID Sales Tax Fund	\$	1,000.00
Downtown CID Property Tax Fund	\$	5,000.00

Total **\$ 687,305.45**

I hereby certify that there is sufficient money standing to the credit of the City of Moberly, Missouri, unappropriated to cover the above funds.



City Treasurer, City of Moberly, Missouri

4/2/2020

Date

ACCOUNTS PAYABLE CHECK REGISTER

#17.

BANK#	BANK NAME	CHECK#	DATE	ACCOUNT#	NAME	CHECK AMOUNT	CLEARED	MANUAL	VOID	REASON FOR VOID
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24 DISBURSEMENTS

82879	3/20/2020	5739	EBERLY REBUILDING	1,095.60						
82880	3/20/2020	3868	RANDOLPH COUNTY SHERIFF'S OFFI	71.50						
82881	3/20/2020	2613	SOLOMON BOILER WORKS INC	910.95						
82882	3/20/2020	1849	SPRINT	.00						
82883	3/20/2020	1849	SPRINT	1,555.28						
82884	3/20/2020	4948	WARREN RICHARD	1,110.00						
* 82885	Thru 82892									
82893	3/25/2020	2643	UNITED WAY	1,392.15						
82894	3/25/2020	2646	VALIC	992.00						
82895	4/01/2020	6009	DOGMASTER DISTILLERY	560.00						
82896	4/01/2020	2903	ABAN PEST CONTROL INC	215.00						
82897	4/01/2020	4693	ADVANCED TURF SOLUTIONS	1,829.60						
82898	4/01/2020	4645	AERZEN USA CORP	270.80						
82899	4/01/2020	6003	ALL ACCESS HEATING & COOL	420.00						
82900	4/01/2020	6	AMEREN MISSOURI	201.49						
82901	4/01/2020	3534	AMERICAN CLEANING SYSTEMS INC	503.26						
82902	4/01/2020	5836	AMERICAN FAMILY INSURANCE	400.00						
82903	4/01/2020	3112	ARAMARK UNIFORM SERVICES	630.38						
82904	4/01/2020	790	ARISTA INFORMATION SYSTEMS INC	2,815.62						
82905	4/01/2020	13	ARROW ENERGY INC	10,091.39						
82906	4/01/2020	30	ARTDEP+BENTON	674.00						
82907	4/01/2020	9	ARTS APPLIANCE	846.30						
82908	4/01/2020	17	AT&T 5001	7,776.54						
82909	4/01/2020	4504	AT&T 5011	614.48						
82910	4/01/2020	3808	ATCO INTERNATIONAL	75.00						
82911	4/01/2020	306	ATLANTIC SAFETY PRODUCTS	2,114.40						
82912	4/01/2020	4729	BARTLETT & WEST	3,242.15						
82913	4/01/2020	5997	BENNETT RAE	300.00						
82914	4/01/2020	6007	BLACKWELL ROD	75.00						
82915	4/01/2020	3143	BLUE VALLEY PUBLIC SAFETY INC	749.00						
82916	4/01/2020	2885	BOTKINS TRUCKING LLC	951.51						
82917	4/01/2020	2605	BRATCHER'S MARKET	12.37						
82918	4/01/2020	2975	BRENNTAG MID SOUTH INC	47,570.86						
82919	4/01/2020	1837	BUTLER RAENENE	250.00						
82920	4/01/2020	424	BUTLER SUPPLY INC	20.09						
82921	4/01/2020	6001	CARDINAL PUMP	2,612.00						
82922	4/01/2020	104	CARTER-WATERS	413.33						
82923	4/01/2020	4214	CARUS CORPORATION	5,886.72						
82924	4/01/2020	591	CASON BUILDING MAINTENANCE INC	2,063.70						
82925	4/01/2020	5236	CASSADY SHANE	100.00						
82926	4/01/2020	592	CDW GOVERNMENT INC	212.28						
82927	4/01/2020	5004	CHAMPION BRANDS LLC	659.46						
82928	4/01/2020	1384	CHEMCO SYSTEMS LP	304.69						
82929	4/01/2020	3008	COLLEY LORA	60.00						
82930	4/01/2020	3063	CONLEY FOREST DO	250.00						
82931	4/01/2020	1110	CONTROLLED AIRE LLC	98.90						
82932	4/01/2020	2645	CORE & MAIN LP	787.15						
82933	4/01/2020	678	CROWN POWER & EQUIPMENT	201.56						
82934	4/01/2020	2913	CULLIGAN WATER CONDITIONING	7.37						
82935	4/01/2020	2951	CUMMINS MID SOUTH LLC	1,791.02						
82936	4/01/2020	2908	CUNNINGHAM VOGEL & ROST PC	10,984.07						

VOID:

431

ACCOUNTS PAYABLE CHECK REGISTER

#17.

BANK#	BANK NAME	ACCOUNT#	NAME	CHECK AMOUNT	CLEARED	MANUAL	VOID	REASON FOR VOID
82937	4/01/2020	118	D & L TRENCHING INC	2,750.00				
82938	4/01/2020	5562	DAVIS ALFREDA	75.00				
82939	4/01/2020	5857	DAVIS JEFF	131.00				
82940	4/01/2020	2293	DETROIT INDUSTRIAL TOOL	170.31				
82941	4/01/2020	6010	DHS EQUIPMENT	46.50				
82942	4/01/2020	194	DMC CONCRETE CONSTRUCTION	17,331.00				
82943	4/01/2020	3571	DMZ ENTERPRISE INC	2,117.00				
82944	4/01/2020	5470	MIKE CHEW	325.00				
82945	4/01/2020	6005	DWYER MARY	400.00				
82946	4/01/2020	5198	EDGE AVIATION LLC	470.00				
82947	4/01/2020	695	ENGINEERING SURVEYS & SERVICES	9,550.16				
82948	4/01/2020	3103	FASTENAL COMPANY	1,181.06				
82949	4/01/2020	699	FEDERAL EXPRESS	35.14				
82950	4/01/2020	2839	FUSION TECHNOLOGY LLC	218.99				
82951	4/01/2020	704	GALLS LLC	129.70				
82952	4/01/2020	5883	GREATLIFE KANSAS CITY LLC	6,892.00				
82953	4/01/2020	2956	GREEN HILLS VET CLINIC LLC	897.86				
82954	4/01/2020	1338	HAWKINS INC	1,703.55				
82955	4/01/2020	5998	HENDREN BRUCE	100.00				
82956	4/01/2020	5158	NATHANAEL E HINDAL	5,000.00				
82957	4/01/2020	5721	HOWE COMPANY LLC	1,562.26				
82958	4/01/2020	2787	IDEXX DISTRIBUTION CORP	1,344.09				
82959	4/01/2020	6004	JD ENGINE	159.00				
82960	4/01/2020	602	JIRA UNLIMITED	554.95				
82961	4/01/2020	6002	K AND T CONSTRUCTION	11,245.00				
82962	4/01/2020	5994	KINDER HAZEL	5,000.00				
82963	4/01/2020	4776	KNOT AS IT SEEMS FLOWERS AND	115.00				
82964	4/01/2020	2919	L & J DEVELOPMENT INC	24.00				
82965	4/01/2020	579	LAND CHARITON COUNTY CONCRETE	610.00				
82966	4/01/2020	1225	LATSON DOROTHY	19.96				
82967	4/01/2020	1381	LEON UNIFORM COMPANY	626.78				
82968	4/01/2020	1246	LOCHNER	119,927.93				
82969	4/01/2020	4718	MACON COUNTY HEALTH DEPARTMENT	10.00				VOID: DUPLICATE
82970	4/01/2020	1565	MACON ELECTRIC COOP	40.46				
82971	4/01/2020	679	MARTECK	266.77				
82972	4/01/2020	2220	MARTIN EQUIPMENT	924.73				
82973	4/01/2020	1608	MARTIN'S FLAG CO INC	177.34				
82974	4/01/2020	4066	METAL CULVERTS INC	530.00				
82975	4/01/2020	1688	MFA OIL COMPANY	19,027.57				VOID: INCORRECT CHARGE NUMBER
82976	4/01/2020	1136	MFA PROPANE	3,062.78				
82977	4/01/2020	1726	MIDWEST ENVIR CONSULTANTS INC	68.50				
82978	4/01/2020	1756	MIRMA	326.65				
82979	4/01/2020	5239	MISSOURI DEPART OF REV 3375	2,586.61				
82980	4/01/2020	2889	MISSOURI DEPART OF CORRECT	1,132.50				
82981	4/01/2020	3085	MO DEPT OF REVENUE	2,993.90				
82982	4/01/2020	3041	MO ONE CALL SYSTEM INC	270.00				
82983	4/01/2020	2740	MOBERLY AREA CHAMBER OF COMMER	7,500.00				
82984	4/01/2020	1921	MOBERLY LUMBER INC	89.97				
82985	4/01/2020	1935	MOBERLY MONITOR INDEX	140.40				
82986	4/01/2020	2907	MOBERLY READY MIX	303.75				
82987	4/01/2020	4457	MOCCFOA	50.00				
82988	4/01/2020	4906	MUTTER FARMS LLC	592.32				
82989	4/01/2020	2152	NEMO ELECTRIC CO INC	2,215.70				

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#17.

BANK#	BANK NAME	ACCOUNT#	NAME	CHECK AMOUNT	CLEARED	MANUAL	VOID	REASON FOR VOID
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82990	4/01/2020	2976	NEUMAYER EQUIPMENT CO INC	560.65				
82991	4/01/2020	3079	NEWMAN COMLEY & RUTH PC	325.00				
82992	4/01/2020	5036	PLAY-WELL TEKNOLOGIES	1,370.21				
82993	4/01/2020	5718	POMP'S TIRE SERVICE	1,374.00				
82994	4/01/2020	4714	PRIMROSE HILL TEEN CHALLENGE	400.00				
82995	4/01/2020	2778	PRO-TECH CO INC	645.81				
82996	4/01/2020	4924	R P LUMBER COMPANY INC	1,038.85				
82997	4/01/2020	2593	RANDOLPH COUNTY RECORDER	9.00				
82998	4/01/2020	5500	ROGERS CRYSTAL	250.00				
82999	4/01/2020	3014	SAM'S CLUB	1,526.10				
83000	4/01/2020	617	SCHULTE SUPPLY INC	1,746.94				
83001	4/01/2020	6008	SHADES OF TUESDAY LLC	1,000.00				
83002	4/01/2020	6006	SHULL JESSICA	400.00				
83003	4/01/2020	2610	BRENDLINGER ENTERPRISES INC	253.00				
83004	4/01/2020	5700	STAPLES	1,179.56				
83005	4/01/2020	5990	SUGAR CREEK VETERINARY SE	81.00				
83006	4/01/2020	2640	THOMAS HILL PUBLIC WATER SUPPL	105.47				
83007	4/01/2020	5996	THORNHILL SETON	400.00				
83008	4/01/2020	1367	TNEMEC COMPANY INC	881.05				
83009	4/01/2020	1562	UNITED FIRST AID & SAFETY,LLC	59.13				
83010	4/01/2020	3175	UNITED STATES POSTAL SERVICE	200.00				
83011	4/01/2020	2223	US CELLULAR	373.76				
83012	4/01/2020	2644	USA BLUE BOOK	6,697.30				
83013	4/01/2020	2647	VANDEVANTER ENGINEERING INC	15,641.91				
83014	4/01/2020	2742	WAL MART COMMUNITY	.00				
83015	4/01/2020	2742	WAL MART COMMUNITY	1,118.08				
83016	4/01/2020	4820	WALKER REGANA	100.00				
83017	4/01/2020	4948	WARREN RICHARD	907.00				
83018	4/01/2020	2658	WILLIS BROS INC	1,650.00				
83019	4/01/2020	2772	WIRELESS USA	577.35				
83020	4/01/2020	5999	WRIGHT LORIE	250.00				
83021	4/01/2020	5298	ZAMKUS AND ASSOCIATES LLC	1,000.00				
83022	4/01/2020	1688	MFA OIL COMPANY	19,027.57				
83023	4/01/2020	5700	STAPLES	1,180.10				

VOID: UNDERPAID TOTAL

VOID:

*20190773								
20190774	3/16/2020	1800	MO LAGERS	40,169.25				E-PAY
20190775	3/16/2020	5898	MOBERLY SOLAR, LLC	15,660.16				E-PAY
20190776	3/20/2020	6	AMEREN MISSOURI	47,876.70				E-PAY
20190777	3/20/2020	5783	BANKCARD SERVICES	17,053.30				E-PAY
20190778	3/24/2020	2708	UMB BANK	90,663.50				E-PAY
20190779	4/01/2020	2591	MOBERLY AREA ECONOMIC DEVELOPM	43,750.00				E-PAY
20190780	4/01/2020	1800	MO LAGERS	40,228.67				E-PAY

* See Check Summary below for detail on gaps and checks from other modules.

BANK TOTALS:	
OUTSTANDING	687,305.45
CLEARED	.00

BANK 24 TOTAL	687,305.45
VOIDED	20,217.13

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ACCOUNTS PAYABLE CHECK REGISTER

#17.

BANK# BANK NAME
CHECK# DATE

ACCOUNT# NAME

CHECK AMOUNT CLEARED MANUAL VOID REASON FOR VOID

FUND	TOTAL	OUTSTANDING	CLEARED	VOIDED
100 GENERAL FUND	132,202.44	132,202.44	.00	19,340.60
102 NON-RESIDENT LODGING TAX	7,500.00	7,500.00	.00	.00
105 PAYROLL FUND	82,782.07	82,782.07	.00	.00
110 SOLID WASTE FUND	25,027.18	25,027.18	.00	.00
114 HERITAGE HILLS GOLF CRSE	8,826.98	8,826.98	.00	.00
115 PARKS & RECREATION FUND	41,033.36	41,033.36	.00	876.53
120 AIRPORT FUND	131,351.06	131,351.06	.00	.00
140 VETERAN MEMORIAL FLAG PRJ	19.96	19.96	.00	.00
300 UTILITIES COLLECTION FUND	5,580.51	5,580.51	.00	.00
301 UTILITIES OP & MAINT	132,373.95	132,373.95	.00	.00
303 UTILITIES OP RESERVE	9,727.44	9,727.44	.00	.00
377 2004B SRF BONDS DEBT SERV	37,639.16	37,639.16	.00	.00
378 2006A SRF BONDS DEBT SERV	27,007.38	27,007.38	.00	.00
379 2004C BONDS DEBT SERVICE	26,016.96	26,016.96	.00	.00
400 EMERGENCY TELEPHONE FUND	8,391.02	8,391.02	.00	.00
600 TRANSPORTATION TRUST FUND	4,804.41	4,804.41	.00	.00
601 STREET IMPROVEMENT FUND	1,021.57	1,021.57	.00	.00
911 DOWNTOWN CID SALES TAX	1,000.00	1,000.00	.00	.00
912 DOWNTOWN CID PROP TAX	5,000.00	5,000.00	.00	.00

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ACCOUNTS PAYABLE CHECK REGISTER
*** CHECK SUMMARY ***

#17.

BANK# BANK NAME
CHECK# DESCRIPTION

24 DISBURSEMENTS

82879 Thru 82884 Accounts Payable Checks
82885 Thru 82892 Utility Billing Checks
82893 Thru 83023 Accounts Payable Checks

20190774 Thru 20190780 Accounts Payable E-Pay

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