



**Federal Project:  
WEST ESSEX AVENUE RECONSTRUCTION  
STP-5502(610)  
ADDENDUM #4  
10/11/2024**

**Add-Item #1:** The City of Kirkwood is issuing this addendum to revise the pipe sizes and invert elevations for the pipes connected to the proposed Hydrodynamic Separator structure. Prime Coat has also been added to the plans, to be installed below the asphalt base pavement.

Sheets included in this addendum include Typical Section Sheets #1-5, Summary of Quantities Sheet, Schedule of Quantities Sheets #2-3, Drainage Plan Sheet #2, and the Flow Splitter Detail Sheet.

Item 408-10.15 – PRIME-LIQUID ASPHALT (MC30) has been added the plans, with a quantity of 3020 GAL.

The quantity of item 726-23.12 - 12" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE) has been revised from 207 LF to 180 LF.

The quantity of item 726-23.24 - 24" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE) has been revised from 25 LF to 53 LF.

**End of Addendum #4.**

**Contractor to acknowledge on Bid Form.**

PREPARED BY



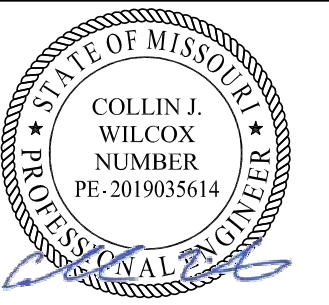
411 North 10<sup>th</sup> Street, Suite 200  
St. Louis, Missouri 63101

**ITEMIZED BID FORM**

(PAGE 1 OF 2)

SPECIFIC ROADWAY ITEMS					
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
2022010	REMOVAL OF IMPROVEMENTS	1	LS		
2031000	CLASS A EXCAVATION	1,411	CY		
2035500	EMBANKMENT IN PLACE	915	CY		
2036000	COMPACTING EMBANKMENT	1,411	CY		
203-60.20	EXCAVATION AND BACKFILL FOR UNSUITABLE MATERIAL	250	CY		
3040504	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	16,720	SY		
405-30.10	TYPE "C" BITUMINOUS CONCRETE (PAVEMENT)	1,153	TON		
405-30.30	TYPE "X" BITUMINOUS CONCRETE (BASE)	4,900	TON		
4071005	TACKCOAT	1,708	GAL		
408-10.15	PRIME-LIQUID ASPHALT (MC30)	3,020	GAL		
600-99.03	MODIFIED CONCRETE CURB (12 IN. HEIGHT AND UNDER)	97	LF		
604-12.01	SINGLE CURB INLET, UNTRAPPED	13	EA		
604-16.98	ROOF DRAIN POP-UP EMITTER	17	EA		
604-19.27	MANHOLE	8	EA		
604-19.80	TRENCH DRAIN	1	LS		
604-20.23	REBUILD MANHOLE	1	EA		
604-20.30	ADJUSTING MANHOLE TO GRADE	10	EA		
604-23.08	HYDRODYNAMIC SEPARATOR (8')	1	EA		
604-25.40	CONVERT INLET TO MANHOLE AND ADJUST TO GRADE	1	EA		
605-10.10	CLASS "A" UNDERDRAIN	3,621	LF		
605-50.03	GRAVEL (3/4 INCH)	12	CY		
608-50.06	PAVED DRIVEWAY APPROACH, 6 IN CONCRETE	1,062	SY		
608-50.07	PAVED DRIVEWAY APPROACH, 7 IN CONCRETE	168	SY		
6089905A	PAVED DRIVEWAY APPROACH, 6 IN CONCRETE, STAMPED	17	SY		
6089905B	PAVED DRIVEWAY APPROACH, 6 IN CONCRETE, EXPOSED AGGREGATE	35	SY		
609-10.53	CURB AND GUTTER, VERTICAL	5,448	LF		
703-90.15	MODULAR BLOCK WALL (H<4')	174	SF		
726-23.12	12" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	180	LF		
726-23.15	15" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	196	LF		
726-23.18	18" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	236	LF		
726-23.24	24" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	53	LF		
806-55.00	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	1	EA		
806-55.99	LAND DISTURBANCE PERMIT - MDNR	1	EA		
9031250A	U-CHANNEL POST, 3 LB	474	LF		
9035004A	SH-FLAT SHEET	175	SF		
9039902A	REMOVE AND REINSTALL SIGN ON NEW POST	2	EA		
SPECIFIC LANDSCAPING ITEMS					
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
607-41.99	REMOVE AND REPLACE EXISTING FENCE	868	LF		
8031000A	TURF TYPE TALL FESCUE SODDING	5,311	SY		
8041000	TOPSOIL	590	CY		
8061007A	CURB INLET CHECK	15	EACH		
8061019	SILT FENCE	500	LF		





THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

**DISCLAIMER OF RESPONSIBILITY**

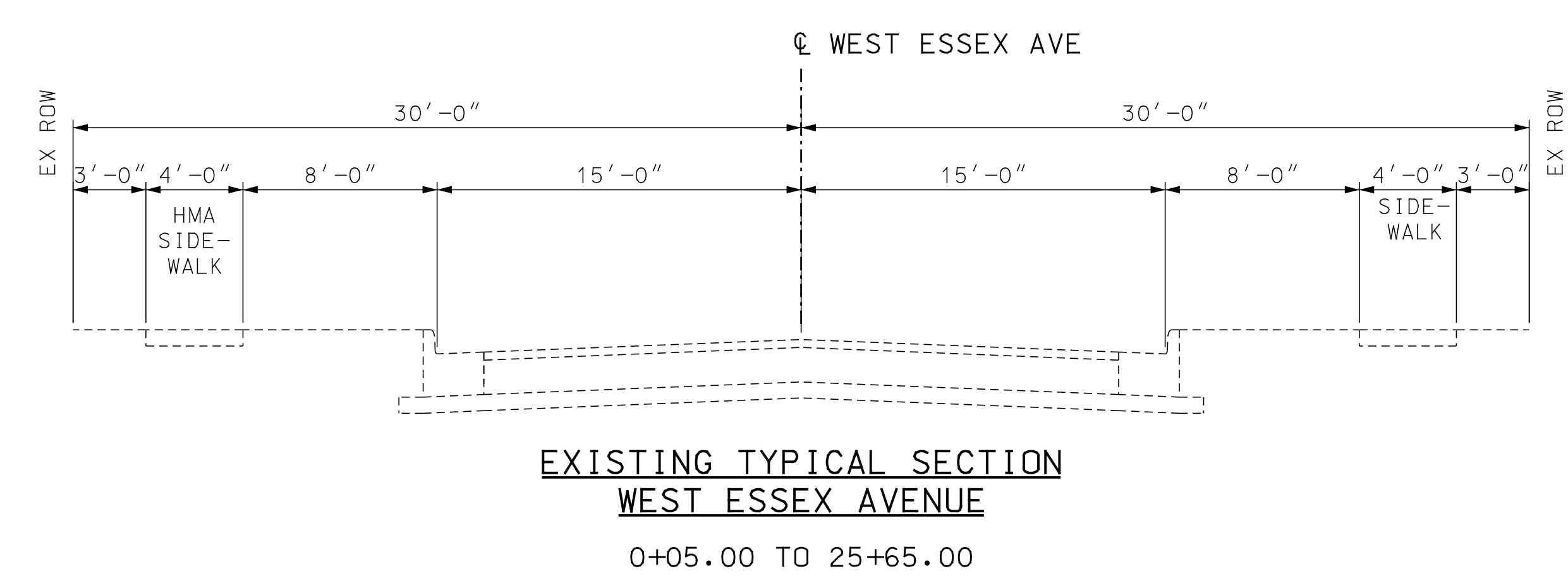
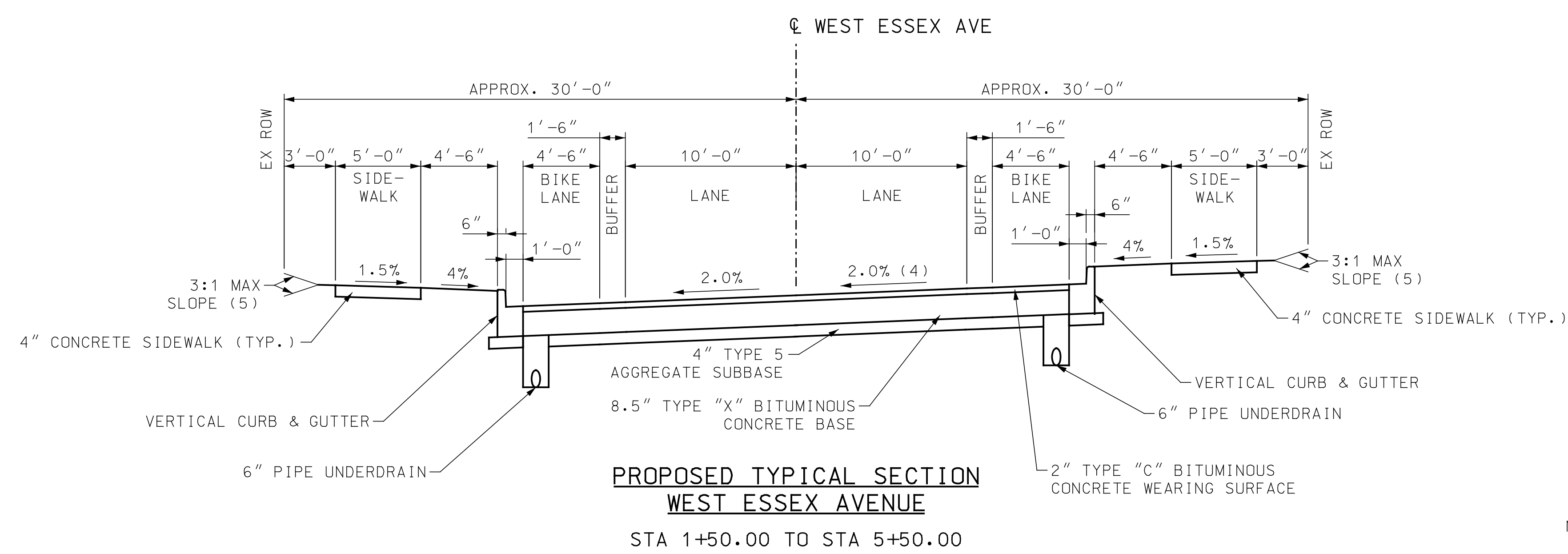
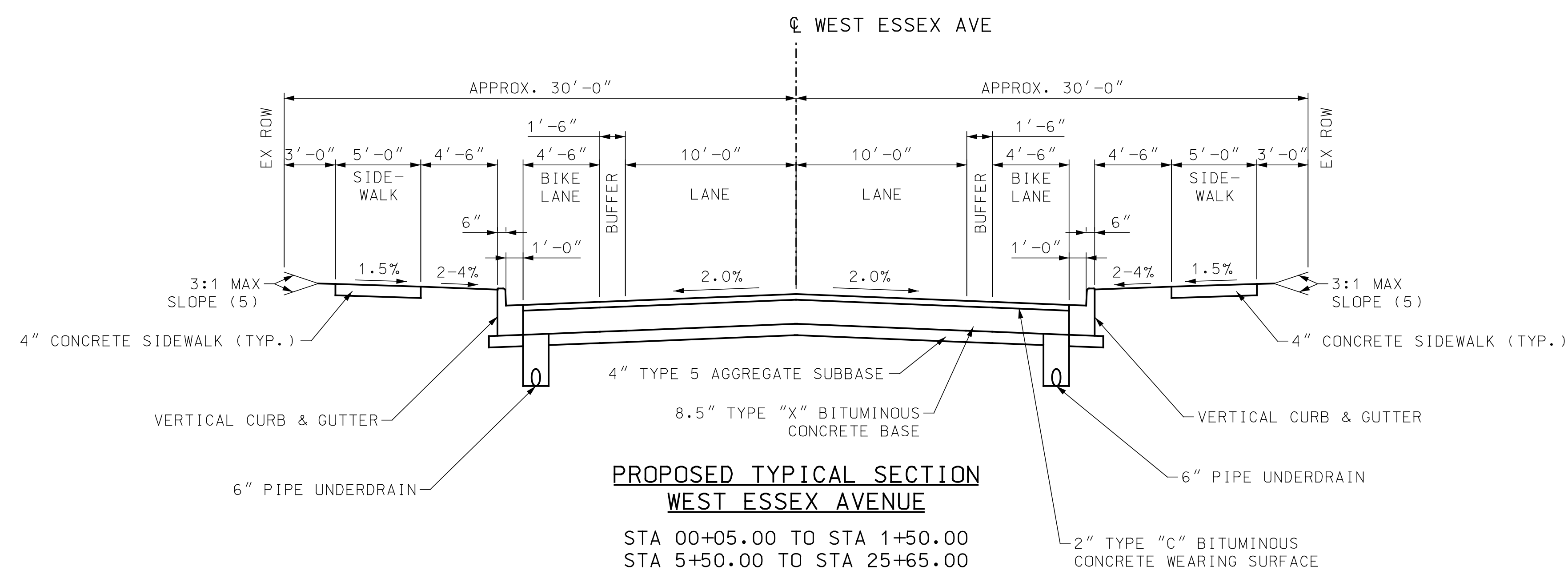
I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
 411 N 10TH STREET, SUITE 200  
 SAINT LOUIS, MISSOURI 63101  
 P (314) 621-3395 F (314) 621-3288  
 WWW.LOCHGROUP.COM  
 MISSOURI STATE ENGINEERING CORPORATION  
 CERTIFICATE/LICENSE NO. 2002011852

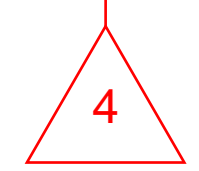
**WEST ESSEX AVENUE RECONSTRUCTION**  
**TYPICAL SECTIONS SHEET 1 OF 5**

PROJECT/JOB NO.	STP-5502(610)
MSD PROJECT NO.	23MSD-00141
MSD BASE MAP	23M, 23N
DATE PREPARED	09/13/2024
SHEET	3 OF 104



**NOTES:**

- SIDEWALK SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM 4' WIDE ACCESSIBLE ROUTE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- SLOPES MAY VARY AT INTERSECTIONS. SEE INTERSECTION DETAILS FOR LOCATION AND LENGTH OF TRANSITIONS.
- SEE PLAN FOR SIDEWALK OFFSET DISTANCE.
- VARIES FROM -2.0% AT STA 2+00.00 TO 2.0% AT STA 2+50.00, 2.0% FROM STA 2+50.00 TO STA 5+00.00, VARIES FROM 2.0% AT STA 5+00.00 TO -2.0% AT STA 5+50.00.
- FORESLOPES SHALL BE A MAXIMUM OF 3:1. IF ROW/EASEMENTS ALLOW, A 6:1 OR FLATTER SLOPE IS PREFERRED.
- TACK COAT SHALL BE APPLIED BETWEEN PAVEMENT LAYERS. PRIME-LIQUID ASPHALT (MC30) SHALL BE APPLIED TO THE TOP OF THE AGGREGATE SUBBASE BELOW THE TYPE "X" BITUMINOUS CONCRETE BASE PAVEMENT.

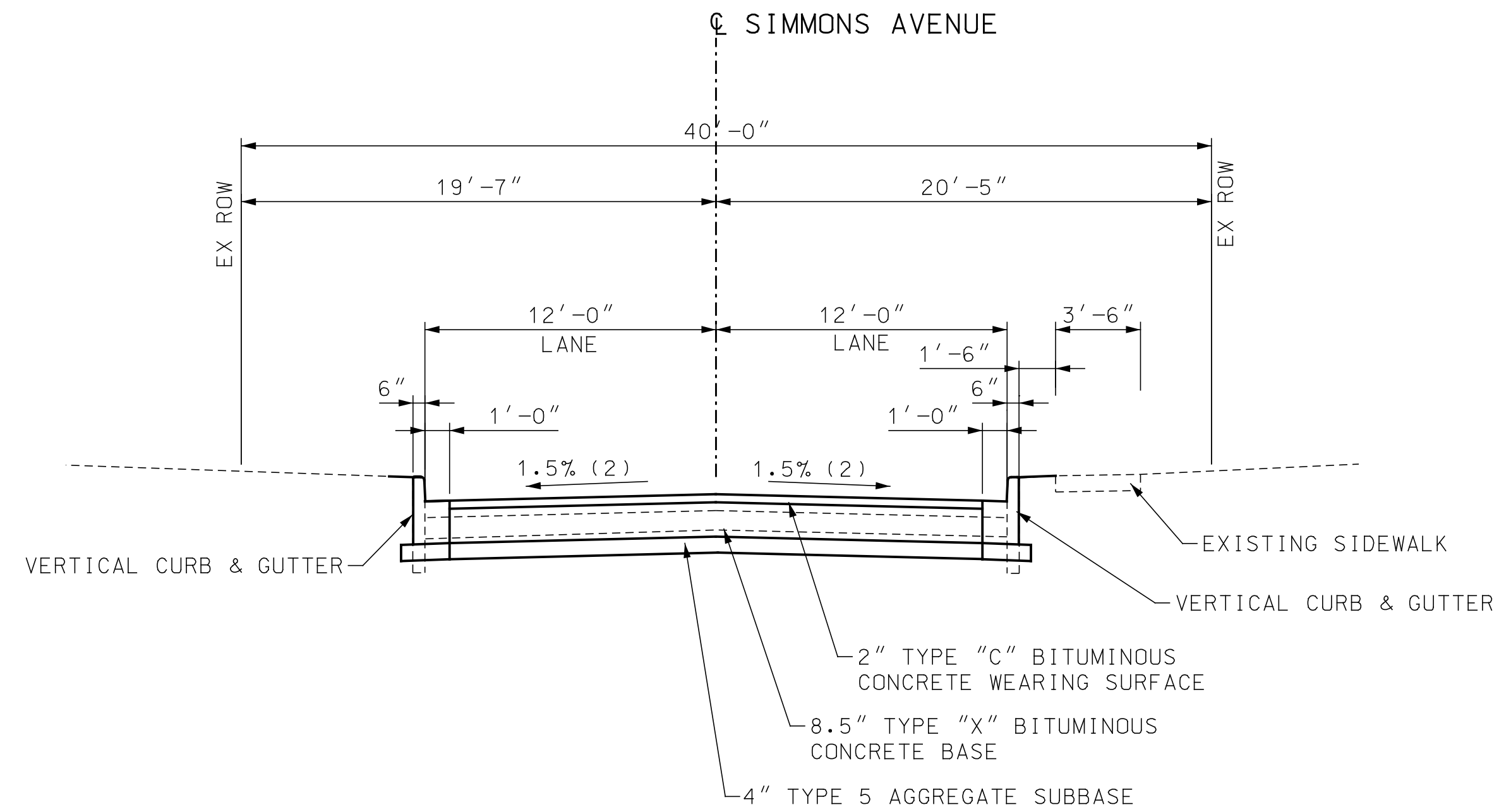
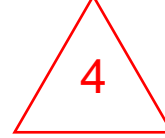


IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED. LOCHMUELLER PROJECT NO. 520-0140

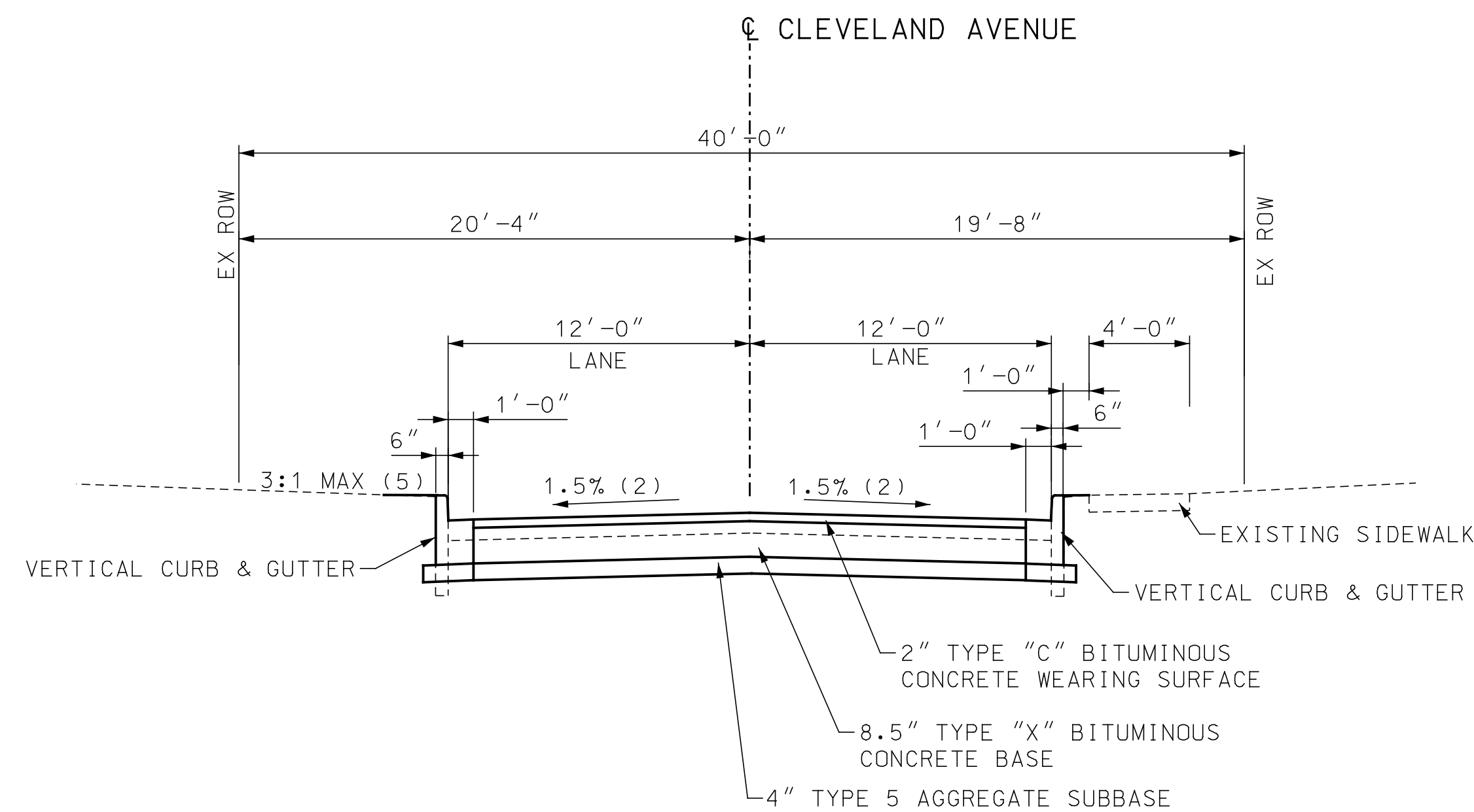
NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM 4' WIDE ACCESSIBLE ROUTE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
2. SLOPES MAY VARY AT INTERSECTIONS. SEE INTERSECTION DETAILS FOR LOCATION AND LENGTH OF TRANSITIONS.
3. SEE PLAN FOR SIDEWALK OFFSET DISTANCE.
4. VARIES FROM -2.0% AT STA 2+00.00 TO 2.0% AT STA 2+50.00, 2.0% FROM STA 2+50.00 TO STA 5+00.00, VARIES FROM 2.0% AT STA 5+00.00 TO -2.0% AT STA 5+50.00.
5. FORESLOPES SHALL BE A MAXIMUM OF 3:1. IF ROW/EASEMENTS ALLOW, A 6:1 OR FLATTER SLOPE IS PREFERRED.

6. TACK COAT SHALL BE APPLIED BETWEEN PAVEMENT LAYERS. PRIME-LIQUID ASPHALT (MC30) SHALL BE APPLIED TO THE TOP OF THE AGGREGATE SUBBASE BELOW THE TYPE "X" BITUMINOUS CONCRETE BASE PAVEMENT.



**SIMMONS AVENUE**  
STA 40+17.00 TO STA 40+60.00



**CLEVELAND AVENUE**  
STA 50+17.00 TO STA 50+90.00



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

**DISCLAIMER OF RESPONSIBILITY**

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
 411 N 10TH STREET, SUITE 200  
 SAINT LOUIS, MISSOURI 63101  
 P (314) 621-3395 F (314) 621-3288  
 WWW.LOCHGROUP.COM  
 MISSOURI STATE ENGINEERING CORPORATION  
 CERTIFICATE/LICENSE NO. 2002011852

**WEST ESSEX AVENUE RECONSTRUCTION**  
**TYPICAL SECTIONS**  
**SHEET 2 OF 5**

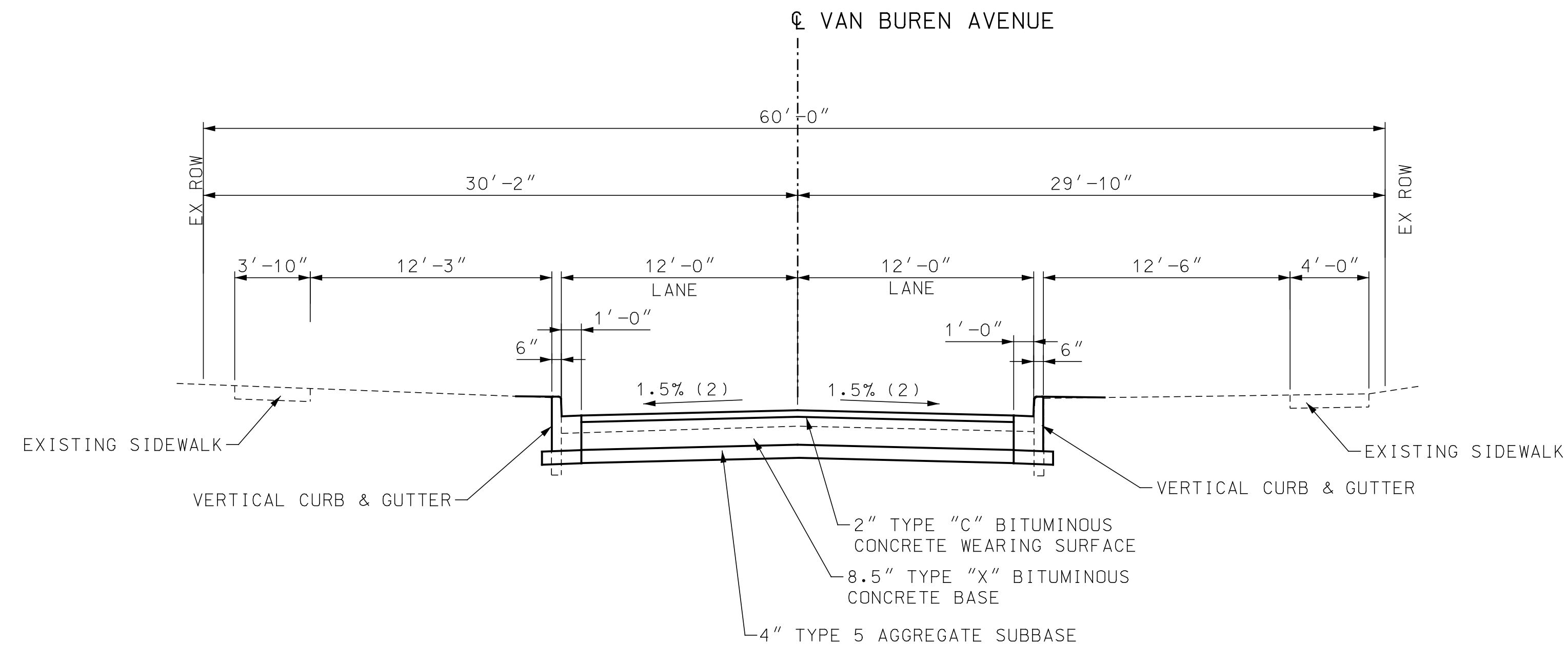
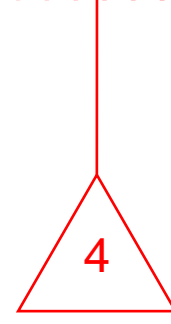
PROJECT/JOB NO.	STP-5502(610)
MSD PROJECT NO.	23MSD-00141
MSD BASE MAP	23M, 23N
DATE PREPARED	09/13/2024
SHEET	4 OF 104

LOCHMUELLER PROJECT NO. 520-0140 IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

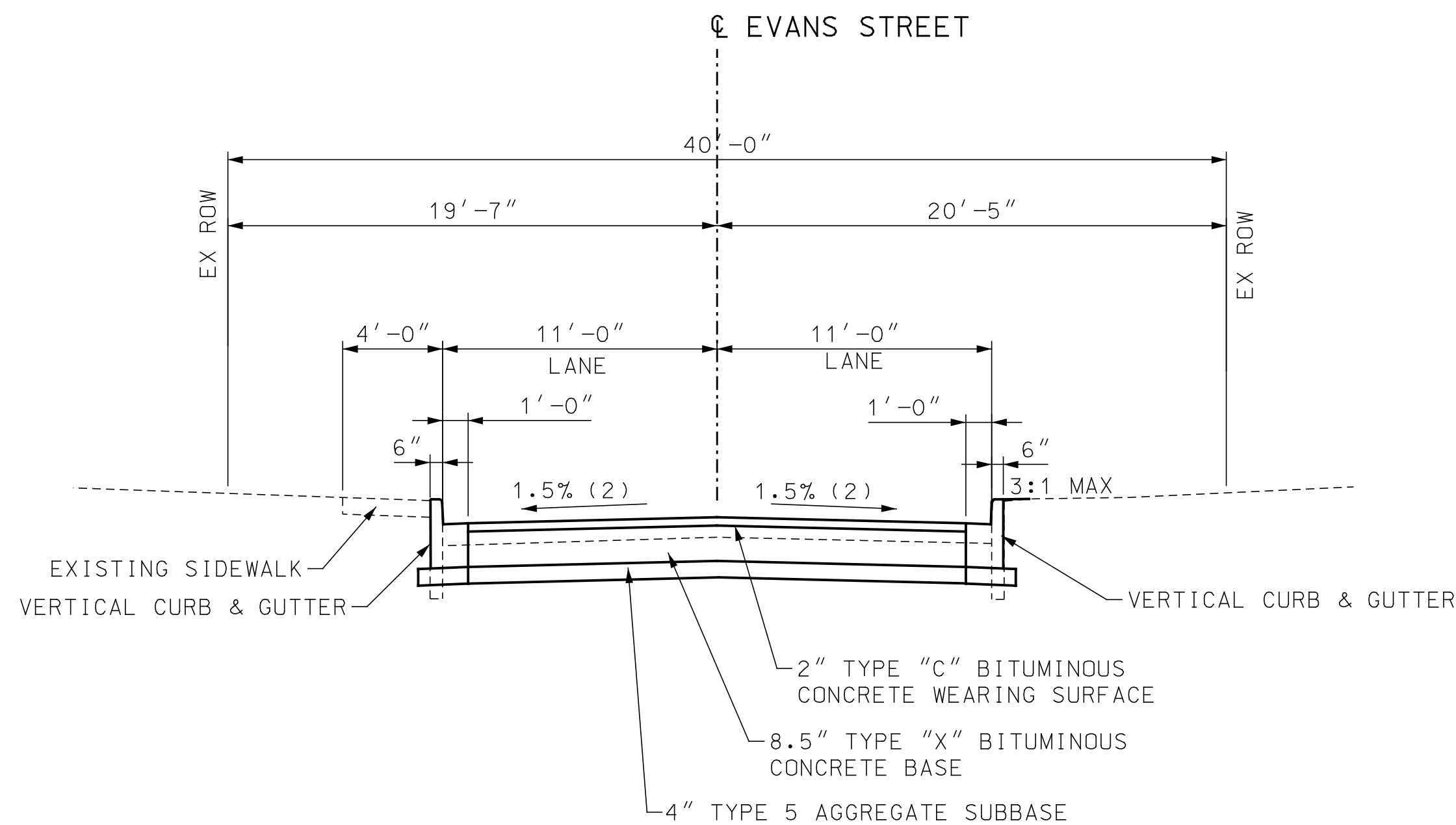
NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM 4' WIDE ACCESSIBLE ROUTE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
2. SLOPES MAY VARY AT INTERSECTIONS. SEE INTERSECTION DETAILS FOR LOCATION AND LENGTH OF TRANSITIONS.
3. SEE PLAN FOR SIDEWALK OFFSET DISTANCE.
4. VARIES FROM -2.0% AT STA 2+00.00 TO 2.0% AT STA 2+50.00, 2.0% FROM STA 2+50.00 TO STA 5+00.00, VARIES FROM 2.0% AT STA 5+00.00 TO -2.0% AT STA 5+50.00.
5. FORESLOPES SHALL BE A MAXIMUM OF 3:1. IF ROW/EASEMENTS ALLOW, A 6:1 OR FLATTER SLOPE IS PREFERRED.

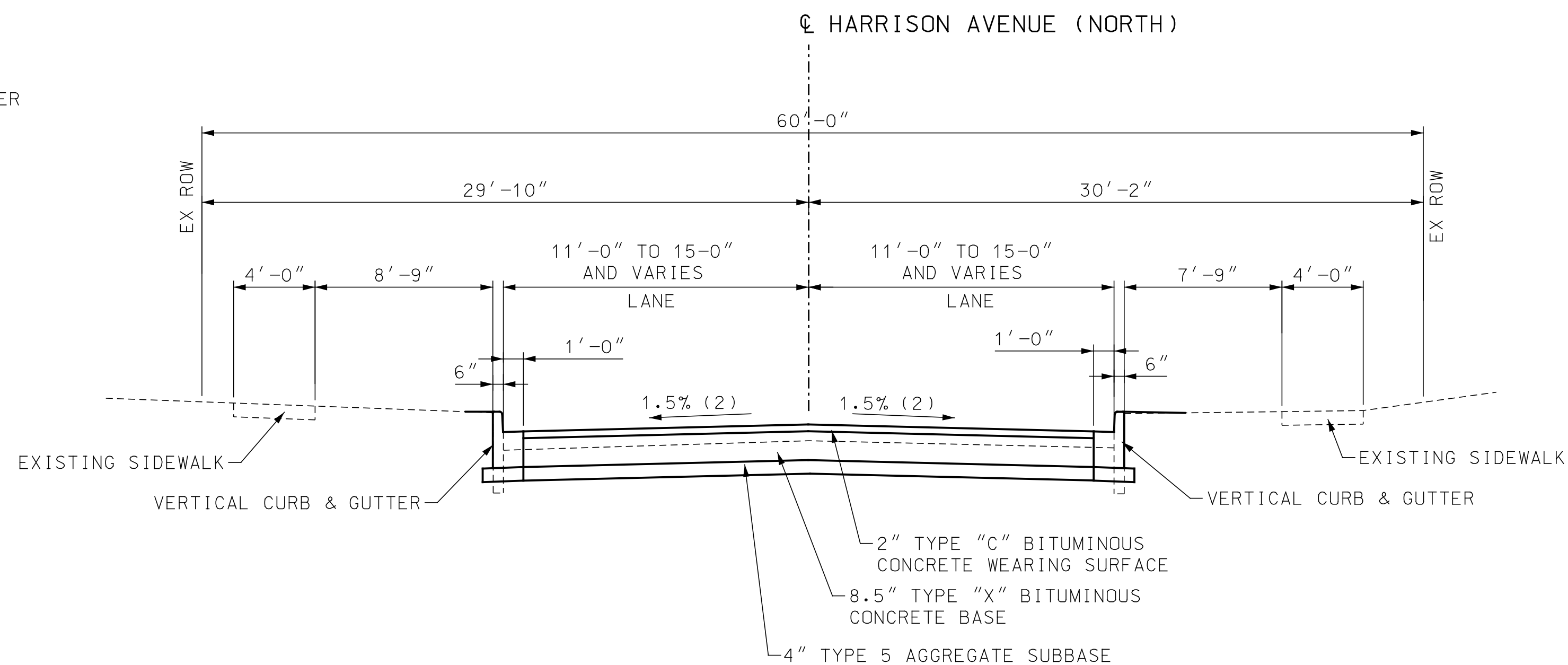
6. TACK COAT SHALL BE APPLIED BETWEEN PAVEMENT LAYERS. PRIME-LIQUID ASPHALT (MC30) SHALL BE APPLIED TO THE TOP OF THE AGGREGATE SUBBASE BELOW THE TYPE "X" BITUMINOUS CONCRETE BASE PAVEMENT.



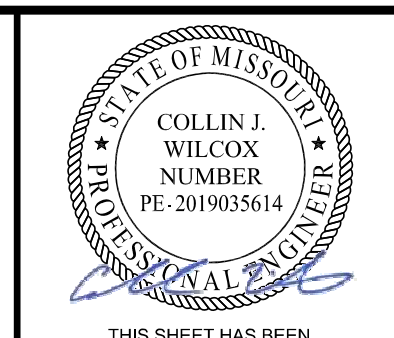
**VAN BUREN AVENUE**  
STA. 59+28.00 TO STA. 59+82.97



**EVANS STREET**  
STA. 70+17.00 TO STA. 70+55.00



**HARRISON AVENUE (NORTH)**  
STA. 80+17.05 TO STA 80+48.00



THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY.

**DISCLAIMER OF RESPONSIBILITY**

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**

411 N 10TH STREET, SUITE 200  
SAINT LOUIS, MISSOURI 63101  
P (314) 621-3395 F (314) 621-3288  
WWW.LOCHMUELLERGROUP.COM  
MISSOURI STATE ENGINEERING CORPORATION  
CERTIFICATE/LICENSE NO. 2002011852

**WEST ESSEX AVENUE RECONSTRUCTION**

**TYPICAL SECTIONS SHEET 3 OF 5**

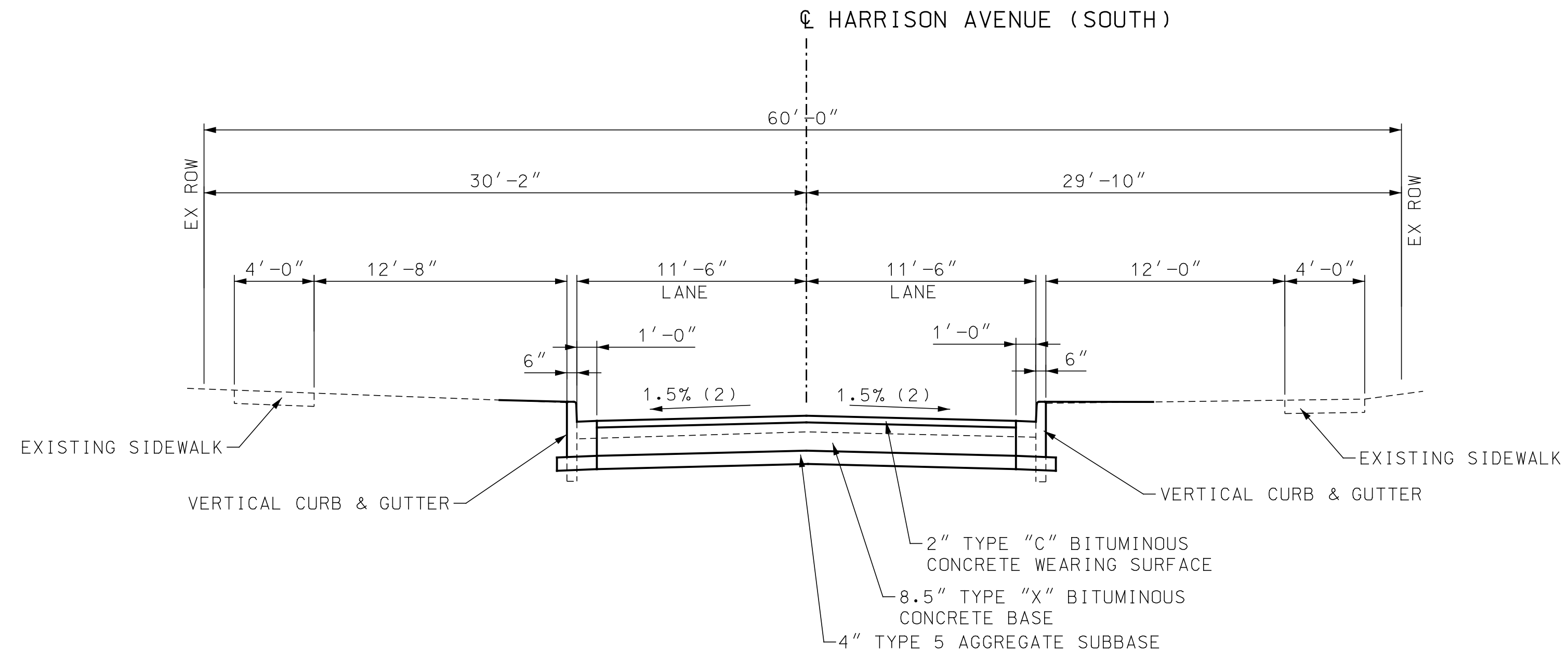
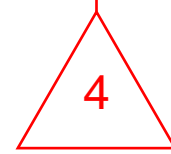
PROJECT/JOB NO.	STP-5502(610)
MSD PROJECT NO.	23MSD-00141
MSD BASE MAP	23M, 23N
DATE PREPARED	09/13/2024
SHEET	5 OF 104

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED. LOCHMUELLER PROJECT NO. 520-0140

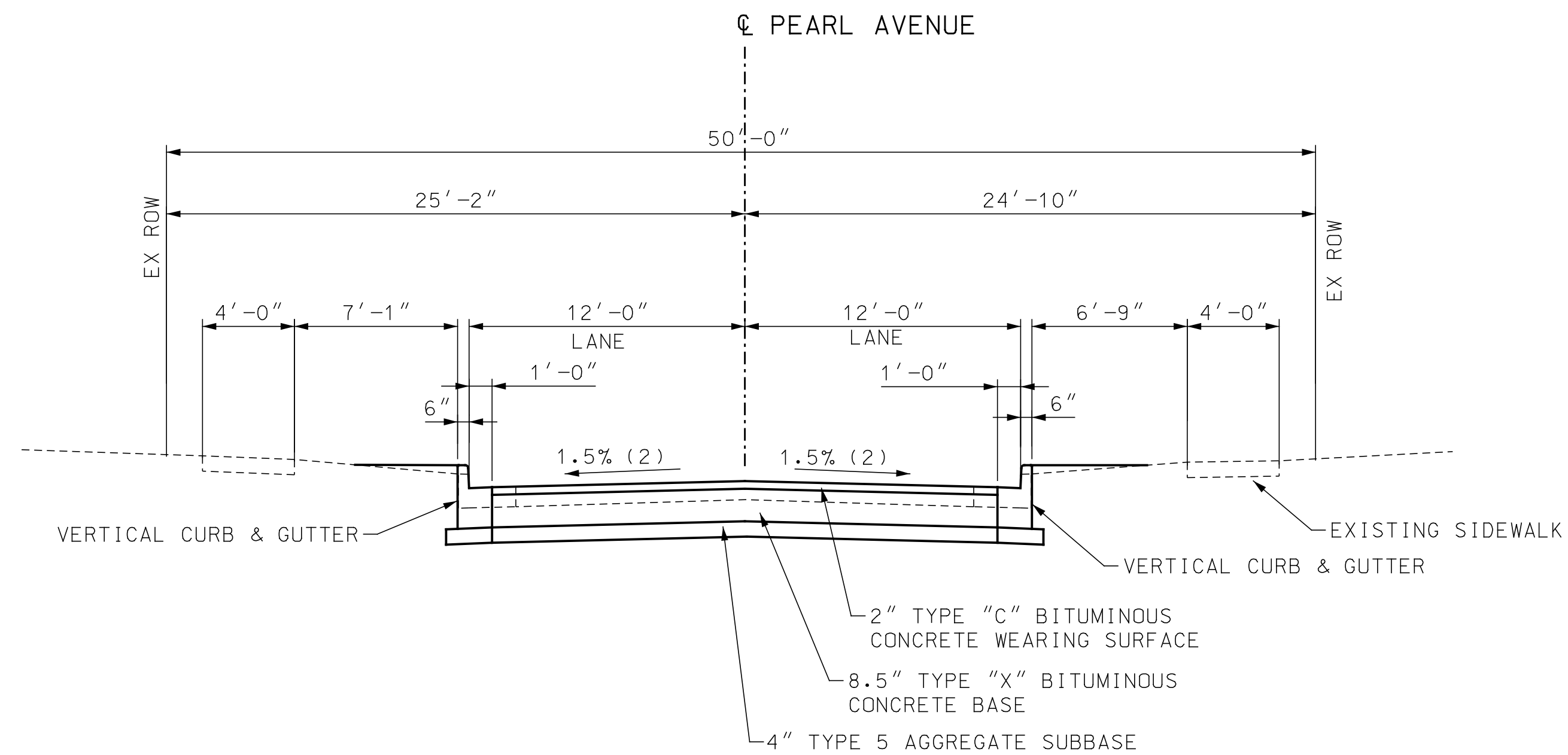
NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM 4' WIDE ACCESSIBLE ROUTE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
2. SLOPES MAY VARY AT INTERSECTIONS. SEE INTERSECTION DETAILS FOR LOCATION AND LENGTH OF TRANSITIONS.
3. SEE PLAN FOR SIDEWALK OFFSET DISTANCE.
4. VARIES FROM -2.0% AT STA 2+00.00 TO 2.0% AT STA 2+50.00, 2.0% FROM STA 2+50.00 TO STA 5+00.00, VARIES FROM 2.0% AT STA 5+00.00 TO -2.0% AT STA 5+50.00.
5. FORESLOPES SHALL BE A MAXIMUM OF 3:1. IF ROW/EASEMENTS ALLOW, A 6:1 OR FLATTER SLOPE IS PREFERRED.

6. TACK COAT SHALL BE APPLIED BETWEEN PAVEMENT LAYERS. PRIME-LIQUID ASPHALT (MC30) SHALL BE APPLIED TO THE TOP OF THE AGGREGATE SUBBASE BELOW THE TYPE "X" BITUMINOUS CONCRETE BASE PAVEMENT.



**HARRISON AVENUE (SOUTH)**  
STA. 89+58.00 TO STA. 89+83.00



**PEARL AVENUE**  
STA. 100+16.91 TO STA. 100+55.00



THIS SHEET HAS BEEN  
SIGNED, SEALED AND  
DATED ELECTRONICALLY

**DISCLAIMER OF  
RESPONSIBILITY**

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
411 N 10TH STREET, SUITE 200  
SAINT LOUIS, MISSOURI 63101  
P (314) 621-3395 F (314) 621-3288  
WWW.LOCHGROUP.COM  
MISSOURI STATE ENGINEERING CORPORATION  
CERTIFICATE/LICENSE NO. 2002011852

**WEST ESSEX AVENUE  
RECONSTRUCTION**

**TYPICAL SECTIONS  
SHEET 4 OF 5**

PROJECT/JOB NO. <b>STP-5502(610)</b>
MSD PROJECT NO. <b>23MSD-00141</b>
MSD BASE MAP <b>23M, 23N</b>
DATE PREPARED <b>09/13/2024</b>
SHEET <b>6 OF 104</b>

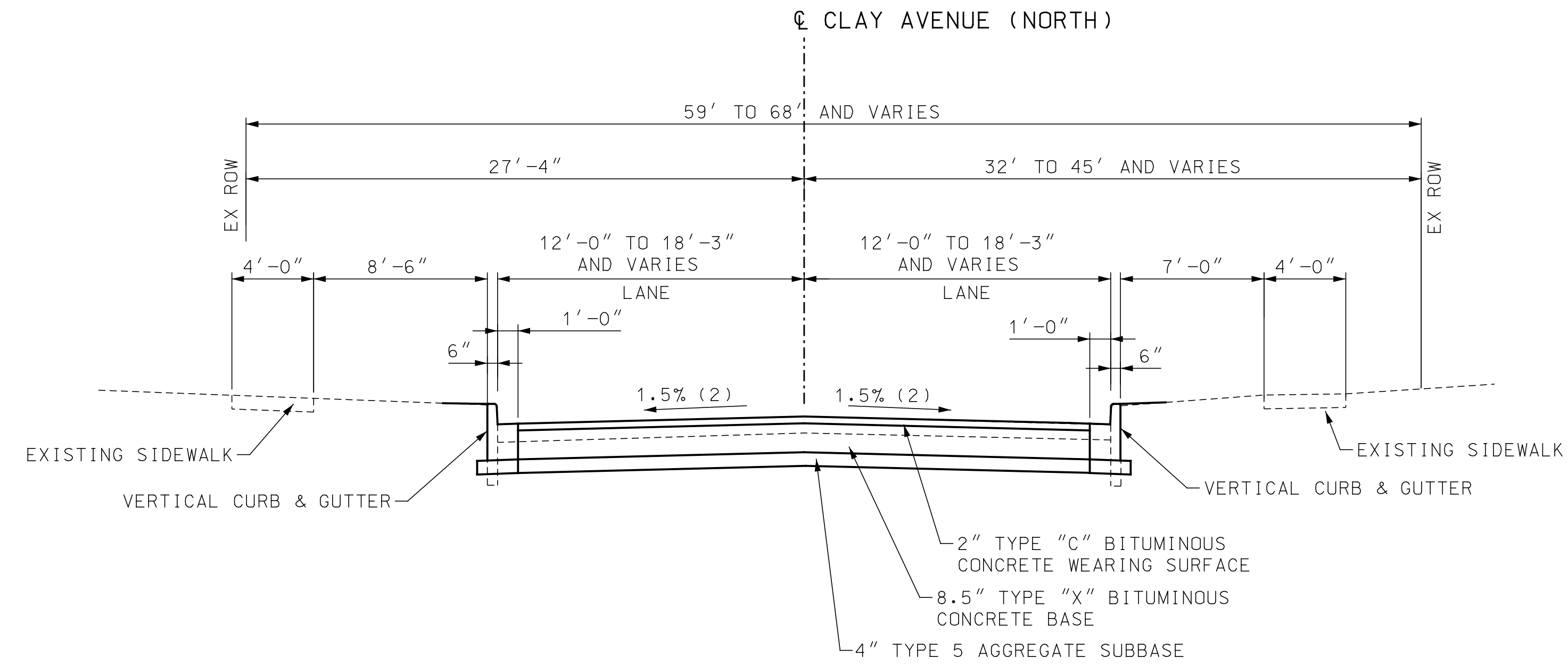
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED. LOCHMUELLER PROJECT NO. 520-0140

NOTES:

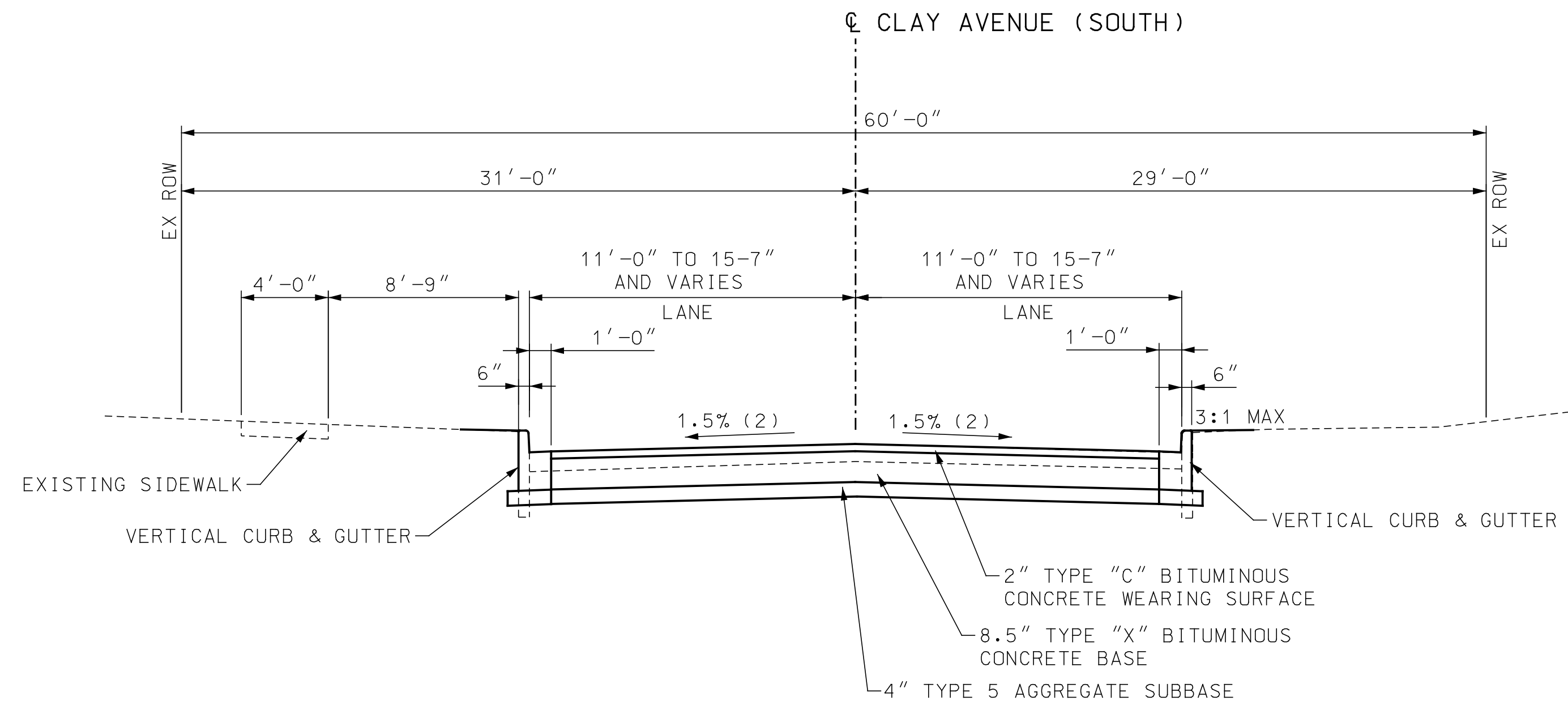
1. SIDEWALK SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM 4' WIDE ACCESSIBLE ROUTE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
2. SLOPES MAY VARY AT INTERSECTIONS. SEE INTERSECTION DETAILS FOR LOCATION AND LENGTH OF TRANSITIONS.
3. SEE PLAN FOR SIDEWALK OFFSET DISTANCE.
4. VARIES FROM -2.0% AT STA 2+00.00 TO 2.0% AT STA 2+50.00, 2.0% FROM STA 2+50.00 TO STA 5+00.00, VARIES FROM 2.0% AT STA 5+00.00 TO -2.0% AT STA 5+50.00.
5. FORESLOPES SHALL BE A MAXIMUM OF 3:1. IF ROW/EASEMENTS ALLOW, A 6:1 OR FLATTER SLOPE IS PREFERRED.

6. TACK COAT SHALL BE APPLIED BETWEEN PAVEMENT LAYERS. PRIME-LIQUID ASPHALT (MC30) SHALL BE APPLIED TO THE TOP OF THE AGGREGATE SUBBASE BELOW THE TYPE "X" BITUMINOUS CONCRETE BASE PAVEMENT.

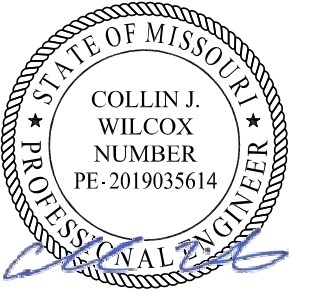
4



**CLAY AVENUE (NORTH)**  
STA. 110+17.19 TO STA. 110+65.23



**CLAY AVENUE (SOUTH)**  
STA. 119+50.00 TO STA 119+83.05



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

**DISCLAIMER OF RESPONSIBILITY**

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
 411 N 10TH STREET, SUITE 200  
 SAINT LOUIS, MISSOURI 63101  
 P (314) 621-3395 F (314) 621-3288  
 WWW.LOCHGROUP.COM  
 MISSOURI STATE ENGINEERING CORPORATION  
 CERTIFICATE/LICENSE NO. 2002011852

WEST ESSEX AVENUE RECONSTRUCTION  
 TYPICAL SECTIONS  
 SHEET 5 OF 5

PROJECT/JOB NO.	STP-5502(610)
MSD PROJECT NO.	23MSD-00141
MSD BASE MAP	23M, 23N
DATE PREPARED	09/13/2024
SHEET	7 OF 104

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED. LOCHMUELLER PROJECT NO. 520-0140



SUMMARY OF QUANTITIES

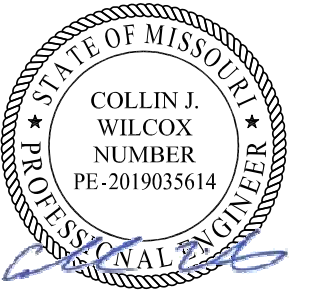
PAY ITEM	ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
1	2022010	REMOVAL OF IMPROVEMENTS	LS	1
2	2031000	CLASS A EXCAVATION	CY	1411
3	2035500	EMBANKMENT IN PLACE	CY	915
4	2036000	COMPACTING EMBANKMENT	CY	1411
#	5	203-60.20 EXCAVATION AND BACKFILL FOR UNSUITABLE MATERIAL	CY	250
6	3040504	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	16720
#	7	405-30.10 TYPE "C" BITUMINOUS CONCRETE (PAVEMENT)	TON	1153
#	8	405-30.30 TYPE "X" BITUMINOUS CONCRETE (BASE)	TON	4900
9	4071005	TACKCOAT	GAL	1708
#	10	408-10.15 PRIME-LIQUID ASPHALT (MC30)	GAL	3020
#	11	600-99.03 MODIFIED CONCRETE CURB (12 IN. HEIGHT AND UNDER)	LF	97
#	12	603-10.30 ADJUST WATER SERVICE VALVE AND BOX TO GRADE	EA	39
#	13	604-12.01 SINGLE CURB INLET, UNTRAPPED	EA	13
#	14	604-16.98 ROOF DRAIN POP-UP EMITTER	EA	17
#	15	604-19.27 MANHOLE	EA	8
#	16	604-19.80 TRENCH DRAIN	LS	1
#	17	604-20.23 REBUILD MANHOLE	EA	1
#	18	604-20.30 ADJUSTING MANHOLE TO GRADE	EA	10
#	19	604-23.08 HYDRODYNAMIC SEPARATOR (8')	EA	1
#	20	604-25.40 CONVERT INLET TO MANHOLE AND ADJUST TO GRADE	EA	1
#	21	605-10.10 CLASS "A" UNDERDRAIN	LF	3621
#	22	605-50.03 GRAVEL (3/4 INCH)	CY	12
#	23	607-41.99 REMOVE AND REPLACE EXISTING FENCE	LF	000
24	6086004	CONCRETE SIDEWALK, 4 IN	SY	2428
25	6081010	CONCRETE CURB RAMP	SY	182
26	6081012	TRUNCATED DOMES	SF	251
#	27	608-50.06 PAVED DRIVEWAY APPROACH, 6 IN CONCRETE	SY	1062
#	28	608-50.07 PAVED DRIVEWAY APPROACH, 7 IN CONCRETE	SY	168
#	29	607-30.20 ALUMINUM HANDRAIL	LF	20
#	30	608-70.00 CONCRETE STEPS	SF	45
31	6089905A	PAVED DRIVEWAY APPROACH, 6 IN CONCRETE, STAMPED	SY	17
32	6089905B	PAVED DRIVEWAY APPROACH, 6 IN CONCRETE, EXPOSED AGGREGATE	SY	35
#	33	609-10.53 CURB AND GUTTER, VERTICAL	LF	5448
34	6209903A	4 IN. WHITE EPOXY PAVEMENT MARKING PAINT	LF	8233
35	6161025	CHANNELIZER (TRIM LINE)	EA	93
36	6161030	TYPE III MOVEABLE BARRICADE	EA	8
37	6169901	TEMPORARY TRAFFIC CONTROL	LS	1
38	6181000	MOBILIZATION	LS	1

# DENOTES A ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION BID ITEM NUMBER

SUMMARY OF QUANTITIES

PAY ITEM	ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
38	6209903B	4 IN. YELLOW EPOXY PAVEMENT MARKING PAINT	LF	5148
39	6209903C	12 IN. WHITE EPOXY PAVEMENT MARKING PAINT	LF	612
40	6209903D	24 IN. WHITE EPOXY PAVEMENT MARKING PAINT	LF	481
41	6200021	PREFORMED THERMOPLASTIC PAVEMENT MARKING, LEFT TURN ARROW	EA	1
42	6200027	PREFORMED THERMOPLASTIC PAVEMENT MARKING, THRU-RIGHT TURN ARROW	EA	1
43	6209902A	PREFORMED THERMOPLASTIC PAVEMENT MARKING, HELMETED BICYCLIST SYMBOL	EA	25
44	6209902B	PREFORMED THERMOPLASTIC PAVEMENT MARKING, BIKE LANE STRAIGHT ARROW	EA	25
45	6209902C	PREFORMED THERMOPLASTIC PAVEMENT MARKING, SHARED LANE SYMBOL	EA	4
46	6274000	CONTRACTOR FURNISHED SURVEYING AND STAKING	LS	1
#	47	703-90.15 MODULAR BLOCK WALL (H<4')	SF	174
#	48	726-23.12 12" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	LF	180
#	49	726-23.15 15" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	LF	196
#	50	726-23.18 18" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	LF	236
#	51	726-23.24 24" CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)	LF	53
52	8031000A	TURF TYPE TALL FESCUE SODDING	SY	5311
53	8041000	TOPSOIL	CY	590
54	8061007A	CURB INLET CHECK	EACH	15
55	8061019	SILT FENCE	LF	500
#	56	806-55.00 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	EA	1
#	57	806-55.99 LAND DISTURBANCE PERMIT - MDNR	EA	1
58	9017008	CABLE, 8 AWG 1 CONDUCTOR	LF	810
59	9019902A	REMOVE LIGHT POLE (RESIDENTIAL)	EA	1
60	9025300	CONDUIT, 3 IN., TRENCH WITH TRACER WIRE	LF	75
61	9026300	CONDUIT, 3 IN., PUSHED WITH TRACER WIRE	LF	105
62	9028620	POWER SUPPLY ASSEMBLY, TYPE 2	EA	2
63	9028810	PULL BOX, PREFORMED CLASS 1	EA	4
64	9029902A	RECTANGULAR RAPID FLASHING BEACON ASSEMBLY	EA	4
65	9031250A	U-CHANNEL POST, 3 LB	LF	474
66	9035004A	SH-FLAT SHEET	SF	175
67	9039902A	REMOVE AND REINSTALL SIGN ON NEW POST	EA	2

# DENOTES A ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION BID ITEM NUMBER



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DISCLAIMER OF RESPONSIBILITY

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
 411 N 10TH STREET, SUITE 200  
 SAINT LOUIS, MISSOURI 63101  
 P (314) 621-3395 F (314) 621-3288  
 WWW.LOCHGROUP.COM  
 MISSOURI STATE ENGINEERING CORPORATION  
 CERTIFICATE LICENSE NO. 2002011852

WEST ESSEX AVENUE RECONSTRUCTION  
 SUMMARY OF QUANTITIES  
 SHEET 1 OF 1

PROJECT/JOB NO.  
**STP-5502(610)**  
 MSD PROJECT NO.  
**23MSD-00141**  
 MSD BASE MAP  
**23M, 23N**  
 DATE PREPARED  
**09/13/2024**  
 SHEET  
**8 OF 104**

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



UNDERDRAIN SCHEDULE	
605-10.10	
Connecting Structure Number	CLASS "A" UNDERDRAIN LF
CI-37	335.5
MH-36	340.7
CI-8	336
MH-32	184.3
CI-11	440
CI-14	346.7
CI-40	75.2
CI-23	497.3
CI-26	210.2
MH-28	201.9
CI-29	179.4
CI-30	473
<b>SUBTOTAL</b>	<b>3620.2</b>
<b>TOTAL</b>	<b>3621</b>

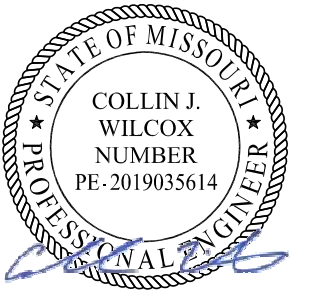
POP-UP EMITTER SCHEDULE			
STA	OFFSET FT	LT/RT	604-16.98
			ROOF DRAIN POP-UP EMITTER EA
3+49.62	19	RT	3
3+87.49	19	RT	1
4+93.54	38	RT	1
7+90.79	39	RT	1
9+26.98	39	RT	1
10+85.07	40	RT	1
20+47.43	28	RT	1
20+65.78	28	RT	1
20+81.05	36	LT	1
21+58.40	32	RT	1
22+37.27	40	RT	1
22+55.82	39	LT	1
22+76.28	39	LT	1
22+78.59	40	RT	1
23+40.81	40	LT	1
<b>TOTAL</b>			<b>17</b>

LANDSCAPING AND EROSION CONTROL SCHEDULE					
STA TO	STA	8061007A CURB INLET CHECK EACH	8061019 SILT FENCE LF	8031000A TURF TYPE TALL FESCUE SODDING SQ YD	8041000 TOPSOIL (4") CU YD
0+31.42	4+70.00	3	57.0	855.4	95.0
4+70.00	10+10.00	5	153.3	1345.1	149.5
10+10.00	15+70.00	6		967.6	107.5
15+70.00	21+30.00	1	232.8	1122.9	124.8
21+30.00	25+65.00		56.4	1020.2	113.4
<b>TOTAL</b>		<b>15</b>	<b>500</b>	<b>5311</b>	<b>590</b>

FENCE SCHEDULE		
ADDRESS	LT/RT	607-41.99
		REMOVE AND REPLACE EXISTING FENCE LF
232 W ESSEX AVE	RT	116
357 W ESSEX AVE	LT	50
415 W ESSEX AVE	LT	85
425 W ESSEX AVE	LT	65
603 N EVANS AVE	LT	127
604 PEARL AVE	LT	95
601 N CLAY AVE	LT	85
555 N CLAY AVE	RT	110
529 N KIRKWOOD RD	RT	135
<b>TOTAL</b>		<b>868</b>

DRAINAGE SCHEDULE													
STA	LOCATION	604-20.23	604-19.27	604-12.01	604-23.08	604-25.40	726-23.12 726-23.15 726-23.18 726-23.24						
							CLASS III REINFORCED CONCRETE PIPE CULVERT (GASKET TYPE)						
							12"	15"	18"	24"			
EA	FOOT	EA	EA	EA	EA	EA	FOOT	FOOT	FOOT	FOOT			
0+37.71	TO 1+98.70	DR-01	MH 35 - DCI 4										
1+98.70	TO 1+98.70	DR-01	MH 35 - MH 36										
1+98.70	TO 1+98.70	DR-01	MH 36 - CI 37										
1+98.70	TO 1+98.70	DR-01	CI 37										
5+10.95	TO 5+18.24	DR-02	EX MH 9 - HDS 99										
5+18.24	TO 5+35.32	DR-02	EX MH 9 - MH 32										
5+35.32	TO 5+18.24	DR-02	HDS 99										
5+18.24	TO 5+35.32	DR-02	HDS 99 - MH 32										
5+35.32	TO 5+35.32	DR-02	MH 32										
5+35.32	TO 5+35.32	DR-02	MH 32 - CI 8										
5+35.33	TO 7+00.36	DR-02	CI 8										
7+00.36	TO 7+00.36	DR-02	TEE 10 - CI 11										
7+00.36	TO 59+59.86	DR-02	CI 11										
59+59.86	TO 59+59.86	DR-02	CI 11 - CI 12										
59+59.86	TO 59+59.86	DR-02	CI 12										
59+59.86	TO 59+59.79	DR-02	CI 12 - CI 13										
59+59.79	TO 8+61.57	DR-02	CI 13										
8+61.57	TO 8+70.53	DR-02	MH 15										
8+70.53	TO 8+70.53	DR-02	MH 15 - CI 14										
8+70.53	TO 11+41.83	DR-02	CI 14										
11+41.83	TO 11+41.83	DR-03	MH 41										
11+41.83	TO 11+41.83	DR-03	MH 41 - CI 40										
11+41.89	TO 80+30.49	DR-03	CI 40										
80+30.49	TO 80+45.77	DR-03	MH 17										
80+45.77	TO 80+45.77	DR-03	MH 17 - CI 18										
80+45.77	TO 80+45.77	DR-03	CI 18										
80+45.77	TO 80+45.69	DR-03	CI 18 - CI 19										
80+45.69	TO 12+08.95	DR-03	CI 19										
12+08.95	TO 12+16.24	DR-03	MHI 22										
12+16.24	TO 12+16.24	DR-03	MHI 22 - CI 23										
12+16.24	TO 13+44.53	DR-03	CI 23										
13+44.53	TO 13+44.53	DR-03	TEE 25 - CI 26										
13+44.53	TO 14+97.66	DR-03	CI 26										
14+97.66	TO 15+54.19	DR-03	MH 27										
15+54.19	TO 15+54.19	DR-03	MH 27 - MH 28										
15+54.19	TO 15+54.19	DR-03	MH 28										
15+54.19	TO 15+54.19	DR-03	MH 28 - CI 29										
15+54.19	TO 17+33.73	DR-03	CI 29										
17+33.73	TO 17+33.73	DR-03	CI 29 - CI 30										
17+33.73	TO 17+33.73	DR-04	CI 30										
<b>TOTAL:</b>													

PAVEMENT MARKING SCHEDULE												
LOCATION				6209903A	6209903B	6209903C	6209903D	6209902A	6209902B	6209902C	6200021	6200027
STA	STA	STREET	SHEET NO.	4 IN. WHITE EPOXY PAVEMENT MARKING PAINT LF	4 IN. YELLOW EPOXY PAVEMENT MARKING PAINT LF	12 IN. WHITE EPOXY PAVEMENT MARKING PAINT LF	24 IN. WHITE EPOXY PAVEMENT MARKING PAINT LF	PREFORMED THERMOPLASTIC PAVEMENT MARKING, HELMETED BICYCLIST SYMBOL EA	PREFORMED THERMOPLASTIC PAVEMENT MARKING, BIKE LANE STRAIGHT ARROW EA	PREFORMED THERMOPLASTIC PAVEMENT MARKING, SHARED LANE SYMBOL EA	PREFORMED THERMOPLASTIC PAVEMENT MARKING, LEFT TURN ARROW EA	PREFORMED THERMOPLASTIC PAVEMENT MARKING, THRU-RIGHT TURN ARROW EA
0+31	5+00	W ESSEX	18	1330	938	54	40	4	4			
5+00	10+60	W ESSEX	19	1956	1120	227	179	6	6			
10+60	16+20	W ESSEX	20	1926	1166	153	119	6	6			
16+20	21+80	W ESSEX	21	1997	1156	178	122	5	5			
21+80	25+65	W ESSEX	22	1024	768		21	4	4			
<b>TOTAL</b>				<b>8233</b>	<b>5148</b>	<b>612</b>	<b>481</b>	<b>25</b>	<b>25</b>	<b>4</b>	<b>1</b>	<b>1</b>



THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY.

**DISCLAIMER OF RESPONSIBILITY**

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
 411 N 10TH STREET, SUITE 200  
 SAINT LOUIS, MISSOURI 63101  
 P (314) 621-3395 F (314) 621-3288  
 WWW.LOCHMUELLERGROUP.COM  
 MISSOURI STATE ENGINEERING CORPORATION  
 CERTIFICATE LICENSE NO. 2002011852

WEST ESSEX AVENUE RECONSTRUCTION  
 QUANTITY SCHEDULES  
 SHEET 3 OF 6

PROJECT/JOB NO. STP-5502(610)  
 MSD PROJECT NO. 23MSD-00141  
 MSD BASE MAP 23M, 23N  
 DATE PREPARED 09/13/2024  
 SHEET 11 OF 104

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED. LOCHMUELLER PROJECT NO. 520-0140



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

**DISCLAIMER OF RESPONSIBILITY**

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

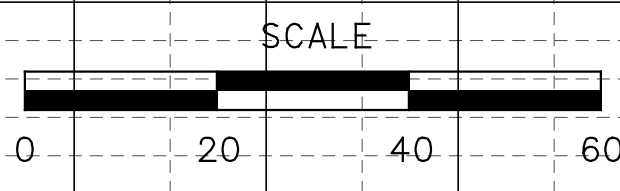
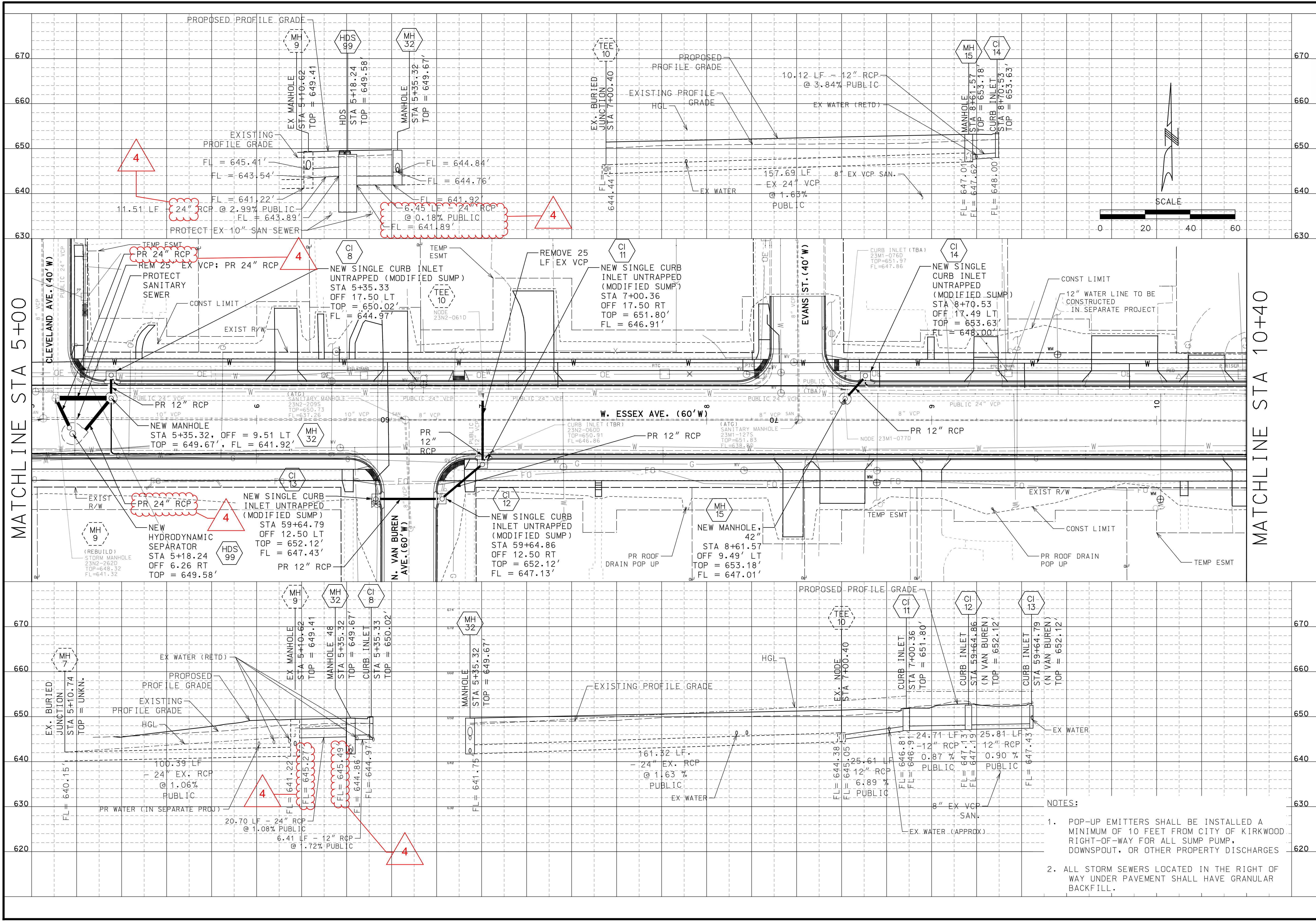
**REVISIONS**

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
 411 N 10TH STREET, SUITE 200  
 SAINT LOUIS, MISSOURI 63101  
 P (314) 621-3395 F (314) 621-3288  
 WWW.LOCHMUELLERGROUP.COM  
 MISSOURI STATE ENGINEERING CORPORATION  
 CERTIFICATE/LICENSE NO. 2002011852

**WEST ESSEX AVENUE RECONSTRUCTION**  
**DRAINAGE PLANS**  
**SHEET 2 OF 5**

PROJECT/JOB NO.  
**STP-5502(610)**  
 MSD PROJECT NO.  
 MSD BASE MAP  
**23M,23N**  
 DATE PREPARED  
**09/13/2024**  
 SHEET  
**40 OF 104**

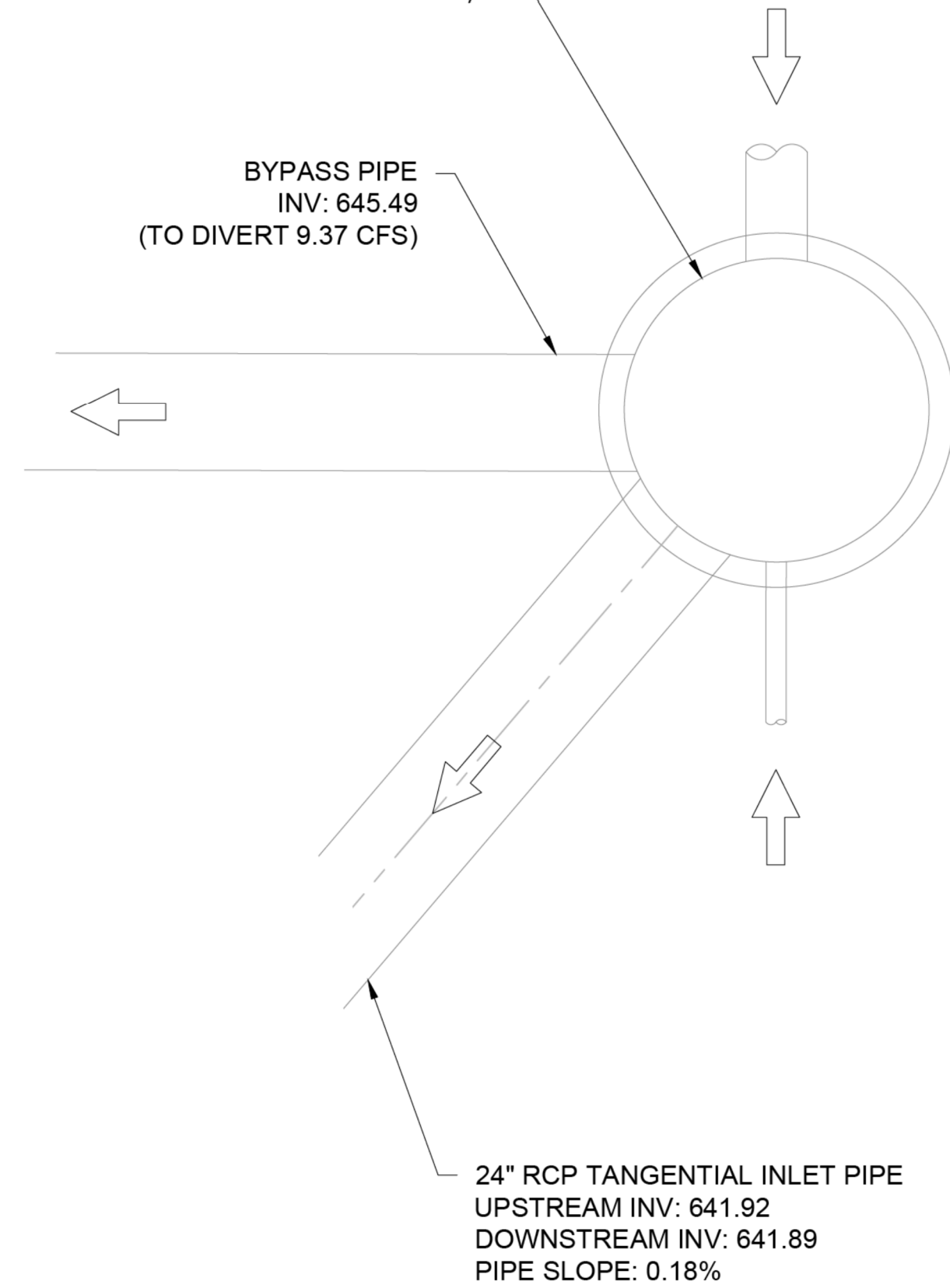


- NOTES:**
- POP-UP EMITTERS SHALL BE INSTALLED A MINIMUM OF 10 FEET FROM CITY OF KIRKWOOD RIGHT-OF-WAY FOR ALL SUMP PUMP, DOWNSPOUT, OR OTHER PROPERTY DISCHARGES
  - ALL STORM SEWERS LOCATED IN THE RIGHT OF WAY UNDER PAVEMENT SHALL HAVE GRANULAR BACKFILL.

MATCHLINE STA 5+00

MATCHLINE STA 10+40

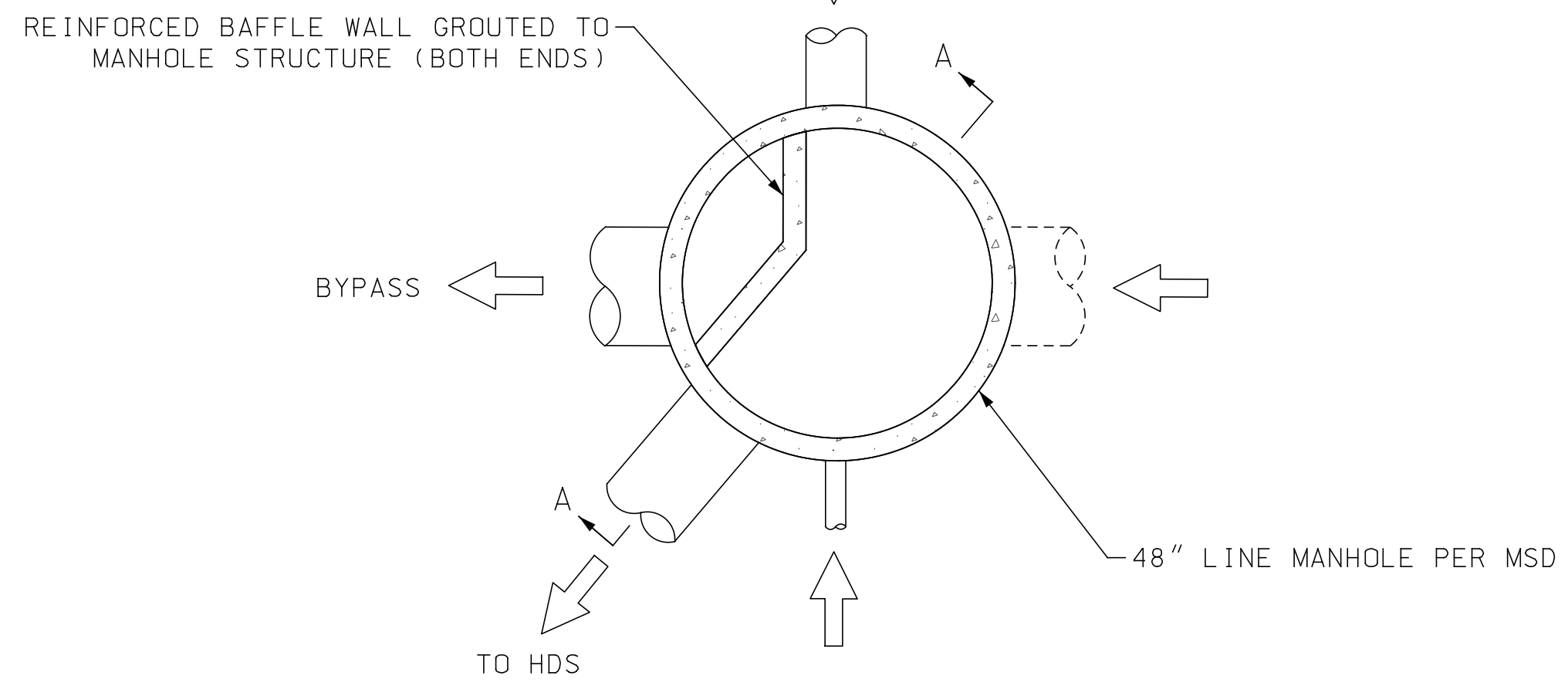
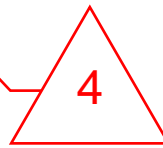
**DIVERSION STRUCTURE MH 32 PER PLAN**  
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)



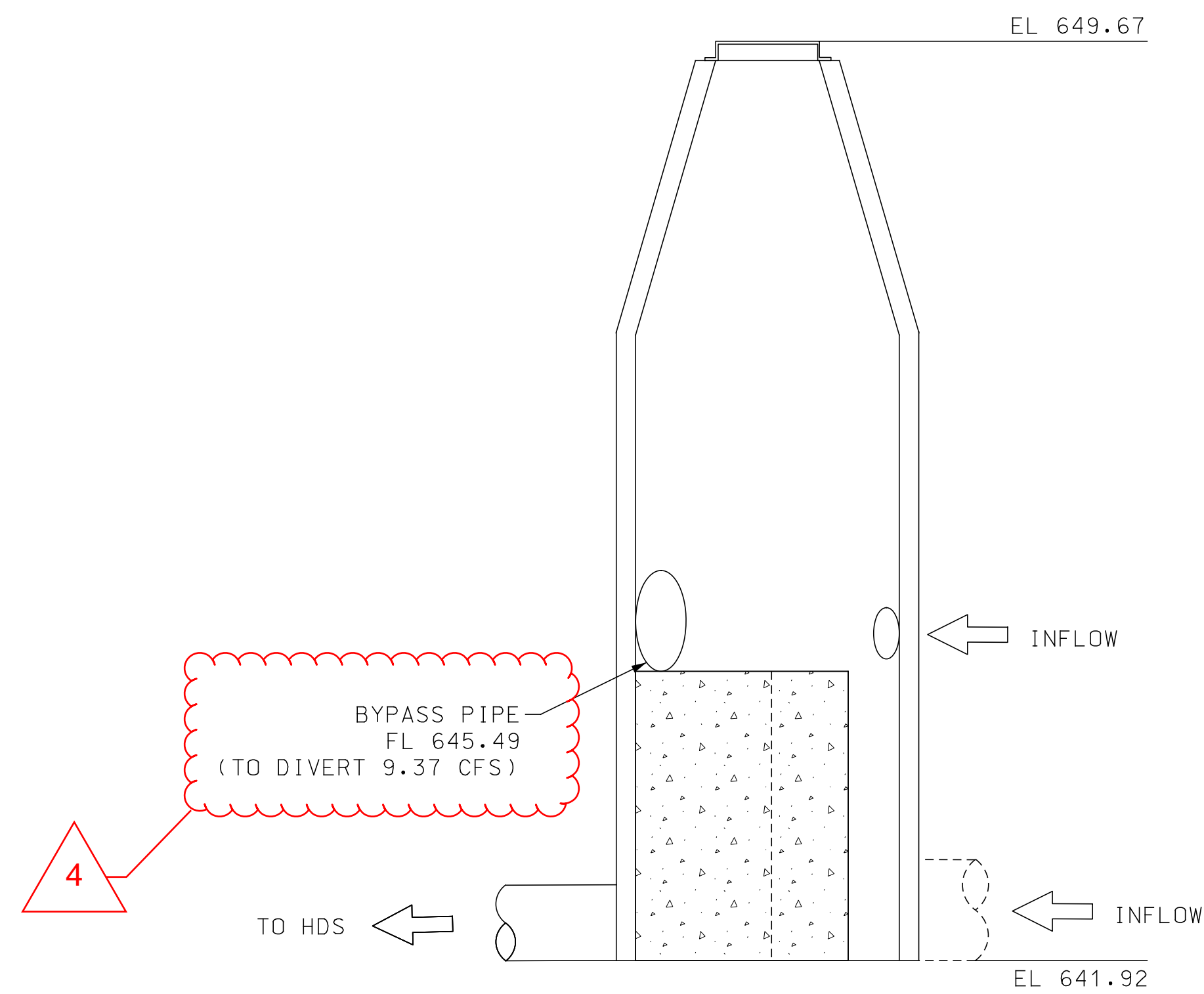
BYPASS PIPE  
INV: 645.49  
(TO DIVERT 9.37 CFS)

24" RCP TANGENTIAL INLET PIPE  
UPSTREAM INV: 641.92  
DOWNSTREAM INV: 641.89  
PIPE SLOPE: 0.18%

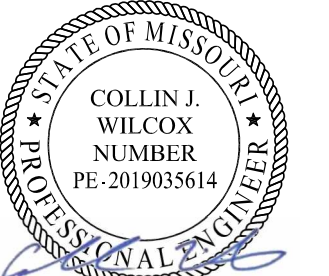
HDS LAYOUT PER ADS  
PARTIAL PLAN



DIVERSION STRUCTURE DETAIL  
PLAN



DIVERSION STRUCTURE DETAIL  
PROFILE



THIS SHEET HAS BEEN  
SIGNED, SEALED AND  
DATED ELECTRONICALLY

**DISCLAIMER OF  
RESPONSIBILITY**

I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

REV	DATE	BY	DESCRIPTION
4	10/11/2024	CJW	PIPE DETAILS & PRIME COAT

**LOCHMUELLER GROUP**  
411 N 10TH STREET, SUITE 200  
SAINT LOUIS, MISSOURI 63101  
P (314) 621-3395 F (314) 621-3288  
WWW.LOCHGROUP.COM  
MISSOURI STATE ENGINEERING CORPORATION  
CERTIFICATE/LICENSE NO. 2002011852

WEST ESSEX AVENUE  
RECONSTRUCTION  
DRAINAGE DETAILS  
SHEET 2 OF 2

PROJECT/JOB NO. STP-5502(610)
MSD PROJECT NO. 23MSD-00141
MSD BASE MAP 23M, 23N
DATE PREPARED 09/13/2024
SHEET 45 OF 104

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED. LOCHMUELLER PROJECT NO. 520-0140