

# **COUNTY OF UNION**

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT Joseph A. Graziano Sr., Director

BOARD OF COUNTY COMMISSIONERS

**MEMORANDUM** 

SERGIO GRANADOS

Chair

KIMBERLY PALMIERI-MOUDED Vice-Chairwoman

TO:

All Potential Bidders

JAMES E. BAKER, JR.

JOSEPH C. BODEK

FROM:

Ricardo S. Matias, PE, CME, CFM,

County Engineer

Director / Division of Engineering

Dr. Angela R. Garretson Bette Jane Kowalski

DATE:

May 26, 2023

LOURDES M. LEON

ALEXANDER MIRABELLA

REBECCA WILLIAMS

RE:

ADDENDUM NUMBER 1

2023 Road Resurfacing Project,

Various Municipalities

County of Union, New Jersey

BA# 7-2023,

**Union County Engineering Project # 2021-011** 

EDWARD T. OATMAN County Manager

AMY CRISP WAGNER
Deputy County Manager

BRUCE H. BERGEN, ESQ. County Counsel

JAMES E. PELLETTIERE Clerk of the Board Attached is Addendum Number 1 dated May 26, 2023 for the above referenced project.

Please note that the attached "Addendum Number 1" form must be completed and submitted with the original

RICARDO S, MATIAS PE, CME, CFM County Engineer Director, Division of Engineering



# COUNTY OF UNION

### ADDENDUM # 1

# 2023 ROAD RESURFACING PROJECT – VARIOUS MUNICIPALITIES COUNTY OF UNION, NEW JERSEY (CA-2022) BA#7-2023; UNION COUNTY ENGINEERING PROJECT #2021-011

### May 26, 2023

- The "Bid Form" page B-4 located within the Bid Sheets has been revised, specifically, Item #12 "Hot Mix Asphalt Pavement Repair (Excavation, 4" DGA, 6" Base Course) (If & Where Directed)." The quantity has been corrected from 37,595 SY to 1,895 SY. <u>Page B-4</u> shall be replaced with the updated "Bid Form" <u>Page B-4</u> denoted as Addendum #1, May 26, 2023; and
- 2. Within the plans, the following sheets have been revised to reflect the change in quantity specified in Item #12. Please replace the sheets accordingly:

	There is a second of the secon
Sheet 03.00	Quantities and Typical Road Section
Sheet 04.00	East Broad Street Quantity Sheet
Sheet 05.00	East Front Street Quantity Sheet
Sheet 06.00	Locust Street, Tucker Avenue and Freeman Circle Quantity Sheet
Sheet 07.00	Westfield Avenue Quantity Sheet
Sheet 08.00	Centennial Avenue Quantity Sheet
Sheet 09.00	Diamond Hill Road Quantity Sheet
Sheet 10.00	Baltusrol Road Quantity Sheet
Sheet 11.00	Mathewson Drive, Rose Street & Laramie Road Quantity Sheet
Sheet 12.00	Cataract Hollow Road Quantity Sheet
Sheet 13.00	Raritan Road Quantity Sheet
Sheet 14.00	Chestnut Street Quantity Sheet
Sheet 15.00	Main Street Quantity Sheet
Sheet 16.00	Locust Street Quantity Sheet

This Addendum does not change the bid receipt date.

END OF ADDENDUM # 1

BIDDER'S NAME:	
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### ACKNOWLEDGMENT OF ADDENDUM

### ADDENDUM NUMBER 1

DATED: May 26, 2023 COUNTY OF UNION

2023 Road Resurfacing Project Various Municipalities, County of Union New Jersey BA# 7-2023 Union County Engineering Project # 2021-011

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder, hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the County of Union's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Union County is issuing Addendum #1 for the above mentioned project as described below:

Local Unit Reference Number or Title of Addendum/Revision  ADDENDUM NUMBER 1:	How Received (mail, fax, pick-up, etc.)	Date Received
See the attached Addendum #1 (16 page) from Neglia dated May 26, 2023.		
ACKNOWLEDGMENT BY BIDDER:		
NAME OF BIDDER:		

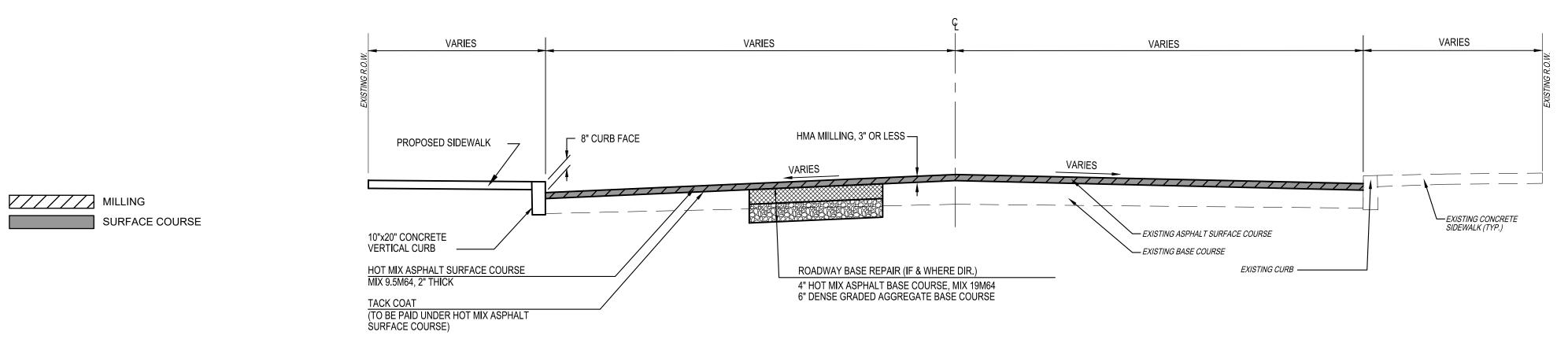
ORIGINAL SIGNATURE:

PRINTED NAME AND TITLE:

DATE:

**ADDENDUM NO. 1 DATED: 5/26/2023** 

	ESTIMATE OF QUANTITIES		
ITEM	DESCRIPTION	APPE	ROX.
NO	DESCRIPTION	QTY	UNIT
1	PORTABLE VARIABLE MESSAGE SIGN	4	UNIT
2	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	2	UNIT
3	BREAKAWAY BARRICADE	100	UNIT
4	DRUM	100	UNIT
5	TRAFFIC CONE	1,000	UNIT
6	CONSTRUCTION SIGNS	2,400	S.F.
7	TRAFFIC DIRECTOR, FLAGGER	500	HOUR
8	TRAFFIC DIRECTOR, UNIFORM POLICE	1	ALLOW.
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	635	CY
10	HMA MILLING, 3" OR LESS	250,497	SY
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	500	CY
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	1,895	SY
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	28,760	TON
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	1,470	TON
15	FUEL PRICE ADJUSTMENT	1	DOLL.
16	ASPHALT PRICE ADJUSTMENT	1	DOLL.
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	750	SY
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	500	LF
19	CURB PIECE	27	UNIT
20	BICYCLE SAFE GRATE	18	UNIT
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	661	UNIT
22	RESET WATER VALVE BOX	254	UNIT
23	INLET, TYPE B	1	UNIT
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	3	UNIT
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	43	UNIT
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	25	UNIT
27	10"X20" CONCRETE VERTICAL CURB	6,765	LF
28	GRANITE CURB	420	LF
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	855	SY
30	CONCRETE SIDEWALK, 4" THICK	1,345	SY
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	1,080	SY
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	164	SY
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	55	SY
34	TRAFFIC STRIPES, 4"	135,635	LF
35	TRAFFIC STRIPES, 6"	11,525	LF
36	TRAFFIC STRIPES, 8"	14,835	LF
37	TRAFFIC MARKINGS, SYMBOLS	6,750	SF
38	TRAFFIC MARKING, LINES, 12"	20,045	LF
39	TRAFFIC MARKING, LINES, 24"	3,455	LF
40	REGULATORY AND WARNING SIGN	320	SF
41	SOLAR FLASHING LED CROSSING SIGN	2	UNIT
42	RPM, MONO-DIRECTIONAL, AMBER LENS	100	UNIT
43	RPM, BI-DIRECTIONAL, AMBER LENS	1,000	UNIT
44	TOPSOIL SPREADING, 4" THICK	2,810	SY
45	FERTILIZING AND SEEDING, TYPE A	2,810	SY
46	STRAW MULCHING	2,810	SY
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	85,000	LF
48	CLEARING SITE	1	LS
49	FINAL CLEANUP	1	LS

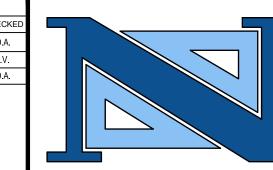


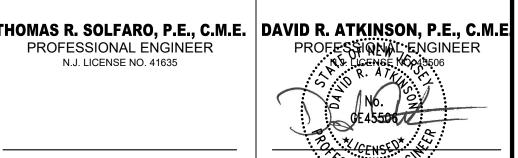
# **TYPICAL ROAD SECTION**

NOT TO SCALE

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REVISIONS REVISED PER NJDOT COMMENT LETTER 2023/03/20 J.V. J.V. D.A. ISSUED FOR BID 2023/05/16





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
LYNDHURST
FAX: 201-939-0846

A SSOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

**2023 ROAD RESURFACING PROJECT** (CA-2022)
VARIOUS MUNICIPALITIES

 NO SEPARATE PAYMENT WILL BE MADE FOR TACK COAT AND PRIME COAT. THE COST FOR ALL LABOR, EQUIPMENT, AND MATERIALS ASSOCIATED THEREWITH SHALL BE INCLUDED IN THE UNIT PRICE FOR VARIOUS BITUMINOUS PAYMENT ITEMS. TACK COAT

SECTION 401.03.06 OF THE 2019 NJDOT SPECIFICATIONS.

SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 401.03.05 OF THE 2019 NJDOT SPECIFICATIONS. PRIME COAT SHALL BE CONSTRUCTED IN ACCORDANCE WITH

• WHERE PROPOSED PAVEMENT ABUTS EXISTING PAVEMENT, A CLEAN JOINT SHALL BE

COSTS FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE

ASPHALT DRIVEWAYS SHALL CONSIST OF 2" HOT MIX ASPHALT SURFACE COURSE AND

IN THE UNIT PRICE BID FOR HOT MIX ASPHALT DRIVEWAY REPAIR.

CONTRACTOR TO COORDINATE CURB GRADES WITH DESIGN ENGINEER DURING

4" HOT MIX ASPHALT BASE COURSE. THE COSTS FOR THIS WORK SHALL BE INCLUDED

PROVIDED USING SAWCUTTING METHODS AND APPROPRIATE BUTT JOINTS. THE

**NEW JERSEY UNION COUNTY** 3.00 UNIOCTY22.010 SCALE: N.T.S.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000 **QUANTITIES & TYPICAL ROAD SECTION** 

PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

PROPOSAL.

CONSTRUCTION.

NOTES:

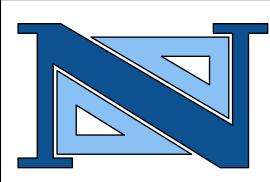
# TOWN OF WESTFIELD

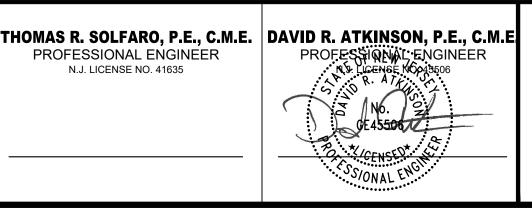
							ADA R	AMPS						
			CURB RAMP LAYOUT					QUANTITIES						
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	I GRANITE CURRI	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	REINFORCED 6"	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK	
2+75	LT	1			Х		30				5	1	20	
2+75	RT	1			Х		25				5	1	15	
3+17	LT	1			Х		30				5	1	15	
3+17	RT	1			Х		25				5	1	10	
10+71	LT	1	Х				30				5	1	10	
10+72	RT	1			Х		30				5	1	25	
11+32	RT	1			Х		25				5	1	15	
14+51	RT	6	Х				30				10	1	15	
20+12	RT	4	Х				35				10	1	15	

		INLET TYP	ES & LOCA	TIONS						
			QUANTITY							
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET				
1+82	LT	Α				Х				
2+52	LT	Α				Х				
2+62	LT	В	Х	Χ		Х				
2+78	RT	В				Х				
2+80	LT	В	Х	Χ		Х				
5+11	LT	В		Χ		Х				
5+50	RT	В	Х	Χ		Х				
5+81	LT	В	X	Χ		Х				
6+43	LT	В	Х	Χ		Х				
8+48	LT	В				Х				
8+65	RT	В				Х				
13+79	LT	В				Х				
19+29	LT	В				Х				
18+65	LT	В				Х				
24+12	RT	В	Х			Х				

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTIT
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	13,670
4.4	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	0)/	
11	DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	SY	105
12	& WHERE DIRECTED)	51	105
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,580
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	80
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	6
20	BICYCLE SAFE GRATE	UNIT	6
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	74
22	RESET WATER VALVE BOX	UNIT	23
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	280
28	GRANITE CURB	LF	190
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	140
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	55
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	9
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	6,615
35	TRAFFIC STRIPES, 6"	LF	1,465
36	TRAFFIC STRIPES, 8"	LF	1,300
37	TRAFFIC MARKINGS, SYMBOLS	SF	620
38	TRAFFIC MARKING, LINES, 12"	LF	1,665
39	TRAFFIC MARKING, LINES, 24"	LF	425
40	REGULATORY AND WARNING SIGN	SF	20
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
46	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	1
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
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LYNDHURST
FAX: 201-939-0846

A SSOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

EAST BROAD STREET QUANTITY SHEE 2023 ROAD RESURFACING PROJECT	T
(CA-2022)	
(CA-2022)	
TOWN OF WESTFIELD	
JNION COUNTY NEW JERS	SE

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

CHECKED BY: D.R.A.
SCALE: 4.00 UNIOCTY22.010

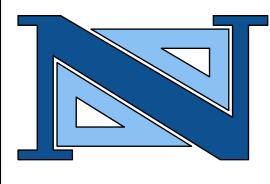
# CITY OF PLAINFIELD

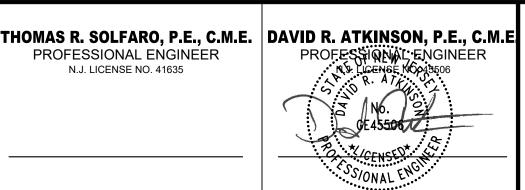
							ADA F	RAMPS							
				CURB RAMP LAYOUT QUANTITIES											
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK 4" THICK		
0+17	LT	1			X		20		15		5	1			
0+20	RT	1			Х		20		10		5	1			
0+70	LT	1			Х		25		20		5	1			
0+74	RT	1			Х		20		10		5	1			
7+67	LT	1			Х		20				5	1	15		
7+67	RT	1			Х		20				5	1	15		
8+33	LT	1			Х		20				5	1	15		
8+33	RT	1			Х		20				5	1	15		
14+56	LT	1			Х		20				5	1	10		
14+56	RT	1	X				20				10	1	15		
14+98	LT	1			Х		20				10	1	15		
19+85	RT	7			X		25				10	1	10		
19+97	LT	1			X		25				10	1	15		
20+37	LT	1			X		25				15	1	10		
20+48	RT	1			X		30				10	1	10		
34+26	RT	1			X		20				10	1	10		
34+66	RT	6	X				25				5	1	10		
41+07	LT	1	^		X		20				10	1	10		
50+94	RT	1			X		20				5	1	10		
51+42	RT	6	X		^		20					1	10		
54+87	RT	6	X				20				10 5	1	5		
55+33 58+85	RT RT	6	X		X		20				10	1	10		
		1	V		^						10	1	5		
59+09	LT	6	X		V		15				5	1	5		
59+47	LT	1			X		15				10	1	10		
64+85	RT				X		15				10	1	10		
64+91	LT	1			X		25				5	1	10		
65+33	RT	1			X		20				10	1	5		
65+42	LT	1			X		25				10	1	10		
68+41	RT	1			X		15				5	1	10		
68+76	RT	1			X		20				5	1	10		
68+95	LT	1			X		20				10	1	5		
69+18	LT	5	X				20				5	1	5		
70+37	LT	5	X				20				5	1	5		
70+61	LT	6	X				15				10	1	10		
71+46	RT	1			Х		20				5	1	10		
71+48	LT	1	X				20				10	1	15		
71+84	RT	1			X		20			ļ	5	1	10		
74+51	RT	1			X		20				5	1	10		
74+85	RT	5	X				20				5	1	5		
85+26	RT	5	X				20				5	1	5		
85+59	RT	5	X				20				5	1	10		
86+12	LT	5	X				15				5	1	5		
86+53	LT	5	X				15				5	1	10		
88+97	LT	5	X				15				5	1	5		
89+31	LT	5	X				20				5	1	5		
91+89	LT	1			Х		20				5	1	5		
92+25	LT	1			Х		20				5	1	10		

		INLET TYP	PES & LOCAT	ΓIONS						
				QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESE				
0+20	LT	Α				Х				
0+22	RT	Α				Х				
0+81	LT	В				Х				
0+87	RT	В				Х				
3+83	RT	В				Х				
4+49	RT	В				Х				
15+10	RT	В				Х				
20+74	RT	В				Х				
23+76	RT	В				Х				
35+77	RT	В				Х				
48+64	LT	В				Х				
65+45	RT	В				Х				
65+56	LT	В				Х				
92+40	LT	В				Х				

ITEM	TO DE CONCEDUCED	LINUT	OLIANITITY.
NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	42,947
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	CY	
11	DIRECTED)	Ci	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	SY	325
	& WHERE DIRECTED)		323
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	4,955
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	250
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	111
22	RESET WATER VALVE BOX	UNIT	27
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	2
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	37
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	1,750
28	GRANITE CURB	LF	,
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	415
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	335
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	48
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	55
34	TRAFFIC STRIPES, 4"	LF	27,890
35	TRAFFIC STRIPES, 6"	LF	610
36	TRAFFIC STRIPES, 8"	LF	3,115
37	TRAFFIC MARKINGS, SYMBOLS	SF	520
38	TRAFFIC MARKING, LINES, 12"	LF	4,070
39	TRAFFIC MARKING, LINES, 24"	LF	310
40	REGULATORY AND WARNING SIGN	SF	80
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	-
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	400
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	400
46	STRAW MULCHING	S.Y.	400
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
			<del> </del>
48	CLEARING SITE	L.S.	

REVISIONS 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
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LYNDHURST
FAX: 201-939-0846

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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**EAST FRONT STREET QUANTITY SHEET 2023 ROAD RESURFACING PROJECT** (CA-2022) CITY OF PLAINFIELD **UNION COUNTY NEW JERSEY** 

PROJECT NO.:

UNIOCTY22.010

SHEET INC...

DATE: DECEMBER 1, 202

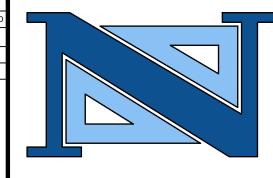
							ADA R	AMPS						
				CURB RAN	/IP LAYOUT			QUANTITIES						
STATION	OFFSET (LT/RT)		PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK	
5+21	LT	1	Х				20				15	2	10	
24+18	LT	1			Х		25				5	1	5	
24+19	RT	1			Х		25				5	1	5	
24+60	RT	1			Х		25				10	1	5	
24+61	LT	1			Х		25				10	1	15	
37+97	LT	1			Х		20				5	1	10	
37+98	RT	1			Х		20				10	1	10	
38+39	LT	1			Х		20				10	1	10	
38+39	RT	1			Х		20				10	1	10	
42+56	LT	1			Х		25				5	1	5	
42+60	RT	1			Х		20				5	1	5	
43+00	RT	1			Х		25				5	1	10	
43+01	LT	1			Х		25				5	1	5	
52+16	LT	5	X				20				5	1	5	
52+19	RT	1			Х		20				5	1	5	
57+19	RT	3	X				25				5	1	10	
59+83	LT	3	X				20				5	1	10	
59+86	RT	3	X				20				5	1	10	
68+90	LT	1			Х		15				5	1	10	
69+30	LT	5			Х		15				5	1	5	
74+51	RT	1			Х		15				10	1		
74+77	RT	1	X				15				5	1		
74+87	RT	1	X				15				5	1		
75+02	LT	1	Х				15				5	1	5	

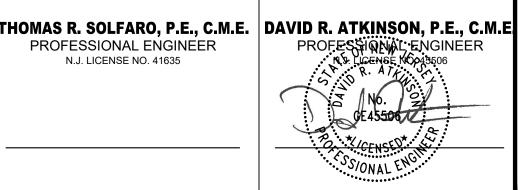
		INLETTYF	PES & LOCAT			
				QUA	NTITY	1
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
0+03	RT	В				Х
0+06	LT	В				Х
0+75	RT	В				Х
0+76	LT	В				Х
4+49	RT	В				Х
4+51	LT	В				Х
4+66	RT	В				Х
5+16	RT	В				Х
5+35	RT	В				Х
13+66	RT	В				Х
13+80	LT	В				Х
21+73	LT	В				Х
22+07	RT	Α	Х			
22+18	LT	В				Х
24+71	RT	В				Х
24+72	LT	В				Х
29+31	LT	В				Х
33+16	LT	В				Х
33+18	RT	В				Х
37+87	LT	В				Х
37+87	RT	В				Х
38+53	LT	В				Х
43+11	LT	В	Х	Х		
47+72	RT	В				Х
47+73	LT	В				Х
52+33	RT	В		Х		Х
68+31	LT	В	Х	Х		
69+54	RT	В	Х	Х		
74+49	RT	Α	Х			
74+90	LT	В		Х		Х

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTI <sup>*</sup>
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
 8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	31,055
	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	_	01,000
11	DIRECTED)	CY	
	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF		
12	& WHERE DIRECTED)	SY	235
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	3,585
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	180
15	FUEL PRICE ADJUSTMENT	DOLL.	, , , ,
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	7
20	BICYCLE SAFE GRATE	UNIT	5
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	84
22	RESET WATER VALVE BOX	UNIT	39
23	INLET, TYPE B	UNIT	39
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	5
			5
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	0.45
27	10" X 20" CONCRETE VERTICAL CURB	LF	945
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	165
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	160
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	25
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	20,93
35	TRAFFIC STRIPES, 6"	LF	580
36	TRAFFIC STRIPES, 8"	LF	2,620
37	TRAFFIC MARKINGS, SYMBOLS	SF	795
38	TRAFFIC MARKING, LINES, 12"	LF	3,190
39	TRAFFIC MARKING, LINES, 24"	LF	200
40	REGULATORY AND WARNING SIGN	SF	20
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	250
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	250
46	STRAW MULCHING	S.Y.	250
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID





NEGLIA ENGINEERING ASSOCIATES
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PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

LOCUST STREET, TUCKER AVENUE & FREEMAN CIRCLE QUANTITY SHEET **2023 ROAD RESURFACING PROJECT** (CA-2022)
BOROUGH OF ROSELLE PARK / BOROUGH OF ROSELLE / TOWNSHIP OF UNION

**UNION COUNTY NEW JERSEY** PROJECT NO.:

UNIOCTY22.010

DATE: DECEMBER 1, 207

							ADA F	RAMPS					
				CURB RAN	/IP LAYOUT					QUANT	TITIES		
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
6+34	LT	7			X		30				10	1	10
6+81	LT	7			X		30				10	1	10
9+45	RT	5	X				20				10	1	
11+47	LT	1			X		25				5	1	10
11+57	RT	5	X				20				10	1	
13+56	LT	5	X				20				5	1	5
13+97	LT	5	X				20				5	1	5
15+12	RT	5	X				20				5	1	5
15+55	RT	5	X				20				5	1	5
16+06	LT	5	X				15				5	1	5
16+49	LT	5	X				20				10	1	
18+56	LT	5	X				20				10	1	
18+98	LT	5	X				15				5	1	5
19+82	RT	1			X		30				5	1	10
20+16	RT	1,5				X	30				10	2	5
20+29	LT	1	X				20				5	1	10
21+04	LT	5					20				5	1	5
21+50	LT	1			X		20				5	1	5
23+61	LT	1			X		20				5	1	10
23+97	LT	1			X		20				5	1	10
30+47	LT	1			Х		20				5	1	5
31+69	RT	1				X	35				10	2	25
36+17	RT	7				X	30				10	2	5
45+98	RT	5	X				15				5	1	5
46+39	RT	5	X				20				5	1	5
48+57	RT	5	X				20				5	1	5
48+94	RT	7			X		20				5	1	10
51+16	RT	7			X		20				15	1	10
51+31	LT	7			Х		25				10	1	10
51+67	RT	7			Х		20				10	1	5
51+86	LT	1			Х		25				5	1	10
56+46	LT	5	X				20				5	1	5
56+85	LT	5	X				20				10	1	10

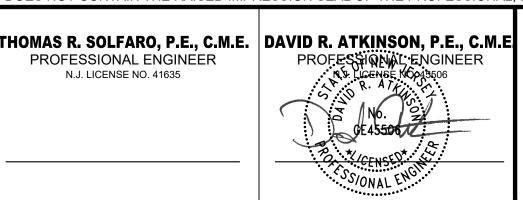
		INLET TYP	ES & LOCA	TIONS		
				QUA	NTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESE <sup>*</sup>
1+29	RT	В				х
2+78	RT	В				х
8+10	LT	В				Х
8+99	RT	В				Х
11+01	RT	В				Х
11+03	LT	E				Х
13+48	LT	В				Х
14+94	RT	В				Х
16+02	LT	В				Х
18+51	LT	В				Х
19+73	RT	В				Х
21+02	LT	В				Х
21+80	LT	В				Х
21+82	RT	В				Х
23+51	LT	В				Х
24+06	LT	В				Х
26+10	LT	В				Х
30+42	LT	В				Х
30+53	LT	В		Х		Х
31+00	RT	В				Х
31+19	RT	В				Х
31+89	RT	В				Х
35+70	RT	В				Х
39+45	RT	В				Х
39+82	LT	В				Х
51+02	RT	В				Х
51+04	LT	В				Х
54+73	RT	В				Х
54+80	LT	В				Х
54+84	LT	В				Х
56+42	LT	В				Х
56+87	LT	В				Х
60+63	LT	В				Х
60+82	RT	В				Х
61+14	LT	В				Х

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	31,515
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	240
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	3,640
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	185
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	1
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	101
22	RESET WATER VALVE BOX	UNIT	59
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	1,185
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	250
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	230
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	35
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	17,595
35	TRAFFIC STRIPES, 6"	LF	535
36	TRAFFIC STRIPES, 8"	LF	2,135
37	TRAFFIC MARKINGS, SYMBOLS	SF	565
38	TRAFFIC MARKING, LINES, 12"	LF	3,095
39	TRAFFIC MARKING, LINES, 24"	LF	555
	REGULATORY AND WARNING SIGN	SF	40
<u> </u>	SOLAR FLASHING LED CROSSING SIGN	UNIT	
	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	270
	FERTILIZING AND SEEDING, TYPE A	S.Y.	270
46	STRAW MULCHING	S.Y.	270
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
	CLEARING SITE FINAL CLEANUP	L.S.	
49		1.8	

REVISIONS

REVISED PER NJDOT COMMENT LETTER

2023/03/20



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**WESTFIELD AVENUE QUANTITY SHEET 2023 ROAD RESURFACING PROJECT** (CA-2022)
TOWNSHIP OF CLARK / CITY OF RAHWAY **UNION COUNTY NEW JERSEY** 

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

UNIOCTY22.010 DATE: DECEMBER 1, 20

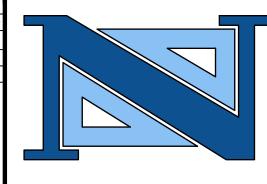
### TOWNSHIP OF CRANFORD

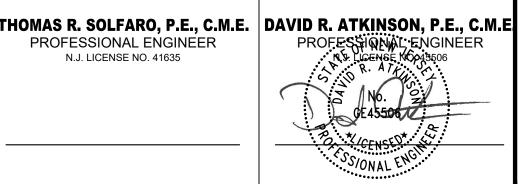
							ADA R	AMPS								
		CURB RAMP LAYOUT							QUANTITIES							
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. /ERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK			
26+30	LT	1			Х		20				5	1	10			
27+00	RT	1			Х		15				10	1	15			
27+44	RT	1			Х		15				5	1	15			
56+83	LT	5	Х				30				15	1				
57+17	LT	1			Х		25				5	1	10			
60+14	RT	7			Х	30					5	1	10			
60+71	RT	1			Х		30				5	1	10			

1		INLET TYP	ES & LOCA			
				QUAI	VTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
3+24	RT	В				Х
3+33	LT	В				Х
4+87	LT	В				Х
5+43	RT	Α				Х
5+74	LT	В				Х
6+16	RT	Α				Х
12+80	LT	В		Х		Х
13+30	RT	В		Х		Х
14+08	RT	Α				Х
16+21	LT	В				Х
16+21	RT	В				Х
16+77	LT	В				Х
16+84	RT	В				Х
17+04	RT	В				Х
17+06	RT	В				Х
17+11	RT	В	Х	Х		Х
19+88	RT	В				Х
19+94	LT	В				Х
25+74	LT	В				Х
26+39	LT	В				Х
26+80	RT	В				Х
29+48	RT	В				Х
29+49	LT	В				Х
30+16	RT	В				Х
33+99	RT	В				Х
38+61	RT	В				Х
44+39	RT	В				Х
45+53	RT	В				Х
48+94	RT	В	Х			Х
59+99	RT	В				Х
60+88	RT	В				Х
60+99	LT	В				Х
64+85	RT	В				Х
65+51	LT	В				Х
66+23	RT	В	Х	Х		Х

ITEM	TO BE CONSTRUCTED	UNIT	QUANTI
NO.		LINIT	
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	20.70
10	HMA MILLING, 3" OR LESS	SY	36,790
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	275
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	4,225
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	215
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	4
20	BICYCLE SAFE GRATE	UNIT	3
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	114
22	RESET WATER VALVE BOX	UNIT	41
23	INLET, TYPE B	UNIT	41
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)		
26		UNIT	705
27	10" X 20" CONCRETE VERTICAL CURB	LF	725
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	70
30	CONCRETE SIDEWALK, 4" THICK	SY	70
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	50
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	7
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF · -	16,17
35	TRAFFIC STRIPES, 6"	LF	1,545
36	TRAFFIC STRIPES, 8"	LF	1,905
37	TRAFFIC MARKINGS, SYMBOLS	SF	1,305
38	TRAFFIC MARKING, LINES, 12"	LF · -	3,325
39	TRAFFIC MARKING, LINES, 24"	LF	645
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	170
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	170
46	STRAW MULCHING	S.Y.	170
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

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PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**CENTENNIAL AVENUE QUANTITY SHEET 2023 ROAD RESURFACING PROJECT** (CA-2022)
TOWNSHIP OF CRANFORD **UNION COUNTY NEW JERSEY** 

PROJECT NO.:

UNIOCTY22.010

DATE: DECEMBER 1, 207 8.00

### **BOROUGH OF NEW PROVIDENCE**

	ADA RAMPS														
			CURB RAMP LAYOUT					QUANTITIES							
STATION	OFFSET	CURB RAMP					10"X20" CONC.		RESET BRICK	12" X 13"	CONC. SIDEWALK,	DETECTABLE WARNING	CONC. SIDEWALK,		
	(LT/RT)	TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	VERTICAL CURB	I GRANITE CURB I	PAVERS	CONCRETE SLOPING CURB	REINFORCED 6"	SURFACE	4" THICK		
8+08	LT	1			Х		30			SEOTHIO COND	5	1			
8+49	RT	1			Х		25				5	1			
54+29	LT	1			Х		20				5	1	5		
55+03	LT	1			Х		20				10	1			

		IINLEI IIF	PES & LOCAT						
			QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET			
0+97	RT	В				Х			
1+00	LT	В				Х			
8+84	LT	В				Х			
8+88	RT	В				Х			
12+46	LT	В				Х			
12+51	LT	В				Х			
15+88	LT	В				X			
15+92	LT	В				Х			
16+16	RT	В				X			
16+21	RT	В				X			
19+27	LT	В				X			
19+32	LT	В				X			
20+02	LT	В				Х			
20+07	RT	В				Х			
20+12	RT	В				Х			
22+92	LT	В				Х			
35+78	RT	В				X			
35+80	LT	В				Х			
42+62	RT	В				X			
43+50	LT	В		Χ		X			
43+71	LT	В		Χ		Х			
43+77	RT	В		Χ		Х			
48+75	LT	В				Х			
48+75	RT	В				Х			

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
<del>9</del> 10	HMA MILLING, 3" OR LESS	SY	29,815
10	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	31	29,015
11	DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	225
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	3,440
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	175
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	3
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	73
22	RESET WATER VALVE BOX	UNIT	19
23	INLET, TYPE B	UNIT	10
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	475
	GRANITE CURB	LF	4/5
28		SY	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	_	10
30	CONCRETE SIDEWALK, 4" THICK	SY	10
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	25
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	4
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	14,765
35	TRAFFIC STRIPES, 6"	LF	4,240
36	TRAFFIC STRIPES, 8"	LF	750
37	TRAFFIC MARKINGS, SYMBOLS	SF · =	905
38	TRAFFIC MARKING, LINES, 12"	LF	970
39	TRAFFIC MARKING, LINES, 24"	LF	700
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	110
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	110
46	STRAW MULCHING	S.Y.	110
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
40	CLEARING SITE	L.S.	
48			

NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
LYNDHURST
FAX: 201-939-0846

A SSOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

**DIAMOND HILL ROAD QUANTITY SHEET 2023 ROAD RESURFACING PROJECT** (CA-2022)

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**NEW JERSEY** 

TOWNSHIP OF BERKELEY HEIGHTS / BOROUGH OF NEW PROVIDENCE **UNION COUNTY** PROJECT NO.:

UNIOCTY22.010

| DATE: DECEMBER 1, 20'

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

		REVISIONS				
NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	
1.	2023/03/20	REVISED PER NJDOT COMMENT LETTER	J.V.	J.V.	D.A.	
2.	2023/05/16	ISSUED FOR BID	J.V.	J.V.	J.V.	
3.	2023/05/26	ADDENDUM NO. 1	J.V.	J.V.	D.A.	
	l					Ĺ

THOMAS R. SOLFARO, P.E., C.M.E.

PROFESSIONAL ENGINEER

N.J. LICENSE NO. 41635

DAVID R. ATKINSON, P.E., C.M.E.

PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER

OR A TKINSON, P.E., C.M.E.

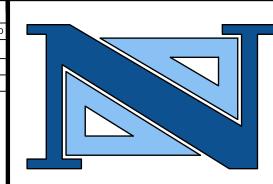
							ADA R	AMPS					
				CURB RAMP LAYOUT						QUAN	FITIES		
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
0+26	LT	5	Х				25				5	1	5
0+72	LT	5	Х				20				5	1	5
5+04	LT	5	Х				30				5	1	5
5+48	LT	5	Х				30				5	1	5
19+39	LT	5	Х				20				5	1	5
20+00	LT	5	Х				20				5	1	5
29+24	LT	5	Х				20				5	1	5
29+76	LT	5	Х				20				5	1	10

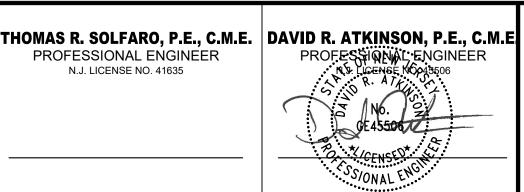
		INLET TYP	ES & LOCA	TIONS		
				QUA	NTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	F
5+95	RT	В				
6+93	LT	В				
7+95	LT	В				
7+96	RT	В				
10+50	RT	В				
17+08	RT	В				
18+02	RT	В		Χ		
19+91	LT	В				
19+91	RT	В				
19+96	LT	В				
19+96	RT	В				
21+43	LT	В				
22+11	LT	В				
30+69	LT	В		Χ		
31+68	RT	В		Χ		

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	12,825
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	,=
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	SY	100
40	& WHERE DIRECTED)	TON	4 400
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,480
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	75
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	0
19	CURB PIECE	UNIT	3
20	BICYCLE SAFE GRATE	UNIT	0.5
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	35
22	RESET WATER VALVE BOX	UNIT	14
23	INLET, TYPE B	UNIT	1
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	205
28	GRANITE CURB	LF	230
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	40
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	45
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	8
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	11,955
35	TRAFFIC STRIPES, 6"	LF	
36	TRAFFIC STRIPES, 8"	LF	440
37	TRAFFIC MARKINGS, SYMBOLS	SF	230
38	TRAFFIC MARKING, LINES, 12"	LF	515
39	TRAFFIC MARKING, LINES, 24"	LF	15
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
46	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

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LYNDHURST
FAX: 201-939-0846

A SSOCIATES
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E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

	LTUSROL RO 23 ROAD RES (C	•		
	SUMMIT / TO COUNTY		SPRING NEW JEF	
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.:	SHEET NO.:	40.00
DESIGNED BY: J.V.	SCALE:	UNIOCTY22	2.010	10.00
FIELD BOOK NO.:	PAGE:	DA <sup>-</sup>	TE: DECEMBER 1, 2022	

# CITY OF PLAINFIELD

							ADA R	AMPS						
			CURB RAMP LAYOUT					QUANTITIES						
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	I CONVILLE CLIDD I	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	REINFORCED 6"	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK	
17+25	LT	5	X				20				5	1	5	
17+25	RT	5	X				20				10	1		
17+28	LT	2	X				20				5	1	5	
17+59	LT	2	X				20				5	1	10	

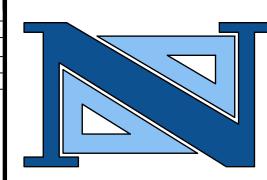
		INI FT TYP	ES & LOCA	TIONS		
				1AUQ	VTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
1+76	LT	Α	Х			Х
2+08	RT	В	Х			Х
2+30	RT	В				Х
4+98	LT	Α				Х

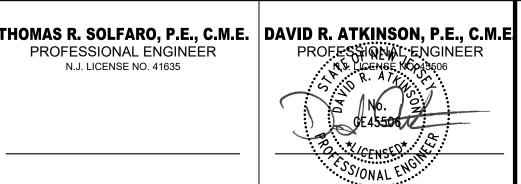
ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	135
10	HMA MILLING, 3" OR LESS	SY	-
10		31	8,765
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	SY	65
12	& WHERE DIRECTED)	51	05
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,010
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	55
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	
20	BICYCLE SAFE GRATE	UNIT	2
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	8
22	RESET WATER VALVE BOX	UNIT	
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	1
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	1
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	80
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	855
30	CONCRETE SIDEWALK, 4" THICK	SY	20
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	25
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	4
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	T
34	TRAFFIC STRIPES, 4"	LF	705
35	TRAFFIC STRIPES, 6"	LF	700
36	TRAFFIC STRIPES, 8"	LF	365
37	TRAFFIC MARKINGS, SYMBOLS	SF	705
38	TRAFFIC MARKING, LINES, 12"	LF	500
39	TRAFFIC MARKING, LINES, 24"	LF	30
40	REGULATORY AND WARNING SIGN	SF	60
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	2
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	500
45	FERTILIZING AND SEEDING, TYPE A	S. Y.	500
45	STRAW MULCHING	S.Y.	500
46	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE		300
	CLEARING SITE	L.F.	
48		L.S.	
49	FINAL CLEANUP	L.S.	

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS DRAWN DESIGNED CHECKER

J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID







MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

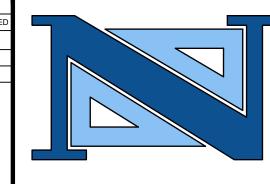
PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

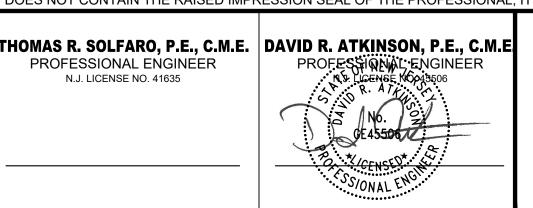
MATH	EWSON DRIVE, 2023 RO	AD RESU				
		CITY OF		IELD		
UN	ION COUN	NTY		NE	W JER	SEY
DRAWN BY: J.V	CHECKE	ED BY: D.R.A.	PROJECT NO.:		SHEET NO.:	11.00
DESIGNED BY:	J.V. SCALE:		UNIO	CTY22.010		11.00
FIELD BOOK NO.	:	PAGE:	·	DATE: DECEMB	ER 1, 2022	

### TOWNSHIP OF BERKELEY HEIGHTS

ITEM	TO BE CONSTRUCTED	UNIT	QUANTITY
NO.		_	
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	7.005
10	HMA MILLING, 3" OR LESS	SY	7,265
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	55
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	835
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	45
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	
22	RESET WATER VALVE BOX	UNIT	
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	
35	TRAFFIC STRIPES, 6"	LF	1,210
36	TRAFFIC STRIPES, 8"	LF	
37	TRAFFIC MARKINGS, SYMBOLS	SF	135
38	TRAFFIC MARKING, LINES, 12"	LF	
39	TRAFFIC MARKING, LINES, 24"	LF	15
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	500
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	500
46	STRAW MULCHING	S.Y.	500
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	OL FADINO OITE	1 0	1
	CLEARING SITE	L.S.	

REVISIONS 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
LYNDHURST
FAX: 201-939-0846

A SSOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000 **CATARACT HOLLOW ROAD QUANTITY SHEET** 

**2023 ROAD RESURFACING PROJECT** (CA-2022)
TOWNSHIP OF BERKELEY HEIGHTS

**UNION COUNTY NEW JERSEY** PROJECT NO.:

UNIOCTY22.010

SHEET NO.:

DATE: DECEMBER 1, 202' 12.00

# TOWNSHIP OF CLARK

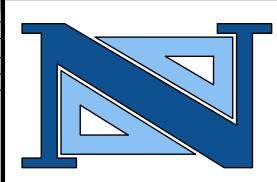
							ADA R	AMPS							
		CURB RAMP TYPE	CURB RAMP LAYOUT					QUANTITIES							
STATION	OFFSET (LT/RT)		PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK		
1+45	RT	1			Х		25				10	1	15		
5+11	LT	1			Х		25				5	1	10		
5+74	LT	1			X		25				5	1	10		
9+41	RT	1			Х		30				10	1	10		
9+47	LT	7	Х				15				10	1			
9+96	LT	7	Х				15				10	1			
10+11	RT	1			Х		30				10	1	10		
13+80	RT	1			Х		30				5	1	10		
14+31	RT	1			Х		30				5	1	10		
16+74	LT	5	Х				30				5	1	5		
17+33	LT	1			X		30				5	1	10		
18+96	RT	1			Х		25				5	1	5		
19+53	RT	1			Х		25				5	1	10		
19+64	LT	5	Х				20				5	1	5		
20+30	LT	5	Х				25				5	1	10		

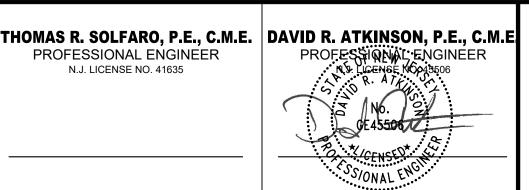
		INLET TYP	ES & LOCA	TIONS		
				QUAI	YTITV	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
13+59	LT	В				Х
13+63	RT	В				Х
13+78	LT	ROUND				Х
19+28	LT	В				Х
19+60	RT	В			·	Х
25+82	LT	В				Х
26+79	LT	Α				Х

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTI <sup>*</sup>
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	17,390
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	,
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	130
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	2,080
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	105
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	29
22	RESET WATER VALVE BOX	UNIT	27
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	480
28	GRANITE CURB	LF	1
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	120
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	100
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	15
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	6,840
35	TRAFFIC STRIPES, 6"	LF	1,070
36	TRAFFIC STRIPES, 8"	LF	1,265
37	TRAFFIC MARKINGS, SYMBOLS	SF	755
38	TRAFFIC MARKING, LINES, 12"	LF	1,545
39	TRAFFIC MARKING, LINES, 24"	LF	435
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	110
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	110
46	STRAW MULCHING	S.Y.	110
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000 **RARITAN ROAD QUANTITY SHEET** 

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
LYNDHURST
FAX: 201-939-0846

A S S O C I A T E S
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

202	2023 ROAD RESURFACING PROJECT (CA-2022) TOWNSHIP OF CLARK							
UNION	COUNTY	NEW JERSE	EY					
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.:	.00					
DESIGNED BY: J.V.	SCALE:	UNIOCTY22.010 <b>13</b>	.00					
FIELD BOOK NO.:	PAGE:	DATE: DECEMBER 1, 2022						

# TOWNSHIP OF UNION

	ADA RAMPS												
CURB RAMP LAYOUT QUANTITIES													
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	I GRANITE CURRI	PAVFRS	12" X 13" CONCRETE SLOPING CURB	REINFORCED 6"	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
3+72	RT	5	X				30				5	1	10
4+20	RT	5	X				30				5	1	10

INLET TYPES & LOCATIONS								
				QUAI	YTITY			
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET		
9+05	RT	В				Х		
9+10	RT	В				Х		
9+36	LT	В				Х		
9+71	RT	В				Х		
9+82	LT	В				Х		
18+94	LT	В				Х		
19+33	RT	В				Х		
19+66	RT	В				Х		
20+39	LT	В				Х		

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	9,630
10	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	31	9,030
11	DIRECTED)	CY	
	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF		
12	& WHERE DIRECTED)	SY	75
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,110
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	60
15	FUEL PRICE ADJUSTMENT	DOLL.	00
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	
20	BICYCLE SAFE GRATE	UNIT	11
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	11
22	RESET WATER VALVE BOX	UNIT	2
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	210
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	20
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	10
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	2
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	6,745
35	TRAFFIC STRIPES, 6"	LF	185
36	TRAFFIC STRIPES, 8"	LF	335
37	TRAFFIC MARKINGS, SYMBOLS	SF	195
38	TRAFFIC MARKING, LINES, 12"	LF	385
39	TRAFFIC MARKING, LINES, 24"	LF	90
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
46	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

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NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

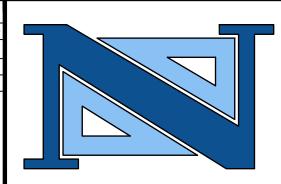
202	(0	SURFACING PROJECT CA-2022)	
UNION	COUNTY	HIP OF UNION NEW JERS	ΕY
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.:	4.00
DESIGNED BY: J.V. FIELD BOOK NO.:	SCALE: PAGE:	UNIOCTY22.010 DATE: DECEMBER 1, 2022	T. UU

**CHESTNUT STREET QUANTITY SHEET** 

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS DRAWN DESIGNED CHECKER

J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID



THOMAS R. SOLFARO, P.E., C.M.E.

PROFESSIONAL ENGINEER

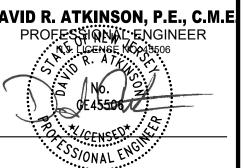
N.J. LICENSE NO. 41635

DAVID R. ATKINSON, P.E., C.M.E.

PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER



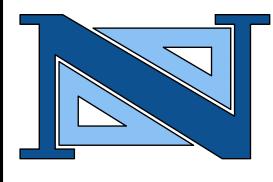
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

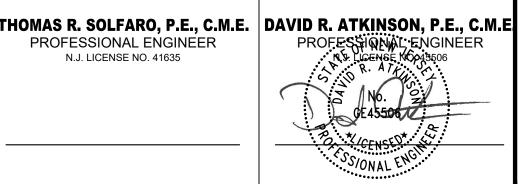
### TOWNSHIP OF SPRINGFIELD

	INLET TYPES & LOCATIONS									
				QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET				
1+07	LT	В				Х				
1+07	RT	В		Х		Х				
3+23	RT	В				Х				
6+98	LT	4X4				Х				
12+70	LT	В				Х				
12+70	RT	В				Х				

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	4,725
	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE		,,
11	DIRECTED)	CY	
1.5	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF		
12	& WHERE DIRECTED)	SY	35
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	345
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	20
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	1
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	6
22	RESET WATER VALVE BOX	UNIT	<del>                                     </del>
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	100
28	GRANITE CURB	LF	100
20 29		SY	
30	HOT MIX ASPHALT SIDEWALK, 2" THICK CONCRETE SIDEWALK, 4" THICK	SY	
31	'	SY	
32	CONCRETE SIDEWALK, REINFORCED 6" THICK DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	2,220
35	TRAFFIC STRIPES, 4"	LF	85
36	TRAFFIC STRIPES, 8"	LF	05
37	TRAFFIC MARKINGS, SYMBOLS	SF	10
38	TRAFFIC MARKINGS, STIVIBOLS  TRAFFIC MARKING, LINES, 12"	LF	10
39	TRAFFIC MARKING, LINES, 12 TRAFFIC MARKING, LINES, 24"	LF LF	20
40	REGULATORY AND WARNING SIGN	SF	20
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42 43	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	1
	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	100
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A STRAW MULCHING	S.Y.	100
46		S.Y.	100
47 48	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE  CLEARING SITE	L.F. L.S.	
		L.O.	1

REVISIONS 2023/03/20 REVISED PER NJDOT COMMENT LETTER ISSUED FOR BID





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FAX: 201-939-0846

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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

MAIN STREET QUANTITY SHEET **2023 ROAD RESURFACING PROJECT** (CA-2022)
TOWNSHIP OF SPRINGFIELD

**UNION COUNTY NEW JERSEY** 

PROJECT NO.: SHEET NO. DATE: DECEMBER 1, 20 15.00

# **BOROUGH OF ROSELLE**

	ADA RAMPS											
			CURB RAN	1P LAYOUT			QUANTITIES					
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	PAVFRS	12" X 13" CONCRETE SLOPING CURB	REINFORCED 6"	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
4+40	RT	1		Х		30				5	1	10
4+83	RT	1		Х		35				10	1	15
4+90	LT	1	X			20				10	1	10
8+96	RT	1		Х		35				5	1	15
8+98	LT	1		Х		35				5	1	15
9+43	LT	1		Х		35				5	1	15
9+46	RT	1		Х		30				5	1	15

		INLET TYP	ES & LOCA	TIONS		
QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
0+37	LT	В				Х
0+40	RT	В				Х
4+27	LT	В				Х
4+29	RT	В				Х
4+46	RT	В	Х	Χ		Х
4+76	RT	В	Х	Χ		Х
4+93	RT	В				Х
6+19	LT	В				Х
7+20	LT	В				Х
8+84	LT	В				Х

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	4,105
44	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	0)/	
11	DIRECTED)	CY	
10	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	CV	20
12	& WHERE DIRECTED)	SY	30
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	475
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	25
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	2
20	BICYCLE SAFE GRATE	UNIT	2
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	15
22	RESET WATER VALVE BOX	UNIT	3
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	330
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	95
31	CONCRETE SIDEWALK, 4 THIOK  CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	45
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	7
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	,
34	TRAFFIC STRIPES, 4"	LF	3,200
35	TRAFFIC STRIPES, 6"	LF	3,200
36	TRAFFIC STRIPES, 8"	LF	605
37	·	SF	10
38	TRAFFIC MARKINGS, SYMBOLS TRAFFIC MARKING, LINES, 12"	LF	785
39 40	TRAFFIC MARKING, LINES, 24" REGULATORY AND WARNING SIGN	LF SF	15
40	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	400
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
46	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

NEGLIA ENGINEERING ASSOCIATES
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**LOCUST STREET QUANTITY SHEET 2023 ROAD RESURFACING PROJECT** JAD RESUM ACTION (CA-2022)

BOROUGH OF ROSELLE

NEW JERSEY

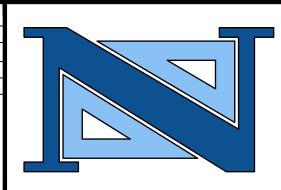
15 00

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**UNION COUNTY** UNIOCTY22.010 DATE: DECEMBER 1, 2

MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

	REVISIONS			
DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED
2023/03/20	REVISED PER NJDOT COMMENT LETTER	J.V.	J.V.	D.A.
2023/05/16	ISSUED FOR BID	J.V.	J.V.	J.V.
2023/05/26	ADDENDUM NO. 1	J.V.	J.V.	D.A.
	2023/03/20	DATE DESCRIPTION 2023/03/20 REVISED PER NJDOT COMMENT LETTER 2023/05/16 ISSUED FOR BID	DATE DESCRIPTION DRAWN 2023/03/20 REVISED PER NJDOT COMMENT LETTER J.V. 2023/05/16 ISSUED FOR BID J.V.	DATE DESCRIPTION DRAWN DESIGNED 2023/03/20 REVISED PER NJDOT COMMENT LETTER J.V. J.V. 2023/05/16 ISSUED FOR BID J.V. J.V.



THOMAS R. SOLFARO, P.E., C.M.E.

PROFESSIONAL ENGINEER

N.J. LICENSE NO. 41635

DAVID R. ATKINSON, P.E., C.M.E.

PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER

OR A TKINSON, P.E., C.M.E.

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

### **BID FORM**

I/We have carefully examined the plans, specifications, and advertisement for bid for the

# 2023 Road Resurfacing Project, Various Municipalities, County of Union, New Jersey (CA-2022) BA#7-2023; UNION COUNTY ENGINEERING PROJECT #2021-011

that is on file in the Union County Division of Engineering. I/We have inspected the site of the work and will contract to do all the work and furnish all materials mentioned in said plans and specifications. Work will be accomplished in the manner prescribed therein.

#### **BASE BID ITEMS:**

ITEM No.	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	4		
2	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	UNIT	2		
3	BREAKAWAY BARRICADE	UNIT	100		
4	DRUM	UNIT	100		
5	TRAFFIC CONE	UNIT	1,000		
6	CONSTRUCTION SIGNS	SF	2,400		
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	500	\$83.28	\$41,640.00
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	1	\$500,000.00	\$500,000.00
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	635		
10	HMA MILLING, 3" OR LESS	SY	250,497		
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	500		
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	1,895		
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	28,760		
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	1,470		
15	FUEL PRICE ADJUSTMENT	DOLL.	1	\$13,300.00	\$13,300.00
16	ASPHALT PRICE ADJUSTMENT	DOLL.	1	\$26,800.00	\$26,800.00
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	750		
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	500		
19	CURB PIECE	UNIT	27		
20	BICYCLE SAFE GRATE	UNIT	18		
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	661		
22	RESET WATER VALVE BOX	UNIT	254		
23	INLET, TYPE B	UNIT	1		
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	3		
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	43		
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	25		



# COUNTY OF UNION

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT Joseph A. Graziano Sr., Director

BOARD OF COUNTY COMMISSIONERS

DATE:

May 24, 2023

SERGIO GRANADOS

FROM:

Ricardo S. Matias, PE, CME, CFM

**County Engineer** 

Chair
KIMBERLY PALMIERI-MOUDED

TO:

All Potential Bidders

Vice-Chairwoman

JAMES E. BAKER, JR.

JOSEPH C. BODEK

.....

RE: CLARIFICATION 1

Dr. Angela R. Garretson

2023 Road Resurfacing Project, Various Municipalities,

County of Union, New Jersey (CA-2022)

BETTE JANE KOWALSKI

BA#7-2023; Union County Engineering Project # 2021-011

LOURDES M. LEON

LOURDES IVI. LEON

ALEXANDER MIRABELLA

REBECCA WILLIAMS

EDWARD T. OATMAN County Manager

AMY CRISP WAGNER
Deputy County Manager

BRUCE H. BERGEN, ESQ. County Counsel

JAMES E. PELLETTIERE Clerk of the Board

RICARDO S. MATIAS PE, CME, CFM County Engineer Director, Division of Engineering Please be advised that an error was found in the Time of Completion for the above-mentioned project. In the Time of Completion form (Page B-33) of the Bid proposal states, "The undersigned proposed that if awarded the Contract, the scope of work will be started within ten (10) calendar days and will be substantially completed within 120 calendar days from the date of notice to proceed." Whereas in the numeral 108.10 Contract Time of Section 108 (Page T14) states "All proposed improvements associated with the 2023 Road Resurfacing Project shall be completed within 180 (one hundred and eighty) calendar days after notice to proceed, weather permitting, including any and all awarded alternates." However, this is incorrect, the time of completion shall be 120 calendar days, not 180 calendar days.

Please utilize the attached as a clarification of the contract time of completion.

Enclosed please see the revised pages reflecting these changes. It should be noted that these changes are for clarification purposes only and shall have no impact on the bid receipt date.

Scotch Plains, NJ 07076

### TIME OF COMPLETION

I	of		
I,NAME (Print or type)	COMPANY		
Agree to complete work in the time	e frame specified	SIGNATURE	<del></del>
SITE VISIT GENERAL CONTR	ACTOR		
I,NAME (Print or type)	of		
Visited the site of the work on		SIGNATURE	<u></u>

The Consultant shall be responsible for obtaining NJDOT and NJTA permits approvals for roadway closures prior to commencement of permitted work with assistance from the Contractor.

It shall be noted that the paving contractor is responsible for scheduling and coordinating utility manhole work with the appropriate utility provider and shall advise Union County and their consultant of said work schedule. Additionally the contractor is responsible to ensure that utility provide and their contractor are aware of County standards. The contractor shall be responsible to ensure manholes are reset to the appropriate elevation to make final grade of top course asphalt.

The required time of completion for this project is 180 (one hundred and eighty) 120 (one hundred and twenty) calendar days from the Notice to Proceed.

In addition to the standard resurfacing operations performed along each road (milling, resurfacing, striping and markings, raised pavement markings and street name signage), other items of miscellaneous work may also be warranted and will be described elsewhere in these specifications and the various construction details found in the contract plans. These items include accessible curb ramps, loop detectors, miscellaneous inlet and manhole improvements, sidewalk, bridge deck repairs and installation of waterproof membranes and detectable warning surfaces.

Due to the size of this Program, punch list items will invariably arise. To minimize disruption to its citizens, the County shall require all punch list items brought to the Contractor's attention to be rectified within seven (7) calendar days from receipt of said items. If said punch list items are not resolved to the satisfaction of the Engineer, within the specified time, liquidated damages, as specified in Section 43 of the General Specifications ('G' sheets of this specification) shall be pursued, commencing on the eighth calendar day.

The County retains the right to delete or substitute roads to be milled and paved under this Contract. The County also retains the right to increase or decrease any and all quantities up to 25 percent of those estimated, at the unit prices bid.

Certified payroll records shall be produced and submitted on a bi-weekly basis to the County for all personnel involved with this project. The County shall withhold any and all payments until the certified payroll records are received.

Utility companies shall reset their valves, meters and manholes prior to construction. The Contractor shall make all necessary arrangements with the respective utility companies, to confirm that the appropriate number of each type of valve sleeves, covers, etc., are on-site. All work concerning these resets shall be in accordance with Sections: 105 and 650 as amended herein; except that this item will not be measured, and any/all payment associated with it shall be made part of the overall price bid for the project. No separate payment will be made for the resetting of utility valve boxes.

UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE PERMITTED TO COMMENCE WITH THE RESURFACING OPERATIONS UNTIL ALL UTILITY VALVES HAVE BEEN RESET.

All roads under this Contract requiring milling will be milled to a depth of two (2) inches. Quantities Tables on the contract plans identify the estimated amount of material for each road. In cases where the road must be re-profiled, the locations will be pointed out to the Contractor, who shall make the necessary adjustments to the milling machine to obtain said changes.

The Contractor and each of its Subcontractors shall purchase from and maintain insurance with companies which, as of the time of the Bid (in the case of the Contractor) and as of the time of the purchase (in the case of the Subcontractor), have at the very least an A Minus rating by A.M. Best & Company.

All of the insurance to be provided shall be considered to be primary insurance as respects the Owner, the Engineer and the municipalities in which the on-site Work is to be performed. The Contractor will save harmless, indemnify and defend the Owner, the Engineer and the municipalities in which the on-site Work is to be performed, as well as their respective agents, officers and employees, from any and all claims arising out of the Contractor's performance.

#### THE FOLLOWING SECTION IS REMOVED

#### **SECTION 108 - PROSECUTION AND COMPLETION**

With respect to the prosecution and completion of the contract, the Contractor shall comply with the requirements established within the Instructions to Bidders, General Conditions, and Bid Documents sections provided elsewhere within this specifications package. The County's contract requirements shall prevail over the 2019 NJDOT Standard Specifications with respect to the same.

#### 108.10 CONTRACT TIME

All proposed improvements associated with the 2023 Road Resurfacing Project shall be completed within 180 (one hundred and eighty) 120 (one hundred and twenty) calendar days after notice to proceed, weather permitting, including any and all awarded alternates.

The contractor shall price accordingly to account for weather delays, holidays, and review of shop drawings, and any other potential delays typical of a project of this duration and magnitude. No consideration will be given for extensions or additional compensation due to these delays.

### SPECIFICATIONS

### FOR

2023 Road Resurfacing Project, Various Municipalities,
County of Union, New Jersey (CA-2022)
BA#7-2023; UNION COUNTY ENGINEERING PROJECT #2021-011

MAY 16, 2023

### UNION COUNTY BOARD OF COUNTY COMMISSIONERS

Sergio Granados Chairman
Kimberly Palmieri-Mouded, Vice Chair
James E. Baker, Jr., Commissioner
Joseph C. Bodek, Commissioner
Dr. Angela R. Garretson, Commissioner
Bette Jane Kowalski, Commissioner
Lourdes M. Leon, Commissioner
Alexander Mirabella, Commissioner
Rebecca Williams, Commissioner

#### **CLERK OF THE BOARD**

James E. Pellettiere, RMC

#### **COUNTY MANAGER**

Edward T. Oatman

# DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES MANAGEMENT

Joseph A. Graziano, Sr., CPWM
Director, Department of Engineering, Public Works and
Facilities Management

# COUNTY ENGINEER DIVISION OF ENGINEERING

Ricardo Matias, PE, CME, CFM

### Prepared by:

Neglia Engineering Associates 200 Central Avenue, Suite 102, Mountainside, N.J. 07092 (201) 939-8805 David R. Atkinson, P.E., P.P., C.M.E.

Revised: 2020.02.19

# COUNTY OF UNION NOTICE TO BIDDERS

Sealed bids will be received by the assistant director of the Division of Purchasing, or her designee, at the County of Union, New Jersey on June 8, 2023 at 10:30 a.m., prevailing time, in the 3<sup>rd</sup> Floor Conference Room, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

2023 Road Resurfacing Project, Various Municipalities,
County of Union, New Jersey (CA-2022)
BA#7-2023; UNION COUNTY ENGINEERING PROJECT #2021-011

Bid Packages may be obtained at no charge by registering and downloading at <a href="http://ucnj.org/bid-specs">http://ucnj.org/bid-specs</a>. Bid Packages may also be obtained in person from the Division of Engineering at 2325 South Avenue, Scotch Plains, New Jersey 07076 between 8:30 a.m. and 4:00 p.m. weekdays upon payment of a non-refundable money order or bank check in the amount of \$275.00 made payable to the County of Union. No Personal / Company checks will be accepted. Requests for mailing of specifications will not be honored. For further information please call 908-789-3675.

The County reserves the right to reject any and all bids and to waive any and all informalities in the bid in accordance with the New Jersey Local Public Contracts Law.

Bids shall be submitted in a sealed envelope and clearly marked with the subject of the bid, name and address of the bidder, phone & fax number, and date of the bid opening. Each bid must be delivered to reach the Division of Purchasing prior to the stated time of the opening of the bids. The County will not be responsible for late delivery by the U.S. Mail or any other carrier. If hand delivered, please note that parking and security access at the County Complex may cause delays and bidders should take them into consideration in order to submit a timely bid. **No** late bids will be accepted.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

MICHELLE HAGOPIAN, ASSISTANT DIRECTOR OF PURCHASING

# Union County Board of County Commissioners

We're Connected to You!

NB-1

Revised: 2019.04.02

#### TITLE OF PROJECT

### 2023 Road Resurfacing Project, Various Municipalities, County of Union, New Jersey (CA-2022) BA#7-2023; UNION COUNTY ENGINEERING PROJECT #2021-011

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Revised: 2022.01.12

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#### **BIDDING DOCUMENTS**

Bid Document Submission Checklist

**Bidding Documents** 

Bid Form

Consent of Surety

Bidder Signature Page

Bidder Disclosure Statement

Subcontractor Identification Statement: List of Subcontractors

Subcontractor Identification Certification

Acknowledgement of Addendum

Contractor Business Registration Certificate

Affirmative Action Requirement

**Experience Statement** 

Certificate of Bidder Showing Ability to Perform Contract

Non-Collusion Affidavit

Contractor Registration Advisement

Americans with Disabilities Act

Statement of Bidder's Qualifications

Contractor Performance Record

Affidavit Regarding List of Disbarred, Suspended or Disqualified Bidders

Prior Negative Experience Questionnaire-Certification

Contractor's Certification of Compliance - New Jersey Prevailing Wage Act

**Uncompleted Contracts Affidavit** 

Certificate of Insurance Statement

Collection of Use Tax on Sales to Local Governments Statement

Time of Completion

Disclosure of Investment Activities in Iran

Federal Non-Debarment Certification

Byrd Anti-Lobbying Amendment Certification

Certification regarding lobbying

Disclosure of lobbying activities (LLL Form)

#### **STANDARD SPECIFICATION FORM - SS-1**

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#### PROJECT TECHNICAL SPECIFICATIONS

TOC-2 Revised: 2022.01.12

# UNION COUNTY BOARD OF COUNTY COMMISSIONERS INSTRUCTIONS TO BIDDERS AND FORMS

#### **DEFINITIONS**

Wherever reference is made to the County, Title of Project, Bidder, or Vendor/Contractor they shall be as follows:

#### **OWNER/COUNTY:**

Union County Board of County Commissioners UC Administration Building, 6<sup>th</sup> Floor 10 Elizabethtown Plaza Elizabeth, New Jersey 07207

#### **ADDRESS INQUIRIES TO:**

Union County Division of Purchasing UC Administration Building, 3<sup>rd</sup> Floor 10 Elizabethtown Plaza Elizabeth, NJ 07207

Attn: Michelle Hagopian, Assistant Director, Division of Purchasing

Telephone: 908-527-4130 Facsimile: 908-558-2548

ucbids@ucnj.org

#### ADDRESS BIDS AND SUBMIT TO:

Union County Division of Purchasing UC Administration Building, 3<sup>rd</sup> Floor 10 Elizabethtown Plaza Elizabeth, NJ 07207

Attn: Michelle Hagopian, Assistant Director, Division of Purchasing

Telephone: 908-527-4130 Facsimile: 908-558-2548

ucbids@ucnj.org

TITLE OF PROJECT: 2023 Road Resurfacing Project, Various Municipalities, County of Union, New Jersey (CA-2022)
BA#7-2023; UNION COUNTY ENGINEERING PROJECT #2021-011

BIDDER: Bidder shall be a single overall contract bidder

**ENGINEER: Neglia Engineering Associates** 

COUNTY ENGINEER AND/OR CONSTRUCTION MANAGER (as applicable):

**COUNTY ENGINEER:** 

Ricardo S. Matias, PE, CME, CFM Union County, Division of Engineering

#### **GENERAL SPECIFICATIONS**

G-1

Revised: 2022.01.03

#### 1. BID FORM

Bids for this Work will be enclosed in a sealed envelope addressed to the Purchasing Division, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207, with the full name of the Project clearly marked on the outside. Refer to the sheet marked "Notice of Bid (Advertisement)" for the correct name of the Project. Bidders must submit their bids on the attached pricing sheet (Bid Form), in a sealed envelope addressed to the County and bearing on the outside: the name of the Bidder, Bidder's business address, and the title of the Project.

The Division of Purchasing will receive the bids for this Work at the Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey on the date and time noted on the sheet marked "**Notice of Bid (Advertisement)**".

The County will not assume responsibility for bids forwarded by mail. It is the individual's responsibility to see that the bids are presented to the Purchasing Division at the time and at the place designated.

Bids will be accepted only on the Bid Form supplied. Bids on forms other than the original supplied herein will be rejected. The "complete" Bid Documents includes the Bid Bond, Bid Form, Bidder's Checklist, Consent of Surety, Ownership Disclosure Certification, Non-Collusion Affidavit, and any other documents noted in these Instructions to Bidders or Contract Document to be submitted with this Bid.

The bidder will state in the bidding sheet the price per unit of measure for each scheduled Item of Work for which he will agree to carry out the Work, and the Total Bid Price for the construction of the Project.

The prices in the Bid Form shall be typed or written in pen and ink. Erasures or alterations must be initialed by the bidder in ink.

The bidding sheet for this Project may include a fixed amount as a Bid Allowance. If applicable, all bidders are required to add this fixed amount to their base bid and to include this additional amount in their Bid Bond. This sum will be included in the Contract as well as the performance, labor and materials bond. Payment by the County will be made to the Contractor from these funds only upon the completion of extra Work pursuant to a written Change Order(s) signed by the County's Engineer or his designee and the Contractor, prior to the commencement of such Work. Work commenced prior to written approval by the County shall be done at Contactor's risk. Such payment will only be in the amount agreed to by the parties, in writing in the Change Order(s). See Section 37, Change Orders, of these general specifications for further details.

Refer to Bid Document Submission Checklist for all required documents.

In the event there is a discrepancy between the unit price given and the extended total, the unit price will govern. Any discrepancies will be mathematically adjusted.

Insert applicable alternates, if any have been specified, applicable to the Bidder's Work. All alternates MUST be bid upon. Any Bidder's failure to do so will be deemed a material, non-waivable defect and shall render the bid nonresponsive. The Bidder shall clearly designate whether the change in price is an addition or subtraction, by using either a "+" sign or the word "addition", or in the alternative, a "-"sign or the word "minus". If there is no other change in price, the Bidder shall insert "NC" or "No Charge".

When two or more low bids are equal in all respects, awards will be made according to the provisions of N.J.S.A. 40A:11-6.1(d).

Where unit prices have already been established by the Contract Documents, the Bidder agrees that such unit prices shall prevail. All unit prices, whether filled in by the Bidder or established by the Contract Documents, shall become part of the Contract. No bid will be considered or award made, unless applicable unit prices, as required, are filled in.

The County reserves the right to reject any or all bids and also reserves the right to waive any minor informalities or non-material exceptions in the bids.

The County of Union has the right to reject any and all bids from any bidder that is in, or contemplates bankruptcy of any chapter of nature. Said bidder shall notify the County, in writing, of any condition or knowledge of the same.

Conditional bids will not be accepted. Bids may be withdrawn prior to the advertised time for the opening of bids or authorized postponement thereof or in accordance with the provisions of N.J.S.A. 40A:11-23.3 discussed below. Bids received after the advertised time shall not be considered. Bidders shall be solely responsible for premature opening or late delivery of bids not properly marked, addressed, or directed.

### 2. WITHDRAWAL OF BID DUE TO MISTAKE

N.J.S.A. 40A:11-23.3 authorizes a bidder to request withdrawal of a public works bid due to a mistake on the part of the bidder. A mistake is defined by N.J.S.A. 40A:11-2(42) as a clerical error that is an unintentional and substantial computational error or an unintentional omission of a substantial quantity of labor, material, or both, from the final bid computation.

A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal, **in writing**, by certified or registered mail to Michele Hagopian, Assistant Director, Division of Purchasing, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207. The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five business days after the receipt and opening of the bids. Since the bid withdrawal

G-3

request shall be effective as of the postmark of the certified or registered mailing, Michele Hagopian, Assistant Director of the Division of Purchasing or his designee may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

A bidder's request to withdraw the bid **shall** contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the County's designated staff pursuant to the statutory criteria of N.J.S.A. 40A:11-23.3.

The County will not consider any written request for a bid withdrawal for a mistake, as defined by N.J.S.A. 40A:11-2(42), by a bidder in the preparation of a bid proposal unless the postmark of the certified or registered mailing is within the five business days following the opening of bids.

### 3. QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS

The County may make such investigation as it deems necessary to determine the ability of the Bidders to perform the Work, which includes investigation of any and all subcontractors listed with the bid. The Bidder shall furnish any information and data for this purpose as the County may request.

#### 4. INTERPRETATIONS AND ADDENDA

Any explanation desired by a bidder regarding the meaning or interpretation of the Contract Documents must be requested in writing to the Assistant Director, Division of Purchasing at <a href="mailto:ucbids@ucnj.org">ucbids@ucnj.org</a> with reasonable time allowed for a reply to reach bidders before submission of their bids. Any interpretation or instruction made by the County Engineer will be in the form of an addendum to the Contract Documents or clarification and will be furnished to all prospective bidders. Oral explanations or instructions given before the award of the Contract will not be binding. Bidders are required to bring to the attention of the Assistant Director, Division of Purchasing at ucbids@ucnj.org, the discovery of any apparent ambiguity, inconsistency, error, discrepancy, omission in the Contract Documents for interpretation and correction at least ten (10) working days before opening of bids with the exception of Saturdays, Sundays and holidays.

All Addenda issued through the Office of the Division of Purchasing are amendments to the Contract Documents and shall be considered in preparing bids. Same shall become part of the Contract Documents.

Addenda take precedence over all earlier documents and over each other according to the latest date. Addenda unless themselves interpretive remain subject to interpretation the same as any other document incorporated in the Contract.

G-4 Revised: 2022.01.03 Addenda may be issued by the Assistant Director, Division of Purchasing up to seven (7) working days prior to the opening of bids. Failure of any bidder to receive an addendum shall not relieve such bidder from the obligation imposed by such addendum. Bidders are to keep themselves currently acquainted with the Contract Documents during the entire bidding period and make inquiry on their own initiative as to issuance of any Addenda. Receipts of all Addenda shall be acknowledged on the "Acknowledgement of Receipt of Changes" included in the bid package and must be submitted with the bid.

# 5. OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS

At the time of the opening of bids, each Bidder will be presumed to have inspected the site(s) and to have read, and be thoroughly familiar with the Contract Documents. The failure or neglect of any Bidder to receive or examine any form, instrument, or document shall in no way relieve any Bidder from any obligation in respect to its bid.

The Bidder shall examine the contents of the Project Manual and the set of Drawings and assure itself that all pages of the Specifications, Drawings, and other Contract Documents are included in the documents obtained for bidding purposes. Should the Specifications, Drawings, and other Contract Documents be incomplete, the Bidder shall notify the County Engineer in writing, who will supply the Bidder with any missing pages of Specifications, Drawings, or other Contract Documents. The lack of such written notification by the Bidder will be construed as evidence that the Specifications, Drawings, or other Contract Documents supplied it for bidding purposes are full and complete and as a waiver of any subsequent claim to the contrary.

#### 6. BID AND PERFORMANCE GUARANTEE

Each bidder must furnish a Bid Bond, Certified Check or Bank Cashier's Check in the amount of ten percent (10%) of the Bid. Checks shall be drawn to the order of the County of Union, New Jersey, not to exceed \$20,000.

Each bidder must furnish with the bid a certificate from a Surety Company, i.e. Consent of Surety, stating that in the event of the contract being awarded to said bidder, such Surety Company will provide the Contractor with bonds guaranteeing the faithful performance of the Work in accordance with the plans and specifications, and the payment for labor, materials, and all other indebtedness which may accrue on the account of this Work. A Performance, Labor and Materials Bond will be furnished by the Contractor upon an award of Contract, and will be in the amount of 100% of the contract price.

G-5 Revised: 2022.01.03 A one-year Maintenance Bond will be required upon acceptance of the Project by the County in the amount as stated in Section 15 of the General Specifications. Bonds will be written by a firm authorized to issue the bonds under the laws of the State of New Jersey and be in a form acceptable to the County Counsel.

*N.J.S.A.* 40A:11-1 *et seq.* allows the prime Contractor to furnish the Performance Security for his Subcontractors. The County of Union requires Performance Security to be furnished by the prime contractor for the entire job in the total amount of the contract.

The County will return all certified checks or cashier's checks after the proposals have been opened, tabulated and reviewed except those of the three (3) bidders lowest responsible bidders. The County will return the checks of these bidders when a contract is awarded to the successful bidder within ten (10) days after the award of the contract.

If the successful bidder refuses or neglects to sign an agreement and furnish the required bonds, the Bid Bond will be held and used by the County to offset any damages for such refusal or neglect.

#### 7. COMMENCEMENT AND COMPLETION

Work will not commence until a Notice to Proceed is received from the County Engineer.

Upon substantial completion of the Project, the Contractor must request a joint inspection with the County Engineer. Upon completion of this inspection, the County Engineer will prepare a list of incomplete or incorrect items (punch list) and have Contractor initial and date same. The Contractor shall rectify all deficiencies noted on the punch list within 30 calendar days of receipt of the list. The County Engineer may approve extensions for extenuating circumstances.

#### 8. BIDDER AFFIDAVIT

All Bidders are required to complete, sign, and submit with their Bid, the attached "Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders". (See form enclosed)

### 9. LABOR AND MATERIALS

The prices will cover all costs of any nature incident to and growing out of the Work, including all labor, material, equipment, transportation, loss by damage or destruction of the Project, settlement of damages, and for replacement of defective work or materials. N.J.S.A. 54:32B-1 et seq. exempts all materials sold to the County of Union from sales or use taxes and should not be included in the prices provided on the Bidding Sheet.

#### 10. INSURANCE REQUIREMENTS

G-6 Revised: 2022.01.03 The County of Union requires all contractors to be able to comply with the following insurance requirements. In the event a bid is accepted by the County, the contractor must accept the applicable insurance requirements, as set forth below, as part of any contract awarded to it by the County.

Contractor shall carry and maintain at all times while the contract is in full force and effect, the following insurance coverage with an insurance company or companies acceptable to the County, with limits not less than those shown below. A Certificate of Insurance shall be filed with the County <u>prior</u> to commencement of any Work indicating the following:

- a) Commercial General Liability (CGL): Coverage for all operations including, but not limited to, contractual, products and completed operations, and personal injury with limits no less than \$5,000,000 per occurrence/\$10,000,000 aggregate. The County of Union, its Board of County Commissioners, officers, employees, agents and servants shall be included as an additional insured. Coverage is provided on a primary and non-contributory basis to the County of Union, et al.
- b) Automobile Liability: Coverage for all owned, non-owned and hired vehicles with limits not less than \$5,000,000 per occurrence, combined single limits (CSL) or its equivalent.
- c) Workers Compensation: As required by the State of New Jersey and Employers Liability with limits not less than \$1,000,000 per accident for bodily injury or disease.
- d) Professional Liability (if design/build): Coverage with limits not less than \$1,000,000 per occurrence or claim, \$2,000,000 aggregate
- e) Contractor's Pollution Legal Liability and/or Asbestos Legal Liability and/or Errors & Omissions (if project involves environmental hazards): Coverage with limits no less than \$1,000,000 per occurrence or claim/\$2,000,000 aggregate.
- f) Builders Risk (for major renovations): During the course of construction utilizing an "All Risk" coverage form with limits equal to the completed value of the project and no coinsurance penalty provisions.

Where applicable, a waiver of subrogation in favor of the County of Union, its Board of County Commissioners, officers, employees, agents, servants and the State of New Jersey is to be included in those policies of insurance where permitted by law.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Entity.

Special Risks or Circumstances: The County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

#### 11. INDEMNIFICATION REQUIREMENTS

The County of Union requires all bidders to accept the following indemnification requirements in the event the County accepts their bid. The Contract awarded by the County to the successful bidder will contain the following provision:

"To the fullest extent permitted by law the Contractor shall indemnify, defend, and hold harmless the owner and the owner's consultants, agents, representatives, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys' fees, legal costs and legal expenses arising out of or resulting from the performance of the Contractor's work under this contract, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the Contractor, anyone directly or indirectly employed or retained by the Contractor, or anyone for whose acts the Contractor may be liable regardless of whether caused in part by the negligent act or omission of a party indemnified hereunder provided it is not caused by the sole negligence of a party indemnified hereunder. Contractor shall further indemnify and hold harmless the County and the County's consultants, agents, representative, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys' fees, legal costs and legal expenses, arising out of or resulting from performance of the work, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts. negligent omissions, and/or fault of the County or the County's consultants, agents, representatives, or employees and arises out of this project and provided such claim, damage, loss, cost, or expense is not caused by the sole negligence of a party indemnified hereunder."

### 12. ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall hold the County harmless from loss on account thereof.

### 13. PLANS AND SPECIFICATIONS

G-8 Revised: 2022.01.03 In carrying out the Work, the plan(s) and the specifications will be followed by the Contractor. Minor alterations in the plan may be made or permitted by the County Engineer from time to time and, if no additional Work is necessary, there will be no additional charge for carrying out such minor alterations.

The Contractor shall provide the County Engineer a set of reproducible as-built drawings upon completion of the Project. The Contractor shall maintain an updated construction progress plan in the Project field office at all times.

When applicable, The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, as amended, and Supplemental Specifications for State Aid Projects, herein after referred to as the "Standard Specifications", are made a part of these specifications and contract for the improvements, and will govern the construction of this Project, the material used and the execution of this Project, except as revised and modified herein. The references to these specifications are given herein for the purpose of aiding in the rapid location of the description of the various items herein specified. The entire Work must be carried on and completed to the satisfaction of the County. The Standard Specifications are amended as follows:

"Any reference to the Commissioner, Department, Department Laboratory, Engineer or Inspector should be redefined to be the County of Union".

### 14. GUARANTEE AGAINST DEFECTIVE WORK

Prior to final payment being made or before the release of the performance security required by Section 3 above, the Contractor and Surety shall execute and deliver to the County an original Maintenance Bond with an original signature and seal having a penal sum equal to:

- A) One hundred percent (100%) of the final adjusted Contract amount, if such amount is \$50,000.00 or less;
- B) Fifty percent (50%) of the final adjusted Contract amount, if such amount be greater than \$50,000.00 but less than \$250,000.00; and,
- C) Twenty-five percent (25%) of the final adjusted contract amount, if such amount is \$250,000.00 or more.

The Bond and Surety shall be satisfactory to the Union County Counsel. The Surety shall hold a Certificate of Authorization to do business in the State of New Jersey and shall conform to P.L. 1995 c.384, codified as N.J.S.A. 2A:44-143, 144. The Surety Disclosure Statement and Certification required by N.J.S.A. 2A: 44-143, 144, shall be attached to the Bond. Such Maintenance Bond shall remain in full force and effect for a period of one (1) year from the date of Final Completion. Such Maintenance Bond shall

also provide that the Contractor and the Surety guarantee to replace for the said period of one (1) year from the date of Final Completion, all Work performed and/or all materials furnished that were not performed or were not furnished in accordance to the terms and performance requirements of the Contract Documents, and will make good any defects thereof which become apparent before the expiration of one (1) year. If, during that period, any part of the Project, in the judgment of the Engineer, is found defective, the Contractor will repair or replace same within five (5) days of receipt of notice from the County Engineer. If the Contractor refuses or neglects to do such Work in the time specified, the County Engineer may have the Work done by others and the Contractor or his Surety thereof will pay the cost.

The Contractor will furnish the County a Maintenance Bond for a percentage of the final adjusted contract price, as stated above. The one (1) year period will start the day of Final Completion of Project by the County. Final payment is conditional on the receipt of a maintenance bond in a form acceptable to County Counsel.

### 15. TRAFFIC AND STREET MAINTENANCE

The Work must be started and performed by the Contractor in such a manner as to minimize delays to the traveling public. It must be completed in a timely fashion, with little or no inconvenience to traffic and pedestrians, where such inconvenience may be avoided.

All municipal, county, and state roadways shall remain open to traffic unless otherwise provided for in the technical specifications.

If modified traffic patterns are authorized in order to provide a safe working or traveling environment, the Contractor is responsible for providing all equipment, barrels, cones, signs, and barricades to implement the work zone and detours, unless otherwise specified in the technical specifications. All work zones and detours shall be established in accordance with the technical plans and specifications if provided or in strict compliance with the current version of the Manual for Uniform Traffic Control Devices (MUTCD). The Contractor shall obtain approval for these work zones and detour plans from the Municipal Police or applicable police agency and the Union County Bureau of Traffic Maintenance prior to implementation.

All traffic control plans shall provide for safe movement of vehicular, bicycle, and pedestrian traffic. Particular attention shall be given to requirements of the Americans with Disabilities Act.

No portion of any street or alleyway may be used for the storage of any materials or equipment without the approval of the Municipal Police or other applicable police

agency. Sidewalks, gutters, drains, fire hydrants and private drives shall be maintained for their intended use unless specifically approved by the County Engineer.

Upon suspension of Work, at the end of the day or for protracted periods, the Contractor shall remove all rubbish and materials from the Work site to the approved storage/staging location. All road cuts, saw cuts, and trenches that may pose hazard to vehicular, pedestrian, or bicycle traffic, to include handicapped users, shall be filled to the surface of the roadway or sidewalk. At no time will steel plates or settled trenches be allowed at the daily suspension of Work, unless specifically approved by the County Engineer.

Use of Traffic Control Officers shall be determined by the County in accordance with the provisions of N.J.S.A. 40A:11-23.1(c). If applicable to the Project, the County shall have provided an allowance for same as set forth in the Bid Form.

With respect to pedestrian traffic, the Contractor shall install signs restricting access of the general public and, as necessary, Union County employees to the area of construction. The Contractor shall provide safe access to required areas and place physical barriers to restricted areas. These barriers may range from caution tape to actual barriers, at the direction of the County Engineer.

### 16. CONTRACTOR'S EMPLOYEES

The Contractor must employ only suitable and competent labor in the Work, and must remove from the Work any incompetent, unsuitable, or disorderly person upon complaint from the County Engineer.

The parties to any contract resulting from this proposal do hereby agree that the provisions of N.J.S.A. 10:2-1 through 10:2-4 (discrimination in employment on public works contracts): 34:11-56.25 et seq. (payment of prevailing rate of wages determined pursuant to N.J.S.A. 34:11-56.30 by the Commissioner), and the Rules and Regulations promulgated pursuant thereto, are hereby made a part of any contract and are binding upon them.

There will be no discrimination against any employee who is employed in the Work to be covered by any contract resulting from this bid because of age, race, creed, color, national origin, ancestry, marital status or sex.

Any person, firm, or corporation violating the provisions of this Section will be deemed and judged a disorderly person.

### 17. OWNERSHIP DISCLOSURES REQUIRED

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Pursuant to P.L. 2016, c. 43, codified as N.J.S.A. 52:25-24.2.no corporation, partnership, or limited liability company shall be awarded any contract nor shall any agreement be entered into for the performance of any work or the furnishing of any materials or supplies the County unless prior to the receipt of the bid or accompanying the bid, of said corporation, said partnership, or said limited liability company there is submitted a statement setting forth the names and addresses of all stockholders in the corporation who own ten percent (10%) or more of its stock, of any class, or of all individual partners in the partnership who own a ten percent (10%) or greater interest therein, or of all members in the limited liability company who own a ten percent (10%) or greater interest therein, as the case may be. If one or more such stockholder or partner or member is itself a corporation or partnership or limited liability company, the stockholders holding ten percent (10%) or more of that corporation's stock, or the individual partners owning ten percent (10%) or greater interest in that partnership, or the members owning ten percent (10%) or greater interest in that limited liability company, as the case may be, shall also be listed. The disclosure shall be continued until names and addresses of every non corporate stockholder, and individual partner, and member, exceeding the ten percent (10%) ownership criteria has been listed.

To comply with this section, a bidder with any direct or indirect parent entity which is publicly traded may submit the name and address of each publicly traded entity and the name and address of each person that holds a ten percent (10%) or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission ("SEC") or the foreign equivalent, and, if there is any person that holds a ten percent (10%) or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal SEC or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a ten percent (10%) or greater beneficial interest.

(See forms attached)

### 18. NON-COLLUSION AFFIDAVIT

The Bidder shall submit with its bid either the attached completed "Non-Collusion Affidavit" or a statement of non-collusion with verbiage similar to same.

### 19. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES

The successful bidder shall be required to complete and submit an Initial Project Workforce Report, New Jersey Department of Treasury Form AA-201, upon notification of award. Failure to submit this completed form may result in the Contract being terminated.

G-12 Revised: 2022.01.03 The successful bidder shall also be required to submit a copy of its Monthly Project Workforce Report, New Jersey Department of Treasury Form AA-202, to the New Jersey Department of Treasury's Division of Public Contracts Equal Employment Opportunity Compliance and to the Board.

### 20. COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT

The County of Union, in order to fulfill the requirements of N.J.S.A. 34:11-56.25 et seq, requires that the following additional conditions be strictly followed. The bidders represent that he is not listed or is not on record in the Office of the Commissioner or the Department of Labor and Workforce Development as one who failed to pay prevailing wages in accordance with the provisions of this Act. The bidder agrees to the inclusion of a contract provision upon award which specifically requires said Contractor to fully comply with each and all of the requirements of the aforesaid Act as it relates to prevailing rates of wages on public contracts as set forth in the New Jersey Prevailing Wage Act, P.L. 1963, Chapter 150 and P.L. 1974, Chapter 64.

A Copy of the Prevailing Wage Rates is attached for your reference. Applicable rates are those wages and fringe benefit rates in effect on the date the contract is awarded. All predetermined rate increases listed at the time the contract award must also be paid, beginning on the dates specified. Rates may change between the time of issuance of this determination and the award of the public works contract. Therefore, prior to the award of the contract, verification must be made with the Public Contracts section, to insure that the rates contained in this determination are still prevailing.

The Contractor agrees to abide and be bound by each and all of the said statutory provisions with respect to the payment of prevailing rates of wages, and acknowledges that the County reserves the right to terminate the Contractor's (or his subcontractors') right to proceed with the scope of Work, or such portion thereof that relates to the failure to pay prevailing rates of wages. In such event or under the terms of N.J.S.A. 34:11-56.27, the Contractor and his surety will be liable to the County of Union for any excess costs occasioned by such a violation.

The Contractor or subcontractors for this Project will post the Prevailing Wage Rates for each craft and classification involved as determined by the Commissioner of Labor and Industry, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the Work or at such place or places as are used by them to pay workmen their wages.

The County of Union requires a copy of payroll records from the Contractor and subcontractors. Payroll records shall be submitted with each voucher request for payment. Prevailing wage rates may be obtained from the New Jersey Labor, Division of Workplace Standards, Public Contracts Section, (609-292-2259).

G-13 Revised: 2022.01.03 In addition to compliance with the New Jersey Prevailing Wage Act, the County requires compliance with procedures established by Resolution No. 2014-0408 adopted by the Union County Board of County Commissioners on May 8, 2014. The resolution is furnished in Section 56 of these General Specifications.

### UNION LABOR IS PREFERRED ON ALL COUNTY WORK

The foregoing reference to specific laws will not be deemed to be a limitation of obligation of the Contractor to perform his obligations in full compliance with the provisions and requirements of all federal and state statues and local ordinances applicable to the Work to be done under the contract.

It is agreed and understood that any contracts and/or orders placed as a result of this proposal will be governed and construed and the rights and obligations of the parties hereto will be determined in accordance with the laws of the State of New Jersey.

Upon completion of the Work, the Contractor will furnish a Certification of Compliance with the New Jersey Prevailing Wage Act. The certificate in a form acceptable to County Counsel is a condition of the final payment. (See form attached)

### 21. BRAND NAME OR EQUAL

When the Specifications, Forms, and other Contract Documents use "brand name or equivalent" or similar language, the listed brand name shall serve as a reference or point of comparison for the functional or operational characteristic desired for the goods or services being requested. Where a bidder attempts to submit an equivalent product for a brand name, it shall be the responsibility of the bidder to fully describe and document the product to be provided with the bid in order to establish the equivalence claim.

- A. If the Bidder proposes to offer substitute goods as an equal to those specified herein, the bidder shall so indicate with the Bid Proposal. For the purposes of this paragraph, a proposed item shall be considered equal to goods specified herein if:
  - 1. The County, in its sole discretion, determines that: (i) the goods conform substantially, even with deviations, to the brand name goods specified herein; (ii) the goods are equal to or greater than the brand name goods specified herein in terms of quality, durability, functionality, appearance, strength and design; (iii) the goods are capable, at least as well as the brand name goods specified herein, or performing with existing equipment;

G-14 Revised: 2022.01.03 and (iv) the goods do not cost the County more than the brand name goods specified herein costs the County.

- B. To offer substitute goods as an equal to those specified herein, it is necessary that:
  - The Bidder submits sufficient information with its bid to permit the County to determine that the goods are equivalent to the brand name goods specified herein, including, but not necessarily limited to the brand, catalog number and specifications/data sheets;
  - 2. The Bidder fully identifies and describes the variations of the goods from the brand name goods specified herein on a separate sheet that is to be submitted with the bid proposal. Bidder's literature WILL NOT suffice in explaining exceptions to these specifications.
  - 3. The Bidder certifies that the goods (i) are similar in substance to the brand name goods specified, and (ii) are suited to the same use as the item specified;
- C. The County shall be allowed a reasonable time within which to evaluate the Bidder's proposal to offer substitute goods as an equal to those specified herein. The County shall be the sole judge of acceptability. No "or-equal" goods shall be ordered, delivered, assembled, set-up or utilized until the County's evaluation is complete. The County's determination as to equivalency shall be deemed final and absolute.

In the event the Bidder does not provide sufficient supporting documentation with the bid, it will be presumed and required that the brand name goods and services as described in the specifications will be provided.

### 22. LINES AND GRADES

Normally, horizontal and vertical control points will be provided in the technical specifications. All other surveying will be the responsibility of the Contractor unless otherwise noted.

### 23. NUMBER OF WORKING DAYS

G-15 Revised: 2022.01.03 In accordance with N.J.S.A. 40A:11-17, the Work for the within Project shall be completed as specified on the Time of Completion Form. See form attached

There shall be taken a deduction from the contract price, or any wages paid by the County, to any inspector(s) necessarily employed by it on the Work, for any number of days in excess of the number allowed in the specifications.

# 24. PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)

Pursuant to N.J.S.A. 2A:30A-1 et seq., payment to the Contractor, other than for Work done pursuant to a contact allowance, where applicable, shall be processed and paid as follows:

- 1. All contractor bills shall be either approved for payment, or notice provided as to why the bill or any portion of it will not be approved by the representative(s) of the governing body no later than the public meeting following 20 calendar days of the billing date as defined in the statute.
- 2. If the billing is approved, said bill shall be paid in the payment cycle following the meeting.

### 25. STOPPING WORK ON ACCOUNT OF BAD WEATHER

Work must only be performed in weather suitable for the type of construction planned or underway. Extremes in temperature, humidity, precipitation, evaporation, etc. can detrimentally affect the constructed product. Refer to the Standard and Technical Specifications for specific items.

### 26. ACCESS FOR OTHER CONTRACTORS

The Contractor for this Work will give proper access to other contractors who may be employed upon the Project and must not hinder or delay unnecessarily any Work that may be progressing under other contracts.

### 27. CONDEMNED MATERIALS AND WORK

Any materials and or part of the Work that may be condemned by the County Engineer will be removed and replaced by the Contractor or otherwise rectified, as may be directed by the County Engineer. No payment will be made upon the Work until such faulty work has been made good as may be directed. In the event the Contractor refuses or neglects to make good such faulty work, he will be deemed to have abandoned the contract and proceedings may be taken against him as provided herein.

G-16 Revised: 2022.01.03

### 28. STORAGE

In the event that it is necessary for the Contractor to stockpile or store materials or equipment on the job site, the Contractor shall inform the County of such necessity and the County may offer available space, if any, for storage of such materials or equipment. The Contractor shall use said space only for such purpose. Any and all materials which may be stored in such space or which may be brought onto the job site at any time by the Contractor will be at the Contractor's sole risk. The County will not be responsible for loss of or damage to said materials or equipment for any cause whatsoever. The Contractor shall take necessary measures to protect any such storage area and shall be responsible for any and all damages.

### 29. FINAL CLEAN UP

Upon completion of the Work, the Contractor will remove all equipment, unused materials, rubbish, etc., and will repair, or replace in an a manner acceptable to the County Engineer, all areas that may have been damaged in the prosecution of the Work. Same shall be a condition precedent to final payment. Should said Contractor fail to comply with this requirement, the County shall undertake the clean-up with its own forces and charge the cost of same against the Contractor's contract balance.

### 30. SUB-LETTING OF WORK

Except for the List of Subcontractors, pursuant to N.J.S.A. 40A:11-16 (See form attached), no portion of the Work will be sublet by the Contractor to any other entities, except with the consent of the County Engineer. A complete list of subcontractors must be submitted to the County Engineer at the preconstruction meeting. If the job does not warrant a preconstruction meeting, the Contractor must submit such list prior to the start of Work.

All Subcontractors will be subject to N.J.S.A. 34:11-56 et al.

N.J.S.A. 40A:11-16 requires the bidder to list in the bid sheets the name or names of all subcontractors involved in the following types of Work: plumbing and gas fitting and all kindred work, steam and hot water heating, ventilating apparatus, steam power plants and kindred work, electrical work, ornamental iron work, and structural steel. In addition, the County may require the identification of specific additional subcontractors. If these trades are expected to be part of the contract, such subcontractors should be listed on the "Subcontractor Identification Statement List of Subcontractors" and Bidder shall certify same on the accompanying sheet titled "Subcontractor Identification Certification". (See forms attached) Bidder's failure to submit these two forms shall be considered a material defect and result in rejection of Bidder's bid. Substitutions of any listed

G-17 Revised: 2022.01.03 subcontractors pursuant to N.J.S.A. 40A:11-16 will not be permitted except with the consent of the County Engineer.

### 31. SAFETY

The Contractor shall observe all rules and regulations of the Federal, State, and local health officials. Attention is directed to Federal, State, and local laws, rules, and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to the worker's health or safety.

The Contractor shall admit to the site, without delay and without the presentation of an inspection warrant, any inspector of OSHA or other legally responsible agency involved in safety and health administration upon presentation of proper credentials.

The Contractor shall make available to the Contractor's employees, subcontractors, the County Engineer, and the public, all information pursuant to OSHA 29 CFR Part 1926.59 of The Hazard Communication Standard 29 CFR 1910.1200, and shall also maintain a file on each job site containing all Material Safety Data Sheets (MSDS) for products in use at the Project. These Material Safety Data Sheets shall be made available to the Engineer upon request.

The Contractor shall at all times conduct the Work to provide for the safety and convenience of the general public and protection of persons and property. The safety provisions of applicable laws, OSHA regulations, building and construction codes, and the rules and regulations of the New Jersey Department of Labor and Workforce Development shall be observed.

### 32. QUALITY, SAFETY AND PERFORMANCE STANDARDS

All goods and services must be constructed and provided with the highest quality materials and workmanship. It is the intent of these specifications that only equipment equal to, or exceeding, the standard specified will be acceptable in order to protect the safety of the occupants of the Building.

### 33. MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS

Any Work, material, or method, not specifically described in these specifications, but shown upon the plans of the Work, will be carried out as shown on said plan.

### 34. PERMITS

The Contractor will obtain all necessary permits required by law and provide the County with necessary approvals prior to commencement of permitted Work.

### 35. CONTRACTOR TO PROVIDE PROOF OF PAYMENT

G-18 Revised: 2022.01.03 Upon the completion of the Work, the Contractor will furnish a General Release as proof that all claims for labor, materials, etc., have been settled by the Contractor. The General Release, in a form acceptable to County Counsel, is a condition of final payment.

### 36. CHANGE ORDERS

The applicability of change orders and change order procedures shall comply with *N.J.S.A.* 40A:11-16.7 and *N.J.A.C.* 5:30-11.1 *et seq.*, "Change Orders and Open End Contracts".

### **37. SUPPLEMENTAL WORK**

In case any supplemental work is necessary, it will be performed by the Contractor at a price fixed by agreement between the Contractor and the County Engineer and approved by the County as specified in Section 36. The Contractor will do no supplemental work on any character, for which the Contractor will demand pay, except upon the written order of the County.

### 38. FORM OF CONTRACT

The Contract will be subject to all statutory provisions on the matter of Public Works, Public Contracts, The Law Against Discrimination, the Laws Governing Affirmative Action and Prevailing Rates of Wages under the laws of New Jersey.

The Agreements shall be executed by both parties not later than twenty-one (21) days from the date of the award by the County (Sundays and holidays excluded); however, such time frame may be extended by agreement of the parties.

### 39. PROGRESS PAYMENTS

Monthly progress payments will be made based on the value of labor and materials incorporated in the Work and of materials suitably stored at the site. An itemized schedule of values shall be submitted with each Application for Payment.

(Refer to the Owner/Contractor Agreement for Retainage and other conditions pertaining to payment and the application of N.J.S.A. 2A:30A-1 et seq.)

All Applications for Payment shall be accompanied by paid invoices for materials incorporated in the Work and for materials suitably stored at the site, and affidavit(s) by

G-19 Revised: 2022.01.03 Subcontractors whose Work was included in the next to the last application to the effect such Work and such materials have been paid for.

No payment shall be made without Contractor having provided all submittals set forth in this Section, and the approval of same by the County.

For contracts exceeding \$100,000.00, monthly payments will be made on the Work to the extent of 98% of the value of the Work done which is considered to be retainage.

For contracts less than \$100,000.00, monthly payments will be on the Work to the extent of 90% of the value of the Work done. In lieu of the retainage, the Contractor will, at his option, deposit with the County Counsel negotiable bearer bonds of the State of New Jersey or any political subdivision thereof, equal to the amount otherwise withheld as retainage.

When the Project is completed, the final cost of the Project will be based on actual quantities of authorized Work done under each item scheduled in the bidding sheet and approved Change Orders, if any. The money due to the Contractor as determined by said final certificate after deduction of previous monthly payments on account, will be paid to the Contractor in accordance with the terms of the contract dealing with Prompt Payment, providing, however that before such final payment is made, all outstanding claims against the Contractor must be satisfied. Before final payment is released, the Contractor must furnish: a) Maintenance Bond (see Section 6 of these general specifications); b) Certification of Compliance, New Jersey Prevailing Wage Act (see Sections 21 and 51); and c) General Release (see Section 36) in a form satisfactory to County Counsel; d) complete set of as-built plans in the latest AutoCad on compact disc; and e) a complete set of in-progress photos in jpg, jpeg, or bmp digital format on a compact disc.

#### 40. INSPECTION

The Work must be done in accordance with the plans and specifications, and will be inspected by the County Engineer. An inspector may be placed upon the Work at any time by the County Engineer to see that the plans, specifications, and instructions of the County Engineer are carried out. In connection herewith, bidders are referred to N.J.S.A. 40A:11-17.

#### 41. DAMAGES

The Contractor will be held responsible for all damages that may occur to Work, or to persons or property by reason of the nature of the Work or from the elements, or by reason of inadequate protection of the Work, or from any carelessness or negligence on his part or on the part of his employees. The County will withhold payments on the Work

G-20 Revised: 2022.01.03 until all suits or claims for damages sustained on, or by reason of, this Work will have been settled by the Contractor.

The construction and final completion of this Work will be guaranteed by the Contractor. Any damages that may be done to the Work or any part thereof, by the elements or otherwise, during its construction, will be made good by the Contractor.

### **42. LIQUIDATED DAMAGES**

If the Project is not completed within the time specified herein or within such further time as may have been granted by the County Engineer, then the Contractor hereby agrees to pay to the County as liquidated damages, but not as a penalty, \$1,000.00 per day for each and every calendar day that he is in default on time to complete the Work. The said sum will be deducted from moneys due the Contractor and if the damages exceed this amount, then the Contractor or his Surety Company will pay the excess. These damages may be waived at the option of the County.

### 43. AFFIRMATIVE ACTION REQUIREMENTS

(REVISED 01/2022)

### **EXHIBIT B**

### MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

N.J.S.A. 10:5-31 et seq. (P.L.1975, c.127)

N.J.A.C. 17:27-1.1 et seq.

### **CONSTRUCTION CONTRACTS**

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: 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. The contractor agrees

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to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to <u>N.J.S.A.</u> 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program, may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B, and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade

G-22 Revised: 2022.01.03 union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

- (B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:
  - (I) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to <u>N.J.A.C.</u> 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
  - (2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
  - (3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade:
  - (4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;
  - (5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal

employment opportunity and nondiscrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

- (6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:
  - (i) The contactor or subcontractor shall interview the referred minority or women worker.
  - (ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.
  - (iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.
  - (iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.
  - (7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms

made available by the Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Dept. of LWD, Construction EEO Monitoring Program, and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women. (D) The contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these

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regulations, and public agencies shall furnish such information as may be requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq.

### 44. PROHIBITED ACTIVITIES IN RUSSIA AND BELARUS & INVESTMENT ACTIVITIES IN IRAN

P.L. 2022, c. 3 prohibits the award, renewal, amendment, or extension of State and local public contracts for goods or services with persons or entities engaging in prohibited activities in Russia or Belarus. P.L. 2012, c.25 prohibits the award or renewal of State and local public contracts for goods and services with persons or entities engaged in certain investment activities in the energy or finance sectors of Iran.

Before a goods and services contract can be entered into, vendors and contractors must certify that neither they nor any parent entity, subsidiary, or affiliate is listed on the New Jersey Department of the Treasury's list of entities determined to be engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3 ("Russia-Belarus list") or in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 list").

# 45. COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT - (N.J.S.A. 34:11-56.48 et. seq.)

Pursuant to the above-referenced law, Bidders are required to be registered with the New Jersey Department of Labor and Workforce Development and to possess a current certificate by said Department indicating compliance with the Act prior to the time and date that bids are received. Bidders are notified of this requirement of their compliance. Such certificates or applications shall also be provided for each Subcontractor furnishing plumbing and gas fitting, steam and hot water heating and ventilating apparatus, and all kindred work, steam power plants and kindred work, electrical work, structural steel and ornamental iron work, and such other subcontractors as the specifications require relative to prior identification.

### 46. UTILITIES

Attention of the bidder is directed to the fact that the approximate locations of known utility structures and facilities that may be encountered within and adjacent to the limits of the Work are shown on the plans and described herein. The accuracy and completeness of this information is not guaranteed by the County Engineer and the bidder is advised to ascertain for himself all the facts concerning the location of these and other utilities.

G-26 Revised: 2022.01.03 The Contractor will not proceed with his Work until he has made diligent inquiries of all public utility and municipal officials to determine the exact location of all-underground structures and pipes within the site of the Project. The Contractor will notify utility owners not less than ten (10) days in advance of the time he proposes to perform any Work that will endanger or affect their facilities in compliance with **New Jersey One-Call**. In excavating in any part of the Work, care must be taken not to remove or damage any gas, water, sewer, or other pipe, conduit, or structure, - public or private - without the concurrence of the owner and the County Engineer. The Contractor will, at his own expense, shore up, secure and maintain a continuous flow in such structures, and will keep them in repair until final acceptance of the Work.

When pipes or other structures are encountered or when the removal, relocation or protection of these utilities are necessary in carrying out the Project as planned, the Contractor will cooperate with the owner of said utilities and will permit the owners or their agents access to the site of the Work in order to relocate or protect their facilities and not hinder or delay unnecessarily the Work of the owners in moving same. No extra allowance of payment will be made to the Contractor for the use of any materials, equipment, etc., or for the performance of any Work in connection with the moving of said structures unless the Contractor is specifically ordered by the County Engineer to furnish such materials, equipment, or services. If directed by the County Engineer to do any Work or furnish any materials or equipment, payment will be allowed the Contractor in accordance with the unit prices bid for such Work, or, if such items are not scheduled in the proposal, such Work shall be allowed "Supplemental Work" as provided in Section 39 of these general specifications. The corporations, companies, agencies or municipalities owning or controlling the utilities, and the name, and telephone numbers are listed in the beginning of the Technical Specifications.

### 47. MATERIAL COMPLIANCE AND SHOP DRAWINGS

The Contractor will require the manufacturer or supplier to furnish three (3) copies of Certification of Compliance with each delivery of materials, components and manufactured items for the Project. Two (2) copies will be furnished to the County Engineer; one copy will be retained by the Contractor. Certificates of Compliance will contain the following information:

- 1. Project to which material is consigned;
- 2. Name of the Contractor to which the material is supplied;
- 3. Kind of material supplied;
- 4. Quantity of material represented by the Certificate;
- Means of identifying the consignment, such as label marking, seal number, etc.:
- Date and method of shipment;
- 7. That the material is in conformity with the pertinent specifications stated in the certificate; and

8. Signature of a person having legal authority to bind the supplier.

The Contractor will submit to the County Engineer for his approval five (5) copies of complete and fully detailed shop or working drawings for those items listed in the beginning of the technical specifications.

Each drawing will identify the name of the job, location and Contractor.

All drawings will be approved in accordance with the standard specifications. Refer to the Technical Specifications for specific items.

All materials or articles used in the Work will be of American manufacture, insofar as same are available, in conformance with N.J.S.A. 40A:11-18.

### 48. PRECONSTRUCTION

In order to provide full coordination of this Project among the parties concerned, the County Engineer will arrange for a preconstruction meeting between the Contractor, County Engineer and other interested parties as soon as possible after the contract is executed. At this meeting the Contractor will present his proposed schedule of Work which shall be subject to review and approval of the County through its designated representatives.

### 49. DISPUTES UNDER THE CONTRACT

A dispute arising under the Contract shall be submitted in writing to the County Engineer with all facts and supporting data. The County Engineer will review the dispute and issue his decision or request additional facts or documentation after which he will render his decision.

In the event the dispute is not then resolved, the matter shall, pursuant to law, be submitted to mediation before being submitted to a court of competent jurisdiction venued in Union County.

The County Engineer will notify the County Counsel when a matter is to be submitted to mediation. The County Counsel will communicate with the parties and inform them of the procedures to be followed in making such a submission.

### 50. CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

G-28 Revised: 2022.01.03 Pursuant to N.J.S.A. 52:32-44, the County of Union is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the County of Union with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

Proof of registration must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids. If subcontractors are named on the bid, proof of the business registration for each must be provided prior to the award of a contract. Similarly, to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

During the course of contract performance:

- the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- 2) the contractor shall maintain and submit to the County of Union a list of subcontractors and their addresses that may be updated from time to time.
- 3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at

http://www.state.nj.us/treasury/revenue/busregcert.shtml.

Before final payment is made under the contract, the contractor shall submit to the County of Union a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a

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### 51. BID PROTEST - LEGAL FEES AND COSTS

In the event a Bidder unsuccessfully challenges a Bid Submission by filing an action in a court of law concerning same, said Bidder shall be responsible for payment of reasonable legal costs and fees incurred by the County relating to said protest.

### 52. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE

Bidder shall comply with the requirements of N.J.S.A. 40A:11-18 and use only manufactured and farm products of the United States, wherever available, for the Project.

### 53. NEW JERSEY PAY-TO-PLAY REQUIREMENTS

This Contract is required by law to be publicly advertised for bids. As such, lists of political contributions pursuant to N.J.S.A. 19:44A-1 et seq. are NOT REQUIRED to be provided with the bids.

### 54. STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION

Pursuant to N.J.S.A. 40A:11-20 entitled Certificate of Bidder Showing Ability to Perform Contract, the County requires a Certification from all bidders submitting a bid showing that the Bidder owns, leases, or controls all necessary equipment required by the Project Plans and Specifications. All bidders shall provide this information at the time of the bid opening using the attached form entitled, "CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT".

If the Bidder is not the actual owner of the equipment, it shall state the source from which the equipment will be obtained and shall attach a certificate from the owner or person in control of the equipment demonstrating that the equipment owner has granted the Bidder control of the requisite equipment during such time as may be necessary for completion of the portion of the contract for which the equipment is necessary.

### 55. NEW JERSEY SALES AND USE TAX REQUIREMENTS,

Contractors are required to comply with the following:

New Jersey Sales and Use Tax Requirements: All contractors with subcontractors, or any of their affiliates, who enter into contracts for the provision of goods or services with or for New Jersey local government entities, are required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax due on all of their sales of tangible personal property delivered into the State of New Jersey

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pursuant to the "Sales and Use Tax Act," (N.J.S.A. 54:32B-1 et seq.), regardless of whether the tangible personal property is intended for a contract with the contracting agency. This tax shall be remitted for the term of the Contract.

For purposes herein "affiliate" shall mean any entity that: (a) directly, indirectly, or constructively controls another entity, (b) is directly, indirectly, or constructively controlled by another entity, or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the ownership interest in that entity. NJSA 52:32-44(g)(3).

### 56. RESOLUTION NO. 2014-408

WHEREAS, the County of Union recognizes there is a need to ensure that all work on significant public construction and maintenance contracts is performed by responsible, qualified firms that maintain the capacity, expertise, personnel, and other qualifications and resources necessary to successfully perform public contracts in a timely, reliable, and cost-effective manner; and

WHEREAS, in order to effectuate the purpose of selecting responsible contractors for significant public contracts and to protect Union County's capital investments in such contracts prospective contractors and subcontractors should be required to meet pre-established, clearly-defined, minimum standards relating to contractor responsibility, including retirements and criteria concerning qualifications, competency) expertise, adequacy of resources, including equipment, financial and personnel, and satisfactory records regarding past project performance, safety, legal compliance and business integrity; and

**WHEREAS**, the County has a compelling interest in assuring that its Public Works Projects meet the highest standard of safety and quality; and

WHEREAS, due to the critical impact that skilled construction craft labor has on public works projects, and due to the limited availability of skilled construction craft labor and imminent craft labor skill shortages, it is necessary to require contractors and subcontractors to participate in established, formal apprenticeship training programs for the purpose of both promoting successful project delivery and ensuring future workforce development; and

WHEREAS, an apprenticeship program is a structured system of training designed to prepare individuals for occupations and lifelong careers in skilled trades and crafts by providing a wage-paying job that incorporates extensive

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workplace and classroom training under the supervision of experienced workers, in preparation for highly skilled occupations; and

WHEREAS, apprenticeship programs are a critical component in public safety, by ensuring that workers on public projects are properly trained, able, competent and capable craftsmen, and provide assurance of compliance with the County's bid specifications and achieve high quality standards; and

WHEREAS, for an apprenticeship program to be fully effective, the public and private sectors must recognize its value and commit to supporting its mission; and

WHEREAS, Union County has long recognized the value of apprenticeship programs through its support of the Union County Vocational-Technical Schools, which offer training programs to help ensure that Union County will continue to produce a skilled and educated work force in the trade specialties, and thus, strengthen Union County's economy by fostering the development of highly paid trade and craft careers; and

WHEREAS, the use of apprenticeship programs or apprenticeship trained employees on Union County Public Works Projects will serve the dual goal of providing the County with assurance that its public works projects are completed with a well-trained workforce, in a highly skilled and timely fashion, while creating opportunities for careers in the skilled trades and craft industry for County residents: and

WHEREAS, the County of Union also recognizes that it is beneficial to their employees to utilize fair business, employment, and training practices that have a positive impact on local communities affected by such contracts:

NOW, THEREFORE, BE IT RESOLVED by the Board of Chosen Freeholders of the County of Union as follows:

- The County of Union shall require compliance with the provisions of this Resolution by business entities seeking to provide services to the County of Union as specified herein. The requirements of this Resolution are intended to supplement, not replace, existing contractor qualifications and performance standards or criteria currently required by law, public policy or contracting documents, including but not limited to Union County's DPMC classification and Project Labor Agreement policies
- 2. All contractors and subcontractors that perform significant work on

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any public facility or public works project, including construction, alteration, renovation, repair, service, or maintenance work, shall meet the requirements of this Resolution. For purposes of this Resolution, the term "significant work" shall be defined as any work or activity covered under the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq.

- 3. All firms engaged in contracts covered by this Resolution shall be qualified responsible contractors or subcontractors that have sufficient capabilities in all respects to successfully perform contracts on which they are engaged, including the necessary experience, equipment, technical skills and qualifications and organizational, financial and personnel resources. Firms bidding on public contracts shall also be required to have a satisfactory past performance record and a satisfactory record of legal compliance, integrity and business ethics. Compliance with these standards shall be established by compliance with the requirements set forth in paragraph 8 of this Resolution.
- 4. As a condition of performing work on public works contracts over the public works threshold, the general contractor shall provide certification that he and each subcontractor working on the project shall have at least one (I) employee who has successfully completed the OSHA 10-hour construction safety and health course. As a condition of performing work on public works contracts of \$500,000.00 or more total cost of project, the general contractor shall provide certification that each subcontractor working on the project shall have at least one (1) employee who has successfully completed the OSHA 30-hour construction safety and health course.
- 5. All contractors and subcontractors that perform significant work on any public facility or public works project shall be required to affirmatively provide evidence of and confirm compliance with proof of participation in an Apprenticeship Program currently registered and approved by the United States Department of Labor ("USDOL"), the New Jersey Department of Labor ("NJDOL") or any state having equal to or higher requirements as either the USDOL or NJDOL apprenticeship programs. Additionally, Apprenticeship Programs shall meet the criteria set forth in Section 8(i) of this Resolution.
- 6. As a condition of performing work on public works contracts subject to this Resolution, a general contractor seeking award of a contract shall submit a Contractor Responsibility Certification at the time it submits its bid for contract.
- 7. The Contractor Responsibility Certification shall be completed on

a form provided by the Union County Purchasing Department and shall reference the project for which a bid is being submitted by name and contract or project number.

- 8. In the Contractor Responsibility Certification, general contractors and subcontractors shall certify the following facts regarding their past performance and work history and its current qualifications and performance capabilities:
  - a. The firm has all valid, effective licenses, registrations or certificates required by federal, state, county, or local law, including, but not limited to, licenses, registrations, certificates required to: (1) do business in the designated locale; and (2) perform the contract work it seeks to perform. These shall include, but not be limited to, licenses, registrations or certificates for any type of trade work or specialty work, which the firm proposes to self-perform.
  - b. The firm meets the bonding requirements for the contract, as required by applicable law or contract specifications and any insurance requirements, as required by applicable law or contract specifications, including general liability insurance, workers compensation insurance and unemployment requirements.
  - c. The firm has not been debarred by any federal, state or local government agency or authority in the past three (3) years.
  - d. The firm has not defaulted on any project in the past three (3) years.
  - e. The firm has not had any type of business, contracting or trade license, registration, or other certification suspended or revoked in the past three (3) years.
  - f. The firm has not been cited and found guilty for a willful violation of federal or state safety laws in the past three (3) years.
  - g. The firm and/or its owners have not been convicted of any crime relating to the contracting business by a final decision of a court or government agency in the past three (3) years.
  - h. The firm will pay all craft employees that it employs on the project the current wage rates and benefits as required under

applicable Federal or State prevailing wage laws.

- i. The firm participates in an Apprenticeship Program that is currently registered with the USDOL, the NJDOL or any state having equal to or higher requirements as either the USDOL or NJDOL apprenticeship programs, for each craft or trade in which it apprentices. The firm shall provide proof of meeting this qualification standard by submitting appropriate documentation as an attachment to this Certification. The firm shall continue to participate in applicable apprenticeship programs for the full duration of the contract work. The apprenticeship program in which the firm participates shall have graduated at least one (1) enrollee in each of the past three (3) years.
- 9. The County of Union may conduct any additional inquiries to verify that the prospective awardee and its subcontractors have the technical qualifications and performance capabilities necessary to successfully perform the contract and that the firms have a sufficient record of legal compliance and business integrity to justify the award of a public contract. In conducting such inquiries, the County of Union may seek relevant information from the firm, its prior clients or customers, its subcontractors or any other relevant source.
- 10. If any provision of this Resolution shall be held to be invalid or unenforceable by a court of competent jurisdiction, any such holding shall not invalidate any other provisions of this Resolution and all remaining provisions shall remain in full force and effect.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Chosen Freeholders of the County of Union that it hereby establishes and adopts the Responsible Contractor Policy, and it hereby authorizes the County Manager to sign any and all documents necessary to make said Policy effective immediately.

### **57. FEDERAL TERMS**

TERMS AND CONDITIONS APPLICABLE TO ALL CONTRACTS/PURCHASES FUNDED, IN WHOLE OR IN PART, BY FEDERAL FUNDS.

The provisions set forth below apply to all contracts funded, in whole or in part, by Federal funds as required by 2 CFR 200.317.

# 1. <u>CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA</u> FIRMS

Pursuant to 2 CFR 200.321, the State must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Accordingly, if subawards are to be made the Contractor shall:

- (1) Include qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Divide total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and,
- (5) Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

### 2. DOMESTIC PREFERENCE FOR PROCUREMENTS

Pursuant to 2 CFR 200.322, where appropriate, the State has a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). If subawards are to be made the Contractor shall include a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). For purposes of this section:

- (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) "Manufactured products" means items and construction materials composed in whole or in part of nonferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

### 3. PROCUREMENT OF RECOVERED MATERIALS.

Where applicable, in the performance of contract, pursuant to 2 CFR 200.323, the contractor must comply with section 6002 of the Solid Waste

G-36 Revised: 2022.01.03 Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$ 10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

To the extent that the scope of work or specifications in the contract requires the contractor to provide recovered materials the scope of work or specifications are modified to require that as follows.

- i. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
  - 1. Competitively within a timeframe providing for compliance with the contract performance schedule;
  - 2. Meeting contract performance requirements; or
  - 3. At a reasonable price.
- ii. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.
- iii. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

### 4. EQUAL EMPLOYMENT OPPORTUNITY

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." See, 2 CFR Part 200, Appendix II, para. C.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

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. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his/her books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the

nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of

September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

### 5. DAVIS-BACON ACT, 40 U.S.C. 3141-3148, AS AMENDED

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. Additionally, contractors are required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

### 6. COPELAND ANTI-KICKBACK ACT

Where applicable, the Contractor must comply with Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

a. Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into the OGS centralized contract.

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- b. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- c. Breach. A breach of the clauses above may be grounds for termination of the OGS centralized contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. § 5.12.
- 7. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, 40 U.S.C. 3701-3708

Where applicable, all contracts awarded by the non-Federal entity in excess of \$ 100,000 that involve the employment of mechanics or laborers must comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

- (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 (b)(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 (b)(1) of this section, in the sum of \$27 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 (b)(1) of this section.
- (3) Withholding for unpaid wages and liquidated damages. The unauthorized user 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 (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(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 (b)(1) through (4) of this section.

### 8. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

9. CLEAN AIR ACT, 42 U.S.C. 7401-7671Q, AND THE FEDERAL WATER POLLUTION CONTROL ACT, 33 U.S.C. 1251-1387, AS AMENDED

Where applicable, Contracts and subgrants of amounts in excess of \$150,000, must comply with the following:

#### Clean Air Act

- The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- 2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

G-42 Revised: 2022.01.03 3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

### Federal Water Pollution Control Act

- 1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- 2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- 3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.
- 10. DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 AND 12689)
- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by the State or authorized user. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the State or authorized user, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

### 11. BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. 1352

Contractors that apply or bid for an award exceeding \$100,000 must file the

required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

### 12. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

- (a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
  - (1) Procure or obtain;
  - (2) Extend or renew a contract to procure or obtain; or
  - (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
    - For the purpose of public safety, security of government (i) facilities, physical security surveillance of critical infrastructure, and national security purposes, video surveillance and Hytera telecommunications equipment produced bγ Communications Corporation. Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
    - (ii) Telecommunications or video surveillance services provided by such entities or using such equipment.
    - (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

### 13. CONTRACTS FOR MORE THAN THE SIMPLIFIED ACQUISITION THRESHOLD

Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriat

### 14. TERMINATION FOR CONVENIENCE PROVISION

All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

### 15. BONDING REQUIREMENTS

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

- (a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.
- (b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.
- (c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

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# MICHELLE HAGOPIAN, ASSISTANT DIRECTOR DIRECTOR / DIVISION OF PURCHASING

### **BID DOCUMENT SUBMISSION CHECKLIST**

ALL SIGNATURES AND SEALS SHALL BE ORIGINALS UNLESS OTHERWISE SPECIFIED BID SHEETS SHOULD NOT BE SUBMITTED DOUBLE SIDED PAGES, (SINGLE SIDE ONLY)

EACH BIDDER SHOULD COMPLETE THIS FORM AND INITIAL EACH ENTRY.  DATE COMPLETED:
PLEASE SUBMIT BID DOCUMENTS ON SINGLE SIDED PAPER ONLY, WITH THE EXCEPTION OF THE SURETY AND BID BOND DOCUMENTS.
IN ACCORDANCE WITH THE BID SPECIFICATIONS I HAVE REVIEWED, COMPLETED / EXECUTED AND INCLUDED THE FOLLOWING FORMS:
Bid Form Page (Signed, Dated and Bid on all alternatives applicable to the Work).
Security in the form of: Bid bond in an amount equal to 10% of the total amount of this bid not to exceed \$20,000.00; or Certified check or cashier's check in the amount of 10% of this bid not to exceed \$20,000.00
Consent of Surety form signed by a Surety Company if the total amount of your Bid is over \$36,000.00.  If your bid is accepted, the Surety Company that provided the Consent shall be required to furnish a Performance, Labor and Materials Bond in the amount of 100% of the award of the contract.  The County of Union has provided its Consent of Surety form for your use. The use of this form by your Surety Compa will expedite the bid review process and eliminate the possibility of having your bid rejected. If, however, you should need to use another form, please use language similar to that used on the Union County form and avoid making any additions or deletions to the Union County form language. In lieu of the Consent of Surety you may submit a Certified Check in the full amount of the bid.
STATEMENT OF BIDDER OWNERSHIP. Pursuant to N.J.S.A. 52:25-24.2, which includes <b>BOTH</b> of the following documents:
<ul> <li>Bidder Signature Page</li> <li>Bidder Disclosure Statement (Fill out 2 pages completely)</li> </ul>
SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes <b>BOTH</b> of the following documents:
<ul> <li>Subcontractor Identification Statement: List of Subcontractors (only for certain types of work)</li> <li>Subcontractor Identification Certification</li> </ul>
Acknowledgement of Addendum form: (This form is to be used only when an addendum has been added to the specifications).
A copy of the State of New Jersey Department of the Treasury, Division of Revenue, <b>Business Registration Certificate ("BRC")</b> may be included with the bids to expedite the contract process because the bidder is required to provide the County of Union with its proof of business registration and that of any named subcontractor(s) prior to contract award or authorization.
A copy of the State of New Jersey Department of the Treasury, Division of Revenue, <b>Business</b> Registration Certificate ("BRC") of all named or listed subcontractors (List of Subcontractors) in a  Construction bid may be included with the bid as the BRC(s) for each named or listed subcontractors in order to expedithe contract process. Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

Affirmative Action Requirement	
Experience Statement	
Certificate of Bidder showing ability to perform Contract	
Non-Collusion Affidavit – Fill out completely and notarize	
Certificates from New Jersey Department of Labor and Workforce Development – Public Works Contractor Registration Act. (Only for certain types of work)	
Federal Attachments (If applicable)	
NJDPMC Certificate / Notice of Classification (If applicable)	
Americans with Disabilities Act	
Statement of Bidder's Qualifications	
Contractor Performance Record	
Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders	
Prior Negative Experience Questionnaire	
Contractor's Certification of Compliance – New Jersey Prevailing Wage Act	
Uncompleted Contracts Affidavit (For Bidder, if applicable) MUST ALSO PROVIDE DPMC FORM 701	
Certificate of Insurance Statement	
Collection of Use Tax on Sales to Local Government Statement	
Time of Completion	
Prohibited Russia-Belarus Activities & Iran Investment Activities Certification	
Federal Non-Debarment Certification	
BYRD Anti-Lobbying Amendment Certification	
Certification regarding Lobbying	
Disclosure of Lobbying Activities (LLL Form)	
I HAVE TAKEN THE FOLLOWING ACTIONS:	
Visited the site and attended the Pre-Bid Meeting (Where applicable)	
Reviewed the Contract Documents (including any permits the County or its professionals may have obtained), Work, Site, Locality, and Local Conditions and Laws and Regulations that in any manner may affect Cost, Progress, Performance or Furnishing of Work.	
Reviewed Bond Requirements	
Provided Proof of Compliance with New Jersey Prevailing Wage Act	
Reviewed Form of Owner/Contractor Agreement and General Conditions to the Contract	

NOTE: QUESTIONS PERTAINING TO THIS BID ARE TO BE DIRECTED TO THE DIVISION OF PURCHASING AT <u>ucbids@ucnj.org.</u>

# **BIDDING DOCUMENTS**

The Bidding Documents consist of the following items:

- ADDENDA, if issued
- CLARIFICATIONS, if issued
- INSTRUCTION TO BIDDERS
- BID FORM
- SPECIFICATIONS: As outlined in the Table of Contents and included in the Project Manual.
- DRAWINGS:
   As per List of Drawings, indicated on the Project Title Sheet.

# **BID FORM**

I/We have carefully examined the plans, specifications, and advertisement for bid for the

# 2023 Road Resurfacing Project, Various Municipalities, County of Union, New Jersey (CA-2022) BA#7-2023; UNION COUNTY ENGINEERING PROJECT #2021-011

that is on file in the Union County Division of Engineering. I/We have inspected the site of the work and will contract to do all the work and furnish all materials mentioned in said plans and specifications. Work will be accomplished in the manner prescribed therein.

#### **BASE BID ITEMS:**

ITEM No.	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	4		
2	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	UNIT	2		
3	BREAKAWAY BARRICADE	UNIT	100		
4	DRUM	UNIT	100		
5	TRAFFIC CONE	UNIT	1,000		
6	CONSTRUCTION SIGNS	SF	2,400		
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	500	\$83.28	\$41,640.00
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	1	\$500,000.00	\$500,000.00
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	635		
10	HMA MILLING, 3" OR LESS	SY	250,497		
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	500		
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	37,595		
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	28,760		
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	1,470		
15	FUEL PRICE ADJUSTMENT	DOLL.	1	\$13,300.00	\$13,300.00
16	ASPHALT PRICE ADJUSTMENT	DOLL.	1	\$26,800.00	\$26,800.00
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	750		
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	500		
19	CURB PIECE	UNIT	27		
20	BICYCLE SAFE GRATE	UNIT	18		
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	661		
22	RESET WATER VALVE BOX	UNIT	254		
23	INLET, TYPE B	UNIT	1		
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	3		
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	43	_	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	25		

27	10"X20" CONCRETE VERTICAL CURB	LF	6,765	
			· ·	
28	GRANITE CURB	LF	420	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	855	
30	CONCRETE SIDEWALK, 4" THICK	SY	1,345	
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	1,080	
32	DETECTABLE WARNING SURFACE (CAST-IN- PLACE)	SY	164	
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	55	
34	TRAFFIC STRIPES, 4"	LF	135,635	
35	TRAFFIC STRIPES, 6"	LF	11,525	
36	TRAFFIC STRIPES, 8"	LF	14,835	
37	TRAFFIC MARKINGS, SYMBOLS	SF	6,750	
38	TRAFFIC MARKING, LINES, 12"	LF	20,045	
39	TRAFFIC MARKING, LINES, 24"	LF	3,455	
40	REGULATORY AND WARNING SIGN	SF	320	
41	SOLAR FASHING LED CROSSING SIGN	UNIT	2	
42	RPM, MONO-DIRECTIONAL, AMBER LENS	UNIT	100	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	1,000	
44	TOPSOIL SPREADING, 4" THICK	SY	2,810	
45	FERTILIZING AND SEEDING, TYPE A	SY	2,810	
46	STRAW MULCHING	SY	2,810	
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	LF	85,000	
48	CLEARING SITE	LS	1	
49	FINAL CLEANUP	LS	1	

TOTAL BASE BID AMOUNT:	
Written	Figures
BID CONTINGENCY: (To be used if and when directed by the Cour	
One Hundred Fifty Thousand Dollars and Zero Cents Written	<u>\$150,000.00</u> Figures
TOTAL BASE BID ITEMS PLUS BID CONTINGENCY AMOUNT:	
<del></del>	
Written	Figures

NOTE: Bid Contingency may include one-half of one percent of contract amount set aside for local training if and when directed by the County.

# CONSENT OF SURETY TO ACCOMPANY PROPOSAL (BID)

(	hereinafter called Su	rety), organized	and	existing	under	the laws	of the	State of
du	ıly authorized and quali	fied to transact bu	usiness	in the S	tate of N	ew Jersey	, in cons	ideration of
the sum of One Dollar (\$1.0	0), lawful money of the	United States of	Americ	ca, to it ir	n hand p	aid, receip	t where	of is hereby
acknowledged, and in consid	deration, hereby certifie	s and agrees that	if the c	ontract fo	or which t	the attach	ed propo	sal is made
be awarded to	(hereinafte	er called Contracto	or) for tl	he perfor	mance o	f certain w	ork and	labor or the
supplying of certain materia	ls, or both, as more pa	articularly set fort	h in sai	id propos	sal and c	lescribed	for purpo	oses of this
instrument as a proposal fo	r	to the COU	NTY O	F UNION	l and if (	Contractor	shall er	nter into the
contract, Surety will become	bound as surety for it	s faithful performa	ance, la	abor and	material	payment	and will	provide the
Contractor with a performan	ce, labor and material բ	payment bond in t	he full	amount o	of the cor	ntract price	∍.	
NOTE:	NAME OF INCUE	ANCE COMPANI						
NOTE: Expiration date	NAME OF INSUR	ANCE COMPAN	T					
Needed if Annual	ADDRESS:							
Surety								
	ORIGINAL SIGNA		ANCE	00				
	ATTORNEY-IN-FA	AUT FUR INSUR	イバしに	UU.				

NOTE: PROOF OF AUTHORITY OF OFFICERS OF SURETY COMPANY TO EXECUTE THIS DOCUMENT MUST BE SUBMITTED.

#### **BIDDER SIGNATURE PAGE**

THE BIDDER MUST READ THE FOLLOWING INSTRUCTIONS TO COMPLETE THIS PAGE:

- 1. If doing business under a <u>trade name, partnership or a sole proprietorship</u>, you must submit the bid under exact title of the trade name, partnership, or proprietorship, and the bid must be signed by either the <u>owner</u>, or a <u>partner</u> and <u>witnessed</u> by a <u>notary public</u>.
- 2. If a <u>Corporation</u>, the bid must be signed by the <u>President</u> or <u>Vice President</u> and <u>witnessed</u> by a <u>Corporate Secretary</u> (corporate title must be exact) and <u>affix corporate seal</u>. If a Corporate Secretary does not exist, President or Vice President's signature shall be witnessed by a Notary Public.
- 3. Other persons <u>authorized</u> by <u>corporate resolution</u> to execute agreements in its behalf may also sign the bid documents (pages). <u>Copy of a resolution must accompany the bid</u>.
- 4. The person who signs this bid form **must also** sign the **Non-Collusion Affidavit**.

5. You <u>cannot</u> witness your o	n signature.
	NAME OF BIDDER
ORIGINAL SIGNATURE CORPORATE SECRETARY	ADDRESS OF BIDDER
PRINT NAME AND TITLE CORPORATE SECRETARY	TEL: FAX: E-Mail:
	BY: ORIGINAL SIGNATURE
Corporate Seal	

WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY SUPPLY THE INFORMATION REQUESTED ON THIS PAGE, YOUR BID MAY BE REJECTED.

PRINT OR TYPE NAME AND TITLE

# STATEMENT OF OWNERSHIP DISCLOSURE

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

<u>Name</u>	of Organization:	
Organ	ization Address:	
<u>Part</u>	$oldsymbol{I}$ Check the box that represents the ty	pe of business organization:
□ <sub>Sc</sub>	ole Proprietorship (skip Parts II and III, ex	recute certification in Part IV)
□ <sub>N</sub>	on-Profit Corporation (skip Parts II and II	II, execute certification in Part IV)
□ <sub>Fc</sub>	or-Profit Corporation (any type)	nited Liability Company (LLC)
<b>□</b> Pa	artnership Limited Partnershi	p Limited Liability Partnership (LLP)
<b>O</b> 1	ther (be specific):	<del></del>
<u>Part</u>	<u>II</u>	
	percent or more of its stock, of any opercent or greater interest therein,	and addresses of all stockholders in the corporation who own 10 class, or of all individual partners in the partnership who own a 10 or of all members in the limited liability company who own a 10 as the case may be. (COMPLETE THE LIST BELOW IN THIS SECTION)
	OR	
(Please	partner in the partnership owns a 10	on owns 10 percent or more of its stock, of any class, or no individual 0 percent or greater interest therein, or no member in the limited or greater interest therein, as the case may be. (SKIP TO PART IV) seneeded):
N	Jame of Individual or Business Entity	Address

# <u>Part III</u> DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. Attach additional sheets if more space is needed.

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II other than for any publicly traded parent entities referenced above. The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. Attach additional sheets if more space is needed.

Stockholder/Partner/Member and	Address
Corresponding Entity Listed in Part II	

# Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the *County of Union* is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with *County of Union* to notify the *County of Union* in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the *County of Union* to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):	Title:	
Signature:	Date:	

# SUBCONTRACTOR IDENTIFICATION STATEMENT LIST OF SUBCONTRACTORS

This form is ONLY required for plumbing and gas fitting, steam and hot water heating and ventilating apparatus, steam power plants, electrical work, structural steel, ornamental iron work, and any other trades required to be identified by the specifications (including, but not limited, to satisfying any DPMC Classification requirements).

# CHECK THIS BOX IF NONE OF THE ABOVE LISTED TRADES OR THOSE REQUIRED TO BE IDENTIFIED IN THE SPECIFICATIONS ARE TO BE USED TO PERFORM THE WORK In compliance with N.J.S.A. 40A:11-16 and the bid specifications, the undersigned hereby lists the name or names of the following subcontractors: Company Name: Address: Telephone: Subcontract Amount: \$ Specific Scope of Work Subcontracted: License No. Company Name:\_\_\_\_\_ Address: Telephone: Subcontract Amount: \$ Specific Scope of Work Subcontracted: \_\_\_\_\_ License No. Company Name: Address: \_\_\_\_ Telephone: \_\_\_\_\_ Subcontract Amount: \$\_\_\_\_\_ Specific Scope of Work Subcontracted: License No. IF MORE THAN THREE SUBCONTRACTORS, PLEASE COPY THIS SHEET AS NECESSARY AND ATTACH TO THE **BID PACKAGE.** (Continued on following page)

#### SUBCONTRACTOR IDENTIFICATION CERTIFICATION

Note the law does not permit the listing of alternate subcontractors. However, multiple subcontractors for the same trade are permitted to be named provided the bidder meets the following requirements:

- Bidder identifies each subcontractor named for that category;
- Bidder states the scope of work, goods and services (the portion of the work) to be performed by each subcontractor; and
- Bidder provides the price quote provided by each subcontractor.

The bidder is advised that any change of subcontractor(s) from ones listed herein is subject to the County's approval. Change of subcontractor(s) will be approved only if made for good cause and not as a result of an arbitrary purpose.

The undersigned Bidder certifies and declares that the subcontractors listed above shall be used as subcontractors to complete certain portions of the work in this project as set forth in N.J.S.A. 40A: 11-16.

Witness		NAME OF BIDDER
Date		-
		ADDRESS
	Ву:	ORIGINAL SIGNATURE ONLY
		PRINT NAME AND TITLE

# **ACKNOWLEDGMENT OF ADDENDUM**

# **COUNTY OF UNION**

(Name of Construction /Public \	Norks Project) (Project)	ct or Bid Number)	
Pursuant to N.J.S.A. 40A:11-23.13 revisions, or addenda to the bid a acknowledges the submitted bid take of Union's record of notice to bidders may be subject for rejection of the bid acknowledges.	dvertisement, specifications or es into account the provisions of shall take precedence and that	bid documents. By indicati the notice, revision or adden	ng date of receipt, bidder dum. Note that the County
Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pic up, etc.)	k- Date Received	
or Title of Addendam/Revision	up, etc.)		
A OVALOW! ED OMENT DV DIDDE			
ACKNOWLEDGMENT BY BIDDER	C:		
NAME OF BIDDER:			
ORIGINAL SIGNATURE:			
PRINTED NAME AND TITLE:			
DATE:			

#### **CONTRACTOR BUSINESS REGISTRATION CERTIFICATE**

New Mandatory Requirement - Effective 1/18/2010

The recently enacted **P.L. 2009**, **c.315**, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each subcontractor must be provided prior to the award of bid. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

	Proof of	business	registration	shall be	
--	----------	----------	--------------	----------	--

	A copy of a Business Registration Certificate issued by the Department of the Treasury, Division of Revenue;
or	A convert the week version provided by the N.I. Division of Devenue, or
	A copy of the web version provided by the NJ Division of Revenue, or

Register online at www.nj.gov/treasury/revenue/taxreg.htm. Click the "online" link and then select "Register for Tax and Employer Purposes or call the Division at 609-292-1730.

Note: A NJ Certificate of Authority is not acceptable.

**FAILURE** to submit proof of registration of the bidder or any subcontractor named on the bid prior to the award of a contract shall be cause to reject the bids.

**FAILURE** of the bidder or any subcontractor named on the bid to be <u>registered</u> prior to the receipt of bids is cause for a **MANDATORY REJECTION** of bids. (A NON-WAIVABLE DEFECT). This covers construction work as well as non-construction bids.

#### IN ADDITION:

The contractor shall provide written notice to all **subcontractors and suppliers** not specifically named on the bid of the responsibility to register and submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L.2001,c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L.1977,c.110 (C.5:12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

#### **BUSINESS REGISTRATION**

Pursuant to N.J.S.A. 52:32-44, the County of Union is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the County of Union with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

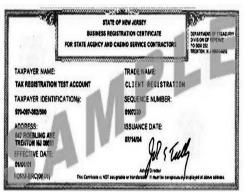
Proof of registration must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids. If subcontractors are named on the bid, proof of the business registration for each must be provided prior to the award of a contract. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

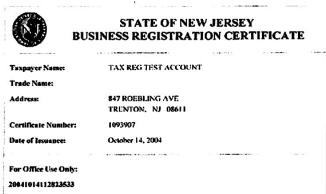
During the course of contract performance:

- (1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- (2) the contractor shall maintain and submit to the County of Union a list of subcontractors and their addresses that may be updated from time to time.
- (3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at http://www.state.nj.us/treasury/revenue/busregcert.shtml.

Before final payment is made under the contract, the contractor shall submit to the County of Union a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.





ATTACH BRC HERE

### AFFIRMATIVE ACTION REQUIREMENT

### **REQUIRED AFFIRMATIVE ACTION EVIDENCE**

General Requirements of P.L. 1975, c. 127: You are hereby put on notice that:

CONSTRUCTION CONTRACTS: The successful contractor must submit within three (3) days of the notice of intent to award or the signing of the contract the initial project manning report (A.A.201). This report should be submitted at the time the signed contract is returned to the County of Union. Attention: Affirmative Action Officer.

If the successful contract <u>does not submit the initial project manning report</u> (A.A.201) within the three (3) days from the time the signed contract is returned to the County of Union, the County of Union <u>WILL</u> declare the contractor <u>non-responsive and award the contract to the next lowest responsible bidder</u>.

# **EXPERIENCE STATEMENT**

I further certify that my		following private or public work, d under any contract. Should you sheet.	
Witness		NAME OF BIDDER	
Date			
		ADDRESS	
	Ву:	ORIGINAL SIGNATURE ONLY	
		PRINT NAME AND TITLE	

YOU MAY ATTACH ADDITIONAL SHEETS, BUT YOU MUST SIGN AND WITNESS THIS SHEET.

# CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT

STATE OF NEW JERSEY /		)	
COUNTY OF	Specify, if Other )	) SS:	
I,State of	, of full age, being duly sv	, of the (City, Town, Borough, etc.) of worn according to law on my oath depose and say that:	
I am	of the firm of	, the Bidder mak	ing
the proposal for the above named Pr	oject ("Contractor'), and tha	at I executed said proposal with full authority to do so; a	and
that said Contractor, pursuant to N.J.	.S.A. 40A:11-20, certifies th	nat it owns, leases or controls all the necessary equipme	ent
required by the Plans, Specifications	and Advertisements under	this Bids are asked for.	
If the Bidder is not the actual owner of	or lessee of any such equip	oment, then the Bidder shall attach to this Certificate	
information identifying the source fro	m which the equipment will	l be obtained, and such information shall be accompani	ed
by a certificate from the owner or per	son in control of the equipm	ment definitively granting to the Bidder the control of the	<b>;</b>
equipment required during such time	as may be necessary for the	he completion of that portion of the contract.	
(Also type or print name of affiant un	der signature)	_	
Bv:			

# **NON-COLLUSION AFFIDAVIT**

(N.J.S.A. 52:34-15)

STATE O	F	<u> </u>		
	) SS:			
COUNTY	OF	)		
named pro	, of the C , of full age, I of the firm o oject, and that I executed	ity of being duly sworn accordii f the said proposal for the	, in the County of ng to law, on my oath depose , the bidder ma above named project, and th	, and the State of e and say that: I am aking the proposal for the above nat I executed the said proposal
with full au collusion, project; ar knowledge	uthority to do so; that said or otherwise taken any act and that all statements cont that the COUNTY OF U	bidder has not, directly of stion in restraint of free, canned in said proposal ar NION, NEW JERSEY reli	or indirectly, entered into any ompetitive bidding in connec	agreement, participation in any stion with the above named nd correct, and made with full ements contained in said
an agreen	nent or understanding for	a commission, percentag		it or secure such contract upon ee, except bona fide employees (N.J.S.A. 52:34-15).
			NAME OF BID	DER
			ORIGINAL SIG	NATURE ONLY
			TE: The person who signe the bidder should sign this	ed the bidder signature page s form also.
Subscribe	d and sworn to before me			
this	day of	, 2	20	
(Seal) Not	ary Public of New Jersey	,		
` '	,	Specify Other State	<del></del>	
My Comm	ission Expires	,	20	

**WARNING:** 

IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY FILL OUT THIS AFFIDAVIT OF NON-COLLUSION, YOUR BID MAY BE REJECTED.

### **Contractor Registration Advisement**

For Public Works Projects

A new law, known as "The Public Works Contractor Registration Act" (P.L. 1999, c.238), became effective April 11, 2000. Under the Act, no contractor/subcontractor will be permitted to bid on or engage in any contract for public work, as defined in Section 2 of P.L. 1963, c.150 (C:34:11-56.26), unless that contractor/subcontractor is registered with the New Jersey Department of Labor and Workforce Development. The Act provides that upon registration with the Department, a public works contractor/subcontractor will be issued a certificate by the Department indicating compliance with the Act's requirements. The registration fee has been set at \$300.00 per year. Upon the effective date of the Act, public bodies will be expected to request production of such a certificate from those bidding on or engaging in public works projects.

It is important to note that the term "contractor," is defined in the, Act as, "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract which is subject to the provision of the "New Jersey Prevailing Wage Act," P.L. 1963, c.150 (C.34:11-56.25, et seq.) for the construction, reconstruction, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein: except that, for the purposes of the act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public institution."

Registration forms, copies of the Act, and other relevant information can be obtained by contacting:

Contractor Registration Unit
New Jersey Department of Labor and Workforce Development
Division of Wage & Hour Compliance
PO Box 389
Trenton, New Jersey 08625-0389
Telephone: 609-292-9464

Fax: 609-633-8591 E-mail: contreg@dol.state.nj.us

# **AMERICANS WITH DISABILITIES ACT**

#### EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES

The contractor and the County of Union (hereafter "Owner") do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 US.C. S12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the Owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the Owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the Owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Owner's grievance procedure, the contractor agrees to abide by any decision of the Owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Owner, or if the Owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The Owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the Owner or any of its agents, servants, and employees, the Owner shall expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or process received by the Owner or its representatives.

It is expressly agreed and understood that any approval by the Owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the Owner pursuant to this paragraph.

It is further agreed and understood that the Owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the Owner from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

Name	(Please print or type)
Signature	Date

# **STATEMENT OF BIDDER'S QUALIFICATIONS**

All questions must be answered and the data given must be clear and comprehensive. <u>This statement must be notarized</u>. Questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

(Permanent Ma	ain Office Address)		
(When Organiz	zed)		
(If a Corporatio	n, where incorporated)		
Number of year trade name? _	rs your organization has beer	en engaged in construction or contracting business unde	er prese
How many yea (b) As a subcor	rs of experience in constructintractor?	tion work has your organization had (a) as a general cor	ntractor'
Contracts on ha	and: (Attach a list or table sho	nowing gross amounts of each Contract and the appropr	riate dat
		ou	
Have you ever		awarded to you?	
Have you ever	defaulted on a Contract?	If so, complete details, including where and	d why?

# STATEMENT OF BIDDER'S QUALIFICATIONS - (continued)

ist your major equipment a	available for this Co	ontract.		
Experience in the construct	ion work similar in	importance to this Proje	ct.	
lave you had any material 5) years?				sification withi
Background and experience	e of the principal m	nembers of your organiza	ation, including the of	ficers.
Individual's Name	Present Position	Yrs. of Construction	Magnitude &	In What
	or Office	Experience		

10.		cy in verification of the responses comprising this Statement of Bidder's
19.	Bidder's telephone number, fa	x number and e-mail address (if applicable).
	Phone	
	Fax	
	E-mail	
	Mobile	
Dated	at	this day of _, 20
BIDDE	ER (Signature)	
BIDDE	ER (Print Name)	
Subsc	ribed and sworn to before me	
	day of	
(Seal)	Notary Public of New Jersey/	Specify Other State
Му Сс	ommission Expires	, 20

# **CONTRACTOR PERFORMANCE RECORD**

List all contracts completed by you below or provide separate form.

Name of Owner	Name & Location of Project: Type Of Work	Prime or Sub- Cont.	Engineer or Architect in Charge for Owner	Contract Price (Omit Cost)	Date Completed	Was Time* Extension Necessary	Were Any Penalties Imposed	Were Liens* Claims or Stop Notice Filed

<sup>\*</sup> If answer is YES, provide explanation of details in connection with non-completion of contracts, time extensions, penalties imposed, labor troubles, liens, claims and notices filed against contracts listed in preceding item "Performance Record" on an attached sheet.

# CONTRACTOR PERFORMANCE RECORD CERTIFICATION

The information above is true and complete to the best of my knowledge and belief.

	(Name of Organization)
	(Signature)
	(Title)
Subscribed and sworn to before me	
this day of	, 20
(Seal) Notary Public of New Jersey/	Specify Other State
	Specify Other State
My Commission Expires	20

# <u>AFFIDAVIT REGARDING LIST OF DEBARRED,</u> <u>SUSPENDED OR DISQUALIFIED BIDDERS</u>

STATE OF NEW JERSEY /		)	
STATE OF NEW JERSEY /	Specify, if Other		
COUNTY OF		)	
ı		of the (City Town Borough et	c ) of
State of	, of full age, being duly	, of the (City, Town, Borough, et v sworn according to law on my oath	depose and say that:
I am	of the firm o	of he said Proposal with full authority to	, the Bidder making
		sey State Treasurer's or the Federa	
Debarred, Suspended or Disqua	lifted Bidders as a result of ac	ction taken by any State or Federal <i>i</i>	Agency.
		Name of Contractor	
	_		
	By:	re of Authorized Representative)	
	(Signature	e of Authorized Representative)	
Subscribed and sworn to before	me		
	04	•	
this day of	, 20	J	
(Seal) Notary Public of New Jers	eev/		
, ,	Specify Other State		
My Commission Expires	, 2	20 .	

# PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE (N.J.S.A. 40A:11-4)

1.	Within the past ten (10) years, have you been found, through either court adjudication, arbitration, mother contractually stipulated alternate dispute resolution mechanism, to have: failed to provide or performed or services; or failed to complete a contract in a timely manner; or otherwise performed unsatisfactor prior contract with a public entity?	erform goods
	yes no If yes, please provide full, detailed explanation.	
2.	Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to uservices of another contractor to provide the goods or perform the services or to correct or complete	utilize the the contract?
	yes no If yes, please provide full, detailed explanation.	
3.	Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to leave the surety for completion of the contract or tender of the costs of completion?	ook to your
	yes no If yes, please provide full, detailed explanation.	
4.	Within the past ten (10) years, have you been debarred or suspended from contracting with any of the department of the executive branch of the State of New Jersey at the time of the contract award, who	e agencies or ere the action
	was based on failure to perform a contact for goods or services with a public entity?  yes no If yes, please provide full, detailed explanation.	

# **PRIOR NEGATIVE EXPERIENCE CERTIFICATION**

hereby certify that the above statements are true and accurate as of this , 20		day of	
	_		
Name of Contractor			
By(Signature of Authorized Representative)	_		
Subscribed and sworn to before me			
this day of	, 20		
(Seal) Notary Public of New Jersey/Specify Other S	State		
My Commission Expires	, 20		

### TO BE COMPLETED ONLY WHEN FINAL PAYMENT IS REQUESTED

#### CONTRACTOR'S CERTIFICATION OF COMPLIANCE - NEW JERSEY PREVAILING WAGE ACT

10:	County of Union  Division of Engineering	CONTRACT:
	2325 South Avenue	
	Scotch Plains, New Jersey 07076	
PROJ	IECT:	
	cordance with the requirements of the actor on the public work being performe	New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56 et al *, the undersigned d for:
		COUNTY OF UNION
		h the contract requirements regarding the payment of the minimum prevailing revailing Wage Act" N.J.S.A. 34:11-56 et al.
	CONTRACTOR: ADDRESS:	
	ADDRESS.	
	BY:	
		ORIGINAL SIGNATURE ONLY
	E OF NEW JERSEY	
	by me duly sworn according to law, on ays thatis the above named	
tne ta	cts set forth in the above statement are	true.
Subsc	cribed and sworn to before me	
this _	day of	, 20
(Seal)	Notary Public of New Jersey/	
(234)	Notary Public of New Jersey/Spe	cify Other State
	ommission Expires	
*	N. I. C. A. 24:44 FC 22 manufacturity of the co	

\* N.J.S.A. 34:11-56.33 requires the contractor and subcontractor to file written statements with the public body in form satisfactory to the Commissioner certifying to the amounts then due and owing from such contractor and subcontractor filing such statement to any and all workmen for wages due on account of the public work, setting forth therein the names of the persons whose wages are unpaid and the amount due to each respectively. Union County will withhold the amount so deducted for the benefit of the workmen whose wages are unpaid as shown by the verified statement filed, and will pay directly to any workman the amount shown by such statement to be due to him for such wages. Such payment shall thereby discharge the obligation of the contractor to the person receiving such payment to the extent of the amount thereof.

# **UNCOMPLETED CONTRACTS AFFIDAVIT**

(To be Submitted with DPMC Form 701)

PURSUANT TO N.J.A.C. 17:19-2.13, BIDDER DECLARES THE FOLLOWING WITH RESPECT TO ITS UNCOMPLETED CONTRACTS, ON ALL WORK, FROM WHATEVER SOURCE (PUBLIC AND PRIVATE), BOTH IN NEW JERSEY AND FROM OTHER GOVERNMENTAL JURISDICTIONS **ENTITY PROJECT** ORIGINAL UNCOMPLETED NAME AND TELEPHONE NUMBER OF TITLE **CONTRACT AMOUNT AS OF** PARTY TO BE CONTACTED FROM **AMOUNT ENTITY FOR VERIFICATION BID OPENING DATE** 

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$			
	BIDDER:		
	(Signature	e)	
	(Print Nar	ne)	
Subscribed and sworn to before me			
this day of	, 20		
(Seal) Notary Public of New Jersey/	Specify Other State		
My Commission Expires	, 20		

# **CERTIFICATE OF INSURANCE STATEMENT**

•	unty of Union insurance requirements as st and agrees to provide all insurance require	
	BIDDER (Signature)	
	BIDDER (Print Name)	_

### **COLLECTION OF USE TAX ON SALES TO LOCAL GOVERNMENTS STATEMENT**

The Bidder fully understands the requirements of the use tax on sales to local governments as stated in the General Conditions to the Contract for Construction and the Instructions to Bidders, and agrees at all times to comply with the "Contractor Use Tax Collection Legislation", as defined therein, and the terms relating thereto contained in the Contract Documents.

BIDDER (Signature)	
,	
BIDDER (Print Name)	

# **TIME OF COMPLETION**

The undersigned proposed that if a	varded the Contract, the scope	of work will be started within	ten (10)
calendar days and will be substantia	ally completed within 120 caler	ndar days from the date of the	e notice to proceed.
L	of		
NAME (Print or type)	of COMPANY		_
Agree to complete work in the time	frame specified		
•	,	SIGNATURE	_
SITE VISIT – GENERAL CONTRA	CTOR		
l,			
NAME (Print or type)	COMPANY		
Visited the site of the work on			

SIGNATURE

# Prohibited Russia-Belarus Activities & Iran Investment Activities Person or **Entity** Part 1: Certification COMPLETE PART 1 BY CHECKING ONE OF THE THREE BOXES BELOW Pursuant to law, any person or entity that is a successful bidder or proposer, or otherwise proposes to enter into or renew a contract, for goods or services must complete the certification below prior to contract award to attest, under penalty of perjury, that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list or Chapter 25 list as a person or entity engaging in prohibited activities in Russia, Belarus or Iran. Before a contract for goods or services can be amended or extended, a person or entity must certify that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list. Both lists are found on Treasury's website at the following web addresses: https://www.nj.gov/treasury/administration/pdf/RussiaBelarusEntityList.pdf www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf. As applicable to the type of contract, the above-referenced lists must be reviewed prior to completing the below certification. A person or entity unable to make the certification must provide a detailed, accurate, and precise description of the activities of the person or entity, or of a parent entity, subsidiary, or affiliate, engaging in prohibited activities in Russia or Belarus and/or investment activities in Iran. The person or entity must cease engaging in any prohibited activities and provide an updated certification before the contract can be entered into. If a vendor or contractor is found to be in violation of law, action may be taken as appropriate and as may be provided by law, rule, or contract, including but not limited to imposing sanctions, seeking compliance, recovering damages, declaring the party in default, and seeking debarment or suspension of the party. CONTRACT AWARDS AND RENEWALS I certify, pursuant to law, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate appears on the N.J. Department of Treasury's lists of entities engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3 or in investment activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. (Skip Part 2 and sign and complete the Certification below.)

	I certify, pursuant to law, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate is listed on the N.J. Department of the Treasury's lists of entities determined to be engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3. I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. (Skip Part 2 and sign and complete the Certification below.)
	IF UNABLE TO CERTIFY
	I am unable to certify as above because the person or entity and/or a parent entity, subsidiary, or affiliate is listed on the Department's Russia-Belarus list and/or Chapter 25 Iran list. I will provide a detailed, accurate, and precise description of the activities as directed in Part 2 below, and sign and complete the Certification below. Failure to provide such will prevent the award of the contract to the person or entity, and appropriate penalties, fines, and/or sanctions will be assessed as provided by law.
	Part 2: Additional Information
	VIDE FURTHER INFORMATION RELATED TO PROHIBITED ACTIVITIES IN ELARUS AND/OR INVESTMENT ACTIVITIES IN IRAN.
a parent entity,	de a detailed, accurate, and precise description of the activities of the person or entity, or of , subsidiary, or affiliate, engaging in prohibited activities in Russia or Belarus and/or vities in Iran in the space below and, if needed, on additional sheets provided by you.

# Part 3: Certification of True and Complete Information

I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments there, to the best of my knowledge, are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity.

I acknowledge that the County of Union is relying on the information contained herein and hereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the County of Union to notify the County of Union in writing of any changes to the answers of information contained herein.

I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the County of Union and that the County of Union at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print)	Title		
Signature		Date	

STANDARD BID DOCUMENT REFERENCE				
Name of Form:	FEDERAL NON-DEBARMENT CERTIFICATION			
Statutory Reference:	N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)			
Description:	Meets statutory criteria for certification of non-debarment by a federal government agency.			

### **Summary of the Certification Requirements under N.J.S.A. 52:32-44.1**

Pursuant to state law any natural person, company, firm, association, corporation, or other entity prohibited, or "debarred," from contracting with the federal government agencies, shall also be prohibited from contracting for public work in the state of New Jersey. This prohibition also extends to any affiliate organization(s) held by or subject to the control of an entity of that prohibited person or entity.

Prior to awarding a contract for public work a local units must obtain written certification from the contracting person or entity through the form below, attesting to their non-debarment from contracting with federal government agencies. Contracting units are reminded that they must fill-in the boilerplate information in the certification sections of Parts II through IV regarding their name and type of contracting unit before using the form.

### **CERTIFICATION OF NON-DEBARMENT**

### FOR FEDERAL GOVERNMENT CONTRACTS

N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)

This certification shall be completed, certified to, and submitted to the contracting unit prior to contract award, except for emergency contracts where submission is required prior to payment.

		PART I: VEN	NDOR INFORMAT	ΓΙΟΝ	
Individual or Organization Nam	ne				
Physical Address of Individual or Organization	of				
Unique Entity ID	)				
(if applicable)					
CAGE/NCAGE Co	ode				
(if applicable)					
C	Check tl	he box that represe	ents the type of busi	iness orga	anization:
□For-Pro□	rofit Cor L ther (be	rporation (any type) imited Partnership specific):	☐ Limited Liability☐ Limited Liability☐	Compan Partners	
					ual or Organization
government from con execute this certification the information of certification through writing of any change make a false statement prosecution under the	entracting ation on contained a the date ges to the ent or mandellaw are	g with a federal age behalf of the above- d herein and that I and e of contract award e information contain isrepresentation in the nd that it will constituted	ncy. I further acknor- named organization munder a continuing by the County of Unined herein; that I and his certification, and tute a material breac	whedge: the street that the gobligation to no maware the first of the	not debarred by the federal hat I am authorized to County of Union is relying on from the date of this tify the County of Union in hat it is a criminal offense to o, I am subject to criminal greement(s) with the County from this certification void
Full Name (Print):				Title:	
Signature:				Date:	

PART III – CERTIFICATION OF NO Organization	ON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of			
Section A (Check the Box that a	pplies)			
	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of its voting stock, or of the partner in the partnership who owns more than 50 percent interest therein, or of the member of the limited liability company owning more than 50 percent interest therein, as the case may be.			
Name of Individual or Organization				
Physical Address				
	OR			
	No one stockholder in the corporation owns more than 50 percent of its voting stock, or no partner in the partnership owns more than 50 percent interest therein, or no member in the limited liability company owns more than 50 percent interest therein, as the case may be.			
Section B (	Skip if no Business entity is listed in Section A above)			
	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of the voting stock of the organization's parent entity, or of the partner in the partnership who owns more than 50 percent interest in the organization's parent entity, or of the member of the limited liability company owning more than 50 percent interest in organization's parent entity, as the case may be.			
Stockholder/Partner/Member Owning Greater Than 50 Percent of Parent Entity				
Physical Address				
OR				
	No one stockholder in the parent entity corporation owns more than 50 percent of its voting stock, no partner in the parent entity partnership owns more than 50 percent interest therein, or no member in the parent entity limited liability company owns more than 50 percent interest therein, as the case may be.			

Section C – Part III Certification					
Section C – Part III Ce	rtification				
I hereby certify that no contracting with a fed if applicable, owns gree certification on behalf information contained through the date of cochanges to the inform statement or misrepret the law and that it will	o individual or organization teral agency owns greater thateater than 50 percent of a paragramme. I furtion to the above-named organization and that I am under ontract award by the County ation contained herein; that	an 50 percent of the rent entity of <nan a="" acknowledge:="" agreement<="" all="" am="" and="" aware="" continuing="" coulon="" do="" hof="" i="" if="" it="" my="" n,="" notify="" obligation="" of="" so,="" td="" that="" the="" ther="" to="" union="" zation;=""><td>e Organize of organize that I amounty of United Internation from the Counits a criminal musubject (s) with the Counits a criminal musubject (s)</td><td>ration listed above in Part I or, anization&gt; authorized to execute this nion is relying on the n the date of this certification ty of Union in writing of any nal offense to make a false to criminal prosecution under the County of Union,</td></nan>	e Organize of organize that I amounty of United Internation from the Counits a criminal musubject (s) with the Counits a criminal musubject (s)	ration listed above in Part I or, anization> authorized to execute this nion is relying on the n the date of this certification ty of Union in writing of any nal offense to make a false to criminal prosecution under the County of Union,	
Full Name (Print):			Title:		
Signature:			Date:		
Part IV –	CERTIFICATION OF NON-DI	EBARMENT: Contr	actor – C	ontrolled Entities	
	9	Section A			
Below is the name and address of the corporation(s) in which the <b>Organization listed in Part I</b> owns more than 50 percent of voting stock, or of the partnership(s) in which the <b>Organization listed in Part I</b> owns more than 50 percent interest therein, or of the limited liability company or companies in which the <b>Organization listed above in Part I</b> owns more than 50 percent interest therein, as the case may be.					
Name of I	Business Entity		Physic	al Address	
**Add additional sheets if necessary**					
		OR			
	_			greater than 50 percent of the ster than 50 percent interest	

Section B (skip if no business entities are listed in Section A of Part IV)

in any partnership or any limited liability company.

	Below are the names and addresses of any entities in which an entity listed in Part III A owns greater than 50 percent of the voting stock (corporation) or owns greater than 50 percent interest (partnership or limited liability company).				
Name of Business Entity Controlled by Entity Listed in Section A of Part IV			Phy	ysical Address	
**Add additional She	eets if necessary**				
		OR			
	No entity listed in Part III A owns greater than 50 percent of the voting stock in any corporation or owns greater than 50 percent interest in any partnership or limited liability company.				
Section C – Part IV Certification					
I hereby certify that the <b>Organization listed above in Part I</b> does not own greater than 50 percent of any entity that that is debarred by the federal government from contracting with a federal agency and, if applicable, does not own greater than 50 percent of any entity that in turns owns greater than 50 percent of any entity debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the County of Union is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the County of Union, permitting the County of Union to declare any contract(s) resulting from this certification void and unenforceable.					
Full Name (Print):			Title:		
Signature:	Date:				

### BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

(To be submitted with each bid, proposal or offer exceeding \$100,000)

The undersigned, [Company]that:	certifies, to the best of his or her knowledge
person for influencing or attempting to influencing of congress, or an employee of Congress, or an employee any Federal contract, the making of any Federal	een paid or will be paid, by or on behalf of the undersigned, to any nee an officer or employee of an agency, a Member of Congress, are over of a Member of Congress in connection with the awarding of eral grant, the making of any Federal loan, the entering into of any ontinuation, renewal, amendment, or modification of any Federal to.
influencing or attempting to influence an offi or employee of Congress, or an employee of	opriated funds have been paid or will be paid to any person for cer or employee of any agency, a Member of Congress, an officer of a Member of Congress in connection with this Federal contract undersigned shall complete and submit Standard Form - LLL cordance with its instructions.
	uage of this certification be included in the award documents for al ts, subgrants, and contracts under grants, loans, and cooperative ertify and disclose accordingly.
made or entered into. Submission of this certification imposed by 31, U.S.C. § 1352 (as amended by	of fact upon which reliance was placed when this transaction was fication is a prerequisite for making or entering into this transaction by the Lobbying Disclosure Act of 1995). Any person who fails to a civil penalty of not less than \$10,000 and not more than \$100,000
	, certifies or affirms the truthfulness and accuracy of each if any. In addition, the Contractor understands and agrees that the to this certification and disclosure, if any.
Signature of Contractor's Authorized Represe	entative
Name and Title of Contractor's Authorized R	epresentative
Date	

#### CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) 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 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 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.
- (2) 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 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 of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents of all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. 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 section 1352, title 31, United States Code. 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.

(signature)	(date)	
TITLE:		
CERTIFIED BY: (type or print)		
City, State, Zip:		_
Street address:		-
Organization:		_

### DISCLOSURE OF LOBBYING ACTIVITIES (LLL Form)

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 0348-0046

N/A – My agency does not engage in any lobbying activities						
a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	a. bid/offer/application b. Initial award c. Post-award		a. initial filing b. material change  For Material Change Only: year quarter date of last report			
			ntity in NO.4 is a Subawardee, enter Name rim:			
Congressional District, if known:  6. Federal Department/Agency:		7. Federal Program Name/Description:  CDFA NUMBER, if applicable				
8. Federal Action Number, if known:		9. Award Amount, if known:  \$				
10. a. Name and address of Lobbying Registrant (if individual, last name, first name, MI):			forming Services (including address if loa) (las name, first name, MI):			
11. Information request through this form is authorized by title 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.		Print Name: Title: Telephone NO.: _				
Federal Use Only:			Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)			

Bidder's Name		
---------------	--	--

#### INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer of employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

- 1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a Federal action.
- 2. Identify the status of the covered Federal action.
- 3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
- 4. Enter the full name, address, city, state and zip code of the reporting entity include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1<sup>st</sup> tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
- 5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
- 6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
- 7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
- 8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/proposal control number assigned by the Federal agency.) Include prefixes, e.g. "RFP-DE-90-001."
- 9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
- 10. A) Enter the full name, address, city, state and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.
  - B) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter last name, first name and middle initial (MI).
- 11. The certifying official shall sign and date the form; print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-10046), 'Washington, DC 20503.

#### STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2019 Edition; is added to and/or amended elsewhere herein by the Notice to Contractors (Advertisement), Proposal, Information for Bidders, General Conditions, Supplemental Conditions, Project Plans, and Supplementary Specifications; shall, insofar as technical requirements are involved, govern in the execution of this project.

Such Standard Specifications are made a part of these Specifications by this reference and will not be repeated herein. It is the responsibility of prospective bidders to familiarize themselves with these Standard Specifications, copies of which may be examined at the office of the Engineer and may be obtained, upon payment of the cost thereof, from:

Department of Transportation State of New Jersey 1035 Parkway Avenue Trenton, New Jersey 08625

The Notice to Contractors (Advertisement), Proposal, General Conditions, Special Provisions, Project Plans and/or Supplementary Specifications shall govern and prevail in the case of conflict between them and the Standard Specifications.

In these Standard Specifications the words "COMMISSIONER" or "DEPARTMENT" shall refer to and mean the person, persons, body, board or agent legally empowered to enter into contracts and otherwise legally act for the Owner. The word "STATE" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "ENGINEER" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "INSPECTOR" shall mean the authorized project representative of the Engineer with the authority as hereinbefore defined. The word "LABORATORY" shall mean and refer to the Engineer who may, at his discretion, and with the consent of the Owner, employ qualified technical personnel or testing laboratories to assist him in fulfilling the duties normally assigned to the "LABORATORY" in these Standard Specifications.

When reference is made herein to the bulletins, standards, specifications, publications or requirements of the American Association of State Highway Official (AASHO), the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE) or similar national or regional societies, associations, institutes or organizations; the requirements of the bulletins, specifications, publications or requirements referred to shall be considered a part of these Specifications by such reference and shall not be repeated herein but shall have the same import and be as binding as if herein set forth in full.



#### STATE OF NEW JERSEY

Department of Labor and Workforce Development
Division of Wage and Hour Compliance - Public Contracts Section
PO Box 389
Trenton, NJ 08625-0389

#### PREVAILING WAGE RATE DETERMINATION

The New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.) requires that the Department of Labor and Workforce Development establish and enforce a prevailing wage level for workers engaged in public works in order to safeguard their efficiency and general well being and to protect them as well as their employers from the effects of serious and unfair competition.

Prevailing wage rates are wage and fringe benefit rates based on the collective bargaining agreements established for a particular craft or trade in the locality in which the public work is performed. In New Jersey, these rates vary by county and by the type of work performed.

Applicable prevailing wage rates are those wages and fringe benefits in effect on the date the contract is awarded. All pre-determined rate increases listed at the time the contract is awarded must also be paid, beginning on the dates specified. Rates that have expired will remain in effect until new rates are posted.

#### **Prevailing Wage Rate**

The prevailing wage rate for each craft will list the effective date of the rate and the following information:

W =Wage Rate per Hour

**B** = Fringe Benefit Rate per Hour\*

T = Total Rate per Hour

\* Fringe benefits are an integral part of the prevailing wage rate. Employers not providing such benefits must pay the fringe benefit amount directly to the employee each payday. Employers providing benefits worth less than the fringe benefit amount must pay the balance directly to the employee each payday.

Unless otherwise stated in the Prevailing Wage Rate Determination, the fringe benefit rate for overtime hours remains at the straight time rate.

When the Overtime Notes in the Prevailing Wage Rate Determination state that the overtime rates are "inclusive of benefits," the benefit rate is increased by the same factor as the wage rate (i.e. multiplied by 1.5 for time and one-half, multiplied by 2 for double time, etc.).

#### **Apprentice Rate Schedule**

An "apprentice" is an individual who is registered with the United States Department of Labor - Office of Apprenticeship and enrolled in a certified apprenticeship program during the period in which they are working on the public works project.

The apprentice <u>wage</u> rate is a percentage of the journeyman wage rate, unless otherwise indicated. The apprentice <u>benefit</u> rate is the full journeyman benefit rate, unless otherwise indicated.

If there is no apprentice rate schedule listed, the individual must be paid at least the journeyman rate even if that individual is in a certified apprentice program for that trade.

If there is no ratio of apprentices to journeymen listed for a particular craft, then the ratio shall be one (1) apprentice to every four (4) journeymen.

5/4/2023 Page 1 of 73

#### Comments/Notes

For each craft listed there will be comments/notes that cover the definition of the regular workday, shift differentials, overtime, recognized holidays, and any other relevant information.

#### **Public Works Contractor Registration**

The Public Works Contractor Registration Act (N.J.S.A. 34:11-56.48, et seq.) requires that **all** contractors, subcontractors, or lower tier subcontractors who are working on or who bid on public works projects register with the Department of Labor and Workforce Development. Applications are available at <a href="https://www.nj.gov/labor">www.nj.gov/labor</a> (click on Wage & Hour and then go to Registration & Permits).

#### Pursuant to N.J.S.A. 34:11-56.51:

No contractor shall bid on any contract for public work as defined in section 2 of P.L.1963, c. 150 (C.34:11-56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L.1999, c.238 (C.34:11-56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor or subcontractor is registered pursuant to that act.

#### **Snow Plowing**

Snow plowing contracts are <u>not</u> subject to the New Jersey Prevailing Wage Act or the Public Works Contractor Registration Act.

5/4/2023 Page 2 of 73

County - UNION

Craft: Air Conditioning & Refrigeration - Service and Repair

PREVAILING WAGE RATE

	03/01/23
Journeyman (Mechanic)	W44.23
	B28.63
	T72.86

Craft: Air Conditioning & Refrigeration - Service and Repair

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIC	DD AND RAT	ES					
As Shown	1st Year	2nd Year	3rd Year	4th Year	5th Year	Wage = %	of Jnymn	Wage	
Wage and Bene	40%	50%	60%	70%	80%	Bene = %	of Jnymn	Bene	

Ratio of Apprentices to Journeymen - 1:4

Craft: Air Conditioning & Refrigeration - Service and Repair

**COMMENTS/NOTES** 

THESE RATES MAY BE USED FOR THE FOLLOWING:

- Service/Repair/Maintenance Work to EXISTING facilities.
- Replacement or Installation of air conditioning and refrigeration equipment when the combined tonnage does not exceed 15 tons for refrigeration, or 25 tons for air conditioning.
- Replacement or Installation of "packaged" or "unitary" rooftop-type units when the combined tonnage of the units does not exceed 75 tons.

NOTE: These rates may NOT be used for any work in new construction (including work on new additions).

The regular workday shall consist of 8 hours, starting between 6:00 AM and 10:00 AM, Monday through Friday.

#### SHIFT DIFFERENTIALS:

- The second and third shifts shall be paid an additional 15% of the hourly rate.
- All shifts must run for a minimum of 5 consecutive days.

#### **OVERTIME:**

Hours worked in excess of 8 per day or before or after the regular workday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Boilermaker PREVAILING WAGE RATE

	01/01/23
Foreman	W53.50
	B46.66
	T100.16
General Foreman	W55.50
	B47.71
	T103.21
Journeyman	W48.50
	B44.92
	T93.42
I .	1

Craft: Boilermaker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
1000 Hours	65%	70% 75% 80% 85% 90% 95%								
Benefit =	38.07	39.03	40.03	41.00	41.99	42.97	43.93			

#### Ratio of Apprentices to Journeymen - \*

\* 1 apprentice will be allowed for the first 5 journeymen, 1 apprentice for the next 10 journeymen and 1 apprentice for each succeeding 20 journeymen up to a maximum of 5 apprentices per contractor on any one job.

#### Craft: Boilermaker COMMENTS/NOTES

HIGH WORK: All apprentices working on the erection, repair, or dismantling of smoke stacks, standpipes, or water towers shall be paid the Journeyman rate.

The regular workday shall consist of 8 hours, between 8:00 AM and 4:30 PM.

#### SHIFT DIFFERENTIALS:

- The second shift shall work 7½ hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 10%.
- The third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 20%.
- For "Municipal Water Works" projects only, the following shall apply: Two, four day, 10 hour shifts may be worked at straight time Monday through Thursday. The day shift shall work four days, at 10 hours, for 10 hours pay. The second shift shall work four days, at nine and a half hours, for 10 hours pay, plus 10% the hourly rate for new work and .25 cents on repair work. Friday may be used as a make-up day at straight time, due to weather conditions, hoilday or any other circumstances beyond the employer's control.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.
- If any other craft employed by the same contractor, or a subcontractor thereof, receives double time in lieu of time and one-half, then the Boilermaker shall receive double time in lieu of time and one-half.
- For "Municipal Water Works" projects only, the following shall apply: Four 10 hour days may be worked Monday through Thursday at straight time. Friday may be used as a make-up day for a day lost to inclement weather, holiday or other conditions beyond the control of the employer. Overtime shall be paid for any hours that exceed 10 hours per day or 40 hours per week.

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**County - UNION** 

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Boilermaker - Minor Repairs PREVAILING WAGE RATE

	01/01/23
Foreman	W35.45
	B17.78
	T53.23
General Foreman	W35.95
	B17.78
	T53.73
Mechanic	W33.95
	B17.78
	T51.73
I .	I

Craft: Boilermaker - Minor Repairs

#### **COMMENTS/NOTES**

NOTE: These rates apply to MINOR REPAIR WORK ONLY (repair work in the field for which the contract amount does not exceed \$125,000.00), for boilers that do not produce electric or are not used in the heating of petroleum products.

#### **OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Thanksgiving Day, day after Thanksgiving, Christmas Day. Saturday holidays observed the following Monday.

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County - UNION

Craft: Bricklayer, Stone Mason PREVAILING WAGE RATE

	11/01/22
Deputy Foreman	W49.90
	B34.83
	T84.73
Foreman	W53.40
	B34.83
	T88.23
Journeyman	W46.90
	B34.83
	T81.73

Craft: Bricklayer, Stone Mason APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES							
6 Months	40%	50%	55%	60%	65%	70%	75%	80%	
Benefits	4.00	5.00	5.50	6.00	23.26	24.91	26.58	28.22	

#### Ratio of Apprentices to Journeymen - 1:5

Craft: Bricklayer, Stone Mason COMMENTS/NOTES

The regular workday shall consist of 8 hours, between 6:00 AM and 4:30 PM.

#### SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the first, or day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 10%, inclusive of benefits.

#### OVERTIME:

- The first 2 hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. The first 10 hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday may be used as a make-up day for hours lost to inclement weather.
- When Bricklayers/Stone Masons work on Saturday with Laborers, and no other crafts are working on the project for the day, benefits may be paid at straight time. If other crafts are present, the applicable overtime rate for benefits shall be paid.

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**County - UNION** 

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

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County - UNION

Craft: Carpenter PREVAILING WAGE RATE

	05/04/23
Foreman	W62.72 B37.56 T100.28
Journeyman	W54.54 B32.73 T87.27

Craft: Carpenter APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES							
Yearly	40%	55%	65%	80%	90%				
Benefit	59% of	Appren	tice	Wage Rate	for all	intervals	+ \$0.56		

#### Ratio of Apprentices to Journeymen - 1:3

For Solar installation- all work on solar projects that fall under the jurisdiction of the carpenters, and does not require an electrician, the ratio of Apprentices to Journeymen shall be 1:1.

Craft: Carpenter COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL PERIOD AND RATES Yearly 40% 55% 65% 80%

Benefits 59% of apprentice wage rate for all intervals + \$0.56

#### FOREMAN REQUIREMENTS:

- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

#### SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

#### **OVERTIME:**

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

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#### **County - UNION**

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft: Carpenter - Resilient Flooring PREVAILING WAGE RATE

	05/04/23
Foreman	W62.72 B37.47 T100.19
Journeyman	W54.54 B32.64 T87.18

Craft: Carpenter - Resilient Flooring APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES							
Yearly	40%	55%	65%	80%	90%				
Benefit	59%	of	Appren	tice	Wage Rate	for all	intervals	+ \$0.47	

#### Ratio of Apprentices to Journeymen - \*

#### **Craft: Carpenter - Resilient Flooring**

#### COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL PERIOD AND RATES Yearly 40% 55% 65% 80%

Benefits 59% of apprentice wage rate for all intervals + \$0.47

#### FOREMAN REQUIREMENTS:

- On any job where there are 4 or more Carpenters of Resilient Flooring, 1 must be designated a Foreman.

#### FOR SYNTHETIC TURF INSTALLATION ONLY:

- The rate shall be 90% of the wage and benefit rate.

The regular workday consists of 8 hours, starting between 6:00 AM and 9:00 AM.

#### SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular wage rate plus 10%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular wage rate, the second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

#### **OVERTIME:**

- Hours in excess of 8 per day or 40 per week, or before or after the regular workday, Monday through Friday, shall be paid at time and one-half the wage rate. Saturday may be used as a make-up day, at straight time, up to 8 hours, for hours lost to reasons beyond the control of the employer, up to a total of 40 hours per week; hours in excess of 8 on Saturday shall

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<sup>\* 1</sup> apprentice shall be allowed to every 2 journeymen or major fraction therof. No more than 3 apprentices on any one job or project.

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then be paid at time and one-half the wage rate. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the wage rate. All hours on Sundays and holidays shall be paid at double the wage rate.

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for hours lost to reasons beyond the control of the employer. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the wage rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

**Craft: Carpenter-Residential Construction** 

PREVAILING WAGE RATE

	10/20/22
Foreman	W50.97 B11.58 T62.55
Journeyman	W44.32 B10.78 T55.10

Craft: Carpenter-Residential Construction

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES							
Yearly	40%	55%	65%	80%					
Benefit	12% of	Appren	tice	wage rate	for all	intervals	+ \$5.46		

Ratio of Apprentices to Journeymen - 1:3

**Craft: Carpenter-Residential Construction** 

**COMMENTS/NOTES** 

#### FOREMAN REQUIREMENTS:

- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

#### RESIDENTIAL CONSTRUCTION:

All residential construction (excluding commercial buildings and institutional housing), no more than four (4) floors in height above grade consisting of those projects involving the construction, alteration, or repair of town houses or row houses, single family homes, mobile homes, multi-family homes, mixed-use buildings that include commercial space on the first floor or below grade, and apartment buildings.

#### SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

#### OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a

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day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft: Cement Ma	ason P	REVAILING WAGE RAT	E					
See "B	ricklayer, Stone Mason"	Rates						
Craft: Cement Ma	ason A	PPRENTICE RATE SCH	EDULE					
INTERVAL	PERIO	OD AND RATES						
Ratio of Apprentic	es to Journeymen - 1:4	•	+					
Craft: Cement Mason COMMENTS/NOTES								
***See "Bricklayer, Stone Mason" Rates***								

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County - UNION

Craft: Commercial Painter PREVAILING WAGE RATE

	05/02/23
Foreman	W48.02
	B29.51
	T77.53
General Foreman	W52.38
	B29.51
	T81.89
Journeyman	W43.65
	B29.51
	T73.16

Craft: Commercial Painter APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	40%	45%	55%	65%	70%	75%	80%	80%		
Benefits	8.85	8.85	11.25	11.25	12.30	12.30	15.10	15.10		

#### Ratio of Apprentices to Journeymen - 1:4

#### Craft: Commercial Painter COMMENTS/NOTES

\* Commercial Painters perform work on all commercial structures such as offices, schools, hotels, shopping malls, restaurants, condominiums, etc.

Spraying, sandblasting, lead abatement work on commercial buildings, work performed above 3 stories or 30 feet in height, or using swing scaffolds requires an additional 10% of the wage rate.

#### FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day,

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**County - UNION** 

Veterans' Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Diver PREVAILING WAGE RATE

	05/01/22
Diver	W61.99 B50.47 T112.46
Tender	W50.25 B50.47 T100.72

Craft: Diver COMMENTS/NOTES

NOTE: All dive crews must consist of a Tender, a Diver, and a standby Diver (standby Diver is the same rate as a Diver).

DEPTH & PENETRATION RATES: Divers shall be paid the following depth and penetration rates, in addition to the regular hourly rate, when applicable:

#### AIR DIVES: MIXED GAS DIVES:

0-59 feet: No additional wage 60-74 feet: + \$0.25 per foot 75-125 feet: + \$1.00 per foot 75-125 feet: + \$2.00 per foot

#### PENETRATION DIVES:

126-200 feet: + \$1.50 per foot 201-275 feet: + \$1.75 per foot 276-350 feet: + \$2.00 per foot 351-425 feet: + \$2.50 per foot

#### SHIFT DIFFERENTIAL:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis and receive an additional 113% of the wage rate.
- When a three shift schedule is established, all three shifts shall be established on an 8 hour basis, but the second and third shifts shall receive an additional 113% of the wage rate.
- Benefits on shift work shall be paid at the straight-time rate.

#### **OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

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County - UNION

Craft: Dockbuilder/Pile Driver PREVAILING WAGE RATE

	09/21/22
Foreman	W57.79
	B50.47
	T108.26
Foreman (Concrete Form	W56.70
Work)	B37.11
	T93.81
Journeyman	W50.25
	B50.47
	T100.72
Journeyman (Concrete	W49.30
Form Work)	B37.11
	T86.41
I .	I

Craft: Dockbuilder/Pile Driver APPRENTICE RATE SCHEDULE

INTERVAL		PERIC	DD AND RAT	<u>ES</u>			
Yearly	20.10	25.13	32.66	40.20			
Benefits	33.18	for all	intervals				

#### Ratio of Apprentices to Journeymen - \*

Craft: Dockbuilder/Pile Driver COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR CONCRETE FORM WORK ONLY:

INTERVAL PERIOD AND RATES
Yearly 19.72 24.65 32.05 39.44

Benefits 25.24 for all intervals

#### CREOSOTE HANDLING:

When handling creosote products on land piledriving, floating marine construction, and construction of wharves, the worker shall receive an additional \$0.25 per hour.

#### HAZARDOUS WASTE WORK:

- Hazardous waste removal work on a state or federally designated hazardous waste site where Level A, B, or C personal protection is required: an additional 20% of the hourly rate, per hour.
- Hazardous waste removal work in Level D, or where personal protection is not required: an additional \$1.00 per hour.

CERTIFIED WELDER: When required on the job by the project owner, a Certified Welder shall receive an additional \$1.00 per hour.

#### FOREMAN REQUIREMENTS:

The first Dockbuilder/Pile Driver on the job shall be designated a Foreman.

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<sup>\*</sup> When there are 4 or fewer Dockbuilders/Pile Drivers on a job, no more than 1 may be an apprentice. When there are 5 or more Dockbuilders/Pile Drivers, there may be 1 apprentice for every 5 Dockbuilders/Pile Drivers.

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#### SHIFT DIFFERENTIAL:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis and receive an additional 113% of the wage rate.
- When a three shift schedule is established, all three shifts shall be established on an 8 hour basis, but the second and third shifts shall receive an additional 113% of the wage rate.
- Benefits on shift work shall be paid at the straight-time rate.

#### **OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

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County - UNION

Craft: Drywall Finisher PREVAILING WAGE RATE

	05/02/23
Foreman	W47.17
	B29.54
	T76.71
General Foreman	W49.31
	B29.54
	T78.85
Journeyman	W42.88
	B29.54
	T72.42

Craft: Drywall Finisher APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	40%	50%		60%	70%		80%	90%		
Benefits	Intervals	1 to 2 =	11.45	Intervals	3 to 4 =	14.33	Intervals	5 to 6 =	18.04	

#### Ratio of Apprentices to Journeymen - 1:4

Craft: Drywall Finisher COMMENTS/NOTES

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.
- Shift work must run for a minimum of 5 consecutive workdays.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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**County - UNION** 

Craft: Electrician PREVAILING WAGE RATE

	06/10/22	05/29/23	06/03/24
Cable Splicer	W66.30	W68.06	W69.72
	B41.42	B43.20	B44.96
	T107.72	T111.26	T114.68
Foreman (11-20	W70.52	W72.39	W74.15
Journeymen)	B44.08	B45.95	B47.84
	T114.60	T118.34	T121.99
Foreman (1-3	W66.30	W68.06	W69.72
Journeymen)	B41.42	B43.20	B44.96
	T107.72	T111.26	T114.68
Foreman (4-10	W69.31	W71.15	W72.89
Journeymen)	B43.31	B45.17	B47.02
	T112.62	T116.32	T119.91
General Foreman (21-30	W72.32	W74.24	W76.06
Journeymen)	B45.20	B47.14	B49.06
	T117.52	T121.38	T125.12
General Foreman (31-60	W78.35	W80.43	W82.39
Journeymen)	B48.96	B51.07	B53.15
	T127.31	T131.50	T135.54
General Foreman (61+	W79.56	W81.67	W83.66
Journeymen)	B49.71	B51.85	B53.97
	T129.27	T133.52	T137.63
Journeyman	W60.27	W61.87	W63.38
	B37.66	B39.30	B40.89
	T97.93	T101.17	T104.27
Sub-Foreman	W68.71	W70.52	W72.25
	B42.94	B44.79	B46.61
	T111.65	T115.31	T118.86

Craft: Electrician APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	40%	49%	58%	68%	80%		of Jour	neyman	Wage	Rate
Benefit	40%	49%	58%	68%	80%		of Jour	neyman	Benefit	Rate

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician COMMENTS/NOTES

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County - UNION

#### THESE RATES ALSO APPLY TO THE FOLLOWING:

- -All burglar and fire alarm work.
- -All fiber optic work.
- -Teledata work in new construction.
- -Teledata work involving 16 Voice/Data Lines or more.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

#### FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- -4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- -11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- -21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- -31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- -41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- -51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- -61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

#### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

#### **OVERTIME:**

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, and all hours on Saturdays, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

PREVAILING WAGE RATE

	11/28/22	12/04/23	12/02/24
Journeyman Technician	W45.86	W47.08	W48.21
(1-2 Workers on Job)	B27.05	B27.78	B28.45
	T72.91	T74.86	T76.66
Master Tech/General	W59.62	W61.20	W62.67
Foreman	B35.16	B36.12	B36.99
(26 + Workers on Job)	T94.78	T97.32	T99.66
Senior Technician/Lead	W54.57	W56.03	W57.37
Foreman	B32.19	B33.05	B33.86
(16-25 Workers on Job)	T86.76	T89.08	T91.23
Technician A/Foreman	W52.28	W53.67	W54.96
(9-15 Workers on Job)	B30.84	B31.67	B32.43
	T83.12	T85.34	T87.39
Technician B/Working	W49.99	W51.32	W52.55
Foreman	B29.48	B30.28	B31.01
(4-8 Workers on Job)	T79.47	T81.60	T83.56
Technician C/Foreman	W47.69	W48.96	W50.14
(3 Workers on Job)	B28.14	B28.89	B29.59
	T75.83	T77.85	T79.73

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

#### APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	7.45	7.45	8.51	9.15	10.22	11.49	12.98	14.26	15.76	17.24

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

**COMMENTS/NOTES** 

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 11-28-22:

NTERVAL PERIOD AND RATES

6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81% Benefits 7.67 7.67 8.76 9.43 10.52 11.84 13.38 14.69 16.22 17.76

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-4-23:

NTERVAL PERIOD AND RATES

6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81% Benefits 7.88 7.88 9.00 9.68 10.80 12.15 13.73 15.09 16.66 18.23

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-2-24:

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County - UNION

NTERVAL PERIOD AND RATES
6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81%
Benefits 8.07 8.07 9.22 9.91 11.07 12.45 14.06 15.44 17.06 18.68

#### NOTES:

- These rates are for service, maintenance, moves, and/or changes affecting
- 15 Voice/Data (teledata) lines or less. These rates may NOT be used for any teledata work in new construction (including additions) or any fiber optic work.
- The number of Teledata workers on the jobsite is the determining factor for which Foreman category applies .

The regular workday shall be 8 hours, between 7:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

#### **OVERTIME:**

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 10 on Saturday and all hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.

- Four 10-hour days may be worked Monday through Friday, between the hours of 7:00 AM and 5:30 PM. A make-up day may be used for a day not being worked during the four 10-hour day schedule if a holiday occurs during the week or for any other conditions that prevent an employee from working the four 10-hour day schedule.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Saturday holidays will be observed the preceding Friday.

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**County - UNION** 

Craft:	Electrician - Teledata (16 Instruments & More)	PREVAILING WAGE RATE
	See "Electrician" Rates	
Craft:	Electrician - Teledata (16 Instruments & More)	COMMENTS/NOTES
***See	ELECTRICIAN Rates***	

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**County - UNION** 

Craft: Electrician- Outside Commercial

## PREVAILING WAGE RATE

	06/10/22	05/29/23	06/03/24
Cable Splicer	W66.60	W68.37	W70.04
	B41.13	B42.89	B44.66
	T107.73	T111.26	T114.70
Certified Welder	W63.58	W65.26	W66.86
	B39.26	B40.95	B42.62
	T102.84	T106.21	T109.48
Equipment Operator	W60.55	W62.15	W63.67
	B37.40	B39.00	B40.60
	T97.95	T101.15	T104.27
Foreman (11-20	W70.84	W72.72	W74.50
Journeymen workers on	B43.75	B45.62	B47.50
job)	T114.59	T118.34	T122.00
Foreman (1-3	W66.60	W68.37	W70.04
Journeymen workers on	B41.13	B42.89	B44.66
job)	T107.73	T111.26	T114.70
Foreman (4-10	W69.63	W71.47	W73.23
Journeymen workers on	B42.99	B44.86	B46.70
job)	T112.62	T116.33	T119.93
General Foreman (21-30	W72.66	W74.58	W76.41
Journeymen workers on	B44.86	B46.81	B48.71
job)	T117.52	T121.39	T125.12
General Foreman (31-60	W78.71	W80.80	W82.78
Journeymen workers on	B48.61	B50.70	B52.76
job)	T127.32	T131.50	T135.54
General Foreman (61+	W79.93	W82.04	W84.05
Journeymen workers on	B49.34	B51.48	B53.58
job)	T129.27	T133.52	T137.63
Groundman	W36.33	W37.29	W38.21
	B22.43	B23.41	B24.35
	T58.76	T60.70	T62.56
Journeyman	W60.55	W62.15	W63.67
Lineman/Technician	B37.36	B39.00	B40.60
	T97.91	T101.15	T104.27
Sub-Foreman	W69.03	W70.85	W72.59
	B42.62	B44.46	B46.27
	T111.65	T115.31	T118.86

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County - UNION

Craft: Electrician- Outside Commercial APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
1000 Hours	60%	65%	70%	75%	80%	85%	90%			
Benefits	61.75% of	Journey	man	wage	+ \$.01					

Craft: Electrician- Outside Commercial COMMENTS/NOTES

### APPRENTICE RATE SCHEDULE AS OF 5-29-23:

Interval Period and Rates

1000 Hours 60% 65% 70% 75% 80% 85% 90%

Benefits 62.75% of the Journeyman wage + \$.01

#### APPRENTICE RATE SCHEDULE AS OF 6-3-24:

Interval Period and Rates

1000 Hours 60% 65% 70% 75% 80% 85% 90%

Benefits 63.75% of the Journeyman wage + \$.01

### \* FOR UTILITY WORK PLEASE SEE STATEWIDE RATES

The regular worday shall be 8 hours, between 8:00 AM and 4:30 PM.

### FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- -4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- -11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- -21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- -31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- -41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- -51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- -61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

#### SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

2nd Shift (4:30 PM to 12:30 AM): 8 hrs. pay for 7.5 hrs. work + an additional 10% of the regular rate, inclusive of benefits.

3rd Shift (12:30 AM to 8:00 AM): 8 hrs. pay for 7 hrs. work + an additional 15% of the regular rate per hour, inclusive benefits.

#### **OVERTIME:**

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, and all hours on Saturdays, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

### RECOGNIZED HOLIDAYS:

New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day,

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**County - UNION** 

Thanksgiving Day and Christmas Day.

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County - UNION

	Craft:	<b>Electrician-Utility</b>	Work (North)	PREVAILING WAGE RATE
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Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (North)

### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
* 6 Months	60%	65%	70%	75%	80%	85%	90%			
Benefits	69% of	Appren	tice	Wage	Rate	for all	intervals			

Craft: Electrician-Utility Work (North) COMMENTS/NOTES

Electrician-Utility Work (North) rates are located in the "Statewide" rate package.

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<sup>\*</sup> The apprentice wage rate is paid at the percentage of the Journeyman Lineman wage rate located in the "Statewide" rate package.

County - UNION

Craft: Electrician-Utility Work (South)	PREVAILING WAGE RATE
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Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (South)

### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	31.65	34.29	36.93	39.56	42.20	44.84	47.78			
Benefits	28.02	29.62	31.20	32.80	34.40	36.00	37.58			

Craft: Electrician-Utility Work (South)

**COMMENTS/NOTES** 

Electrician-Utility Work (South) rates are located in the "Statewide" rate package.

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County - UNION

Craft: Elevator Constructor PREVAILING WAGE RATE

	03/29/23
Journeyman	W77.49 B45.23 T122.72

Craft: Elevator Constructor APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	34.60	42.62	50.37	58.12						
Benefits	35.56	36.49	38.02	39.55						

### Ratio of Apprentices to Journeymen - 1:1

#### Craft: Elevator Constructor COMMENTS/NOTES

The regular workday shall consist of either 7 or 8 hours to be established at the beginning of the project, between 7:00 AM and 4:30 PM.

#### **OVERTIME:**

For all hours worked before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday, shall be paid at double the hourly rate. Holiday pay is one days wages (8 hours) plus double the hourly rate for all hours worked.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

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County - UNION

Craft: Elevator Modernization & Service

PREVAILING WAGE RATE

	03/29/23
Journeyman	W60.89
	B44.07
	T104.96

**Craft: Elevator Modernization & Service** 

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	34.60	33.49	39.58	45.67						
Benefits	35.50	36.07	37.52	38.97						

#### Ratio of Apprentices to Journeymen - 1:1

#### **Craft: Elevator Modernization & Service**

#### **COMMENTS/NOTES**

MODERNIZATION (addition, replacement, refurbishing, relocation, or changes in design or appearance, of elevator equipment in existing buildings):

- The regular workday consists of 8 hours, between 7:00 AM and 4:30 PM.

#### - Overtime:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday shall be paid at time and one-half the hourly rate. Holiday pay is one days wages (8 hours) plus time and one-half the hourly rate for all hours worked.

SERVICE (repair or replacement of parts for the purpose of maintaining elevator equipment in good operating condition):

- The regular workday consists of 8 hours, between 6:00 AM and 6:00 PM.

#### - Overtime:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS (Modernization and Service): New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

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County - UNION

Craft: Glazier PREVAILING WAGE RATE

	05/18/22
* Leadman	W51.48
	B29.13 T80.61
	160.01
Foreman	W53.48
	B29.37
	T82.85
General Foreman	W55.48
	B29.61
	T85.09
Journeyman	W49.48
	B28.89
	T78.37

Craft: Glazier APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	50%	55%	60%	65%	70%	75%	80%	90%		
Benefits	9.75	9.75	12.36	12.36	15.60	15.60	17.02	17.02		

### Ratio of Apprentices to Journeymen - 1:4

Craft: Glazier COMMENTS/NOTES

Hazard/Height Pay: +\$1.00 per hour

\* When there are three (3) men working on a jobsite for three (3) days or longer, 1 Journeyman may be designated as a Leadman for the duration of the job, provided he has his OSHA certification.

## FOREMAN REQUIREMENTS:

- When there are 4 or more Glaziers on a job, 1 must be designated a Foreman.
- When there are 15 or more Glaziers on a job, 1 must be designated a General Foreman.

The regular workday shall consist of 8 hours, between 7:00 AM and 5:30 PM, Monday to Friday.

#### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.

### **OVERTIME:**

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular

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**County - UNION** 

rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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County - UNION

Craft: Heat & Frost Insulator PREVAILING WAGE RATE

	09/20/22
Foreman	W60.72
	B36.22
	T96.94
General Foreman	W63.06
	B37.33
	T100.39
Journeyman	W58.44
	B35.66
	T94.10

Craft: Heat & Frost Insulator APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	27.38	32.49	39.13	45.71						
Benefits	20.86	24.73	27.41	30.01						

#### Ratio of Apprentices to Journeymen - 1:3

### Craft: Heat & Frost Insulator COMMENTS/NOTES

NOTE: These rates apply to the installing of insulation on hot and cold mechanical systems.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

### SHIFT DIFFERENTIAL:

- Shift work must run for a minimum of 5 consecutive workdays.
- Second Shift shall work 7.5 hours and receive 8 hours pay, at the regular rate, plus 25% per hour.
- Third Shift shall work 7 hours and receive 8 hours pay, at the regular rate, plus 30% per hour.

#### **OVERTIME:**

The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Heat & Frost Insulator - Asbestos Worker PREVAILING WAGE RATE

	09/20/22
Asbestos Helper	W36.89
Abatement	B24.92
	T61.81

Craft: Heat & Frost Insulator - Asbestos Worker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
	SEE	OP.									
				OK .							

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator - Asbestos Worker COMMENTS/NOTES

NOTE: These rates apply only to the removal of insulation materials/asbestos from mechanical systems, including containment erection and demolition, and placing material in appropriate containers.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- The second shift shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 25% per hour.
- The third shift shall work 7 hours and receive 8 hours pay at the regular rate, plus 30% per hour.

OVERTIME: The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Industrial Painter- Bridges PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26			
Foreman	W63.28	W0.00	W0.00	W0.00			
	B34.92	B0.00	B0.00	B0.00			
	T98.20	T100.20	T102.20	T104.20			
General Foreman	W65.78	W0.00	W0.00	W0.00			
	B34.92	B0.00	B0.00	B0.00			
	T100.70	T102.70	T104.70	T106.70			
Journeyman	W58.28	W0.00	W0.00	W0.00			
	B34.92	B0.00	B0.00	B0.00			
	T93.20	T95.20	T97.20	T99.20			

Craft: Industrial Painter- Bridges APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	50%	70%	90%							
Benefits	13.65	20.81	27.43							

#### Ratio of Apprentices to Journeymen - 1:3

### Craft: Industrial Painter- Bridges

### COMMENTS/NOTES

These rates apply to: All bridges that span waterways, roadways, railways and canyons. All tunnels, overpasses, viaducts and all appurtenances.

### FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used as a make-up day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

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<sup>\*</sup> Industrial Painters perform work on all industrial structures, such as bridges.

**County - UNION** 

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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County - UNION

Craft: Industrial Painter- Structural Steel

#### PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26		
Foreman	W52.02	W0.00	W0.00	W0.00		
	B32.57	B0.00	B0.00	B0.00		
	T84.59	T86.59	T88.59	T90.59		
General Foreman	W54.52	W0.00	W0.00	W0.00		
	B32.57	B0.00	B0.00	B0.00		
	T87.09	T89.09	T91.09	T93.09		
Journeyman	W47.02	W0.00	W0.00	W0.00		
	B32.57	B0.00	B0.00	B0.00		
	T79.59	T81.59	T83.59	T85.59		

Craft: Industrial Painter- Structural Steel

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
	SEE	E INDUST RIAL PAINTER BRIDGES									

#### Ratio of Apprentices to Journeymen - 1:3

### **Craft: Industrial Painter- Structural Steel**

### **COMMENTS/NOTES**

\* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilitites, refineries, any structural steel work, etc.

These rates apply to: All work in power plants (any aspect). On steeples, on dams, on hangers, transformers, substations, on all open steel, in refineries, tank farms, water/sewerage treatment facilities and on pipelines.

### FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except for Veterans Day, which shall be paid at time and one-half the regular rate.
- During the regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

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RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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County - UNION

Craft: Industrial Painter-Water Tanks PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26
Foreman	W53.07	W0.00	W0.00	W0.00
	B32.22	B0.00	B0.00	B0.00
	T85.29	T87.29	T89.29	T91.29
General Foreman	W55.57	W0.00	W0.00	W0.00
	B32.22	B0.00	B0.00	B0.00
	T87.79	T89.79	T91.79	T93.79
Journeyman	W48.07	W0.00	W0.00	W0.00
	B32.22	B0.00	B0.00	B0.00
	T80.29	T82.29	T84.29	T86.29

Craft: Industrial Painter-Water Tanks APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	50%	70%	90%							
Benefits	13.65	20.81	27.43							

#### Ratio of Apprentices to Journeymen - 1:3

### **Craft: Industrial Painter- Water Tanks**

### **COMMENTS/NOTES**

\* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilitites, refineries, any structural steel work, etc.

These rates apply to: All new and repaint water tanks (interior and exterior).

### FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

### OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

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**County - UNION** 

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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County - UNION

Craft: Ironworker PREVAILING WAGE RATE

	07/01/22
Rod /Fence Foreman	W48.39
	B48.92
	T97.31
Rod/Fence Journeyman	W45.39
	B48.92
	T94.31
Structural Foreman	W50.69
	B48.92
	T99.61
Structural Journeyman	W47.69
	B48.92
	T96.61

Craft: Ironworker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	50%	9% 60% Yearly 70% 80% 90%								

### Ratio of Apprentices to Journeymen - 1:4

Craft: Ironworker COMMENTS/NOTES

HAZARDOUS WASTE WORK: On hazardous waste removal work on a state or federally designated hazardous waste site where the Ironworker is required to wear Level A,B, or C personal protection: + \$3.00 per hour

The regular workday consists of 8 hours between 6:00 AM and 4:30 PM.

### FOREMAN REQUIREMENTS:

When there are 2 or more Ironworkers on a job, 1 shall be designated a Foreman.

### SHIFT DIFFERENTIALS:

- When a 2 shift schedule is established, the first, or day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15%, and the third shift shall receive the regular rate plus 20%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis.
- When an irregular shift is established for the Ironworker (Structural) classification, the rate shall be paid at time and one-half the regular rate, inclusive of benefits. When an irregular shift is established for the Rod/Fence classification, the shift shall be established on an 8 hour basis and receive the regular rate, plus 20%.

### **OVERTIME:**

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- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits. Saturday may be used as a make-up day for a day lost to inclement weather. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Laborer - Asbestos & Hazardous Waste Removal

PREVAILING WAGE RATE

	08/09/22
Foreman	W41.38 B24.21 T65.59
Journeyman (Handler)	W36.78 B24.21 T60.99

Craft: Laborer - Asbestos & Hazardous Waste Removal

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES							
Yearly	22.07	25.75	29.42	33.10					
Benefits	22.06	for	all	intervals					

### Ratio of Apprentices to Journeymen - \*

### Craft: Laborer - Asbestos & Hazardous Waste Removal

### **COMMENTS/NOTES**

NOTE: These rates apply to work in connection with Asbestos, Radiation, Hazardous Waste, Lead, Chemical, Biological, Mold Remediation and Abatement.

The regular workday shall be 8 hours.

### OVERTIME:

- Hours in excess of 8 per day, Monday through Saturday, and all hours on Sunday and holidays shall be paid at time and one-half the regular rate.
- Benefits on ALL overtime hours shall be paid at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Easter, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. (Holidays start at 12:00 am).

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<sup>\*</sup> Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

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Craft: Laborer - Building PREVAILING WAGE RATE

	11/15/22
Class A Journeyman	W36.75
	B31.42
	T68.17
Class B Journeyman	W36.00
	B31.42
	T67.42
Class C Journeyman	W30.60
	B31.42
	T62.02
Foreman	W41.34
	B31.42
	T72.76
General Foreman	W45.94
	B31.42
	T77.36

Craft: Laborer - Building APPRENTICE RATE SCHEDULE

INTERVAL		<u>PERIC</u>	DD AND RAT	<u>ES</u>				
6 Months	60%	70%	80%	90%	of Class B	wage rate		
Benefit	28.17	28.17	28.17	28.17				

### Ratio of Apprentices to Journeymen - \*

### Craft: Laborer - Building COMMENTS/NOTES

CLASS A: Specialist laborer including mason tender or concrete pour crew; scaffold builder (scaffolds up to 14 feet in height); operator of forklifts, Bobcats (or equivalent machinery), jack hammers, tampers, motorized tampers and compactors, vibrators, street cleaning machines, hydro demolition equipment, riding motor buggies, conveyors, burners; and nozzlemen on gunite work.

CLASS B: Basic laborer - includes all laborer work not listed in Class A or Class C.

CLASS C: Janitorial-type light clean-up work associated with the TURNOVER of a project, or part of a project, to the owner. All other clean-up work is Class B.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

#### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- When a 2-shift schedule is worked, including a day shift, both shifts shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%.
- When a 3-shift schedule is worked, the day shift shall be established on the basis of 8 hours pay for 8 hours worked, the second shift shall be established on the basis of 8 hours pay for 7.5 hours worked, and the third shift shall be established

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<sup>\*</sup> Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

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on the basis of 8 hours pay for 7 hours worked. The day shift shall receive the regular rate, the second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.

- When a second or third shift is worked with no day shift, the second or third shift shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.
- When an irregular shift must be established this shift shall receive the regular rate plus an additional 10%.

#### **OVERTIME:**

- Hours in excess of 8 per day, or outside the regular workday that are not shift work, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. Saturday may be used as a make-up day (paid at straight time) for a day lost to inclement weather, or for a holiday that is observed during the work week, Monday through Friday. All hours on Sundays and holidays shall be paid at double the regular rate.
- Four 10-hour days may be worked Monday to Thursday, at straight time, with Friday used a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the regular rate.
- Benefits on ALL overtime hours shall be paid at time and one-half.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Laborer - Heavy & General PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Laborer - Heavy & General

### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES							
1000 Hours	60%	70%	80%	90%					
Benefit	23.98	for	all	intervals					

Ratio of Apprentices to Journeymen - \*

Craft: Laborer - Heavy & General

**COMMENTS/NOTES** 

Heavy & General Laborer rates are located in the "Statewide" rate package.

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<sup>\*</sup> No more than 1 apprentice for the first journeyman and no more than 1 apprentice for each additional 3 journeymen.

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Craft: Laborer-Residential and Modular Construction

PREVAILING WAGE RATE

	04/01/23
* Skilled Tradesman (only	W27.90
applies to Modular	B5.45
Construction)	T33.35
Foreman (person directing	W31.90
crew, regardless of his	B5.45
skill classification)	T37.35
Laborer (for single family	W17.85
and stand-alone duplex	B2.95
owned by single owner)	T20.80
Residential and Modular	W23.90
Construction Laborer	B5.45
	T29.35

Craft: Laborer-Residential and Modular Construction

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIC	DD AND RAT	<u>ES</u>			
As shown	800 hours	600 hours	600 hours				
wage & benefits	70%	80%	90%				

Ratio of Apprentices to Journeymen-

One (1) apprentice shall be allowed for the first journeyman on site and no more than one (1) additional apprentice for each additional three (3) journeymen on site.

Craft: Laborer-Residential and Modular Construction

COMMENTS/NOTES

### \* SKILLED TRADESMAN-

any worker doing work not typically done by a Building Laborer. Some examples are installing interior doors, sheet rock, hooking up appliances, installing light fixtures, installing railing systems, etc. Please note where local building codes require that certain work be performed under the supervision of a licensed tradesman (i.e. Plumber, Electrician, etc.) Laborers shall work under such supervision.

RESIDENTIAL CONSTRUCTION- All residential construction (not commercial), single-family, stand-alone duplex houses, townhouses and multi-family buildings of not more than four (4) floors. Each housing unit must be fully and independently functional; each housing unit must have its own kitchen and bathroom. The definition includes all incidental items such as site work, parking areas, utilities, streets and sidewalks. Please note the construction must be Residential in nature. A First Floor at or below grade may contain commercial space not to exceed 50% square footage of the floor; at least 50% of the First Floor must contain living accommodations or related nonresidential uses (e.g. laundry space, recreation/hobby rooms, and/or corridor space). Basement stories below grade used for storage, parking, mechanical systems/equipment, etc., are considered basement stories which are not used in determining the building's height even if used for storage purposes. In addition, barracks and dormitories are not considered residential projects.

MODULAR RESIDENTIAL CONSTRUCTION- all aspects of modular residential construction (not commercial) at the site of installation of structures of no more than four (4) stories, including all excavation and site preparation, footings and

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foundation systems whether poured on-site or prefabricated, all underground waterproofing, underground utilities, concrete slabs, sidewalks, driveways, paving, hardscape and landscaping. Please note the construction must be Residential as defined above. All work performed by the Set Crew (the crew of workers who set the modular boxes on the foundation), including the rigging, setting, attaching and assembly of all modules and structural members, preparation of the foundation to accept modules, such as sill plates, connection of all in-module and under-module connections including, but not limited to, plumbing, electrical, HVAC, fire suppression, CATS, telephone, television/internet, and fiber optic, the building or installation of any porches or decks regardless of material or method of construction, the on-site installation of, or completion of any roof system, doors, windows and fenestrations, including flashing, gutter and soffit systems, waterproofing, insulation and interior and exterior trim work, and painting. Please note that modular construction does not include on-site stick built construction, tip up construction or panel built construction.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

#### **OVERTIME:**

Hours worked in excess of 8 per day/40 per week, Monday through Saturday, and all hours worked on Sunday and holidays shall be paid at time and one-half the hourly rate.

#### RECOGNIZED HOILDAYS:

New Year's Day, Martin Luther King Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day.

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Craft: Millwright PREVAILING WAGE RATE

	05/04/23
Foreman	W64.35 B38.57 T102.92
Journeyman	W55.96 B33.62 T89.58

Craft: Millwright APPRENTICE RATE SCHEDULE

INTERVAL		PERIC	DD AND RAT	ES					
6 Months	40%	55%	65%	80%	90%				
Benefits	59% of	Appren	tice	Wage	Rate	for all	intervals	+ \$0.61	

Ratio of Apprentices to Journeymen - 1:3

Craft: Millwright COMMENTS/NOTES

### FOREMAN REQUIREMENTS:

- When there are 2 or more Millwrights on a job, 1 shall be designated as a Foreman.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

### SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

## OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft: Oner	rating Engineer	PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Operating Engineer APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES								
Yearly	60%	70%	80%	90%					

Ratio of Apprentices to Journeymen - \*

Craft: Operating Engineer COMMENTS/NOTES

Operating Engineer rates are located in the "Statewide" rate package.

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<sup>\* 1</sup> apprentice for each piece of heavy equipment. At least 10 pieces of heavy equipment or a minimum of 5 Operating Engineers must be on site.

County - UNION

Craft:	Operating Engineer - Field Engineer	PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

**Craft: Operating Engineer - Field Engineer** 

### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	70%	75%	of Rod/	Chainman	Wage					
Yearly			80%	90%	Transit/	Instrument	man	Wage		

Ratio of Apprentices to Journeymen - \*

Craft: Operating Engineer - Field Engineer

COMMENTS/NOTES

Operating Engineer - Field Engineer rates are located in the "Statewide" rate package.

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<sup>\*</sup> No more than 1 Field Engineer Apprentice per Survey Crew.

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## Craft: Painter - Line Striping PREVAILING WAGE RATE

	12/07/22
Apprentice (1st year)	W29.15
	B14.75
	T43.90
Apprentice (2nd year)	W33.25
	B25.70
	T58.95
Foreman (Charge Person)	W42.05
	B26.48
	T68.53
Journeyman 1 (at least 1	W37.28
year of working exp. as a	B26.48
journeyman)	T63.76
Journeyman 2 (at least 2	W41.05
years of working exp. as a	B26.48
journeyman)	T67.53

Craft: Painter - Line Striping COMMENTS/NOTES

## OVERTIME:

Hours in excess of 8 per day, Monday through Saturday, and all hours on Sundays and holidays shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day and Christmas Day. Veterans Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft: Paperhanger PREVAILING WAGE RATE

	05/02/23
Foreman	W52.82 B29.51 T82.33
Journeyman	W48.02 B29.51 T77.53

Craft: Paperhanger APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
	SEE	COMME	CIAL	PAINTER						
		K								

Craft: Paperhanger COMMENTS/NOTES

### FOREMEN REQUIREMENTS:

- When there are 4 or more Paperhangers on a job, 1 shall be designated a Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans Day, Thanksgiving Day, Christmas Day

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County - UNION

Craft: Pipefitter PREVAILING WAGE RATE

	05/02/23
Foreman	W58.68
	B49.97
	T108.65
Journeyman	W54.43
	B46.36
	T100.79

Craft: Pipefitter APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	35%	45%	55%	65%	75%					
Benefit	26.80	29.79	32.79	35.78	38.78					

#### Ratio of Apprentices to Journeymen - 1:5

Craft: Pipefitter COMMENTS/NOTES

### FOREMAN REQUIREMENTS:

- When there are 2 or more Journeyman Pipefitters on a job, 1 shall be designated a Foreman.
- There shall be a Foreman for every 8 Journeyman Pipefitters on a job.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM.

### SHIFT DIFFERENTIAL:

- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

### OVERTIME:

- All hours worked in excess of 8 per day, Monday through Friday, and all hours worked on Saturday, shall be paid at time and one-half, inclusive of benefits. All hours on Sunday and holidays shall be paid at double time, inclusive of benefits.
- By mutual agreement, employees may work four 10-hour days, Monday to Thursday, at straight time rate. Friday may be used as a make-up day for a day lost to inclement weather, and may be paid at straight time. If Friday is not a make-up day, the first 8 hours shall be paid at time and one-half, inclusive of benefits; hours in excess of 8 shall be paid at double time, inclusive of benefits.

## SHIFT DIFFERENTIAL (Maintenance Work Only):

- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

### OVERTIME (Maintenance Work Only):

- All hours in excess of 8 per day, Monday through Saturday, shall be paid at time and one-half, inclusive of benefits. All

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hours on Sundays and holidays shall be paid at double time, inclusive of benefits.

NOTE: Maintenance work is work to repair, restore, or improve the efficiency of existing facilities. This does NOT apply to ANY new construction.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays are observed the following Monday.

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**County - UNION** 

Craft:	Plasterer	PREVAILING WAGE RATE
CI ait.	1 lasterer	I KE MILING WAGE KATE

See Bricklayer, Stone Mason Rates

Craft: Plasterer COMMENTS/NOTES

\*\*\*See BRICKLAYER, STONE MASON Rates\*\*\*

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Craft: Plumber PREVAILING WAGE RATE

	05/02/23
Foreman	W64.25
	B41.62
	T105.87
General Foreman	W68.41
	B41.62
	T110.03
Journeyman	W59.49
	B41.62
	T101.11
I .	1

Craft: Plumber APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	30%	45%	55%	65%	75%					
Benefits	17.09	23.48	25.72	27.96	30.19					

#### Ratio of Apprentices to Journeymen - \*

#### Craft: Plumber COMMENTS/NOTES

#### FOREMAN REQUIREMENTS:

- On any job having 2 or more Plumbers, 1 must be designated a Foreman.
- On any job having 9 or more Plumbers, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours between 7:00 AM and 4:30 PM.

#### SHIFT DIFFERENTIALS:

- Shift work must continue for a minimum of 5 consecutive workdays.
- When two shifts are worked, the second shift shall work 7.5 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 10%, inclusive of benefits.
- When a third shift is worked, the third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 15%, inclusive of benefits.

### **OVERTIME:**

- All hours in excess of 8 per day, or before of after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays, shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

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<sup>\*</sup> Employers may employ 1 apprentice on any job where 1 or 2 journeymen are employed. Thereafter, 1 apprentice may be employed for every 4 journeymen.

County - UNION

Craft: Roofer PREVAILING WAGE RATE

	06/01/22
Foreman	W45.52 B29.81 T75.33
Journeyman	W42.52 B29.81 T72.33

Craft: Roofer APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	17.00	21.26	25.51	27.64	29.76	31.89	34.01	38.27		
Benefits	2.16	2.16	26.56	26.56	26.56	26.56	26.56	26.56		

### Ratio of Apprentices to Journeymen - \*

- \* A) For roofing jobs that are of the 1 or single ply nature: 1:2 or fraction thereof
- B) For roofing jobs on new built up roofs: 1:3 or fraction thereof
- C) For roofing jobs that are of a tear-off nature: 1:2 or fraction thereof
- D) For roofing jobs {not requiring complete removal of existing systems, installation done over existing roof}: 1:3 or

fraction thereof

Craft: Roofer COMMENTS/NOTES

Pitch: +.50 per hour

Mop Man: +.30 per hour

The regular workday consists of 8 hours between 8:00 AM and 4:30 PM.

### **OVERTIME:**

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays, Sundays, and holidays shall be paid at time and one-half the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Sheet Metal Sign Installation PREVAILING WAGE RATE

	04/01/22
Foreman	W41.29 B38.97 T80.26
Journeyman	W39.29 B38.97 T78.26

Craft: Sheet Metal Sign Installation APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 hours	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
Benefits	13.19	15.02	16.88	18.74	21.06	22.94	24.83	26.73	28.62	30.50

Ratio of Apprentices to Journeymen - 1:3

Craft: Sheet Metal Sign Installation COMMENTS/NOTES

### FOREMAN REQUIREMENT:

When there are 6 or more Sheet Metal Sign Installers on a job, 1 shall be designated a Foreman.

The regular workday consists of 8 hours, between 7:00 AM and 3:30 PM.

### **OVERTIME**:

Hours before or after the regular workday, Monday though Friday, and all hours worked on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

Four(4) 10 hour days may be worked, Monday through Friday, at straight time, for projects lasting at least one week in duration. The fifth day may be used as a make-up day at straight time for a day lost due to inclement weather. However, if the fifth day is not a make-up day, all hours worked will be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

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County - UNION

Craft: Sheet Metal Worker PREVAILING WAGE RATE

	06/06/22
Foreman	W56.98
	B48.69
	T105.67
General Foreman	W57.98
	B48.69
	T106.67
Journeyman	W53.48
	B48.69
	T102.17

Craft: Sheet Metal Worker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
Yearly	35%	45%	55%	65%	of	Journey	man	Wage	Rate		
Benefit	35%	45%	55%	65%	of	Journey	man	Benefit	Rate		

#### Ratio of Apprentices to Journeymen - 1:4

Craft: Sheet Metal Worker COMMENTS/NOTES

#### FOREMAN REQUIREMENTS:

- When there are 2 or more Sheet Metal Workers on a project, 1 must be designated a Foreman.
- When there are 17 or more Sheet Metal Workers on a project, 1 must be designated a General Foreman.
- When there is only 1 Sheet Metal Worker (1 Journeyman) on a project, he/she shall receive \$1.00 more than the regular Journeyman's rate.

The regular workday is 8 hours between 7:00 AM and 4:30 PM.

#### SHIFT DIFFERENTIAL:

- 2nd Shift (3:30 PM 12:00 AM): +17% of regular hourly rate
- Shift work must run for a minimum of 5 consecutive workdays.

#### **OVERTIME:**

- Hours in excess of 8 per day, or before or after the regular workday, that are not shift work, and the first 10 hours on Saturdays shall be paid at time and one-half of the regular rate, inclusive of benefits. Hours in excess of 10 per day on Saturday, and all hours on Sundays and holidays shall be at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Friday, at straight time, with hours in excess of 10 per day, and hours in excess of 40 per week paid at the overtime rates listed above.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

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County - UNION

Craft: Sprinkler Fitter PREVAILING WAGE RATE

	01/01/23
Foreman	W69.82
	B35.80
	T105.62
General Foreman	W73.15
	B35.80
	T108.95
Journeyman	W65.32
	B35.80
	T101.12

Craft: Sprinkler Fitter APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours	80% 85%								85%	
Benefits						Intervals	9 to 10	Jourymn	Ben.	

Craft: Sprinkler Fitter COMMENTS/NOTES

Apprentice rate schedule for those apprentices registered as of 7-1-13:

Interval Period and Rates

1000 Hrs. 25% 30% 40% 45% 55% 60% 70% 75% 85% 90% Ben. 13.60 13.60 28.30 28.30 28.30 Intervals 7-10 Journy. Ben.

Apprentice rate schedule for those apprentices registered as of 7-1-22:

Interval Period and Rates

1000 Hrs. 30% 35% 40% 45% 50% 55% 60% 70% 85% 95% Ben. 13.60 13.60 28.30 28.30 28.30 Intervals 7-10 Journy. Ben

The regular workday consists of 8 consecutive hours between 6:00 AM and 4:30 PM.

#### FOREMAN REQUIREMENTS:

- The first Sprinkler Fitter on the job must be designated a Foreman.
- On any job having 12 or more Sprinkler Fitters, one must be designated a General Foreman.

#### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 2 consecutive workdays.
- 2nd and 3rd shift shall receive an additional 15% of the regular rate, per hour.
- Any "off hours" shift starting at 8:00 PM or later shall receive an additional 25% of the regular rate, per hour.

#### **OVERTIME:**

The first 2 hours in excess of 8 per day, after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate. Hours worked in excess of 10 per day, Monday through Friday, and all hours on Saturday, Sunday and holidays, shall be paid double the regular rate.

Four 10 hour days may be worked, Monday through Friday, at straight-time.

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**County - UNION** 

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Tile Finisher-Marble PREVAILING WAGE RATE

	01/02/23
Finisher	W49.32
	B36.62
	T85.94
1	

Craft: Tile Finisher-Marble APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
750 Hours	40%	0% 60% 65% 70% 75% 85% 95%									
Benefits	Interval 1	thru 5 =	75% of	jyrnm. ben	rate	Interval 6	thru 7 =	full jyrnm	benefit	rate	

#### Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Finisher-Marble COMMENTS/NOTES

#### OVERTIME:

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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**County - UNION** 

Craft: Tile Setter - Ceramic PREVAILING WAGE RATE

	12/05/22
Finisher	W48.04
	B32.26
	T80.30
Setter	W62.62
	B35.39
	T98.01

Craft: Tile Setter - Ceramic APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
750 Hours	35%	55% 40% 50% 55% 60% 65% 70% 75% 80% 90%								90%	

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Ceramic COMMENTS/NOTES

#### **OVERTIME**:

Hours in excess of 7 per day, and the first 10 hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Saturdays after 10 hours shall be paid double the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Tile Setter - Marble PREVAILING WAGE RATE

	01/02/23
Tile Setter	W62.82
	B39.03
	T101.85

Craft: Tile Setter - Marble APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
750 Hours	40%	0% 60% 65% 70% 75% 85% 95%									
Benefits	Interval 1	thru 5 =	75% of	jyrnm. ben	rate	Interval 6	thru 7 =	full jyrnm	benefit	rate	

#### Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Marble COMMENTS/NOTES

#### **OVERTIME:**

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays, and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Tile Setter - Mosaic & Terrazzo PREVAILING WAGE RATE

	01/01/23
Grinder or Assistant	W58.67
	B39.00
	T97.67
Mechanic	W60.28
	B39.01
	T99.29
Terrazzo Resinous	W50.32
Worker	B31.63
	T81.95
	1

Craft: Tile Setter - Mosaic & Terrazzo APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
750 Hours	50%	0% 55% 60% 65% 70% 75% 85% 95% 100%									

Ratio of Apprentices to Journeymen - 1:5

Craft: Tile Setter - Mosaic & Terrazzo COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 7-1-17:

INTERVAL PERIOD AND RATES

1500 Hours 35% 45% 60% 70% 80% 90% 100%

The regular workday consists of 7 hours, between 8:00 AM and 3:30 PM.

#### **OVERTIME:**

- Hours in excess of 7 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Monday after Easter, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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**County - UNION** 

Craft: Truck Driver PREVAILING WAGE RATE

	05/01/23	05/01/24
Bucket, Utility,	W43.56	W45.41
Pick-up, Fuel	B41.78	B43.28
Delivery trucks	T85.34	T88.69
Dump truck, Asphalt	W43.56	W45.41
Distributor, Tack	B41.78	B43.28
Spreader	T85.34	T88.69
Euclid-type vehicles	W43.66	W45.51
(large, off-road	B41.78	B43.28
equipment)	T85.44	T88.79
Helper on Asphalt	W43.56	W45.41
Distributor truck	B41.78	B43.28
	T85.34	T88.69
Low Boy Driver	W45.16	W47.01
-	B41.78	B43.28
	T86.94	T90.29
Slurry Seal,	W43.56	W45.41
Seeding/Fertilizing/	B41.78	B43.28
Mulching truck	T85.34	T88.69
Straight 3-axle truck	W43.56	W45.41
	B41.78	B43.28
	T85.34	T88.69
Tractor Trailer	W43.66	W45.51
(all types)	B41.78	B43.28
	T85.44	T88.79
Vacuum or Vac-All	W43.56	W45.41
truck (entire unit)	B41.78	B43.28
	T85.34	T88.69
Winch Trailer	W43.76	W45.61
	B41.78	B43.28
	T85.54	T88.89

Craft: Truck Driver COMMENTS/NOTES

#### **BLENDED RATE:**

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate" which shall be 80% of the above-listed wage rates, plus the full benefit rate. This rate shall be used when the driver "round robins" for a minimum of 6 hours during the work day.

#### HAZARDOUS WASTE REMOVAL:

- On hazardous waste removal work on a State designated hazardous waste site where the driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin, and eye protection, the driver shall receive an additional \$3.00 per hour (with or without protective gear).
- A hazardous waste related certified worker at a designated hazardous waste site who is not working in a zone requiring level A, B or C personal protection shall receive an additional \$1.00 per hour.

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County - UNION

TRUCK FOREMAN: \$.75 cents per hour above regular rate. Overtime shall be increased accordingly.

The regular workday shall be 8 hours, starting between 6:00 AM and 8:00 AM.

#### SHIFT DIFFERENTIAL:

- Shifts starting at 4:00 PM (2nd Shift): + \$3.00 per hour.
- Shifts starting at 12:00 AM (midnight/3rd Shift): time and one-half the hourly rate.
- Shifts starting at a time other than from 6:00 AM to 8:00 AM, when such hours are mandated by the project owner: + \$3.00 per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Employees may work four 10-hour days at straight time, Monday through Thursday, with Friday used as a make-up day for a lost day. If Friday is not a make-up day, then all hours on Friday shall be paid at time and one-half the hourly rate.
- -Benefits on overtime shall be \$40.03.
- As of 5-1-23, benefits on overtime shall be \$41.53.
- As of 5-1-24, benefits on overtime shall be \$43.03.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veteran's Day.

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County - UNION

#### Craft: Truck Driver-Material Delivery Driver

#### PREVAILING WAGE RATE

	05/01/23	05/01/24
Driver	W35.87	W37.62
	B41.78	B43.28
	T77.65	T80.90

#### Craft: Truck Driver-Material Delivery Driver COMMENTS/NOTES

#### **BLENDED RATE:**

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate". See the "Truck Driver" craft for the blended rates.

Truck Foreman/Shop Steward: +\$0.25 per hour

#### SHIFT DIFFERENTIALS:

- 2nd Shift shall receive an additional \$0.50 per hour
- 3rd Shift shall receive time and one-half the hourly rate.

#### **OVERTIME:**

- Hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veterans Day.

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**County - UNION** 

Craft:	Welder	PREVAILING WAGE RATE
	Welder	
Craft:	Welder	COMMENTS/NOTES
Welder	rs rate is the same as the	e craft to which the welding is incidental.

5/4/2023 Page 73 of 73

# STATEWIDE RATES

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### **OPERATING ENGINEERS** Rates Expiration Date:

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for \* tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- \* FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

#### OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

Hydro-Blaster

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

ENTIRE STATE PREVAILING WAGE RATE DETERMINATION

### **OPERATING ENGINEERS Rates Expiration Date: Effective Dates:** 07/01/2022 Rate Fringe Total 36.65 92.28 55.63 **CLASSIFICATIONS:** A-Frame Backhoe (combination) Boom Attachment on loaders (Except pipehook) Boring & Drilling Machine Brush Chopper, Brush Shredder, Tree Shredder, Tree Shearer Bulldozer, finish grade Cableway Carryall Concrete Pump Concrete Pumping System (Pumpcrete & similar types) Conveyor, 125 feet or longer Drill Doctor (Duties include dust collector and maintenance) Front End Loader (2 cu. yds. but less than 5 cu. yds.) Grader, finish Groove Cutting Machine (ride-on type) Heater Planer Hoist: Outside Material Tower Hoist (all types including steam, gas, diesel, electric, air hydraulic, single and double drum, concrete, brick shaft caisson, snorkle roof, and other similar types, Except Chicago-boom type) \* receives an additional \$1.00 per hour on 100 ft. up to 199 ft. total height, and an additional \$2.00 per hour on 200 ft. and over total height. Hydraulic Crane (10 tons & under) Hydraulic Dredge Hydro-Axe

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

### ENTIRE STATE PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS	Rates Expiration Date :

**Effective Dates:** 

07/01/2022

Rate Fringe Total 55.63 36.65 92.28

#### **CLASSIFICATIONS:**

Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)

Log Skidder

Pan

Paver, concrete

Plate & Frame Filter Press

Pumpcrete (unit type)

Pumperete, Squeezecrete, or Concrete Pumping machine (regardless of size)

Scraper

Side Boom

Straddle Carrier (Ross and similar types)

Whiphammer

Winch Truck (hoisting)

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE PREVAILING WAGE RATE DETERMINATION

<b>OPERATING ENGINEERS</b>	Rates Expiration Date:

**Effective Dates:** 

07/01/2022

Rate Fringe Total 53.72 36.65 90.37

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Asphalt Curbing Machine

Asphalt Plant Engineer

Asphalt Spreader

Autograde Curb Trimmer & Sidewalk Shoulder Slipform (CMI & similar types)

Autograde Curecrete Machine (CMI & similar types)

Autograde Tube Finisher & Texturing Machine (CMI & similar types)

Bar Bending Machines (Power)

Batcher, Batching Plant, & Crusher [On Site]

Belt Conveyor System

Boom-Type Skimmer Machine

Bridge Deck Finisher

Bulldozer (all sizes)

Captain (Power Boats)

Car Dumper (railroad)

Compressor & Blower unit for loading/unloading of concrete, cement, fly ash, or similar type materials (used independently or truck-mounted)

Compressor (2 or 3 battery)

Concrete Breaking Machine

Concrete Cleaning/Decontamination Machine

Concrete Finishing Machine

Concrete Saw or Cutter (ride-on type)

Concrete Spreader (Hetzel, Rexomatic & similar types)

Concrete Vibrator

Hopper

Hopper Doors (power operated)

Ladder (motorized)

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE PREVAILING

**OPERATING ENGINEERS Rates Expiration Date: Effective Dates:** 07/01/2022 Rate Fringe Total 53.72 36.65 90.37 **CLASSIFICATIONS:** Conveyors - under 125 feet Crane Signalman Crushing Machine Directional Boring Machine Ditching Machine - Small (Ditchwitch, Vermeer or similar types) Dope Pot - Mechanical (with or without pump) Dumpster Elevator Fireman Fork Lift (Economobile, Lull & similar types) Front End Loader (1 cu. yd. and over but less than 2 cu. yds.) Generator (2 or 3 battery) Giraffe Grinder Goldhofer/Hydraulic Jacking Trailer Grader & Motor Patrols Grout Pump Gunnite Machine (Excluding nozzle) Hammer - Vibratory (in conjunction with generator) Heavy Equipment Robotics - Operator/Technician Hoist (roof, tugger, aerial platform hoist, house car)

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE **OPERATING ENGINEERS Rates Expiration Date: Effective Dates:** 07/01/2022 Total Rate Fringe 53.72 36.65 90.37 **CLASSIFICATIONS:** Laddervator Locomotive (Dinky-type) Maintenance Utility Man Master Environmental Maintenance Technician Mechanic Mixer (Except paving mixers) Pavement Breaker (truck-mounted or small self-propelled ride-on type) Pavement Breaker - maintenance of compressor or hydraulic unit Pipe Bending Machine (power) Pitch Pump Plaster Pump (regardless of size) Post Hole Digger (post pounder, auger) Rod Bending Machines Roller (black top) Scale (power) Seamen Pulverizing Mixer Shoulder Widener Silo Skimmmer Machine (boom type) Steel Cutting Machine (service & maintenance)

Tamrock Drill

Tractor

Transfer Machines

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

#### **OPERATING ENGINEERS** Rates Expiration Date:

**Effective Dates:** 

07/01/2022

Rate Fringe Total 53.72 36.65 90.37

#### **CLASSIFICATIONS:**

Tug Captains

Tug Master (Power Boats)

Ultra High Pressure Waterjet Cutting Tool System - Operator/Maintenance Technician

Vacuum Blasting Machine - Operator/Maintenance Technician

Vibrating Plant (used with unloading)

Welder & Repair Mechanic

#### **Effective Dates:**

#### 07/01/2022

Rate Fringe Total 50.38 36.65 87.03

#### **CLASSIFICATIONS:**

Assistant Engineer/Oiler

Driller's Helper

Field Engineer - Transit man or Instrument man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Mechanic's Helper

Off Road Back Dump

Tire Repair & Maintenance

#### **Effective Dates:**

#### 07/01/2022

Rate Fringe Total 47.80 36.65 84.45

#### **CLASSIFICATIONS:**

Field Engineer - Rodman or Chainman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

OPERATING ENGINEERS Rates Expiration Date :

**Effective Dates:** 

07/01/2022

Rate Fringe Total 57.96 36.65 94.61

#### **CLASSIFICATIONS:**

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

**ENTIRE STATE** 

#### **OPERATING ENGINEERS Rates Expiration Date:**

Effe	otivo	Da	tos
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Mucking Machine

07/01/2022 Rate Fringe Total 57.22 36.65 93.87 **CLASSIFICATIONS:** Autograde Pavement Profiler (CMI & similar types) Autograde Pavement Profiler - Recycle Type (CMI & similar types) Autograde Placer/Trimmer/Spreader Combination (CMI & similar types) Autograde Slipform Paver (CMI & similar types) Backhoe (Excavator) Central Power Plant Concrete Paving Machine Cranes, Derricks, Pile Drivers (all types), under 100 tons with a boom (including jib and/or leads) under 100 ft. Draglines Drill, Bauer, AMI and similar types Drillmaster, Quarrymaster Drillmaster/Quarrymaster (down-the-hole drill), rotary drill, self-propelled hydraulic drill, self-powered drill Elevator Grader Field Engineer-Chief of Party Front End Loader (5 cu. yards or larger) Gradall Grader, Rago Helicoptor Co-Pilot Helicoptor Communications Engineer Juntann Pile Driver Locomotive (large)

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE PREVAILING WAGE RATE DET

Rates Expiration Date:

**Effective Dates:** 

**OPERATING ENGINEERS** 

07/01/2022

Rate Fringe Total 57.22 36.65 93.87

#### **CLASSIFICATIONS:**

Pavement & C	oncrete Brea	ker (Suner	hammer &	Hoe Ram)

Pile Driver

Prentice Truck

Roadway Surface Grinder

Scooper (loader & shovel)

Shovel (Excavator)

Trackhoe (Excavator)

Tree Chopper with boom

Trenching Machine (cable plow)

Tunnel Boring Machine

Vacuum Truck

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

#### 

**Effective Dates:** 

07/01/2022

Rate Fringe Total 52.09 36.65 88.74

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Chipper

Compressor (single)

Concrete Spreader (small type)

Conveyor Loader (Except elevator graders)

Engines, Large Diesel (1620 HP) & Staging Pump

Farm Tractor

Fertilizing Equipment (operation & maintenance)

Fine Grade Machine (small type)

Form Line Grader (small type)

Front End Loader (under 1 cubic yard)

Generator (single)

Grease, Gas, Fuel, & Oil Supply Trucks

Heaters (Nelson or other type)

Lights - portable generating light plant

Mixer, Concrete (small)

Mulching Equipment (operation & maintenance)

Power Broom or Sweeper

Pump (diesel engine & hydraulic - regardless of power)

Pump (larger than 2 inch suction, including submersible pumps)

Road Finishing Machine (small type)

Roller - grade, fill, or stone base

Seeding Equipment (operation & maintenance)

Sprinkler & Water Pump Trucks

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

#### **OPERATING ENGINEERS** Rates Expiration Date :

#### **Effective Dates:**

07/01/2022

Rate Fringe Total 52.09 36.65 88.74

#### **CLASSIFICATIONS:**

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including proprane, natural gas, and flow-type units)

Water or Sprinkler Truck

Welding Machine (gas, diesel, or electric convertor, of any type)

Welding System - Multiple (rectifier transformer type)

Wellpoint Systems (including installation by bull gang and maintenance)

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
59.04	36.65	95.69

#### **CLASSIFICATIONS:**

Helicoptor Pilot/Engineer

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
63.72	36.65	100.37

#### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
62.72	36.65	99 37

#### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

ENTIRE STATE

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### **OPERATING ENGINEERS** Rates Expiration Date:

#### **Effective Dates:**

07/01/2022

Rate Fringe Total 59.22 36.65 95.87

#### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) 140 ft. and over

#### **Effective Dates:**

07/01/2022

Rate Fringe Total 61.72 36.65 98.37

#### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

#### **Effective Dates:**

#### 07/01/2022

Rate Fringe Total 58.22 36.65 94.87

#### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) from 100 ft. to 139 ft.

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### STRUCTURAL STEEL ERECTION Rates Expiration Date:

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for \* tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- \* FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

#### OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
60.85	36.65	97.50

#### **CLASSIFICATIONS:**

Helicopter Co-Pilot & Communications Engineer

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### STRUCTURAL STEEL ERECTION Rates Expiration Date :

**Effective Dates:** 

07/01/2022

Rate Fringe Total 56.79 36.65 93.44

#### **CLASSIFICATIONS:**

A-Frame

Cherry Picker -10 tons or less (Over 10 tons use crane rate)

Hoist (all types Except Chicago-boom)

Jack (screw, air hydraulic, power-operated unit or console type, Except hand jack or pile load test type)

Side Boom

Straddle Carrier

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

#### **STRUCTURAL STEEL ERECTION** Rates Expiration Date:

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Effective Dates	S:	
	07/01/2022	
Rate	Fringe	Total
54.13	36.65	90.78
CLASSIFICA	TIONS:	
Aerial Platfor	m Used On Ho	ists
Apprentice Er	ngineer/Oiler w	ith Compressor or Welding Machine
Captain (Pow	er Boats)	
Compressor (2	2 or 3 in battery	<i>y</i> )
Concrete Clea	aning/Decontan	nination Machine Operator
Conveyor or T	Tugger Hoist	
Directional Bo	oring Machine	
Elevator or Ho	ouse Car	
Fireman		
Forklift		
Generator (2 o	or 3)	
Heavy Equipr	ment Robotics,	Operator/Technician
Maintenance 1	Utility Man	
Master Enviro	onmental Maint	renance Technician
Tug Master (F	Power Boats)	
Ultra High Pro	essure Waterjet	Cutting Tool System Operator/Maintenance Technician
Vacuum Blast	ting Machine O	perator/Maintenance Technician

Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### ENTIRE STATE

#### STRUCTURAL STEEL ERECTION Rates Expiration Date:

#### **Effective Dates:**

07/01/2022

Rate Fringe Total 52.60 36.65 89.25

#### **CLASSIFICATIONS:**

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

#### **Effective Dates:**

#### 07/01/2022

Rate Fringe Total 50.84 36.65 87.49

#### **CLASSIFICATIONS:**

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

#### **Effective Dates:**

#### 07/01/2022

Rate Fringe Total 58.41 36.65 95.06

#### **CLASSIFICATIONS:**

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

#### **Effective Dates:**

#### 07/01/2022

Rate Fringe Total 47.80 36.65 84.45

#### **CLASSIFICATIONS:**

Field Engineer - Rodman or Chainman

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### **ENTIRE STATE**

#### **STRUCTURAL STEEL ERECTION** Rates Expiration Date:

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total	
57.55	36.65	94.20	

#### **CLASSIFICATIONS:**

Field Engineer-Chief of Party

Vacuum Truck

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
65.74	36.65	102.39

#### **CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms, including jib, 140 ft. and over, above ground). Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), and Pile Drivers (all types) 100 tons and over and Tower Cranes.

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total	
64.08	36.65	100.73	

#### **CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks. land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), 100 tons and over and Tower Crane.

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total	
61.24	36.65	97.89	

#### **CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms including jib, 140 ft. and over, above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), Pile Drivers (all types), under 100 tons.

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
59.58	36.65	96.23

#### **CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), under 100 tons.

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### STRUCTURAL STEEL ERECTION Rates Expiration Date :

**Effective Dates:** 

07/01/2022

Rate Fringe Total 61.24 36.65 97.89

#### **CLASSIFICATIONS:**

Helicopter Pilot & Engineer

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST Rates Expiration Date :

#### THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Monmouth, Ocean, Salem, Sussex, Warren

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for \* tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- \* FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

#### OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total	
57.22	36.65	93.87	

#### **CLASSIFICATIONS:**

Driller

#### **Effective Dates:**

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Rate	Fringe	Total
50.38	36.65	87.03

#### **CLASSIFICATIONS:**

Driller's Helper

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### FREE AIR TUNNEL JOBS Rates Expiration Date :

{For apprentice rates refer to "Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

#### SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

#### OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

#### Hazardous Waste Work:

- -where Level A, B, or C protection is required: + \$3.00/hr
- -other Hazardous Waste site: + \$1.00/hr

#### **Effective Dates:**

Rate	Fringe	Total
50.30	35.73	86.03

#### CLASSIFICATIONS:

Walking Boss & Superintendent

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
50.00	35.73	85.73

#### **CLASSIFICATIONS:**

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### ENTIRE STATE

#### FREE AIR TUNNEL JOBS Rates Expiration Date :

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
49.50	35.73	85.23

#### **CLASSIFICATIONS:**

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
52.00	35.73	87.73

#### **CLASSIFICATIONS:**

Blaster

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48.95	35.73	84.68

#### **CLASSIFICATIONS:**

Top Labor Foreman

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48 60	35.73	84 33

#### **CLASSIFICATIONS:**

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Manitenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Tod Man)

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48.45	35.73	84.18

#### **CLASSIFICATIONS:**

Semi-Skilled Men (including Bell or Signal Man Top or Bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

#### FREE AIR TUNNEL JOBS Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 48.05 35.73 83.78

#### **CLASSIFICATIONS:**

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

### NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

#### DRILL FOR GROUND WATER SUPPLY Rates Expiration Date:

The well driller and/or helper may perform all work relative to the construction, finishing, and servicing of wells, pumps and borings for ground water supply. The present methods of well drilling entailing as they do, many diverse job operations calling for drilling, pump discharge, piping, and the operation of various types of related power equipment, shall all be within the job duties and functions of the well driller and/or helper. In the event that an extension of work should occur beyond water well drilling functions, into the field of general construction work, such extension of work would come under the appropriate rates listed elsewhere in this wage determination.

- For Work Hours, Shift Differentials, Overtime Rates, and Recognized Holidays see the "Operating Engineers" section of this wage determination.

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
55.97	36.65	92.62

#### **CLASSIFICATIONS:**

Driller

#### **Effective Dates:**

#### 07/01/2022

Rate	Fringe	Total
49.13	36.65	85.78

#### **CLASSIFICATIONS:**

Driller's Helper

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## OPERATING ENGINEERS MARINE-DREDGING Rates Expiration Date:

NOTE: These wage rates only apply to dredging and other marine construction activities occurring in navigable waters and their tributaries.

Boat crews carrying explosive material (dynamite, pourfex, and other similar materials) shall be paid at 120% of the hourly wage rate for hours engaged in handling of said materials. Employees required to possess a Hazardous Material Certification as a condition of employment shall be compensated at 120% of the hourly wage rate.

### OVERTIME:

Hours in excess of 40 per week, and all hours on Saturdays and Sundays, shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Martin Luther King Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

#### **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
43.94	14.54	58.48	60.48

#### **CLASSIFICATIONS:**

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

### **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
38.00	14.18	52.18	53.93

### **CLASSIFICATIONS:**

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

#### **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
35.77	14.05	49.82	51.47

#### **CLASSIFICATIONS:**

Certified Welder

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

## OPERATING ENGINEERS MARINE-DREDGING Rates Expiration Date :

## **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
34.79	13.74	48.53	50.14

## **CLASSIFICATIONS:**

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

### **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
33.67	13.67	47.34	48.91

### **CLASSIFICATIONS:**

**Boat Operator** 

## **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
27.97	13.33	41.30	42.63

## **CLASSIFICATIONS:**

Shoreman, Deckhand, Rodman, Scowman

## **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
39.16	14.25	53.41	55.20

## **CLASSIFICATIONS:**

Crane Operator

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

#### MICROSURFACING/SLURRY SEAL **Rates Expiration Date:**

## THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem \*\*\*IN ALL OTHER COUNTIES use the Heavy and General Laborers - North "Slurry Seal Laborer" rates. \*\*\*

## SHIFT DIFFERENTIALS:

Any shift starting at 3:30 PM or later shall receive an additional \$0.35/hr

#### **OVERTIME:**

Hours in excess of 8 per day or 40 per week shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

#### **Effective Dates:**

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Rate	Fringe	Total
36.50	21.27	57.77

#### CLASSIFICATIONS:

Foreman

### **Effective Dates:**

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Rate	Fringe	Total
33.80	21.27	55.07

#### **CLASSIFICATIONS:**

Box man

#### **Effective Dates:**

Rate	Fringe	Total
31.75	21.27	53.02

#### **CLASSIFICATIONS:**

Microsurface/Slurry Preparation

## **Effective Dates:**

## 03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

### **CLASSIFICATIONS:**

Squeegee man

TERRITORY
ENTIRE STATE

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## MICROSURFACING/SLURRY SEAL Rates Expiration Date :

**Effective Dates:** 

03/01/2017

Rate Fringe Total 30.30 21.27 51.57

## **CLASSIFICATIONS:**

Cleaner, Taper

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

#### ASPHALT LABORERS - SOUTH Rates Expiration Date :

"THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY: Atlantic, Burlington, Camden, Cape May, Cumberland,

Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

#### SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- -where Level A, B, or C protection is required: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

## **Effective Dates:**

Rate	Fringe	Total
51.80	35.73	87.53

## **CLASSIFICATIONS:**

Paving Foreman

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48.35	35.73	84.08

#### **CLASSIFICATIONS:**

Head Raker

#### **Effective Dates:**

<b>03</b>	/01	/20	)23
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Rate	Fringe	Total
48.50	35.73	84.23

#### **CLASSIFICATIONS:**

Screedman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

## ASPHALT LABORERS - SOUTH Rates Expiration Date :

## **Effective Dates:**

03/01/2023

Rate Fringe Total 47.95 35.73 83.68

## **CLASSIFICATIONS:**

Tampers, Smoothers, Kettlemen, Painters, Shovelers, Roller Boys

## **Effective Dates:**

03/01/2023

Rate Fringe Total 48.05 35.73 83.78

### **CLASSIFICATIONS:**

Milling Controller

## **Effective Dates:**

03/01/2023

Rate Fringe Total 48.25 35.73 83.98

## **CLASSIFICATIONS:**

Traffic Control Coordinator

## **Effective Dates:**

03/01/2023

Rate Fringe Total 48.20 35.73 83.93

## **CLASSIFICATIONS:**

Raker, Luteman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

#### TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH Rates Expiration Date:

### THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union

### SHIFT DIFFERENTIAL:

Employees on a shift other than between the hours of 8:00 AM and 5:00 PM shall receive an additional \$2.00 per hour.

#### **OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Hazardous Waste Pay (for Levels A, B, and C): an additional 15% of the hourly rate, per hour.

A newly hired Helper with no experience in the industry shall be paid as follows:

1st year on the job - 70% of Helper wage rate

2nd year on the job - 80% of Helper wage rate

3rd year on the job - 90% of Helper wage rate

All helpers receive full fringe benefit rate.

#### **Effective Dates:**

### 10/18/2022

Rate	Fringe	Total
0.00	0.00	65.92

#### **CLASSIFICATIONS:**

Helper (4th year helper)

#### **Effective Dates:**

## 10/18/2022

Rate	Fringe	Total
0.00	0.00	75.24

## **CLASSIFICATIONS:**

Driller

## **Effective Dates:**

#### 10/18/2022

Rate	Fringe	Total
0.00	0.00	81.28

#### **CLASSIFICATIONS:**

Foreman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

#### HEAVY & GENERAL LABORERS - NORTH Rates Expiration Date :

#### THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

#### SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

#### OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

#### Hazardous Waste Work:

- -where Level A, B, or C protection is required: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

## **Effective Dates:**

## 03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

## **CLASSIFICATIONS:**

### "D" Rate:

basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofer; timberman; wagon drill or drill master helper; powder carrier; magazine tender; signal man; power buggy operator; tree cutter; operator of basic power tools

## **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

#### **CLASSIFICATIONS:**

#### "C" Rate:

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning; wagon drill, directional drill, or hydraulic drill operator; drill master; core driller; traffic control coordinator; asphalt raker or lute man

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

## HEAVY & GENERAL LABORERS - NORTH Rates Expiration Date :

## **Effective Dates:**

Rate	Fringe	Total
48.50	35.73	84.23

## **CLASSIFICATIONS:**

"B" Rate:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; asphalt screedman; rammer; hardscaping; gunite nozzle man

## **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
52.05	35.73	87.78

### **CLASSIFICATIONS:**

"A" Rate:

blaster

## **Effective Dates:**

## 03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

## **CLASSIFICATIONS:**

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

## **Effective Dates:**

## 03/01/2023

Rate	Fringe	Total
52.80	35.73	88.53

## **CLASSIFICATIONS:**

"GENERAL FOREMAN" Rate

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### ENTIRE STATE

#### HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

#### THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

#### SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM. OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

## Hazardous Waste Work:

- -where Level A, B, or C protection is required: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

#### **CLASSIFICATIONS:**

basic, landscape, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofers; tree cutter, timberman

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

#### **CLASSIFICATIONS:**

wagon drill or drill master helper; powder carrier; magazine tender; signal man

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

## HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

#### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

### **CLASSIFICATIONS:**

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning

#### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

#### **CLASSIFICATIONS:**

wagon or directional drill operator; drill master

### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
52.05	35.73	87.78

### **CLASSIFICATIONS:**

blaster

## **Effective Dates:**

## 03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

## **CLASSIFICATIONS:**

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
52.80	35.73	88.53

#### **CLASSIFICATIONS:**

general foreman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 48.50 35.73 84.23

## **CLASSIFICATIONS:**

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; rammer; gunite nozzle man

## TERRITORY ENTIRE STATE

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

These rates apply to the following: welding on Transportation Mainline pipe lines (cross-country pipe lines, or any segments thereof, transporting coal, gas, oil, water or other transportable materials, vapors or liquids, including portions of such pipe lines within private property boundaries up to the final metering station or connection - the point where a valve, consumer connection, or town border station divides mainline transmission lines or higher pressure lateral and branch lines from lower pressure distribution systems).

#### PER DIEM PAYMENT:

In addition to the total wage rate paid for each craft, the following per diem (per day) amounts must also be paid - Pipeline Journeyman: \$80.50; Pipeline Journeyman Welder: \$140.50; and Pipeline Helper: \$64.50. Note: in order to receive the per diem payment an employee must work a minimum of 8 hours in a 24 hour period.

#### NOTES:

- Journeymen employed as "stringer bead" welders and journeymen who are regularly employed as "hot-pass" welders shall receive \$1.00 per hour more than other journeymen.
- Welders running "stringer bead" or "hot-pass" on "cutouts" or "tie-ins" on a production basis shall be paid \$1.00 per hour above the journeymen rate.
- Whenever a welder helper is employed using a power buffer or power grinder immediately behind the stringer bead and/or hot-pass welders, and the pipe gang is set on a production basis, the helper shall be paid \$2.00 per hour above the helper rate.
- If back welding is performed inside a pipe under either or both of the following conditions, the welder engaged in the welding will receive \$3.00 per hour above the regular rate for the job only for the days on which such back welding is performed:
  - The employer elects, as a regular procedure, to back weld each line-up. This condition is not intended to apply to occasional back welding performed by the pipe gang to repair a bead, to rectify a "high-lo" condition or wall thickness, etc.
  - A welder is required to back weld a completed weld behind the firing line.
- If the welder helper is required to go inside the pipe for the purpose of brushing, buffing and grinding the weld, they shall receive a wage rate \$1.00 per hour above the regular

helper rate for the days involved.

- Welders working on "hot work" shall be paid \$2.00 per hour above the regular rate for each day engaged in such work. "Hot work' is defined as work on lines in service where there is the danger of fire or explosion.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

## OVERTIME:

Hours in excess of 8 per day, and all hours on Sundays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

#### **Effective Dates:**

#### 06/01/2022

Rate	Fringe	Total	
55.34	34.65	89.99	

#### **CLASSIFICATIONS:**

Pipeline Journeyman Welder

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

## PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

**Effective Dates:** 

06/01/2022

Rate Fringe Total 55.34 34.65 89.99

**CLASSIFICATIONS:** 

Pipeline Journeyman

**Effective Dates:** 

06/01/2022

Rate Fringe Total 33.84 24.27 58.11

**CLASSIFICATIONS:** 

Pipeline Helper

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## PIPELINE - GAS DISTRIBUTION Rates Expiration Date :

These rates apply to the following: welding on gas line distribution systems (that portion of the gas distribution system placed in streets, roads, subways, tunnels, viaducts, highways and easements which serves the users of gas).

### SHIFT DIFFERENTIALS:

An "irregular" shift may start any time from 5:00 PM to 12:00 AM, Monday through Friday, and shall receive an additional 15% of the regular rate per hour, inclusive of benefits.

#### OVERTIME:

Hours in excess of forty per week, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

### **Effective Dates:**

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Rate	Fringe	Total
63.90	29.83	93.73

#### **CLASSIFICATIONS:**

Pipeline Journeyman Welder

### **Effective Dates:**

## 11/02/2022

Rate	Fringe	Total
63.90	29.83	93.73

## **CLASSIFICATIONS:**

Pipeline Journeyman

#### **Effective Dates:**

## 11/02/2022

Rate	Fringe	Total
40.53	22.15	62.68

### **CLASSIFICATIONS:**

Pipeline Helper

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### ENTIRE STATE

#### ASPHALT LABORERS- NORTH Rates Expiration Date:

#### THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren {For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

#### SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- -where Level A, B, or C protection is required: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

## **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

## **CLASSIFICATIONS:**

Asphalt Foreman

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48.50	35.73	84.23

#### **CLASSIFICATIONS:**

Asphalt Screedman

#### **Effective Dates:**

<b>N2</b>	/01	126	172

Rate	Fringe	Total
48 25	35 73	83 98

## **CLASSIFICATIONS:**

Asphalt Raker or Lute Man

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

ASPHALT LABORERS- NORTH Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 47.55 35.73 83.28

**CLASSIFICATIONS:** 

Asphalt Laborer

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

## ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date:

Electrician-Utility Work (North)

(For apprentice rates refer to Electrician-Utility Work (North) in any county rate package).

These rates apply to work contracted for by the following utility companies:

Public Service Electric & Gas Co. of NJ, GPU Energy, Borough of Madison Electric Department, Sussex Rural

Electric Cooperative, Rockland Utilities, and Butler Municipal Electric Co.

These rates do not apply to work on substations or switching stations.

For Utility work contracted for by a utility company other than those listed above or those listed under "Electrician-

Utility Work (South), see the "Outside Commercial Rates" for the county in which the jobsite is located.

#### \* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 6:00 AM and 6:00 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)-all hours of work shall be paid at double the hourly rate.

### SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

2nd shift (between the hours of 4:30 PM and 1:00 AM): 8 hours of work + 17.3% of the regular rate, inclusive of benefits.

3rd shift (between the hours of 12:30 AM and 9:00 AM): 8 hours of work + 31.4% of the regular rate per hour, inclusive of benefits.

#### **OVERTIME:**

Hours in excess of 8 per day, or before or after the regular wokday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

Four 10-hour days may worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday.

## RECOGNIZED HOLIDAYS:

New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day and Christmas Day, or day on which they are legally observed.

#### **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
61.07	42.13	103.20	106.36	109.56

#### **CLASSIFICATIONS:**

Chief Lineman

## **Effective Dates:**

	12/04/202	2	12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.61	39.75	97.36	100.35	103.36

## **CLASSIFICATIONS:**

Journeyman Lineman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

**Effective Dates:** 

	12/04/202	2	12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.61	39.75	97.36	100.35	103.36

## **CLASSIFICATIONS:**

Special License Operator

**Effective Dates:** 

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
57.03	39.35	96.38	99.35	102.32

## **CLASSIFICATIONS:**

Transit Man

**Effective Dates:** 

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
55.31	38.16	93.47	96.33	99.21

### **CLASSIFICATIONS:**

Line Equipment Operator

**Effective Dates:** 

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
48.39	33.38	81.77	84.29	86.81

### **CLASSIFICATIONS:**

Dynamite Man

**Effective Dates:** 

12/04/2022			12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total	
72.01	49.68	121.69	125.44	129.20	

## **CLASSIFICATIONS:**

General Foreman

**Effective Dates:** 

	12/04/202	22	12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
66.25	45.71	111.96	115.41	118.85

## **CLASSIFICATIONS:**

Assistant General Foreman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

**Effective Dates:** 

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
64.52	44.51	109.03	112.40	115.76

### **CLASSIFICATIONS:**

Line Foreman

**Effective Dates:** 

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
46.66	32.19	78.85	81.28	83.72

## **CLASSIFICATIONS:**

Street Light Mechanical Leader

**Effective Dates:** 

	12/04/202	2	12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
44.36	30.60	74.96	77.26	79.58

### **CLASSIFICATIONS:**

Groundman Winch Operator

**Effective Dates:** 

	12/04/202	2	12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
44.36	30.60	74.96	77.26	79.58

### **CLASSIFICATIONS:**

Groundman Truck Operator

**Effective Dates:** 

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
43.78	30.20	73.98	76.26	78.55

## **CLASSIFICATIONS:**

Street Light Mechanic

**Effective Dates:** 

	12/04/202	2	12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
43.78	30.20	73.98	76.26	78.55

## **CLASSIFICATIONS:**

Line Equipment Mechanic

## TERRITORY ENTIRE STATE

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

## **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
37.45	25.84	63.29	65.23	67.17

## **CLASSIFICATIONS:**

Groundman 2nd Year

### **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
34.57	23.85	58.42	60.21	62.02

## **CLASSIFICATIONS:**

Groundman 1st Year

## **Effective Dates:**

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.03	39.35	96.38	99.35	102.32

## **CLASSIFICATIONS:**

Line Equipment Foreman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

#### **ELECTRICIAN- UTILITY WORK (SOUTH)** Rates Expiration Date:

Electrician-Utility Work (South)

(For apprentice rates refer to Electrician-Utility Work (South) in any county rate package).

These rates apply to work contracted for by the following utility company:

Atlantic City Electric.

These rates do not apply to work on substations or switching stations.

For utility work contracted for by a utility company other than the one listed above or those listed under "Electrician-

Utility Work (North), see the "Outside Commercial Rates" for the county in which the jobsite is located.

#### \* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 7:00 AM and 4:30 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)- all hours of work shall be paid at double the hourly rate.

#### SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

When two (2) or three (3) shifts are worked the following shall apply:

1st shift (between the hours of 8:00 AM and 4:30 PM)

2nd shift (between the hours of 4:30 PM and 12:30 AM): 8 hours of work + 10% of the regular rate of pay for 7.5 hours worked.

3rd shift (between the hours of 12:30 AM and 8:00 AM): 8 hours of work + 15% of the regular rate of pay for 7 hours worked.

#### OVERTIME:

Hours in excess of 8 per day, or before or after the regular wokday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and Holidays shall be paid double the hourly rate.

Four 10-hour days may be worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday with Friday used as a make-up day.

#### RECOGNIZED HOLIDAYS:

New Year's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day or on days celebrated.

#### WORKING RULES:

There shall be a Foreman in charge of each work crew. No crews are to exceed twelve (12) men, including Foremen.

There shall be a General Foreman designated for transmission work when three (3) or more crews are on the same job and for distribution work where there are are more than twenty (20) employees on site.

A small job crew shall consist of five (5) or less employees, one (1) of the Journeyman Linemen in the crew shall be designated as a Small Job Foreman.

Work performed from ladders and/or mechanical lift equipment shall be the work of Linemen and/or Apprentices.

On new construction, fitting and framing poles, towers or structures may be done by Journeymen and/or Apprentices. Groundmen may assist, but may not perform any work which would be performed by Linemen if assembled in the air.

There shall be a Journeyman Lineman in each pole setting, erection, grounding, wire and cable-pulling crew of more than three (3) men.

#### **Effective Dates:**

#### 12/04/2022

Rate	Fringe To	
67.52	55.11	122.63

#### **CLASSIFICATIONS:**

General Foreman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## **ELECTRICIAN- UTILITY WORK (SOUTH)** Rates Expiration Date:

**Effective Dates:** 

12/04/2022

Rate Fringe Total 60.14 50.62 110.76

**CLASSIFICATIONS:** 

Foreman

**Effective Dates:** 

12/04/2022

Rate Fringe Total 56.97 48.72 105.69

**CLASSIFICATIONS:** 

Small Job Foreman

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Heavy Equipment Operator

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Cable Splicer

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Journeyman Lineman

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Journeyman Welder

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### **ENTIRE STATE**

## **ELECTRICIAN- UTILITY WORK (SOUTH)** Rates Expiration Date:

#### **Effective Dates:**

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

## **CLASSIFICATIONS:**

Journeyman Painter

### **Effective Dates:**

12/04/2022

Rate Fringe Total 42.20 39.80 82.00

## **CLASSIFICATIONS:**

Light Equipment Operator

#### **Effective Dates:**

12/04/2022

Rate Fringe Total 36.93 36.60 73.53

#### **CLASSIFICATIONS:**

Groundman Truck Driver

#### **Effective Dates:**

12/04/2022

Rate Fringe Total 34.29 35.02 69.31

#### **CLASSIFICATIONS:**

Groundman 3rd Year

### **Effective Dates:**

12/04/2022

Rate Fringe Total 31.65 33.42 65.07

## **CLASSIFICATIONS:**

Groundman 2nd Year

## **Effective Dates:**

12/04/2022

Rate Fringe Total 29.01 31.83 60.84

## **CLASSIFICATIONS:**

Groundman 1st Year

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

**Effective Dates:** 

12/04/2022

Rate Fringe Total 23.21 28.31 51.52

**CLASSIFICATIONS:** 

Flagman

## TERRITORY ENTIRE STATE

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

\*\*THESE RATES APPLY TO CONSTRUCTION ON NEW TRANS HUDSON TUNNELS ONLY\*\*

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

#### SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

#### OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

#### Hazardous Waste Work:

- -where Level A, B, or C protection is required: + \$3.00/hr
- -other Hazardous Waste site: + \$1.00/hr

## **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total	
75.46	35.73	111.19	

#### **CLASSIFICATIONS:**

Walking Boss & Superintendent

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
75.01	35.73	110.74

#### **CLASSIFICATIONS:**

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### ENTIRE STATE

## HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date:

#### **Effective Dates:**

#### 03/01/2023

Rate	ate Fringe	
74.26	35.73	109.99

#### **CLASSIFICATIONS:**

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

#### **Effective Dates:**

### 03/01/2023

Rate Fringe		Total
78.01	35.73	113.74

#### **CLASSIFICATIONS:**

Blaster

#### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total	
73.43	35.73	109.16	

### **CLASSIFICATIONS:**

Top Labor Foreman

## **Effective Dates:**

## 03/01/2023

Rate	Fringe	Total
72.91	35.73	108.64

## **CLASSIFICATIONS:**

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Maintenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Rod Man)

## **Effective Dates:**

## 03/01/2023

Rate	Fringe	Total
72.68	35.73	108.41

## CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man top or bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

TERRITORY
ENTIRE STATE

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 72.08 35.73 107.81

## **CLASSIFICATIONS:**

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

## **TECHNICAL SPECIFICATIONS**

#### CONDITIONS SPECIFIC TO THIS PROJECT

**The 2023 County Aid Resurfacing Project** consists of the resurfacing of 9.96 miles of roadway within Union County. The specific roads are as listed below:

- East Broad Street (from North Avenue to Euclid Avenue);
- East Front Street (from Watchung Avenue to Terrill Road);
- Locust Street (from West Third Avenue to West Summer Avenue);
- Tucker Avenue (from West Summer Avenue to Galloping Hill Road);
- o Freeman Circle (from Tucker Avenue to Chestnut Street);
- Westfield Avenue (from Brant Avenue to Saint Georges Avenue);
- Centennial Avenue (from Raritan Road to South Avenue):
- o Diamond Hill Road (from County Line to Mountain Avenue);
- o Baltusrol Road (from Route 78 Bridge to Glenside Avenue);
- F.S. Mathewson Drive (from Cedar Brook Park Ford to Randolph Road);
- o Rose Street (from F.S. Mathewson Drive to Laramie Road);
- Laramie Road (from Rose Street to Arlington Avenue);
- Cataract Hollow Road (from Glenside Avenue to Deserted Village);
- Raritan Road (from Westfield Avenue to Central Avenue);
- Chestnut Street (from East Summer Avenue to Galloping Hill Road);
- Main Street (from Springfield Avenue to Essex County Line); and
- o Locust Street (from West Ninth Avenue to West Seventh Avenue)

The work will include, but will not be limited to, the milling and resurfacing of each roadway and the following associated work:

- Pavement repair prior to resurfacing;
- Construction of accessible curb ramps;
- Upgrade of stormwater drainage inlets;
- Replacement and/or resetting of manhole castings;
- Bridge deck repair and sawcutting of grooved surface;
- Replacement or upgrade of damaged traffic signal loop detectors;
- Upgrade or installation of street name signs; and
- Replacement of striping and pavement markings.

Work along the roadside, including curb ramp, inlet and signage will be performed during the day. The remaining work, including milling, manhole work and paving will perform at night unless directed otherwise by the County.

Milling, manhole work, and paving will be performed during the day on the following roads:

- Locust Street/Tucker Avenue (from West Third Avenue to Galloping Hill Road)
- Westfield Avenue(from Madison Hill Road to St. Georges Avenue)

Work along F.S. Mathweson Drive, Rose Street Ext., and Laramie Road in Cedar Brook Park cannot be performed on June 3<sup>rd</sup>, June 4<sup>th</sup> and June 24<sup>th</sup>.

Accessible curb ramps and existing non-compliant curb ramps will be constructed and/or reconstructed in compliance with ADA and PROWAG standards as needed. Granite block curb will be replaced to the extent practical, but concrete curb will be constructed along the part of the curb ramp that is flush with the roadway pavement. The pavement along the curb ramps will be reconstructed in accordance with Union County standards prior to milling and paving. A detectable warning surface will be installed on all newly constructed and non-compliant existing curb ramps.

In compliance with NJDEP and NJPDES stormwater management regulations, Type B and D inlet curb pieces will be upgraded as needed to ensure the curb openings meet standards. All stream flow and concave grates and those with square openings will be replaced with bicycle-safe grates. All undersized inlets will be upgraded/retrofit with new frame, grate and curb piece that is compliant with NJDEP stormwater regulations work shall be done in accordance with construction details.

The pavement resurfacing will include milling to an average depth of two inches and resurfacing with hot-mix asphalt (HMA) 9.5M64 surface course of the same thickness. The 9.5M64 mix will also be used as a leveling course where necessary. Isolated base pavement repair prior to resurfacing will be performed as determined necessary by the County or our inspectors after milling. The County's standard pavement section will be used for base repair and curb restoration, including an HMA 19M64 base course six inches in thickness and a dense-graded aggregate base course four inches in thickness.

Worn manhole castings will be replaced as needed and manhole castings that do not correspond to the final roadway surface elevation will be reset using concrete in accordance with Union County standards.

Membrane waterproofing may be applied to selected concrete bridge decks. Crack sealing and deck repair will be performed as needed prior to the overlay operations. Any existing "Black Beauty" material will be removed from bridge decks that are to remain exposed. Grooves will be sawcut into exposed bridge decks in accordance with NJDOT standards.

Traffic signal loop detectors impacted by the project will be upgraded to video detection systems if feasible, or replaced in kind as needed.

Street name signs will be installed or replaced at each intersection to upgrade the signs to meet Union County standards. Municipal standards meeting the County's approval will be used for street name signs in certain municipalities, such as the City of Summit.

Upon completion of the resurfacing operations, thermoplastic traffic markings will be installed along with plowable raised pavement markers.

Prior to construction, the Contractor will perform a walk-through with the Engineer to confirm and verify project pavement limits, and location of miscellaneous pavement and curb repairs, ADA ramps, striping and other proposed improvements. Roadway, curb and drainage repair areas including the resetting of castings shall be performed prior to the placement of final HMA overlay. Milled areas adjacent to manholes and inlets within the roadway shall provide a ramped HMA treatment to the satisfaction of the Engineer to improve rideability to motorist to the greatest extent practical. Milled areas shall not remain exposed for more than 48 hours unless approved by the Engineer. In the event approval is not granted and the roadway is left in the milled condition for 72 hours or greater a penalty may be imposed as outlined within the general conditions.

All project roadways shall be closed to traffic throughout the milling and resurfacing operations unless otherwise directed by the Engineer. All milling and resurfacing operations and other activities that require closure of travel through lanes will be performed during nighttime operations within the stipulated working hours.

Road closures for County roadways will be allowed between 7:00 PM and 6:00 AM. Road closure limitations for any NJDOT roadways and Garden State Parkway or NJ Turnpike will be conditional upon any applicable NJDOT permit and NJTA permit restrictions.

Work that does not impact the travel way, such as inlet, curb and sidewalk work, shall be performed during daytime hours unless directed by the Engineer. Daytime work hours are from 7:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays.

Work within any portion of NJDOT Right-Of-Way (R.O.W.) including off-ramp closures, will be permitted between 9:00 AM and 3:00 PM. Monday through Friday. Additionally, any lane closures (within the NJDOT right-of-way) resulting from adjacent work, and or maneuvering space for construction equipment, shall be restricted to the above mentioned times. For nighttime closures of NJDOT roadways, NJDOT restricts the hours of operation between 10:00 PM and 6:00 AM. The Contractor is made aware of the different time restrictions for County and NJDOT roadways. The Contractor shall review any applicable NJDOT and NJTA permits for further restrictions. These times indicate the road closure and opening times, respectively. Therefore, the Contractor shall have all equipment and materials out of the NJDOT right-of-way and terminate all construction operations at the appropriate time (with adequate time for cleanup, material cooling, drying, curing, etc.), in order for the roads to be opened to traffic by the specified time. The Consultant will secure all NJDOT and NJTA permits, where necessary, prior to construction. The Permit process can take up to 4-6 weeks' time depending on the permit agency workload, therefore the Contractor shall provide the Consultant with a minimum of 8 weeks' notice regarding anticipated start date. Other items to be installed including accessible curb ramps, street name signs, pavement reflectors, loop detectors and curb ramp delineation, shall be performed while traffic is maintained.

Note: a closed road shall be open to traffic prior to initiating work requiring full closure on another road that is part of its detour route.

No construction equipment and material shall be stored within the County right-of-way. Resurfacing operations shall be terminated at the appropriate time (with adequate time for cleanup, material cooling, drying, curing, etc.), in order for the roads to be opened to traffic by the conclusion of the stipulated working hours. No work will be permitted on Saturdays, Sundays, or Union County holidays.

Approximately 9.96 miles of County roads will be improved under this Program as follows:

Municipality	Street	From	То	Length (Miles)
Westfield	East Broad Street	North Avenue	Euclid Avenue	0.48
Plainfield	East Front Street	Watchung Avenue	Terrill Road	1.79
Roselle, Roselle Park	Locust Street	West Third Avenue	West Summer Avenue	0.98
Union	Tucker Avenue	West Summer Avenue	Galloping Hill Road	0.44
Union	Freeman Circle	Tucker Avenue	Chestnut Street	0.02
Clark, Rahway	Westfield Avenue	Brant Avenue	Saint Georges Avenue	1.15
Cranford	Centennial Avenue	Raritan Road	South Avenue	1.05
Berkeley Heights	Diamond Hill Road	County Line	Mountain Avenue	1.04
Summit, Springfield	Baltusrol Road	Route 78 Bridge	Glenside Avenue	0.69
Plainfield	F.S. Mathewson Drive	Cedar Brook Park Ford	Randolph Road	0.33
Plainfield	Rose Street	F.S. Mathewson Drive	Laramie Road	0.06
Plainfield	Laramie Road	Rose Street	Arlington Avenue	0.04
Berkeley Heights	Cataract Hollow Road	Glenside Avenue	Deserted Village	0.53
Clark	Raritan Road	Westfield Avenue	Central Avenue	0.52
Union	Chestnut Street	East Summer Avenue	Galloping Hill Road	0.39
Springfield	Main Street	Springfield Ave.	Essex County Line	0.28
Roselle	Locust Street	West Ninth Avenue	West Seventh Avenue	0.17
			Total Mileage	9.96

A map showing the areas and extent of work are found on the cover sheet of the plan set.

Deviations from the standard curb-to-curb milling and resurfacing will be identified in field by the Engineer prior to construction.

The item described as: <u>Dense Graded Aggregate Base Course</u>, <u>Variable thickness</u>, shall be used on unpaved shoulder areas adjacent to the edge of pavement where drop-offs greater than 1.5 inches exist or will be created. Specific locations will be field verified by the Engineer prior to construction.

Accessible curb ramps shall be constructed prior to commencement of the milling and resurfacing operations. All curb ramps shall be constructed in accordance with the details shown herein. Adjacent pavement along newly constructed curb and or sidewalk shall be restored to the satisfaction of the Engineer, and in accordance with these Specifications, at no cost to the County of Union. The construction details identify the restoration requirements. All materials, labor and costs associated with this restoration including sawcutting, excavation, dense graded aggregate base course and hot mix asphalt base course, shall be the sole responsibility of the Contractor. Detectable warning surfaces shall be installed at all newly constructed ramps.

Resetting inlets and manholes to finished grade elevations is part of this Contract. Castings, grates, curb pieces and covers that are broken shall be replaced as part of this Contract at direction of the Engineer as shown on the plans or as directed. In the areas where existing curb type inlets do not have adjacent curbing, new concrete curbing will be constructed on either side of said inlet.

All striping and pavement markings shall be replaced prior to the road being opened to traffic. Should this not be possible due to material and or manufacturer's specifications, temporary striping shall be installed in the interim, prior to the road being opened to traffic. Additionally, any and all pre-marking for permanent markings shall be completed prior to the close of each resurfacing operation day and prior to the road being opened to traffic. Permanent striping and markings shall then be installed within 24 hours of the roadway being resurfaced (and or originally opened to traffic). Temporary striping shall also be applied to all milled surfaces prior to the road being open to traffic. Separate payment will not be made for any temporary striping/markings. The costs thereof shall be included in the various pay items of the overall contract bid.

At the pre-construction meeting, the County shall provide the Contractor with the appropriate electrical and striping plans for the various signalized intersections within the project limits. *In the event that the County does not have available striping plans for these areas, it will be the Contractor's responsibility to perform any and all field inventory, to confirm locations prior to milling operations.* The Contractor will be responsible for notifying *Ralph Lewis, Assistant Regional Electrical Supervisor, NJDOT Region North* for all State Signalized Intersections. He can be reached at 973-648-2781.

Prior to the start of work, the Contractor shall go over the limits of all work with the Engineer or duly appointed representative.

It shall be noted that the County of Union will be responsible for providing on or about signs, notice to the local municipalities/property owners via website updates as well as distributing the work scheduled to the various agencies via email.

It shall be noted that the Contractor will be responsible for furnishing and implementation of all traffic control measures related to the project inclusive of but not limited to construction signage, cones, barricades, crash truck(s) for all roadway closures and traffic detours, posting of "No Parking" signs, preparation of detour routes for review and approval by the County and Consultant, assistance with closures at NJDOT/NJTA/NJT intersections and/or roadways, coordination with local/county/state police for traffic control directors. It shall be noted that for work within County Parks, the County Police shall be contacted to provide Traffic Directors. In addition, the Contractor shall be responsible for the Maintenance and Protection of Traffic for any construction operation performed at any time other than when the road is fully closed to traffic. These operations include the construction of curb and sidewalk; restoration associated with the various pay items; striping and pavement markings; the various raised pavement markings. Any loop detector operations not performed during the various operations where the road in question is fully closed, will also require the Contractor to perform any associated maintenance and protection of traffic. The County will perform construction inspection and materials testing.

The Consultant shall be responsible for obtaining NJDOT and NJTA permits approvals for roadway closures prior to commencement of permitted work with assistance from the Contractor.

It shall be noted that the paving contractor is responsible for scheduling and coordinating utility manhole work with the appropriate utility provider and shall advise Union County and their consultant of said work schedule. Additionally the contractor is responsible to ensure that utility provide and their contractor are aware of County standards. The contractor shall be responsible to ensure manholes are reset to the appropriate elevation to make final grade of top course asphalt.

## The required time of completion for this project is <u>180 (one hundred and eighty) calendar days</u> from the Notice to Proceed.

In addition to the standard resurfacing operations performed along each road (milling, resurfacing, striping and markings, raised pavement markings and street name signage), other items of miscellaneous work may also be warranted and will be described elsewhere in these specifications and the various construction details found in the contract plans. These items include accessible curb ramps, loop detectors, miscellaneous inlet and manhole improvements, sidewalk, bridge deck repairs and installation of waterproof membranes and detectable warning surfaces.

Due to the size of this Program, punch list items will invariably arise. To minimize disruption to its citizens, the County shall require all punch list items brought to the Contractor's attention to be rectified within seven (7) calendar days from receipt of said items. If said punch list items are not resolved to the satisfaction of the Engineer, within the specified time, liquidated damages, as specified in Section 43 of the General Specifications ('G' sheets of this specification) shall be pursued, commencing on the eighth calendar day.

The County retains the right to delete or substitute roads to be milled and paved under this Contract. The County also retains the right to increase or decrease any and all quantities up to 25 percent of those estimated, at the unit prices bid.

Certified payroll records shall be produced and submitted on a bi-weekly basis to the County for all personnel involved with this project. The County shall withhold any and all payments until the certified payroll records are received.

Utility companies shall reset their valves, meters and manholes prior to construction. The Contractor shall make all necessary arrangements with the respective utility companies, to confirm that the appropriate number of each type of valve sleeves, covers, etc., are on-site. All work concerning these resets shall be in accordance with Sections: 105 and 650 as amended herein; except that this item will not be measured, and any/all payment associated with it shall be made part of the overall price bid for the project. No separate payment will be made for the resetting of utility valve boxes.

## UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE PERMITTED TO COMMENCE WITH THE RESURFACING OPERATIONS UNTIL ALL UTILITY VALVES HAVE BEEN RESET.

All roads under this Contract requiring milling will be milled to a depth of two (2) inches. Quantities Tables on the contract plans identify the estimated amount of material for each road. In cases where the road must be re-profiled, the locations will be pointed out to the Contractor, who shall make the necessary adjustments to the milling machine to obtain said changes.

The Contractor's attention is directed to the following signalized intersections, although the Contractor shall be responsible for his/her own recognizance and site visits and this list shall not be considered comprehensive.

Municipality	Street	Signalized intersections
Westfield	East Broad Street	North Ave., Elm St., Central Ave., Mountain Ave., and Euclid Ave.
Plainfield	East Front Street	Watchung Ave., Roosevelt Ave., Richmond St., and Terrill Road
Roselle, Roselle Park	Locust Street	West Third Ave., West First Ave., Route 28, West Grant Ave., and West Colfax Ave.
Union	Tucker Avenue	Galloping Hill Road
Union	Freeman Circle	Chestnut Street
Clark, Rahway	Westfield Avenue	Brant Ave., Madison Hill Rd., Madison Ave., and S. Georges Ave.
Cranford	Centennial Avenue	Raritan Rd., Cayuga St., Wall St., Myrtle St., Hillside Ave., East Lincoln Ave., and South Ave.
Berkeley Heights	Diamond Hill Road	Valley Rd., McMane Ave., and Mountain Ave.
Summit, Springfield	Baltusrol Road	Glenside Ave.
Clark	Raritan Road	Central Ave., Clarkston Dr., and Central Ave
Union	Chestnut Street	Freeman Cir., and Galloping Gill Rd.
Springfield	Main Street	Springfield Ave.

Other structures exist along the roadways, including bridges, culverts, storm drainage facilities, sanitary sewers, and utilities. It will be the sole responsibility of the Contractor to investigate and use due care when operating in their vicinity.

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019 TO GOVERN.

## **SPECIAL PROVISIONS**

## 2023 ROAD RESURFACING PROJECT (CA-2022)

# BA#7 – 2023; UNION COUNTY ENGINEERING PROJECT #2021-011 VARIOUS MUNICIPALITIES

## **COUNTY OF UNION**

#### **AUTHORIZATION OF CONTRACT**

The contract for this project is authorized by the provisions of local public contracts law, NJSA 40A: 11-1 et seq.

### **SPECIFICATIONS TO BE USED**

The 2019 Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation (Department) as amended herein will govern the construction of this Project. However, the Contractor is advised that with respect to bidding requirements and conditions, as well as the award and execution of contract, the requirements established within the Instructions to Bidders, General Conditions, and Bid Documents sections provided elsewhere within this specifications package shall prevail over the 2019 Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation.

These Special Provisions consist of the following:

Pages 7 to 52 inclusive.

The following additional project specific Attachments are located at the end of these Special Provisions:

Attachment A – Additional Technical Specifications for Non-NJDOT Payment Items

#### **WAGE RATES**

The contractor shall pay the minimum wage rates determined by the New Jersey Department of Labor.

State wage rates may be obtained from the New Jersey Department of Labor (Telephone: 609-292-2259) or by accessing the Department of Labor's web site at <a href="http://lwd.dol.state.nj.us/labor/wagehour/wagehour index.html">http://lwd.dol.state.nj.us/labor/wagehour/wagehour index.html</a>. The State wage rates in effect at the time of award will be made a part of this Contract, pursuant to Chapter 150, Laws of 1963 (NJSA 34:11-56.25, et seq.).

In the event it is found that any employee of the contractor or any subcontractor covered by the contract, has been paid a rate of wages less than the minimum wage required to be paid by the contract, the contracting agency may terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work, as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The contractor and his sureties shall be liable to the contracting agency for any excess costs occasioned thereby.

#### **GENERAL**

All awards shall be made subject to the approval of the New Jersey Department of Transportation. No construction shall start before approval of said award by the New Jersey Department of Transportation. Prior to the start of construction the contractor must submit a Material Questionnaire (SA-11) listing all sources of materials. Any materials used on the project from a non-approved New Jersey Department of

Transportation source will be considered non-participating. The contractor is also notified that the District Office, Division of Local Aid and Economic Development must be notified of the construction commencement date at least three (3) calendar days prior to the start of construction.

Award of contract and subletting will not be permitted to, materials will not be permitted from, and use of equipment will not be permitted that is owned and/or operated by, firms and individuals included in the report of suspensions, debarments and disqualifications of firms and individuals as maintained by the Department of the Treasury, Division of Purchase & Property, Contract Compliance & Administration, Trenton NJ 08625 (609-292-5400).

Payment for a pay item in the proposal includes all the compensation that will be made for the work of that item as described in the contract documents unless the "measurement and payment" clause provides that certain work essential to that item will be paid for under another pay item.

Whenever any section, subsection, subpart or subheading is amended by such terms as changed to, deleted or added it is construed to mean that it amends that section, subsection, subpart or subheading of the 2019 Standard Specifications unless otherwise noted.

Whenever reference to page number is made, it is construed to refer to the 2019 Standard Specifications unless otherwise noted.

Henceforth in this supplementary specification whenever reference to the State, Department, ME, RE or Inspector is made, it is construed to mean the particular municipality or county executing this contract.

Whenever reference to Title 27 is made, it is construed to mean Title 40.

## **DIVISION 100 - GENERAL PROVISIONS**

### SECTION 101 - GENERAL INFORMATION

### 101.03 TERMS

THE FOLLOWING TERMS ARE OMITTED:

**Federal Aid Project.** Any agreement or modification thereof between NJDOT and any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Federal government or borrowed on the credit of the Federal government pursuant to any program involving a grant, contract, loan, insurance or guarantee under which the NJDOT itself participates in the construction work.

**Federal Aid Project Attachments.** Attachments to the Contract Special Provision document, used for Federal Aid Projects.

THE FOLLOWING TERMS ARE CHANGED OR ADDED:

**Commissioner.** The term "Commissioner" means the Mayor of the municipality when the Contract is to be executed by a municipality, either as created by law, acting or through his duly authorized representatives, such representative acting within the scope of the particular duties delegated to them.

Department. The term "Department" means the Owner where the Contract is to be executed.

**Department Laboratory.** The term "Department Laboratory" means the testing laboratory retained by the Owner, or as the Owner may designate.

**Engineer.** The term "Engineer" means the Owner's Engineer, acting directly or through his duly authorized representatives, such representatives acting within the scope of the particular duties delegated to them.

**R.E.** The abbreviation "R.E" means the Owner's field representative having direct supervision of the administration of the Contract as designed by each Municipal Engineer in the Cooperative.

**Contracting Agency.** The term "contracting agency" means the public entity who issues the Master Contract. The Contracting Agency is the Union County.

**Full Traffic Access.** All work is complete to allow safe unencumbered use of the final paved portion of roadway throughout the project including but not limited to striping, RPMs, rumble strips, highway lighting, and traffic signals as determined by the RE.

Wholly State Funded Project: Any agreement, contract or modification thereof between local public agencies and a person for construction work which is paid for in whole or in part with funds obtained from the State government or borrowed on the credit of the State government pursuant to any program involving a grant agreement, contract, loan, insurance or guarantee. This term excludes any agreement, contract or modification for construction work which is paid for in whole or in part with funds obtained from the Federal government.

**actual cost**: The computed cost using calculations of direct labor, labor fringe benefits, indirect labor costs, insurance, materials, extraordinary expenses, equipment, profit, overhead, and subcontractors.

# 101.04 INQUIRIES REGARDING THE PROJECT

SUBSECTION 1 IS MODIFIED AS FOLLOWS

1. **Before Award of Contract.** Submit inquiries to the following individual:

David R. Atkinson, P.E., P.P., C.M.E. Neglia Engineering Associates 200 Central Avenue – Suite 102 Mountainside, NJ 07092

Email: datkinson@negliagroup.com

Telephone: (201) 939-8805

### 2. After Award of Contract.

David R. Atkinson, P.E., P.P., C.M.E. Neglia Engineering Associates 200 Central Avenue – Suite 102 Mountainside, NJ 07092

Email: datkinson@negliagroup.com

Telephone: (201) 939-8805

Local Aid District 2 Office 153 Halsey Street, 5<sup>th</sup> Floor Newark, NJ 07102

Telephone: 862-350-5730

### **SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS**

## 102.10 SUBMISSION OF BIDS

## THE SECOND PARAGRAPH IS CHANGED TO:

The Bidder shall ensure delivery of its bid with all required components and attachments, including, but not limited to the following:

1. Certification of Non-Involvement in Prohibitive Activities in Russia or Belarus Pursuant to P.L. 2022, c.3. In accordance with legislation, P.L. 2022, c3 enacted to require contractor on public works projects to sign a certification that they are not engaged in prohibited activities in Russia or Belarus except as permitted by federal law. If the Bidder certified that they engaged in activities prohibited by P.L. 2022, c.3, the Bidder shall have 90 days to cease engaging in any prohibited activities and on or before the 90th day after the certification, shall provide an updated certification. If the Bidder does not provide the updated certification or at that time cannot certify on behalf of the entity that it is not engaged in prohibited activities, the Department shall not award the Bidder any contracts, renew any contracts, and shall be required to terminate any contract(s) the person or entity holds with the Department that were issued on or after the effective date of P.L. 2022, c.3.

### 102.13.01 BIDDER PRE-AWARD REQUIREMENTS

## A. Federal Aid Projects

This section intentionally left blank.

# THE FOLLOWING IS ADDED IN PART B:

# B. State Funded Projects

2. Compliance with N.J.S.A. 19:44A-20.13, et seq. The Department will verify the certification status of the bidder with the State Chapter 51 Review Unit. If the bidder is NOT within an approved 2 year period, then a completed and signed Two-Year Vendor Certification and Disclosure forms must be submitted to the Department.

## **SECTION 103 – AWARD AND EXECUTION OF CONTRACT**

### THE FOLLOWING IS ADDED WITH RESPECT TO THE AFOREMENTIONED REMOVED SECTIONS:

With respect to bidding requirements and conditions, as well as the award and execution of contract, the Contractor shall comply with the requirements established within the Instructions to Bidders, General Conditions, and Bid Documents sections provided elsewhere within this specifications package. The County's contract requirements shall prevail over the 2019 NJDOT Standard Specifications with respect to the same.

### **SECTION 105 – CONTROL OF WORK**

# 105.07.01 Working in the Vicinity of Utilities

### A. Initial Notice.

THE FOLLOWING IS ADDED

A listing of respective utility purveyors is provided within the contract plans. The Contractor shall be responsible for contacting the respective utilize purveyors prior to construction commencement to acquire utility mark-outs.

## **SECTION 106 - CONTROL OF MATERIAL**

### **106.03 FOREIGN MATERIALS**

### THE FOLLOWING IS ADDED AFTER PARAGRAPH 44

The Contractor's attention is directed to all existing Federal and State statutes and regulations which prohibit on any Public Work, the use of materials produced or manufactured outside of the United States of America. Exceptions to this prohibition, upon the findings of the R.E., are allowed only where such enforcement would be inconsistent with public interest or where the materials is not produced or manufactured in the United States in commercial quantities and of sufficient quality.

If the R.E. finds that in performance of the Contract there has been a failure to comply with the provisions relative to foreign materials, the R.E. shall make public such findings and no other Contract for the construction of any Public Work by this contracting agent shall be awarded to such Contractor, or to any Partnership, Association, or Corporation, with which such Contractor is associated or affiliated, within a period of three (3) years after such findings is made public.

When the use of foreign material is allowed by the R.E. such material shall be furnished in accordance with the following requirements:

- 1. Materials manufactured or produced outside the United State shall be delivered to a location, approved by the R.E., where they shall be retained until examination can be completed.
- 2. The Contractor shall arrange, at his expanse, any testing which the R.E. feels necessary to ascertain the acceptability of the material.
- 3. Each lot of foreign material shall be accompanied by a Certificate of Compliance. In addition, certified mill test reports shall be attached to the Certificate of Compliance for those materials for which mill test reports are required and shall clearly identify the lot to which they apply. Certificates of Compliance shall contain the information as previously described above.

On project utilizing Federal funds, the Contractor's particular attention is directed to the Federal Statutes and regulations which establish the "Buy American" requirements applicable to the project. The Contractor must comply with these requirements in addition to those provided under applicable State Law.

### **SECTION 107 – LEGAL RELATIONS**

## 107.11 RISKS ASSUMED BY THE CONTRACTOR

### 107.11.02 General Insurance

#### SUBSECTIONS A AND B OF THIS SECTION ARE REMOVED AND REPLACED WITH THE FOLLOWING

The Contractor (i) shall purchase from a company or companies lawfully authorized to do business in the jurisdiction in which the project is located, and shall carry, the insurance described in subparagraphs A through D below, in the minimum limits shown, for the purpose of protecting the Contractor and, under the insurance described in subparagraphs B through D below, its Additional Insureds, including the Owner (Union County), the Engineer (Neglia Engineering Associates) each of the municipalities in which the onsite Work is to be performed, as well as their respective agents, officers and employees, from claims (including claims for damages for bodily injury, including accidental or wrongful death, as well as claims for property damage) which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable; (ii) shall obtain and deliver to the Owner the Certificates of Insurance required by subparagraph E below; (iii) shall also ensure that all of its Subcontractors carry the coverages described in subparagraphs A through E below, in the minimum limits shown, it being understood, however, that a Subcontractor shall be excused from carrying any of such insurance only if such Subcontractor is named an Additional Insured under the Contractor's policy or policies; and (iv) shall obtain and deliver to the Owner copies of Certificates of Insurance from all such Subcontractors confirming the existence of their required insurance coverage:

## (A) Worker's Compensation Insurance

The Contractor shall carry Worker's Compensation Insurance in accordance with the Statutes of The State of New Jersey. Under Coverage A, Worker's Compensation, such coverage will be Statutory. Under Coverage B, Employers' Liability, such coverage will be unlimited as respects employees subject to the New Jersey Workers' Compensation Law, and not less than \$1,000,000 for other employments or exposures.

# (B) Commercial General Liability Insurance

The Contractor shall carry Commercial General Liability Insurance equal in form to that offered under the latest version of Standard ISO (Insurance Services Office) Form CG0001, as filed with and approved by the New Jersey Department of Banking and Insurance. The coverage under the Commercial General Liability Insurance policy may not be restricted by any endorsement attached thereto. The policy limits shall not be less than:

\$1,000,000 Each Occurrence.
\$100,000 Fire Legal Liability.
\$1,000,000 Personal and Advertising Injury Liability.
\$2,000,000 General Aggregate\*\*.
Completed Operations/Products

Liability/Aggregate.

<sup>\*\*</sup> The General Aggregate shall apply separately for each project or location of the Contractor. The Owner (Union County), the Engineer (Neglia Engineering Associates) and each of the municipalities in which the on-site Work is to be performed, as well as their respective agents, officers and employees, will (through the use of ISO Endorsement Form CG 20 10 07 04, Additional

Insured - Owners, Lessees or Contractors) all be named as Additional Insureds under the Contractor's policy.

# (C) <u>Business Auto Liability Insurance</u>

The Contractor shall carry Business Auto Liability Insurance coverage under the latest version of Standard ISO Form CA0001, as filed with and approved by the New Jersey Department of Banking and Insurance. The coverage shall be provided for <u>either</u> Symbol 1 ("Any Auto") <u>or</u> Symbol 7 ('All Scheduled Vehicles') <u>plus</u> Symbol 8 ('Hired Vehicles') <u>plus</u> Symbol 9 ('Non-Owned Vehicles'). This coverage shall be not less than \$1,000,000 Each Occurrence; and the Owner, the Engineer and each of the municipalities in which the on-site work is to be performed, as well as their respective agents, officers and employees, shall be named as Additional Insureds.

# (D) <u>Umbrella Liability Insurance</u>

For a Contract for **more than \$250,000**, the Contractor shall carry Umbrella Liability Insurance in a limit **not less than \$5,000,000** Each Occurrence and Annual Aggregate.

For a Contract for \$250,000 or less, the Contractor shall carry Umbrella Liability Insurance in a limit **not less than \$1,000,000** Each Occurrence and Annual Aggregate.

No such Umbrella Liability Insurance policy shall be more restrictive than the coverage provided for under the above-described primary policies.

Any such Umbrella Liability Insurance policy shall contain a clause stating that, in the event the primary coverage is impaired or exhausted, such policy shall take effect (drop down) and act as primary coverage until the exhaustion of its limits.

(E) Certificates of Insurance: If the Contractor has submitted a Consent of Insurance as part of his submission, then in that event, after the Bid of the Contractor has been accepted by the Owner, but simultaneously with the Contractor's entry into a Contract with the Owner, the Contractor shall obtain from its insurer(s) and deliver to the Owner copies of Certificate[s] of insurance (i) confirming that all of the above-described coverage is in full force and effect, (ii) stating the limits of liability and the expiration dates of each policy and type of coverage, (iii) listing all required Additional Insureds, and (iv) stating that the Owner will receive not less than 30 days' advance written notice of either a cancellation of any coverage prior to the expiration date of any policy or any non-renewal (as of the expiration date of any policy) of any insurance coverage. Renewal Certificates covering the renewals of all policies expiring during the life of the Contract shall be filed with the Owner not less than 10 days before the expiration of all such policies.

The insurance required above shall be written for not less than the limits of liability specified therein. Coverages, whether written or an occurrence or claims-made basis, shall be maintained without interpretation from date of commencement of the Work until the date of final payment and the termination of any coverage required to be maintained after final payment.

The forms and/or amounts of insurance to be furnished by the Contractor and each of its Subcontractors shall not in any way operate to relieve or limit the liability of the Contractor or any Subcontractor under the Contract or any other of the Contract Documents.

The Contractor shall not commence work under the Contract until all insurance required of the Contractor has been obtained and has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence work on its subcontract until all similar insurance required of the Subcontractor has been obtained and approved by the Owner. Approval of such insurance by the Owner shall not relieve or decrease the liability of the Contractor under the Contract or the Contract Documents.

The Contractor and each of its Subcontractors shall purchase from and maintain insurance with companies which, as of the time of the Bid (in the case of the Contractor) and as of the time of the purchase (in the case of the Subcontractor), have at the very least an A Minus rating by A.M. Best & Company.

All of the insurance to be provided shall be considered to be primary insurance as respects the Owner, the Engineer and the municipalities in which the on-site Work is to be performed. The Contractor will save harmless, indemnify and defend the Owner, the Engineer and the municipalities in which the on-site Work is to be performed, as well as their respective agents, officers and employees, from any and all claims arising out of the Contractor's performance.

### THE FOLLOWING SECTION IS REMOVED

### **SECTION 108 - PROSECUTION AND COMPLETION**

With respect to the prosecution and completion of the contract, the Contractor shall comply with the requirements established within the Instructions to Bidders, General Conditions, and Bid Documents sections provided elsewhere within this specifications package. The County's contract requirements shall prevail over the 2019 NJDOT Standard Specifications with respect to the same.

### **108.10 CONTRACT TIME**

All proposed improvements associated with the 2023 Road Resurfacing Project shall be completed within 180 (one hundred and eighty) calendar days after notice to proceed, weather permitting, including any and all awarded alternates.

The contractor shall price accordingly to account for weather delays, holidays, and review of shop drawings, and any other potential delays typical of a project of this duration and magnitude. No consideration will be given for extensions or additional compensation due to these delays.

## **DIVISION 150 - CONTRACT REQUIREMENTS**

### **SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENT**

### 157.03.02 Monument

## THE SUBPART IS CHANGED TO:

Comply with the Map Filing Law N.J.S.A. 46:26B-1 through 8 and N.J.A.C. 13:40-5.1 through 2. Set non-Department monuments according to the requirements of the agency. Set Department monuments at the specified location and elevation, and ensure that the monuments are held firmly in place. Excavate so that concrete for the monument base and sides can be placed against undisturbed in-situ material, ensuring that the base is wider than the shaft. If rock is encountered, drill into the rock to provide a rock socket to the satisfaction of the RE. Reuse excess excavated material as specified in 202.03.03.C.1. Place concrete, as specified in 504.03.02.D, and set the reinforcement steel and the monument marker at the time of the concrete pour. Ensure that the top surface of the monument is level, and the disk is in the true position. After the concrete has attained strength, punch the disk.

After the monuments have been set, obtain the current horizontal and vertical control datum values on the monument and submit these values, signed and sealed by the land surveyor, to the RE.

### 157.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS REMOVED

ItemPay UnitCONSTRUCTION LAYOUTDOLLAR

# THE FOLLOWING IS ADDED:

No specific payment will be made for construction layout and the cost thereof shall be included in the prices bid for the various items within the bid proposal.

## **SECTION 159 - TRAFFIC CONTROL**

# 159.01 DESCRIPTION

This Section describes the requirements for implementing controls to protect vehicular and pedestrian traffic. Traffic control includes providing, installing, placing, relocating, maintaining, and removing traffic control devices.

### **159.02 MATERIALS**

# 159.02.01 Materials

Provide materials as specified:

Tack Coat 64-22	902.01.01
Tack Coat:	
Emulsified Asphalt, Grade RS-1, SS-1, SS-1h, Grade CSS-1 or CSS-1h	902.01.02
Hot Mix Asphalt (12.5M64)	902.02
Construction Barrier	
Signs	
Sign Posts	911.02.01
Timber Sign Supports	

Top and Side Mounted Delineators	911.03
Latex Paint	912.04.01
Temporary Pavement Marking Tape	912.04.02.A
Removable Black Line Masking Tape	912.04.02.B
Temporary Pavement Markers	
Box Beam for Construction Barrier Curb	
Polymerized Joint Adhesive	914.03

Provide temporary crash cushions, inertial barrier systems as specified in 611.02. Provide temporary compressive crash cushions as specified for compressive crash cushions in 611.02.

# 159.02.02 Equipment

Provide equipment as specified:

Flashing Arrow Board	1001.01
Portable Variable Message Sign	1001.02
Traffic Control Truck with Mounted Crash Cushions	1001.03
Vibratory Drum Compactor	1003.06
Bituminous Material Distributor	
HMA Plant	1009.01
HMA Trucks	1009.02

# 159.03 PROCEDURE

### 159.03.01 Traffic Control Coordinator

Before starting Work, submit to the RE the name, training, work experience, and contact information of an employee assigned as the on-site Traffic Control Coordinator (TCC). The TCC must be certified as having successfully completed the Rutgers CAIT Traffic Control Coordinator Program, or an equivalent course as approved by the NJDOT Office of Capital Project Safety. The TCC must also successfully complete an approved Traffic Coordinator refresher course every 2 years. The TCC is a full-time position and the employee designated as TCC must be available on a 24 hour a day, 7 days a week basis. The TCC shall have the responsibility for and authority to implement and maintain all traffic operations for the Project on behalf of the Contractor. Ensure that the TCC is present at the work site at all times while the Work is in progress. The TCC's responsibilities and duties shall include the following:

- 1. Overseeing traffic control operations, including those performed by subcontractors.
- 2. Coordinating traffic control with subcontractors, other contractors, and Utilities.
- 3. Ensuring that set-up and removal is performed according to the Contract.
- 4. Performing daily traffic control inspections and providing written reports to the RE documenting the inspections, including detailed findings and corrections made.
- 5. Performing inspections at night and on weekends to ensure compliance with the TCP and providing written reports to the RE documenting the inspections, including detailed findings and corrections made.
- 6. Ensuring that traffic control devices are correctly positioned and spaced.
- 7. Ensuring that signs are properly covered or uncovered.
- 8. Maintaining or replacing traffic control devices to ensure traffic control devices are in an acceptable condition and good working order. Maintenance also includes replacing lights bulbs and electrical components and refueling, recharging, or replacing batteries.
- 9. Ensuring that excavations and lateral drop-offs greater than 2 inches in depth are eliminated or protected by barrier or emergency escape ramps during non-working periods.
- 10. Ensuring that routine road maintenance is performed, including debris removal and road cleaning.
- 11. Ensuring that construction operations do not create flooding or icing conditions for lanes open to traffic.
- 12. Identify and correcting traffic control deficiencies immediately. Correct traffic control deficiencies

- directed by the RE within 2 hours of notification.
- 13. Ensuring that vehicles, equipment, and material stored adjacent to the road are behind barriers or stored at least 30 feet from the traveled way.
- 14. Ensuring that Contractor vehicles for material delivery enter or exit the traveled way in a safe manner.

Provide additional employees to assist the TCC as approved by the RE. The RE may request the TCC or additional employees to demonstrate their competency at any time. Notify the RE before performing daily inspections to provide the RE with the opportunity to observe the inspections.

### 159.03.02 Traffic Control Devices

Ensure that FHWA category 1, 2, 3, and 4 traffic control devices (TCDs) conform to the requirements of the 2016 Edition of the Manual for Assessing Safety Hardware (MASH), except that TCDs manufactured on or before December 31, 2019 must have been purchased by the Contractor on or before December 31, 2019, and conform to the requirements of NCHRP 350, MASH 2009, or MASH 2016. Provide each device's applicable MASH 2016, MASH 2009, or NCHRP 350 test results and FHWA Eligibility letter, if issued by the FHWA, to the RE. Provide the RE with the purchase date certification for devices not meeting the MASH 2016 requirements upon delivery to the site. Ensure that traffic control devices meet or exceed an acceptable condition as described in the ATSSA guide Quality Standards for Work Zone Traffic Control Devices. Traffic control devices need not be new but must be in good condition. Provide traffic control devices according to MUTCD.

Erect traffic control devices before beginning construction operations. Trim vegetation that obscures the sight distance of traffic control devices. Keep the traffic control devices clean, and maintain in acceptable condition until no longer required. Relocate traffic devices as directed by the RE. Place traffic control devices as directed to provide traffic control for Department personnel doing inspections, sampling, testing, and taking measurements required for the Project.

- 1. **Construction Signs.** Install anchor posts with soil anchor plates, except when installing in rock or in concrete. If construction signs are required for less than 3 days, the Contractor may place construction signs on portable sign stands instead of sign posts with the approval of the RE.
  - When construction signs or existing signs do not reflect work zone traffic conditions, cover the signs with black polyethylene sheeting. Ensure that the cover is opaque under all lighting conditions and completely conceals the entire front of the sign panel. Securely attach the cover to the back side of the sign without damaging the reflective sheeting. Do not tape the cover to the face of the sign. Ensure that the cover remains secure in all weather conditions. Overhead signs and large guide signs with areas greater than 200 square feet do not need a cover over the entire sign, but require a cover over the conflicting information. Do not alter the face of a sign with revised messages. Remove construction signs when no longer required, and restore the post hole to match the surrounding conditions.
- 2. Construction Barrier Curb. Alternate A or B construction barrier curb may be used interchangeably in any location. The Contractor may use construction barrier curb that is constructed using gray or white concrete. Do not place different colors of construction barrier curb in a continuous run. Do not use construction barrier curb having any of the following deficiencies:
  - a. Exposed steel at the connector flangeway.
  - b. Exposed reinforcement steel.
  - c. Cracking through the cross section.
  - d. An area of concrete missing larger than a 3 inch by 3 inch right triangle.
  - e. Debris in the keyway.
  - f. Non-functioning anchor bolt holes.
  - g. Non-functioning anchor rod hole.
  - h. Paint applied to the surface.
  - i. Objects protruding from the surface.

- j. Previous repairs.
- k. Damaged, kinked, or bent connection key or box beam stiffener.

At least 30 days before delivering construction barrier curb to the Project Limits, provide the RE notice that the barrier curb is available for inspection. Ensure the barrier curb is not stacked for this inspection. The RE will inspect the barrier curb, along with a Contractor representative, to determine what pieces are not approved for delivery to the Project Limits. Final determination of construction barrier approval will be made at the time of placement at the Project.

Ensure that anchor pins do not project above the plane of the barrier curb. Install the Construction Barrier Curb stiffened with box beams as indicated in the Contract documents.

Replace construction barrier curb that does not meet the specified requirements. Do not patch or repair construction barrier curb.

Provide top and side mounted flexible delineators on the construction barrier curb. For delineators located on the right side when facing in the direction of traffic, ensure that the retroreflective sheeting is white. For delineators located on the left side when facing in the direction of traffic, ensure that the retroreflective sheeting is yellow. Attach flexible delineators according to the manufacturer's recommendations.

Starting at the beginning of the construction barrier curb section mount top delineators at 100 foot intervals on tangent sections, or curves of radii greater than 1,910 feet, and at 50 foot intervals on curves of radii of 1,910 feet or less.

Mount side delineators at the lead end of each barrier segment with the top of the delineator 3 inches from the top of the barrier.

- **3. Flashing Arrow Board.** Provide a flashing arrow board as specified in 1001.01.
- **4. Portable Variable Message Sign (PVMS).** Place the PVMS at the locations directed by the RE. Ensure that a designated representative familiar with the operation and programming of the unit is available on the Project. Only display messages authorized by the Department for the Project. Repair or replace malfunctioning PVMS within 12 hours of notification by the RE.
- Temporary Crash Cushion. Install inertial barrier systems as specified in 611.03.01. Install temporary compressive crash cushions as specified in 611.03.02. Immediately repair or replace crash cushions that become damaged or become inoperable. Begin repair or replacement of the temporary crash cushion within 1 hour of receiving notice of damage from the Department. Ensure that workers assigned to such repair or replacement work continuously until the temporary crash cushion is repaired or replaced. If the Contractor fails to respond to a damage notification and begin work within 1 hour of notification, or does not continue to work until the temporary crash cushion is repaired or replaced, the Department, will require closure of the adjacent live lane. Lane occupancy charges will be imposed as specified in 108.08 for the period of time the adjacent lane is closed. Should the Department have to respond to a repair with its own forces because of a Contractor's lack of response to a damage notification, the Contractor agrees to pay the Department a sum of \$3,000 for costs of mobilizing its forces and equipment. In addition, the Contractor must pay the Department the actual cost of material used for the repair and pay the actual costs of police traffic protection. Maintain an adequate number of replacement parts to repair damaged units at all times. Keep the areas in front, atop, and around the crash cushions clear of snow accumulation of more than 4 inches in depth.

Upon removal of the crash cushion, cut anchor bolts at least 3 inches below the surface of the surrounding roadway. Repair HMA pavement as specified in 401.03.03. Repair concrete pavement as specified in Section 452.

6. Traffic Control Truck with Mounted Crash Cushions. Provide the RE with a copy of the crash cushion manufacturer's recommendations. Provide the RE a certified weigh ticket of the Traffic Control Truck with arrow board and mounted Crash Cushion. Position the traffic control truck to ensure that there is adequate stopping distance after impact and to prevent errant vehicles from

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traveling around the truck and endangering workers. When used in a fixed position, place manual transmission vehicles in second gear and place automatic transmission vehicles in park. Ensure that the parking brake is set, and the wheels are turned to avoid rolling into active traffic lanes. Do not use traffic control trucks in place of other temporary impact attenuators for more than 24 hours. Relocate the traffic control truck as specified by the TCP, or as directed by the RE. Do not use the truck to carry additional equipment, materials, or debris. When using ballast, ensure that it is secured to the truck. Submit drawings to the RE detailing the manner of securing the ballast, signed, and sealed by a Professional Engineer, certifying that it is capable of withstanding the impact forces for which the impact attenuator is rated.

- 7. Channelizing Guide Posts. Prepare the pavement surface to provide a clean, sound area to affix the post. Apply an epoxy or butyl adhesive according to the manufacturer's recommendations and bond the base of the post to the pavement surface. Provide only 4 inch diameter tubular channelizing markers. Remove when no longer required.
- 8. Portable Variable Message Sign with Remote Communication (PVMSRC). Place the PVMSRC at the locations directed by the RE for the duration of the project. Ensure that a designated representative familiar with the operation and programming of the unit is available on the Project for On-Site Configuration. Only display messages on the PVMSRC authorized by the Department for the Project in accordance with the plans or as directed by the RE and make the signs available for use remotely from the Traffic Operation Center (TOC) specified in 105.07.01.B. Program within 8 hours, any message requested by the RE to be displayed on the PVMS at a scheduled time and verify that the message is displayed correctly and notify the RE. If the PVMSRC fails to function, repair the equipment within 48 hours of receiving notice from the Department that the PVMSRC is not functioning.

Integrate the PVMSRC for remote operation from TOC using Vanguard DMS software or the Department's central DMS control software at the time of installation as directed by the RE.

Provide for 1 week of testing by the TOC for remotely operating the PVMSRC before the start of construction operations that require lane or shoulder closures, or other impacts to traffic. At least 10 days before testing, submit to the RE for approval a plan for any work to be completed in the TOC. Submit a request to the RE at least 4 days in advance to access the TOC for any work.

9. Portable Trailer Mounted CCTV Camera Assembly (PTMCCA). Place the PTMCCA at the location directed by the RE. Ensure that a designated representative familiar with the operation and programming of the unit is available on the Project for initial installation. If the PTMCCA fails to function, repair the equipment within 48 hours of receiving notice from the Department that the PTMCCA is not functioning.

Provide a system that includes a robotic network camera remotely controllable, including Pan, Tilt and Zoom (PTZ). Provide broadband internet service connection and On-Site Camera Configuration for remote operation and control of the camera via the Department's existing Head-End Camera Control System, Genetec. No other Head-End Camera Control System substitution is permitted. A Management user system is also to be provided for remote system programming to the camera sites. This includes a website that is to be provided and hosted by the vendor. This website is to have secure authentication and is to show the current devices with their location, status, and display links for each device. Provide continuous viewable image at a minimum of 320H x 240V resolution and 1 frame per sec (fps) through the website. As directed by the Traffic Operation Center (TOC) specified in 105.07.01.B, establish password level designations, camera presets, and camera image displays. Provide all incidental equipment and material required for successful remote operation and communications.

Provide for 1 week of testing by the TOC for remotely operating the PTMCCA before the start of construction operations that require lane or shoulder closures, or other impacts to traffic.

### 159.03.03 Removable Black Line Masking Tape

Apply black line masking tape over existing traffic stripes as specified in 159.03.05. Ensure that the black line masking tape completely covers existing stripes. Replace black line masking tape that becomes loose after placement within 2 hours. When black line masking tape is no longer required or directed by the RE, carefully and completely remove without using heat, solvents, grinding, sanding, or water.

# 159.03.04 Temporary Pavement Markers

Apply temporary pavement markers with butyl adhesive pads to clean, dry pavement surfaces free of cracking, checking, or spalling. If the layout locates a marker at a joint or defect, relocate the marker longitudinally at least 2 inches beyond the joint or defect. Replace lost or damaged temporary pavement markers.

Only remove temporary pavement markers that will be replaced by striping in the same day. If striping cannot be finished in the same day, reinstall temporary pavement markers before opening the road to traffic.

## 159.03.05 Temporary Pavement Marking Tape

Install tape according to the manufacturer's recommendations when the weather is favorable as determined by the RE. Do not install the tape during wet conditions. Immediately before marking the pavement surface, clean the surface of dirt, oil, grease, and foreign material, including curing compound on new concrete. Clean the surface 2 inches beyond the perimeter of the marking to be placed.

Install tape on dry surfaces having a surface temperature between 50 °F and 150 °F, when the ambient temperature is at least 50 °F and rising as determined by the National Weather Service (http://www.nws.noaa.gov/). When splicing is required, install the tape using butt splices. Do not overlap the tape.

Tamp the tape for initial adhesion and then apply pressure by driving a truck slowly over the tape several times. Maintain tape by replacing loose or damaged tape within 2 hours. Remove tape when no longer required or when directed by the RE.

The surface must be dry. Do not install tape when precipitation is imminent as determined by the RE. The RE will coordinate with the Contractor to install the tape when there is no anticipated precipitation. Install the tape in continuous lengths of 20 feet or less. Any continuous length of more than 20 feet must be removed and replaced at no cost to the Department. Ensure that the removable tape is capable of being removed manually, intact or in large pieces, at temperatures above 40 ° F, without the use of solvents, burning, grinding, or blasting and without damage to the underlying surface.

If conditions do not allow for the proper adhesion of the tape, use Latex Traffic Stripes, Latex Traffic Markings Lines, and Latex Traffic Markings Symbols as specified in 159.03.06.

## 159.03.06 Traffic Stripes, Latex ,Traffic Markings Lines, Latex and Traffic Markings Symbols, Latex

Apply latex traffic stripes and latex markings when they are required for 14 days or less. Apply epoxy traffic stripes and thermoplastic markings as specified in 610.03.01 and 610.03.02 when they are required for more than 14 days. Apply latex traffic stripes and latex markings when the ambient and surface temperatures are at least 45 °F and rising and the surface temperature is no more than 140 °F. Apply the latex paint in a wet film thickness of  $6 \pm 1$  mil. Apply glass beads to the wet paint in a uniform pattern and at the rate of 12 pounds per gallon of paint.

# 159.03.07 HMA Patch

The RE may direct the Contractor to sawcut existing HMA pavement to the depth of the area to be repaired. Sawcut lines parallel and perpendicular to the roadway baseline and 3 inches away, at the closest point, from the damaged area to be repaired. Remove loose material within the boundary of the repair, and clean the area. Reuse removed material as specified in 202.03.03.C.1. Ensure that the remaining pavement is not damaged.

Apply polymerized joint adhesive or tack coat to the vertical surfaces of the openings. Ensure that the temperature of the HMA when placed is at least 250 °F. Place HMA in 4 inch maximum lifts, and compact with a vibratory drum. For small areas, the RE may approve hand compacting methods. Compact until the top of the patch is flush with the adjacent pavement surface.

## 159.03.08 Traffic Direction

- **A.** Flagger. Provide a flagger that has received formal training in flagging operations and the proper use of the STOP/SLOW paddle. The flagger must meet MUTCD qualifications and, when requested, demonstrate competency to the RE. Immediately replace flaggers who fail to demonstrate competency with a competent flagger. Ensure that flaggers wear a 360 degree high-visibility retroreflective orange safety garment meeting ANSI/ISEA Class 3, Level 2 standards. Ensure that the flagger is equipped with a STOP/SLOW paddle and follows MUTCD flagging procedures.
- **B.** Police. Unless designated as local police at the preconstruction conference, police will be on-duty New Jersey State Police. Police are either provided by the RE as employees of the State, or by the local government as a vendor to the State. The use of police services by the RE does not relinquish or diminish the Contractor's responsibilities for work zone safety.

Submit a request for police services to the RE 72 hours before beginning construction operations. Activities requiring police services include:

- 1. Traffic direction through signalized intersections, where the integrity of the existing traffic signal system is impacted or where an override of the signal is required.
- 2. Temporary closure of all lanes on state highways and interstates.

This enhancement includes:

- 1. Temporary closure of one or more lanes on interstates.
- 2. Temporary closure of one or more lanes on state highways with a posted speed of 50 miles per hour or higher.

Emergency situations may prevent police from arriving at the scheduled date or time. The RE will not permit construction operations that, by law, require police services if police are unavailable. The Department will not accept claims for interruptions or delays resulting from any failure of police to arrive as requested.

The RE must notify State and local police of cancellations 24 hours in advance. At least 24 hours before the scheduled start of work, notify the RE of any work cancellation for which police services were requested.

# 159.03.09 Emergency Towing Service

At least 30 days before the start of construction operations, submit to the RE for approval an emergency towing service plan for removing abandoned vehicles and vehicles that are disabled but not as the result of an accident. The police will arrange for towing services to remove vehicles that are disabled due to traffic accidents. Indicate in the plan the proposed manner of providing towing service, including the type, quantity, and location of towing equipment to be used.

Provide towing service to remove disabled and abandoned vehicles from the construction zone to the nearest location where the vehicle can be legally parked. Ensure that the towing service responds immediately upon notice of a disabled vehicle by the RE or Contractor personnel.

# **159.04 MEASUREMENT AND PAYMENT**

The Department will measure and make payment for Items as follows:

<i>Item</i>	Pay Unit
BREAKAWAY BARRICADE	UNIT
DRUM	UNIT
TRAFFIC CONE	UNIT
CONSTRUCTION SIGNS	SQUARE FOOT
CONSTRUCTION IDENTIFICATION SIGN,' X'	UNIT
CONSTRUCTION BARRIER CURB	LINEAR FOOT
FLASHING ARROW BOARD,' X'	UNIT
PORTABLE VARIABLE MESSAGE SIGN	UNIT
TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM, MODULES	UNIT

TEMPORARY CRASH CUSHION, COMPRESSIVE BARRIER, TYPE, WIDTH	UNIT
TEMPORARY CRASH CUSHION, LOW MAINTENANCE COMPRESSIVE BARRIER,	
TYPE, WIDTH	UNIT
TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	UNIT
TRAFFIC STRIPES, LATEX"	LINEAR FOOT
TRAFFIC MARKINGS LINES, LATEX"	LINEAR FOOT
TRAFFIC MARKINGS SYMBOLS, LATEX	SQUARE FOOT
CHANNELIZING GUIDE POST	UNIT
PORTABLE VARIABLE MESSAGE SIGN WITH REMOTE COMMUNICATION	UNIT
PORTABLE TRAILER MOUNTED CCTV CAMERA ASSEMBLY	UNIT
REMOVABLE BLACK LINE MASKING TAPE,"	LINEAR FOOT
TEMPORARY PAVEMENT MARKERS	UNIT
TEMPORARY PAVEMENT MARKING TAPE,"	LINEAR FOOT
HMA PATCH	TON
TRAFFIC DIRECTOR, FLAGGER	HOUR
EMERGENCY TOWING SERVICE	UNIT

For traffic control devices measured by the linear foot or unit basis that are specified in 159.03.02, the Department will make payment for the maximum quantity in service at one time as required by the Contract. For CONSTRUCTION SIGNS, the Department will make payment for the maximum quantity of specific sign types in service at one time as required by the Contract. If a particular sign type has more than one unique text, each sign with a unique text will be considered to be a specific sign type. The Department will make payment for 50 percent of the Contract bid price for traffic control devices specified in 159.03.02 that are measured on a linear foot, square foot or unit basis upon approved placement. The Department will prorate the balance of payment over the duration of the Contract.

The Department will measure TRAFFIC STRIPES, LATEX and TRAFFIC MARKINGS LINES, LATEX by the linear foot for each specified width of stripe. The Department will not measure gaps in striping.

The Department will measure TEMPORARY PAVEMENT MARKING TAPE by the linear foot of 4 inch wide strips.

The Department will measure REMOVABLE BLACK LINE MASKING TAPE by the linear foot for each 4 inch width of existing stripe that is to be covered. The Department will not measure replacement temporary pavement stripes and markers for payment.

Except for unforeseen weather conditions, if the Contractor cancels work without providing at least 24 hour notice, the Department will deduct the cost of police services (4 hours for each police officer scheduled) from the Contract.

If after being notified by the Department that the PORTABLE VARIABLE MESSAGE SIGN WITH REMOTE COMMUNICATION or PORTABLE TRAILER MOUNTED CCTV CAMERA ASSEMBLY has failed to function and the equipment has not been restored to good working order within 48 hours, the Department will make payment reductions as follows:

For each occasion the equipment was not restored within 48 hours the Department will assess a liquidated damage of \$250.00 for every 48 hours period the equipment is not functioning.

The Department will not include payment for epoxy traffic stripes and thermoplastic traffic markings and symbols under TRAFFIC STRIPES LATEX, TRAFFIC MARKINGS LINES, LATEX, and TRAFFIC MARKINGS SYMBOLS, LATEX. The Department will make payment for epoxy traffic stripes and thermoplastic traffic markings under TRAFFIC STRIPES, TRAFFIC MARKINGS LINES, and TRAFFIC MARKINGS SYMBOLS as specified in 610.04.

# THE FOLLOWING IS ADDED AT THE END OF THE SECTION:

The County has included an allotted cost in the bid proposal for the presence of uniform police for this project. The Contractor shall provide invoice receipt from the various municipalities for work performed by uniform police, as well as the municipality requirements for police presence on public roadways for construction activity in justifying payment and reimbursement.

The Engineer shall direct the Contractor as to the number of traffic directors required per roadway. Under the circumstances where Police Traffic Directors may be utilized, the Contractor shall notify the respective Police Department at least four (4) business days (96 hours) in advance of requiring the traffic directors. Should there be a difference between the Engineer's requirement, and that of the Police Department, the Contractor shall immediately notify the Engineer and request clarification.

If the Contractor schedules more traffic directors than that which is directed by the Engineer, the additional directors will not be reimbursed, and such payments will be the direct responsibility of the Contractor. In addition, if the Contractor cancels any work without prior notice to the affected Police Department and the Engineer, then any costs incurred from the respective Police Departments shall become the Contractor's responsibility. Police traffic director manpower not approved by the Engineer will not be reimbursed and shall become the Contractor's sole responsibility. The Contractor shall be responsible for establishing any and all escrow accounts that may be required by the various municipal Police Departments. The Contractor shall confirm specific details of hiring Traffic Directors with each respective Police Department.

Once the traffic directors are on the job, the County will direct the Contractor as to the dismissal time for such Traffic Directors. There will be no additional cost payment for Traffic Control Coordinator all costs for this work shall be paid in the various bid pay items.

The County has included the following Maintenance and Protection Pay Items within the contract, Breakaway Barricades, Drums, Traffic Cones, and Construction Signs. The unit price for these items shall include the Contractors cost to carry out any and all Maintenance and Protection of Traffic Measures that will be required to prepare and implement Traffic Detours, Road Closures and any and all other required measures to carry out the roadway improvements. The Contractor shall be responsible for setting up and maintaining the necessary Traffic Control Measures on a daily basis, as well as the removal of the traffic control measures at the completion of the roadway improvements. Traffic Control measures shall be stored outside of the vehicular and pedestrian travel way and shall be removed within 72 hours of completion of the roadway improvements. The Contractor shall also be responsible for preparation of traffic detours to be submitted for review and approval by the owner in advance of all roadway closures. No separate payment will be made for these services, and the cost shall be included in the unit price cost for the Maintenance and Protection of Traffic Pay Items.

# **SECTION 160 - PRICE ADJUSTMENTS**

THE ENTIRE SECTION 160 IS CHANGED TO:

# 160.01 DESCRIPTION

This Section describes the requirements for price adjustments for fuel and asphalt usage.

### 160.02 MATERIALS

(Intentionally Blank)

# 160.03 PROCEDURE

## 160.03.01 Fuel Price Adjustment

The Department will make price adjustments for fuel usage for Items listed in Table 160.03.01-1. Each month may be divided into two periods. Period one includes the first day of the month through the fourteenth day of the month. Period two includes the fifteenth day of the month through the last day of the month. Work starting within period one and continuing past midnight of the fourteenth day into the fifteenth day of the month will be included in period one for any price adjustments. Work continuing past midnight of the last day of the month into the first day of the next month will be included in period two.

The Department will calculate fuel price adjustments based on the pay quantities of listed Items using the fuel usage factors listed in Table 160.03.01-1.

Price adjustments may result in an increased payment to the Contractor for increases in the price index and may result in a reduction in payment for decreases in the price index.

If the as-built quantity of an Item listed in Table 160.03.01-1 differs from the sum of the quantities in the Estimates and the as-built quantity cannot be readily distributed among the time periods that the Item listed in Table 160.03.01-1 was constructed, then the Department will determine fuel price adjustment by distributing the difference in the same proportion as the Item's Estimate quantity is to the total of the Item's time period estimates.

Table 160.03.01-1 Fuel Price Adjustments	
Items	Fuel Usage Factor
EXCAVATION, UNCLASSIFIED	0.50 Gallons per Cubic Yard
EXCAVATION, REGULATED MATERIAL	0.50 Gallons per Cubic Yard
EXCAVATION, ACID PRODUCING SOIL	0.50 Gallons per Cubic Yard
REMOVAL OF PAVEMENT	0.25 Gallons per Square Yard
MICRO-MILLING	0.25 Gallons per Square Yard
HMA MILLING, 3" OR LESS	0.25 Gallons per Square Yard
HMA MILLING, MORE THAN 3" TO 6"	0.25 Gallons per Square Yard
CONCRETE MILLING	0.25 Gallons per Square Yard
HMA PROFILE MILLING	0.25 Gallons per Square Yard
BREAKING PAVEMENT	0.25 Gallons per Square Yard
RUBBLIZATION	0.25 Gallons per Square Yard
SUBBASE	1.00 Gallon per Cubic Yard
I SOIL AGGREGATE	1.00 Gallon per Cubic Yard
SOIL AGGREGATE BASE COURSE, " THICK	1.00 Gallon per Cubic Yard
SOIL AGGREGATE BASE COURSE, VARIABLE THICKNESS	1.00 Gallon per Cubic Yard
DENSE-GRADED AGGREGATE BASE COURSE, " THICK	1.00 Gallon per Cubic Yard
DENSE-GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS	1.00 Gallon per Cubic Yard
CONCRETE BASE COURSE, " THICK	0.25 Gallons per Square Yard
CONCRETE BASE COURSE, REINFORCED " THICK	0.25 Gallons per Square Yard
ASPHALT-STABILIZED DRAINAGE COURSE	2.50 Gallons per Ton
OPEN-GRADED FRICTION COURSE	2.50 Gallons per Ton
HOT MIX ASPHALT SURFACE COURSE	2.50 Gallons per Ton
HOT MIX ASPHALT INTERMEDIATE COURSE	2.50 Gallons per Ton
HOT MIX ASPHALT BASE COURSE	2.50 Gallons per Ton
MODIFIED OPEN-GRADED FRICTION COURSE	2.50 Gallons per Ton
ULTRA-THIN FRICTION COURSE	2.50 Gallons per Ton
STONE MATRIX ASPHALT SURFACE COURSE	2.50 Gallons per Ton
HIGH PERFORMANCE THIN OVERLAY	2.50 Gallons per Ton
BINDER RICH INTERMEDIATE COURSE	2.50 Gallons per Ton
BRIDGE DECK WATERPROOFING SURFACE COURSE	2.50 Gallons per Ton
NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton
COLOR-COATED NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton
CONCRETE SURFACE COURSE, " THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 4" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 5" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 6" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 8" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, REINFORCED, 6" THICK	0.25 Gallons per Square Yard
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Table 160.03.01-1 Fuel Price Adjustments	
Items	Fuel Usage Factor
CONCRETE SIDEWALK, REINFORCED, 8" THICK	0.25 Gallons per Square Yard
DIAMOND GRINDING OF CONCRETE SURFACE COURSE	0.25 Gallons per Square Yard
DIAMOND GRINDING EXISTING CONCRETE PAVEMENT	0.25 Gallons per Square Yard
SLURRY SEAL AGGREGATE, TYPE II	2.5 Gallons pero Ton
SLURRY SEAL EMULSION	0.10 Gallons per Gallon
CONCRETE BRIDGE APPROACH	0.50 Gallons per Cubic Yard
CONCRETE CULVERT	1.00 Gallon per Cubic Yard
CONCRETE FOOTING	1.00 Gallon per Cubic Yard
CONCRETE WING WALL	1.00 Gallon per Cubic Yard
CONCRETE PIER COLUMN PROTECTION, HPC	1.00 Gallon per Cubic Yard
CONCRETE PIER COLUMNS AND CAP	1.00 Gallon per Cubic Yard
CONCRETE ABUTMENT WALL	1.00 Gallon per Cubic Yard
CONCRETE PIER SHAFT	1.00 Gallon per Cubic Yard
CONCRETE PEDESTRIAN BRIDGE	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE DECK	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE DECK, HPC	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE SIDEWALK	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE SIDEWALK HPC	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE PARAPET	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE PARAPET HPC	1.00 Gallon per Cubic Yard
15" BY 32" CONCRETE BARRIER CURB, BRIDGE	0.12 Gallon per Linear Foot
24" BY 32" CONCRETE BARRIER CURB, BRIDGE	0.17 Gallon per Linear Foot
21" BY 34" CONCRETE BARRIER CURB, BRIDGE	0.17 Gallon per Linear Foot
24" BY 42" CONCRETE BARRIER CURB, BRIDGE	0.21 Gallon per Linear Foo
CAST-IN-PLACE CONCRETE PILES, DRIVEN " DIAMETER	1.00 Gallon per Cubic Yard
RETAINING WALL, LOCATION NO	0.10 Gallon per Square Foot
CONCRETE MEDIAN BARRIER, HPC	0.16 Gallon per Linear Foot
15" BY 41" CONCRETE BARRIER CURB	0.28 Gallon per Linear Foot
24" BY 32" CONCRETE BARRIER CURB	0.17 Gallon per Linear Foot
15" BY 54" CONCRETE BARRIER CURB	0.15 Gallon per Linear Foot
38" BY 79" CONCRETE BARRIER CURB	0.40 Gallon per Linear Foot
24" BY 39" CONCRETE BARRIER CURB	0.18 Gallon per Linear Foot
18 5/8" BY 65" CONCRETE BARRIER CURB	0.20 Gallon per Linear Foot
32" BY 41" CONCRETE BARRIER CURB 24" BY 41" CONCRETE BARRIER CURB	0.24 Gallon per Linear Foot
24" BY 45" CONCRETE BARRIER CURB	0.19 Gallon per Linear Foot
	0.19 Gallon per Linear Foot
15" BY 35" CONCRETE BARRIER CURB, DOWELLED	0.09 Gallon per Linear Foot
15" BY VARIABLE HEIGHT CONCRETE BARRIER CURB	0.28 Gallon per Linear Foot
24" BY VARIABLE HEIGHT CONCRETE BARRIER CURB	0.15 Gallon per Linear Foot
15" BY VARIABLE HEIGHT CONCRETE BARRIER CURB, DOWELLED	0.24 Gallon per Linear Foot
24" BY VARIABLE HEIGHT CONCRETE BARRIER CURB, DOWELLED	0.15 Gallon per Linear Foot
19" BY 32" CONCRET BARRIER CURB, DOWELLED	0.10 Gallon per Linear Foot
24" BY 32" CONCRETE BARRIER CURB, DOWELLED	0.13 Gallon per Linear Foot
24 1/2" BY 53" CONCRETE BARRIER CURB, DOWELLED	0.18 Gallon per Linear Foot
4 1/2" BY VARIABLE HEIGHT CONCRETE BARRIER CURB, DOWELLED	0.15 Gallon per Linear Foot

Table 160.03.01-1 Fuel Price Adjustments	
Items	Fuel Usage Factor
24" BY 35" CONCRETE BARRIER CURB, DOWELLED	0.13 Gallon per Linear Foot
GROUND MOUNTED BARRIER CURB	0.15 Gallon per Linear Foot
15" BY 51" F SHAPE CONCRETE BARRIER CURB	0.34 Gallon per Linear Foot
24 1/2" BY 51" F SHAPE CONCRETE BARRIER CURB	0.23 Gallon per Linear Foot
24 1/2" BY" F SHAPE CONCRETE BARRIER CURB, DOWELLED	0.23 Gallon per Linear Foot
15" BY VARIABLE HEIGHT F SHAPE CONCRETE BARRIER CURB, DOWELLED	0.34 Gallon per Linear Foot
15" BY" F SHAPE CONCRETE BARRIER CURB, DOWELLED	0.34 Gallon per Linear Foot
VARIABLE WIDTH BY VARIABLE HEIGHT F SHAPE CONCRETE BARRIER CURB	0.34 Gallon per Linear Foot
9" BY 16" CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY 18" CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY 20" CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY 22" CONCRETE VERTICAL CURB	0.05 Gallon per Linear Foot
9" BY 14" CONCRETE VERTICAL CURB	0.03 Gallon per Linear Foot
9" BY 4" CONCRETE VERTICAL CURB, DOWELLED	0.01 Gallon per Linear Foot
9" BY 6" CONCRETE VERTICAL CURB, DOWELLED	0.01 Gallon per Linear Foot
9" BY 8" CONCRETE VERTICAL CURB, DOWELLED	0.02 Gallon per Linear Foot
9" BY 10" CONCRETE VERTICAL CURB, DOWELLED	0.02 Gallon per Linear Foot
12" BY 13" CONCRETE SLOPING CURB	0.04 Gallon per Linear Foot
12" BY 3" CONCRETE SLOPING CURB, DOWELLED	0.01 Gallon per Linear Foot
" BY" CONCRETE SLOPING CURB, DOWELLED	0.01 Gallon per Linear Foot
9" BY VARIABLE HEIGHT CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY VARIABLE HEIGHT CONCRETE VERTICAL CURB, DOWELLED	0.02 Gallon per Linear Foot

If an item listed in Table 160.03.01-1 has a payment unit which differs from that listed in Table 160.03.01-1, the Department will apply an appropriate conversion factor to determine the number of gallons of fuel used.

The Department will calculate fuel price adjustment using the following formula:

 $F = (MF - BF) \times G$ 

Where:

F = Fuel Price Adjustment

MF = Fuel Price Index for work performed in the time period immediately before the estimate cutoff

BF = Basic Fuel Price Index

G = Gallons of Fuel for Price Adjustment

The Department will post the Fuel Price Index every month on the Department's website: <a href="https://www.state.nj.us/transportation/business/aashtoware/PriceIndex.shtm">https://www.state.nj.us/transportation/business/aashtoware/PriceIndex.shtm</a>.

The Basic Fuel Price Index is the Index which is listed for the month prior to the receipt of bids. If the month prior to the receipt of bids has two Indexes, the Index in effect for the first day of that month will govern for the Basic Fuel Price Index. If the Fuel Price Index increases by 50 percent or more over the Basic Fuel Price Index, do not perform any work involving Items listed in Table 160.03.01-1 without written approval from the RE.

# 160.03.02 Asphalt Price Adjustment

The Department will make price adjustments for asphalt binder usage. The Department will calculate asphalt price adjustments based on the quantities of Items containing asphalt binder constructed.

Each month may be divided into two periods. Period one includes the first day of the month through the fourteenth day of the month. Period two includes the fifteenth day of the month through the last day of the

month. Work starting on the fourteenth day of the month and continuing past midnight into the fifteenth day of the month will be included in period one for any price adjustments. Work continuing through midnight of the last day of the month into the first day of the next month will be included in period two.

The Asphalt Price Adjustment will be separated between asphalt binder grades PG 64S-22 and PG 64E-22. The price used for both the Basic and Monthly Price Indexes will be determined based on the performance grade of asphalt binder in the approved mix design for the asphalt mixture.

Price adjustments may result in an increased payment to the Contractor for increases in the price index and may result in a reduction in payment for decreases in the price index.

The Department will calculate the asphalt price adjustment by the following formula:

 $A = (MA - BA) \times T$ 

Where:

A = Asphalt Price Adjustment

MA = Asphalt Price Index for work performed in the time period immediately before the estimate cutoff

BA = Basic Asphalt Price Index

T = Tons of New Asphalt Binder<sup>1</sup>

1. The Department will determine the weight of asphalt binder for price adjustment by multiplying the percentage of new asphalt binder in the approved job mix formula by the weight of the item containing asphalt binder. If a Hot Mix Asphalt Item has a payment unit other than ton, the Department will apply an appropriate conversion factor to determine the number of tons of asphalt binder used.

For Tack Coat, Prime Coat, MICRO SURFACING EMULSION, SLURRY SEAL EMULSION, and FOG SEAL SURFACE TREATMENT, the Department will calculate the weight of asphalt as follows:

 $T = G \times C \times 0.00428$ 

C = Petroleum content of the product

Use 100% for Tack Coat 64-22 and Tack Coat 64E-22

Use 60% for Polymer Modified Tack Coat, and all other emulsified asphalts

G = Gallons furnished

The constant 0.00428 is derived from the conversion factor of tons per gallon using 8.345 lbs/gallon for water and a factor of 1.025 for the specific gravity of asphalt binder.

The Department will not calculate an asphalt price adjustment for FOG SEAL STRIP.

The monthly asphalt price index, as determined by the Department, will be the average of quotations from suppliers serving the area in which the Project is located, and will be determined by the Department. The Department will post the asphalt price index every month on the Department's website: <a href="https://www.state.nj.us/transportation/business/aashtoware/PriceIndex.shtm">https://www.state.nj.us/transportation/business/aashtoware/PriceIndex.shtm</a>.

The Basic Asphalt Price Index will be the Index which is listed for the month prior to the receipt of bids. If the month prior to the receipt of bids has two Indexes, the Index in effect for the first day of the month will govern for the Basic Asphalt Price Index.

The Monthly Asphalt Price Index will be that for the month that the work is constructed in. If work is constructed over the course of two or more months for a particular pay estimate, then multiple Monthly Indexes will be used corresponding to the date that the work was performed.

If the Asphalt Price Index increases 50 percent or more over the basic asphalt price index, do not perform work on Items containing asphalt binder without written approval from the RE.

### **SECTION 161 – FINAL CLEANUP**

### 161.04 MEASUREMENT AND PAYMENT

## THE FOLLOWING IS ADDED:

In addition, the requirement indicated within this section, payment for the Item FINAL CLEANUP shall also include the following:

- A. Under this item the Contractor shall restore the work site and access area to its original condition including, but not limited to, installation of both temporary and permanent striping, remove and reset street, road and parking lot signs, remove and reset slate pavers, remove and dispose of all topsoil, seeding, and landscaping, sidewalks, roadways, curbs, relocation of mailbox, cleaning and removal of stockpiles and equipment, and all else not specifically covered elsewhere in these specifications. All concrete aprons shall be restored.
- B. This item includes restoration of adjacent parking areas, residential and commercial driveways, associated striping, and landscaping disturbed during construction. Driveways shall be restored with material matching existing material in a uniform seamless manner. Disturbed landscaped areas shall restored in-kind. All existing painted curbs which are damaged during construction shall be repainted in-kind.
- C. In addition to the above, this Item includes the furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto as required for the final cleanup and all incidental work necessary.

## **DIVISION 200 - EARTHWORK**

### **SECTION 201 – CLEARING SITE**

# 201.03.01 Clearing Site

PART A IS CHANGED TO:

**A. Preparation.** Construct SESC measures, as specified in 158.03.02, before clearing site.

### THE FIRST PARAGRAPH IN PART B IS CHANGED TO:

**B. Clearing and Grubbing.** Before beginning excavation or embankment construction, clear the site within the limits of construction. Clear the ground surface of vegetation (trees of various caliper, brush, weeds, roots, matted leaves), small structures not shown on the Plans for demolition, debris, and other objectionable material where its existing position conflicts with the limits of construction. In cut sections, grub out tree stumps within the limits of the total cut area. In fill sections, the Contractor may leave tree stumps extending less than 1 foot above the original ground surface in those areas where the proposed subgrade, or proposed finished grade in non-pavement sections, is greater than 3 1/2 feet above the original ground surface. Grub out tree stumps that lie within 5 feet horizontally or vertically from any proposed structure, pipe, or duct.

#### 201.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The payment for the Item CLEARING SITE shall include the following, as required:

- A. Under this item the Contractor shall remove and dispose of the existing asphalt pavement, existing curb ramps, sidewalks, dirt, stones, walls, curbs, mailboxes, and all debris as needed within project limits; the removal of which is required for carrying out the work of this project, shall be removed and disposed of off-site.
- B. The Contractor shall remove and dispose of any reinforced concrete pavement, bituminous pavement, castings and curb pieces as necessary for the project. He shall remove and reset street any road signs, remove and reset any shrubs and fences, remove and reset to grade manhole and catch basin frames, gas and water valves, and complete all other removals and relocations required for the work and not specifically covered elsewhere for payment.
- C. The Contractors are advised to make a site visit, check the existing site conditions, and determine the detail scope of work for the site clearing before the bidding of this project.
- D. Removal of debris, disposal of materials, and all else necessary therefore, incidental thereto and included herein.
- E. In addition to the above, this Item includes the furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto as required for the site clearing and all incidental work necessary.

# **SECTION 202 - EXCAVATION**

# 202.03.01 Stripping

THE SECOND PARAGRAPH IS CHANGED TO:

Strip vegetation and underlying soil to a depth of 4 to 6 inches below the existing ground surface. Confirm the thickness of stripping with the RE based on field conditions. Temporarily store in stockpiles, as specified in 202.03.03.B, stripped material including excess that is determined suitable for the future use of the Department. The Department will sample and analyze stripped material in stockpiles to determine suitability for use as topsoil. Reuse or dispose of unsuitable stripped material as specified in 202.03.03.C.

# **DIVISION 400 - PAVEMENTS**

# SECTION 401 - HOT MIX ASPHALT (HMA COURSES)

### 401.02.01 Materials

THE FIRST ITEM IS CHANGED TO:

Tack Coat 64-22, PG 64S-22......902.01.01

## 401.03.01 Milling

# A. HMA Milling.

Stage	Max. Time Interval Allowed

## 401.03.03 HMA Pavement Repair

THE TITLE AND ENTIRE SUBSECTION IS CHANGED TO:

## 401.03.03 HMA Repair

**A. HMA Pavement Repair.** Arrange a project site meeting with the RE to establish the limits of HMA pavement repair. Additional repairs, not delineated on the Plans or by the RE during the project site meeting, may be required if the need is established by the RE.

If potholes are discovered, notify the RE immediately. The RE may immediately direct repairs of small areas. The RE may require further evaluation of a large area to determine the need for additional milling and paving.

Perform HMA repairs as a separate operation before milling, paving, and other surface treatments. The Contractor may request approval of the RE to perform the repair work as one operation with the paving or surface treatment.

HMA repairs may be performed on full depth HMA pavement or on composite pavement (HMA over concrete pavement). For full depth HMA pavement, sawcut existing HMA pavement to a depth of 8 inches. For composite pavement, sawcut existing HMA to a depth of 8 inches or up to the top of concrete, whichever is less. Sawcut lines parallel and perpendicular to the roadway baseline and 3 inches away, at the closest point, from the damaged area to be repaired.

Remove damaged and loose material within the boundary of the sawcuts to form rectangular openings with vertical sides to a depth of 8 inches for HMA pavement, or to the top of concrete for composite pavement. A milling machine may be used to remove damaged pavement to form the repair areas if approved by the RE.

After the existing damaged HMA and loose material has been removed, the RE will examine underlying material to determine its condition.

If the base of the repair area is unbound material, then shape and compact the unbound material to produce a firm and level base.

If water exists in the area, remove the underlying material to the depth as directed by the RE. Place geotextile, then place and compact coarse aggregate to required grade to provide for a minimum 8 inch thick HMA pavement repair. Compact coarse aggregate as specified in 203.03.02.B.3.

If the base of the repair is HMA or concrete pavement, then ensure that the remaining pavement is cleaned and dry prior to applying tack coat.

Apply tack coat at an application rate of 0.15 gallons per square yard to the vertical surfaces and base of the opening. Spread and grade HMA surface course mix in the opening as specified for the roadway surface or a HMA surface course mix approved by the RE. Ensure that the temperature of the HMA when placed is at least 250 °F, and compact as specified in 401.03.07.F. Compact areas not accessible to rollers with a flat face compactor. Compact until the top of the patch is flush with, or 1/8 inch higher than, the adjacent pavement surface.

Reuse removed material as specified in 202.03.03.C.1.

**B. HMA Longitudinal Joint Repair.** Arrange a project site meeting with the RE to establish the limits of HMA longitudinal repair areas. Additional repairs, not delineated on the Plans or by the RE during the project site meeting, may be required if the need is established by the RE.

Mill 2 feet wide, unless directed otherwise by the RE, centered over the HMA longitudinal joint, rumble strip, longitudinal distress areas or any combination of the three, as shown on the Plans and as directed by the RE. Mill to a minimum 2 inches in depth, or as required to remove the damaged pavement. For distress areas wider than 4 feet, the RE may direct the use of HMA pavement repair as specified in 401.03.03.A.

Clean the milled area as specified in 401.03.01.A. Obtain RE approval of the repair area before proceeding with the repair.

Apply polymerized joint adhesive to the vertical surfaces of the repair area as specified in 401.03.04. Apply tack coat as specified in 401.03.05 at an application rate of 0.15 gallons per square yard to the bottom surface of the repair area. Obtain RE approval of the repair area before proceeding with the repair. Spread and grade Hot Mix Asphalt 9.5M64 Surface Course in the repair area as specified in 401.03.07.E. Ensure that the temperature of the HMA when placed and compacted is at least 250  $^{\circ}$ F. Compact as specified in 401.03.07.F, ensuring that the top of the compacted HMA is flush with, or not greater than 1/8 inch higher than, the adjacent pavement surface.

Reuse removed material as specified in 202.03.03.C.1.

# 401.03.07 HMA Courses

## A. Paving Plan.

PART (4) IS CHANGED TO:

4. Lighting plan for night operations as specified in 108.06.

## C. Test Strip

REPLACE THE FIRST PARAGRAPH OF THIS SECTION WITH THE FOLLOWING:

**Test Strip.** Construct a test strip for each HMA mix for contracts with more than a total of 5,500 tons of HMA. For HMA HIGH RAP, construct the test strip at least 14 days prior to production. Test strips are not necessary for temporary pavement. Ensure that the tack coat or prime coat has been placed as specified in 401.03.05 and 401.03.06, before placing HMA. Transport and deliver, spread and grade, and compact as specified in 401.03.07.D, 401.03.07.E, and 401.03.07.F, respectively, and according to the approved paving plan. Construct a test strip for the first 700 to 1,200 square yards placed for each job mix formula. If the paving lot area is less than 700 square yards, the District Local Aid Office may waive the coring requirements. While constructing the test strip, record the following information and submit to the RE:

# D. Transportation and Delivery of HMA.

THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Do not allow trucks to leave the plant within 1 hour of sunset unless lighting for night operations is provided as specified in 108.06.

- E. Spreading and Grading.
- G. Opening to Traffic.

## THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

Ensure that RPMs are installed and rumble strips are constructed within 14 days of opening each day's surface paving to traffic.

## H. Air Void Requirements.

FOR LOCAL AID PROJECTS, THIS SUBSECTION IS REPLACED BY THE FOLLOWING.

Pavement lots are defined as approximately 15,000 square yards of pavement in Surface area. If pavement lot area is

less than 5000 square yards, the District Local Aid Office may waive the air voids requirements.

The RE will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (www.amrl.net). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.

The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt

Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.

The Laboratory will determine air voids from 5 (Five) 6 inch diameter cores taken from each lot in random locations within the traveled way and at least one core in each travel lane. The HMA Core Sampling Plan form provided on the Local Aid Website must be utilized by the Laboratory to determine the random locations of the cores. The Laboratory may rerun the random location functions on the HMA Core Sampling Plan form to resolve any conflicts generated by the HMA Core Sampling Plan form and physical limitations of the HMA lot, such as utility conflicts, or the specifications defined herein. The coring locations must be designated by a station and offset, and offsets are taken from the left edge of the payement in the direction of travel within the lane lines. The Laboratory must disclose the contents of the HMA Core Sampling Plan Contractor schedule construction. with the to assist in the of

The Laboratory will determine air voids of cores from the values for the maximum specific gravity of the mix and the bulk specific gravity of the core. The Laboratory will determine the maximum specific gravity of the mix according to NJDOT B-3 and AASHTO T 209, except that minimum sample size may be waived in order to use a 6-inch diameter core sample. The Laboratory will determine the bulk specific gravity of the compacted mixture by testing each core according to AASHTO T 166.

The Laboratory will calculate the percent defective (PD) as the percentage of the lot outside the acceptable range of 2 percent air voids to 8 percent air voids. The acceptable quality limit is 15 percent defective. For lots in which PD > 15, the Department will assess a negative pay adjustment.

The Laboratory will use and submit to the RE <u>form DS8S-PD</u> provided from The Local Aid District Office and verify manually the PD calculation.

The Laboratory will calculate pay adjustments based on the following:

# 1. Sample Mean $(\overline{X})$ and Standard Deviation (S) of the N Test Results (X1, X2,..., XN).

$$\overline{X} = \frac{(X_1 + X_2 + \dots + X_N)}{N}$$

$$S = \sqrt{\frac{(X_1 - \overline{X})^2 + (X_2 - \overline{X})^2 + \dots + (X_N - \overline{X})^2}{N - 1}}$$

### 2. Quality Index (Q).

$$Q_{L} = \frac{(\overline{X} - 2.0)}{S}$$

$$Q_U = \frac{(8.0 - \overline{X})}{S}$$

- 3. **Percent Defective (PD).** Using NJDOT ST for the appropriate sample size, the Laboratory will determine PD<sub>L</sub> and PD<sub>U</sub> associated with Q<sub>L</sub> and Q<sub>U</sub>, respectively. PD = PD<sub>L</sub> + PD<sub>U</sub>
- **4. Reduction Per Lot.** Calculate the reduction per lot as specified in Table 401.03.07-3:

Table 401.03.07-3	
Reduction in Payment for Nonconformance to Air Void Requirements	

Percent Defective (PD) Per Lot	Reduction Per Lot (%)
0 < PD ≤ 15	0
15 < PD ≤ 30	0.5
30 < PD ≤ 35	2
35 < PD ≤ 40	10
40 < PD ≤ 45	15
45 < PD ≤ 50	20
50 < PD ≤ 60	30
60 < PD ≤ 75	45
PD > 75	Remove & Replace

- **5. Outlier Detection.** If PD < 10, the Laboratory will not screen for outliers. If PD ≥ 10, the Laboratory will screen acceptance cores for outliers using a statistically valid procedure. The following procedure applies only for a sample size of 5 or 10.
  - 1. The Laboratory will arrange the core results in ascending order, in which X1 represents the smallest value and XN represents the largest value.
  - 2. If XN is suspected of being an outlier, the Laboratory will calculate:

$$R = \frac{X_{N} - X_{(N-1)}}{X_{N} - X_{1}}$$

3. If X1 is suspected of being an outlier, the Laboratory will calculate:

$$R = \frac{X_2 - X_1}{X_N - X_1}$$

For N = 5 if R > 0.642, the value is judged to be statistically significant and the core is excluded.
 For N = 10 if R > 0.412, the value is judged to be statistically significant and the core is

excluded.

If an outlier is detected for N = 5 and no retest is warranted, the Contractor may replace that core by taking an additional core at the same offset and within 5 feet of the original station. If an outlier is detected and a retest is justified, take a replacement core for the outlier at the same time as the 5 additional retest cores are taken. If the outlier replacement core is not taken within 15 days, the Laboratory will use the initial core results to determine reduction per lot.

If an outlier is detected for N = 10, the Contractor may replace that core by taking an additional core at the same offset and within 5 feet of the original station. If the outlier replacement core is not taken within 15 days, the Laboratory will use the initial core results to determine the reduction per lot.

- 6. Retest. If the initial series of 5 cores produces a percent defective value of PD □□30 for mainline or ramp lots, or PD □□50 for other pavement lots, the Contractor may elect to take an additional set of 5 cores at random locations chosen by the HMA Core Sampling Plan form. Take the additional cores within 15 days of receipt of the initial core results. If the additional cores are not taken within the 15 days, the Laboratory will use the initial core results to determine the PPA. If the additional cores are taken, the Laboratory will recalculate the reduction per lot using the combined results from the 10 cores.
- 7. Removal and Replacement. If the final lot PD ≥ 75 (based on the combined set of 10 cores or 5 cores if the Contractor does not take additional cores), remove and replace the lot and all overlying work. The replacement work is subject to the same requirements as the initial work.

For shoulder lots, the Department will assess the calculated reduction per lot instead of removal and replacement. Fog seal the lot as specified in 422.03.01.

### I. THICKNESS REQUIREMENTS

DELETE THIS SUBSECTION AND REPLACE THIS SUBSECTION'S CONTENTS WITH THE FOLLOWING:

This subsection is deleted. In no instance will a compacted average thickness of less than 1.25 inches be acceptable.

DELETE THIS SUBSECTION AND REPLACE THIS SUBSECTION'S CONTENTS WITH THE FOLLOWING:

## I. Thickness Requirements.

Thickness requirements will apply when full-depth, uniform-thickness HMA pavement construction is shown.

Pavement lots are defined as approximately 15,000 square yards of pavement area. The Engineer will not include areas consisting of different HMA mixtures or thicknesses in the same lot. If thickness lot area is less than 5000 square yards, the District Local Aid Office may waive the thickness requirements.

The RE will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (<a href="https://www.amrl.net">www.amrl.net</a>). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.

The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.

The Laboratory will test for thickness using the full-depth cores taken for surface course air voids, evaluated according to <u>NJDOT B-4</u>. The Laboratory will base acceptance on total thickness and thickness of the surface course.

- 1. Total Thickness. The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the design thickness. The Department will base total thickness acceptance on the percentage of the lot estimated to fall below the specified thickness as follows:
  - Sample Mean  $(\bar{X})$  and Standard Deviation (S) of the N Test Results  $(X_1, X_2, ..., X_N)$ . Calculate as specified in 401.03.07.H.1.

$$\overline{X} = \frac{\left(X_{1} + X_{2} + \dots + X_{N}\right)}{N}$$

$$S = \sqrt{\frac{\left(X_{1} - \overline{X}\right)^{2} + \left(X_{2} - \overline{X}\right)^{2} + \dots + \left(X_{N} - \overline{X}\right)^{2}}{N - 1}}$$

b. Quality Index (Q<sub>I</sub>).

$$Q_L = (X - T_{des})/S$$
, and  $T_{des}$  is the design thickness.

- Percent Defective (PD). Using NJDOT ST for the appropriate sample size, determine the percentage of material (PD) falling below the design thickness associated with QL (lower
- Reduction in Payment. The Department will determine the reduction in payment based on the quantity of the surface course multiplied by the percent reduction in payment from Table 401.03.03-5.

for Total Thickness	
Percent Reduction	
0	
2	
5	
10	
20	
Remove & Replace	

Table 401.03.03.5 Poduction in Payment for Nonconformance to Poquiroments

- e. Retest. If the initial series of 5 cores produces a percent defective value of PD ≥ 30, the Contractor may elect to take an additional set of 5 cores at random locations chosen by the RE. Notify the RE within 15 days of receipt of the initial core results to take the additional cores. If the RE is not notified within the 15 days, the Laboratory will use the initial core results to determine the reduction in payment for nonconformance requirements. If the additional cores are taken, the ME will recalculate the reduction in payment for nonconformance requirements using the combined results from the 10 cores.
- Removal and Replacement. If the lot PD = 45, remove and replace, or mill and overlay, the lot. The replacement work is subject to the same requirements as the initial work.
- Surface Course Thickness. The Laboratory will evaluate the surface course solely to determine whether a remove-and-replace or an overlay condition exists, not for pay adjustment. The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the allowable thickness for the nominal maximum aggregate used in the surface course. The Laboratory will accept payement lots with PD ≤ 25 and will reject payement lots with PD > 25.

The Laboratory will base surface thickness acceptance on the percentage of the lot estimated to fall below the allowable thickness as follows:

- a. Sample Mean  $(\bar{X})$  and Standard Deviation (S) of the N Test Results (X<sub>1</sub>, X<sub>2</sub>,..., X<sub>N</sub>). Calculate using the formula as specified in 401.03.03.1.1.
- b. Quality Index (Q).

 $Q_L = (\overline{X} - T_{all})/S$ , where  $T_{all}$  is the minimum allowable thickness from Table 401.03.03-6.

Table 401.03.03-6 Surface	Table 401.03.03-6 Surface Course Thickness Requirements		
HMA Mix Design Size Designation	Minimum Allowable Compacted Lift Thickness (T <sub>all</sub> )		
4.75 MM	0.75 inch		
9.5 MM	1.00 inch		
12.5 MM	1.25 inches		
19 MM	2.00 inches		

- c. Percent Defective. Using NJDOT ST Statistical Tables (NJDOT Standard Specs for Roads and Bridges 2019-NJDOT TEST METHODS) for the appropriate sample size, determine the percentage of material (PD) falling below the allowable thickness associated with QL (lower limit).
- d. Retest. If the initial series of 5 cores produces a percent defective value of PD > 30, the Contractor may take an additional 5 cores at random locations determined by the Laboratory. Notify the RE within 15 days of receipt of the initial core results to take the additional cores. If the RE is not notified within the 15 days, the Laboratory will use the initial core results to determine the PPA. When the additional cores are taken, the Laboratory will recalculate the reduction in payment for nonconformance requirements using the combined results from the 10 cores to obtain the total PD.
- f. Removal and Replacement. If the surface course fails to meet the acceptance requirement with a PD ≤ 45, the Department will require removal and replacement of the lot. The replacement work is subject to the same requirements as the initial work.

## **REPLACE 401.03.07.J WITH THE FOLLOWING:**

**J. Ride Quality Requirements**. The Department will evaluate the ride quality of the final riding surface of all constructed pavement on the project, for routes designated as National Highway System (NHS) and routes under NJDOT jurisdiction, using the International Roughness Index (IRI) according to ASTM E 1926. All NHS roadways are listed on the Department's website <a href="here">here</a>. The Department may evaluate ride quality of other routes not designated as NHS or under NJDOT jurisdiction. The final riding surface is defined as the last lift of the pavement structure where traffic will be allowed. The pavement will be evaluated using the current average IRI (C) to select the target IRI (T) from Table 401.03.07-8. The current average IRI (C) is defined as the preconstruction ride quality measured not more than two years from the start of the project pavement construction.

The RE will designate an independent testing agency to perform the ride quality testing and analysis. The testing agency is required to comply with testing and certification requirements according to NJDOT R-1. If the current average IRI (C) is not available, then the testing agency will test, analyze and report ride quality before pavement construction to measure current average IRI (C). The testing agency will use and submit to the RE the IRI Testing Summary Report form provided from The Local Aid District Office and verify manually the pay adjustment calculation.

Current IRI data for paving routes designated NHS or NJDOT jurisdiction can be made available by request by contacting Simon Nwachukwu at Simon.Nwachukwu@dot.nj.gov.

For projects paving routes designated NHS or NJDOT jurisdiction on mainline travel lanes equal to or greater than 2,500 feet length and any lane within the project of at least 1,000 feet length, the

Department will evaluate the ride quality of the final riding surface of the mainline travel lanes using IRI. The Department will use the measured IRI to calculate the pay adjustment (PA) using pay adjustment equation (PAE) type PA1 as specified in Table 401.03.07-7. PA will be based on lots of 0.01 mile length. The PA will be zero for acceptable quality and negative for inferior quality work.

For projects paving routes designated NHS or NJDOT jurisdiction on mainline travel lanes of less than 2,500 feet length, the RE will visually inspect the final riding surface. Based on visual inspection, if the RE determines that the work may not conform to the ride quality requirements, then the Department will evaluate the ride quality of the final riding surface using IRI. Visual inspection by the RE is considered sufficient grounds for such evaluation. The Department will use the measured IRI to calculate the PA using pay equation type PA1 as specified in Table 401.03.07-7.

For paving on ramps and shoulders, the RE will visually inspect the final riding surface. Based on visual inspection, if the RE determines that the work may not conform to the ride quality requirements, then the Department will evaluate the ride quality of the final riding surface using IRI. Visual inspection by the RE is considered sufficient grounds for such evaluation. The Department will use the measured IRI to calculate the pay adjustment using pay equation type PA2 as specified in Table 401.03.07-7.

When paving over bridge structures on NHS or NJDOT jurisdiction roadways, the Department will use the measured IRI to calculate the pay adjustment using pay equation type PA3 as specified in Table 401.03.07-7.

For paving on Local roadways other than NHS and NJDOT jurisdiction on mainline travel lanes equal to or greater than 2,500 feet length and any lane within the project of at least 1,000 feet length, the Department may evaluate the ride quality of the final riding surface of the mainline travel lanes using IRI. Local roadways are defined as municipal and county roads that are not designated as part of the NHS. The Department will use the measured IRI to calculate the pay adjustment (PA) using pay adjustment equation (PAE) type PA4 as specified in Table 401.03.07-7.

- Smoothness Measurement. The Department will test the longitudinal profile of the final riding surface for ride quality with a Class 1 Inertial Profiling System according to NJDOT R-1. If project conditions preclude the use of the Class 1 Inertial Profiling System, the Department will use a Class 1 Walking Profiler or lightweight profiler.
- **2. Quality Control Testing.** Perform quality control testing during lift placement to ensure compliance with the ride quality requirements specified in Table 401.03.07-8.
- 3. Preparation for IRI Testing. Notify the RE when all paving is complete and the RE will request IRI testing by independent testing agency. Provide traffic control when the independent testing agency performs IRI testing. Perform mechanical sweeping of the surface before IRI testing. To facilitate auto triggering on laser profilers, place a single line of temporary pavement marking tape perpendicular to the roadway baseline at the beginning and end of each lane, shoulder, and ramp to be tested or as per direction of the independent testing agency. Submit the actual stationing for each temporary pavement marking tape location to the RE.
- **4. Quality Acceptance.** The Department will determine acceptance and provide PA based on the following:
  - a. Pay Adjustment. The acceptable IRI for the roadway pavement will be the target IRI (T) from Table 401.03.07-8 rounded to the nearest whole number for which full payment will be made and will be determined using the latest available current average IRI (C) data. The number of lots for final pay adjustment will be reduced by the number of lots excluded for each segment shown in Table 401.03.07-7. Lots excluded from final PA will be those with the highest recorded IRI numbers for respective roadway and bridge deck segments. A single average IRI value and the corresponding PA for each 0.01 mile lot will be reported. IRI units are in inches per mile.

	Table 401.03.07-7 Pay Adjustment Equations (PAE) for Ride Quality			
Pay Equation Type	Exclusions	Pay Equations		
PA1	Special Provisions Table	IRI <t< td=""><td>PA1=0<sup>2</sup></td></t<>	PA1=0 <sup>2</sup>	
		T≤IRI≤170	PA1=PAE	
		IRI>170	PA1= -A or Corrective action	
PA2	Will include, if tested	IRI ≤ 120	PA2 =0 <sup>2</sup>	
		120 < IRI ≤ 170	PA2 = (IRI - 120) x (-\$5.00)	
		IRI>170	Maximum Negative Pay or Corrective action	
PA3	Will include, if tested	IRI≤120	PA3=0 <sup>2</sup>	
		120 <iri≤170< td=""><td>PA3=PAE</td></iri≤170<>	PA3=PAE	
		IRI>170	PA3= -A or Corrective action	
PA4	Will include, if tested	IRI≤T	PA4=0 <sup>2</sup>	
		T < IRI ≤ T+80 or 170 whichever is higher	PA4 = (IRI - T) x (-\$1.25)	
		IRI>T+80 or 170 whichever is higher	Maximum Negative Pay or Corrective action	

$$PAE = \frac{A}{-37.75347 \times \log_e(T) + 194.87} - \frac{A}{-37.75347 \times \log_e(IRI) + 194.87}$$
$$A = 1267.2 \left[ \frac{M}{9} + \frac{PD}{150} \right]$$

P = Bid price of last lift of the pavement structure to be evaluated or price listed in table 401.03.07-7B, whichever is higher, per Ton

D1 = Design thickness of last lift to be evaluated, Inch

M = Bid price of Milling, per Square Yard

T = Target IRI

1. For various design thicknesses of last lift to be evaluated within a segment, calculate the thickness using the following equation:

Design thickness of last lift to be evaluated (D) = 
$$\frac{D_1N_1 + D_2N_2 + \cdots D_NN_N}{N_1 + N_2 + N_3 + \cdots N_N}$$

Where:

 $D_N$  = Design thickness of the last lift to be evaluated of N sections having same mix, Inch

N<sub>N</sub> = Number of lots of N section with design thickness D<sub>N</sub> of last lift to be evaluated

2. Positive pay adjustment will be used to offset negative pay adjustment. Total pay adjustment will not be greater than zero.

## THE FOLLOWING IS ADDED:

Table 401.03.07-7A Exclusions for Resurfacing or Reconstruction		
Roadway	Lane Number	Exclusions

Lane designation is by increasing numbers from left to right in the direction of traffic with left lane being Lane 1.

Table 401.03.07-7B Minimum Value of P			
Surface Course Mix	Р		
Hot Mix Asphalt (Dense Graded) with PG 64-22 binder	\$60.00		
Hot Mix Asphalt (Dense Graded) with PG 64E-22 binder	\$70.00		
Stone Matrix Asphalt, High Performance Thin Overlay, Ultra-Thin Friction Course, Open Graded or Gap Graded Mixes not specified in this table	\$80.00		
Bridge Deck Waterproof Surface Course	\$250.00		

Table 401.03.07-8 Target IRI for Resurfacing or Reconstruction (T) <sup>3</sup>						
Boodway Type	Current	New Construction or Reconstruction	Number of Operation for other than New Construction or Reconstruction <sup>5</sup>			
Roadway Type	average IRI (C)		One⁴	Two <sup>4</sup>	Three <sup>4</sup>	Four or More <sup>4</sup>
			Targe	et IRI (T)		
NHS & NJDOT	≤ 60	50	50	50	50	50
	61 to ≤95		53	50	50	50
Freeways or	96 to ≤170		55	53	50	50
Limited Access	171 to≤200	50		55	53	50
Highways	201 to ≤285		0.64C <sup>7</sup>	58	55	50
	>2868			60	58	53
NHS & NJDOT Roadways other	≤ 60		60	60	60	60
	61 to ≤95		63	60	60	60
than Freeways or	96 to ≤170	00	66	63	60	60
Limited Access Highways with	171 to≤200	60		66	63	60
speed limit > 35	201 to ≤285		0.64C <sup>7</sup>	69	66	60
МРН	>2868			72	69	63
NHS & NJDOT	≤ 60	70	70	70	70	70
Roadways other	61 to ≤95		74	70	70	70
than Freeways or Limited Access Highways with	96 to ≤170		77	74	70	70
	171 to≤200		0.64C <sup>7</sup>	77	74	70
speed limit ≤ 35	201 to ≤285			81	77	70
MPH	>2868			84	81	74
Local Roadway with Posted Speed ≥45 MPH	С	80	0.7C or 80 whicheve	0.49C or 80 whicheve	0.34C or 80 whicheve	0.24C or 80 whicheve
		55	r is higher	r is higher	r is higher	r is higher
Local Roadway with Posted Speed <45 MPH	С	100	0.84C or 100 whicheve r is higher	0.59C or 100 whicheve r is higher	0.41C or 100 whicheve r is higher	0.29C or 100 whicheve r is higher

1. The Department will determine target IRI (T) of roadways containing multiple speed limits of

greater than 35 MPH and less than or equal to 35 MPH based on the following equation: Target IRI of a roadway consists of N Roadway type (T) = 
$$\frac{T_1L_1 + T_2L_2 + \cdots ... T_NL_N}{L_{1+}L_{2+}L_{3+} .... L_N}$$

Where T<sub>N</sub> is the Target IRI of N section and L<sub>N</sub> is the length of N section in miles to the nearest 0.01 mile

- 2. Current average IRI (C) is the average of the latest available preconstruction IRI data.
- 3. The target IRI (T) is selected or calculated from the table and rounded to the nearest whole number.
- 4. Multiply T with 1.05 for HMA over Concrete, if total HMA after proposed treatment is less than 8 inch thick.
- 5. Milling is one operation. Paving each layer of asphalt mix is an individual operation unless plans specify paving a mix in two lifts. In such case, each lift is considered as an operation.
- 6. Construction or reconstruction of full pavement box on subgrade is new construction or reconstruction.
- 7. Use Pay Equation as below:

IRI≤T PA=0 IRI>T PA=PAE

- 8. For paving over rubblized concrete, use C >286 to determine target IRI, then multiply T with 1.05 if total HMA after proposed treatment is less than 8-inch thick.
- Paving in one lift with no corrective work such as milling, grinding or pre-levelling of at least 25 percent of surface area of existing pavement is one operation.
- b. Corrective Action. The Department may require corrective action or assess the maximum negative pay adjustment as computed in Table 401.03.07-7, if the average IRI after testing is performed of NHS or NJDOT jurisdiction roadway is greater than 170 inches per mile, or average IRI local roadway is greater than T+80 or 170 whichever is higher. If the Department requires corrective action submit a plan for corrective action. If the plan for corrective action is approved and the lot is corrected, the Department will retest and evaluate the corrected area as a new lot that must meet the same requirements as the initial work. If the plan for corrective action is not approved, the Department may require removal and replacement. The replacement work is subject to the same requirements as the initial work.

## 401.03.08 Core Samples

## REPLACE THIS SUBSECTION WITH THE FOLLOWING:

The RE will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (www.amrl.net). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209. The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.

Upon completion of an HMA lot, the Laboratory shall drill cores at random locations at least 12 hours after paving. Take cores in the presence of the RE. The Laboratory will determine air voids from 5 (Five) 6 inch diameter cores taken from each lot in random locations within the traveled way and at least one core in each travel lane. The HMA Core Sampling Plan form provided on the Local Aid Website must be utilized by the Laboratory to determine the random locations of the cores. The Laboratory may rerun the random location functions on the HMA Core Sampling Plan form to resolve any conflicts generated by the HMA Core Sampling Plan form and physical limitations of the HMA lot, such as utility conflicts, or the specifications defined herein. The Laboratory must disclose the contents of the HMA Core Sampling Plan with the Contractor to assist in the schedule of construction.

The Laboratory shall use drilling equipment with a water-cooled, diamond-tipped masonry drill bit that produces 6 inch nominal diameter cores for the full depth of the pavement. The Laboratory shall remove the core from the pavement without damaging it. After the Laboratory removes the core, the Laboratory shall remove all water from the hole. The Laboratory shall apply an even coating of tack coat to sides of the hole. The Laboratory shall place cold patching material or HMA in maximum lifts of 4 inches in the hole and compact each lift. If cold patching material is utilized to fill the coring hole, then it is not necessary to apply tack coat to the sides of the hole. The Laboratory shall ensure that the final surface is 1/4 inch above the surrounding pavement surface.

HMA cores are to be taken from the HMA lot for quality assurance sampling, testing and analysis within seven (7) days of completing the HMA lot. For test strip lots and the first traveled way lot, the Laboratory shall deliver cores from the field to the testing Laboratory within 48 hours of completing the lot. The Laboratory shall deliver all other acceptance cores within 7 days of completing the lot.

After each air void lot is placed, the Laboratory shall drill cores so that the full depth of the course is recovered for air void acceptance testing. If thickness acceptance testing is required as specified in 401.03.07.I, the Laboratory shall drill the surface course air void cores for the full depth of pavement.

The Laboratory shall utilize a tamper proof core sample box for core storage and transportation. The Laboratory shall ensure that the core sample box can be locked and sealed and is tamper proof in such a manner that it cannot be opened without removing the seals. The Laboratory shall ensure that the core sample box provides protection for the cores from being disturbed or damaged during transit. The Laboratory shall mark the assigned core number on the side of the sample. The Laboratory shall place core samples in the core sample box. The Laboratory shall transport the sealed core sample boxes to the testing Laboratory.

The Laboratory will not accept damaged core samples for testing. If the core sample box exhibits indications of tampering, the core samples will be rejected. If any core samples are rejected, drill a replacement core at the same offset and within 5 feet of the original station and deliver to the Laboratory as specified above within 48 hours.

If the project is utilizing quality control cores, the Laboratory shall provide the results of the quality control core testing to the Contractor in a timely manner which will not unnecessarily impede construction.

### **401.04 MEASUREMENT AND PAYMENT**

REPLACE THIS SUBSECTION WITH THE FOLLOWING:

Item	Pay Unit
HMA MILLING, 3" OR LESS	SÝ
TACK COAT	GALLON
TACK COAT 64-22	GALLON
HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON
HOT MIX ASPHALT 19M64 BASE COURSE	TON

The RE will measure TACK COAT, TACK COAT 64-22, PRIME COAT, and POLYMER MODIFIED TACK COAT by the volume delivered, converted to the number of gallons at 60 °F as calculated by the temperature-volume correction factors specified in 902.01.

The RE will measure HOT MIX ASPHALT 9.5M64 SURFACE COURSE and HOT MIX ASPHALT 19M64 BASE COURSE by the ton as indicated on the certified weigh tickets, excluding unused material. When nominal maximum aggregate size 3/8 inch HMA surface course is directed for use in transition (run out) areas, the Department will include this weight with the weight for HOT MIX ASPHALT 9.5M64 SURFACE COURSE.

The Department will make a payment adjustment for HMA air void quality per lot by the following formula:

'x Reduction Per Lot (%)

Where:

BP = Bid Price of HMA

Q = Quantity of HMA in lot receiving payment adjustment Reduction Per Lot (%) = Air void Reduction (%) per lot as specified in 401.03.07.H.

The Department will make a payment adjustment for HMA thickness quality per lot by the following formula:

x Percent Reduction (%)

Where:

BP = Bid Price of HMA

Q = Quantity of HMA in lot receiving payment adjustment
Percent Reduction (%) = Thickness Percent Reduction (%) per lot as specified in 401.03.07.I.

The Department will make a payment adjustment for HMA ride quality, as specified in 401.03.07.J.

## **DIVISION 500 - BRIDGES AND STRUCTURES**

THE FOLLOWING SUBPART IS ADDED:

## 507.03.08 Bridge Deck and Bridge Approach Sealing

The RE will direct if and where to apply BRIDGE DECK AND BRIDGE APPROACH SEALING.

- **A. Instructions.** At least 5 days prior to starting the sealing operation provide the RE with the manufacturer's instructions for application and use. Use only 1 brand and specific type of sealer on each deck or approach slab.
- **B.** Surface Preparation. Ensure the concrete is air dry for 24 hours after saw cut grooving is completed. If the concrete is subjected to rain or moisture from other project operations, extend the drying time by 24 hours from the time that the concrete has stopped being wetted. Complete all work such as surface texturing, saw cut grooving, barriers, parapets, sidewalks and safety walks prior to the cleaning the concrete surface. After the drying period has ended, clean the concrete surface by vacuum methods, to remove loose particles.

After cleaning, ensure no laitance, standing water, oil, dirt or other foreign particles are present. Do not start sealer application until the RE approves the surface preparation.

- **C. Weather Limitations.** Do not apply sealer materials during wet weather conditions or when adverse weather conditions are anticipated within 12 hours of completion of sealer application. Ensure ambient and surface temperatures, during application, and until the sealed concrete is dry to the touch, is maintained at a minimum of 40°F. Spray application is not permitted during windy conditions, if in the opinion of the RE, unsatisfactory results will be obtained.
- **D. Sealer Application.** Do not alter or thin the sealer. Ensure sealer equipment is free of foreign materials. Apply the sealer by means of brushing, spraying or rolling, as recommended by the manufacturer.

Apply a minimum of 2 coats of the sealer to achieve uniform coverage. Apply the sealer to an application rate as recommended by the manufacturer and to the satisfaction of the RE. Apply second and each additional coat perpendicular to the previous coat. Do not allow the sealer to run or puddle. Ensure each coat dries for a minimum of 2 hours before the next coat is applied. Ensure the final coat dries according to the manufacturer's instructions, prior to allowing traffic on the surface.

#### **DIVISION 600 - MISCELLANEOUS CONSTRUCTION**

#### **SECTION 602 - DRAINAGE STRUCTURES**

THE FOLLOWING SECTION IS ADDED:

#### 602.03.08 RECONSTRUCTED, INLET, 2' X 2', USING NEW CASTING

A. Storm structures shall consist of the construction of these structures, reconstruction of these structures, reconstruction of existing undersized inlets, stone bedding, backfilling and backfill material, and the furnishing, installing, resetting, and placing of new castings, heads, and grates. The reconstruction of existing inlets shall mean the complete reconstruction of these structures, installation of new castings, N-Eco curb pieces and bicycle safe grates.

#### **602.04 MEASUREMENT AND PAYMENT**

THE FOLLOWING PAYMENT ITEM IS ADDED:

Item Pay Unit RECONSTRUCTED, INLET, 2' X 2', USING NEW CASTING UNIT

THE FOLLOWING IS ADDED:

Payment for the Item RECONSTRUCTED, INLET, 2' X 2', USING NEW CASTING shall include the cost of furnishing all materials, removal and disposal, backfilling, backfill material, sheathing, shoring, bracing, dewatering, by pass pumping, construction, or reconstruction complete, as specified, all materials including new head castings and frames and ladder rungs or those claimed for the Project as prescribed, labor, equipment, and all else necessary and incidental thereto.

#### SECTION 606 - SIDEWALKS, DRIVEWAYS, AND ISLANDS

#### 606.03.02 CONCRETE SIDEWALKS, DRIVEWAYS, AND ISLANDS

THE FOLLOWING IS SUBSECTION IS ADDED:

J. **Subgrade.** All sidewalks and driveways shall contain <sup>3</sup>/<sub>4</sub>" clean crushed stone subgrade, as illustrated on the construction details provided within the contract plans. Clean crushed stone shall be uniform in texture and quality and shall conform to the Section 901.03.

THE FOLLOWING SECTION IS ADDED:

#### 606.03.04 RESET BRICK PAVERS

- A. **Underlayer Preparation.** Excavate as specified in 202.03.03. Obtain RE approval before finishing excavation. If the RE determines that the bottom of the excavation is unstable, undercut, backfill, and compact as directed by the RE.
- B. **Subgrade.** All paver areas shall contain compacted sand setting bed, geotextile/filter fabric barrier, concrete subbase, and aggregate base, as illustrated on the construction details provided within the contract plans.
- C. Placing Pavers. Pavers shall be placed on approved subbase and compacted appropriately.

D. **Installing Joints.** Polymeric sand to be broom swept and compacted into joints after all cobbles are set. Additional polymeric sand to be applied as needed to fill joints after initial compaction. Clean extra sand from surface of cobbles, then hose down area with water to activate polymeric sand.

E. All pavers shall be constructed in strict conformance with manufacturer specification and in accordance with ADA Standards.

#### **606.04 MEASUREMENT AND PAYMENT**

REVISE THE SECOND PARAGRAPH TO:

When the RE directs undercutting of unstable material in the excavation area, the Department will make payment, for the additional excavation. The Department will also make payment, for the additional bedding if there is not an excess of excavation available.

THE FOLLOWING PAYMENT ITEM IS ADDED:

Item Pay Unit

RESET BRICK PAVER (IF & WHERE DIRECTED) SQUARE YARD

THE FOLLOWING IS ADDED:

Payment for the Item RESET BRICK PAVER (IF & WHERE DIRECTED) shall include the removal of existing pavers and the re-use following leveling and reconstruction of base, and all else necessary to construct and/or reconstruct the pavers, as shown on the plans, or directed by the Engineer.

Payment for the Items CONCRETE SIDEWALK, 4" THICK, CONCRETE SIDEWALK; CONCRETE SIDEWALK, REINFORCED, 6" THICK; and CONCRETE DRIVEWAY, REINFORCED, 6" THICK shall include the all required excavation and disposal, subgrade, backfill, steel mesh reinforcement, reinforcement joints, replacement/reconstruction of all existing roof leaders, all materials, labor, sawcutting, equipment, and all else necessary to construct and/or reconstruct the sidewalk and driveway aprons, as shown on the plans, or directed by the County Engineer.

#### **SECTION 607 - CURB**

#### **607.04 MEASUREMENT AND PAYMENT**

THE FOLLOWING IS ADDED:

Payment for the Item GRANITE CURB shall include the cost of sawcutting, curb & driveway, backfill, construction of curbs and headers, removal of existing curbs, all work included in the two foot repair strip pay limit as shown in the detail, inclusive of the 6-inch dense graded aggregate section and 4-inch hot mix asphalt base course 19M64 section, to include disturbed striping and signage, and cleaning pavement in connection therewith, all materials, labor and equipment necessary to construct concrete curb, as shown on the plans or as directed by the engineer. No specific payment shall be made for curb replacement due to broken or damaged curb outside of the project limits resulting from contractor error. No separate payment will be made for the reconnection of the sump pump outlets or roof leaders and should be accounted for in the bid items. Locations of proposed portions of curb reconstruction shall be field verified by the County Engineer prior to construction commencement.

#### **SECTION 608 NON-VEGETATIVE SURFACES**

#### **608.04 MEASUREMENT AND PAYMENT**

REVISE THE SECOND PARAGRAPH TO:

When the RE directs undercutting of unstable material in the excavation area, the Department will make payment, for the additional excavation. The Department will also make payment, for the additional bedding if there is not an excess of excavated material available for use as bedding.

#### SECTION 610 – TRAFFIC STRIPES, TRAFFIC MARKINGS, AND RUMBLE STRIPS

#### **610.04 MEASUREMENT AND PAYMENT**

THE FOLLOWING IS ADDED:

All traffic stripes and markings installed as part of this project shall be thermoplastic.

#### **DIVISION 650 - UTILITIES**

#### **SECTION 652 - SANITARY SEWERS**

#### 652.03.07 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEMS ARE REMOVED

Item	Pay Unit
RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING	ÚNIT
RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	UNIT

#### THE FOLLOWING IS ADDED:

Payment for the resetting of all sanitary manholes and structures shall be made under the Item RESET EXISTING CASTING. This pay item shall also include the resetting of municipal owned structures with new castings when supplied by local municipality or utility authority.

#### **DIVISION 900 - MATERIALS**

#### **SECTION 902 – ASPHALT**

#### 902.02.01 MIX DESIGNATIONS

PART (4) IS CHANGED TO:

**4. "E"** The fourth field in the Item description designates the high temperature designation of the performance-graded binder. Options are "64" for PG 64S-22 and "E" for PG 64E-22.

#### 902.02.03 MIX DESIGN

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

UNLESS OTHERWISE APPROVED BY THE ENGINEER, ONLY ONE SOURCE OF SUPPLY FOR HOT MIX ASPHALT SURFACE COURSE MAY BE USED ON THE PROJECT.

#### A. General Acceptance Requirements.

THE SECOND PARAGRAPH OF SECTION (A) IS CHANGED TO:

For PG 64S-22, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 290 °F when the ambient temperature is less than 50 °F or is at least 275 °F when the ambient temperature is greater than or equal to 50 °F. For PG 64E-22, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the manufacturer's recommended laydown temperature. For mixes produced using a WMA additive or process, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the WMA manufacturer's recommended laydown temperature.

#### 902.02.04 SAMPLING AND TESTING

#### ADD THE FOLLOWING TO 902.02.04:

**E.** Acceptance of HMA. The Department may accept the HMA as specified in 902.02.04.A through 902-02.04.E by employing staff or an independent testing agency at the HMA plant during production. The inspector who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2. Form "DS-8 HMA Testing Summary Report – State Aid" provided on the Local Aid Website must be utilized by the Laboratory to report their findings to the RE.

Alternatively, the Department may accept the HMA by <u>Certification of Compliance</u> according to 106.07.

#### **Baseline Document Changes**

Baseline Document Change (BDC) Announcements are notices that a Baseline Document has been modified in part or in whole. A Baseline document is defined as any official document that has gone through an initial approval process and was approved for use as intended. Thus a BDC is an alteration to or rewriting of any officially approved document. New documents are also announced with a BDC.

For additional BDC's to the 2019 specs that are not covered in this document:

http://www.state.nj.us/transportation/eng/documents/BDC/

#### **SECTION 903 - CONCRETE**

#### 903.01 CEMENT

#### THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Use cement, listed on the QPL, that is either portland cement or blended hydraulic cement and conforms to the following:

Only use Type III portland cement for Class V concrete, prestressed Items, and precast Items.

Use portland cement pre-blended with a maximum of 25 percent fly ash, by weight, or a maximum of 5 percent silica fume by weight, or with a maximum of 50 percent slag by weight for blended hydraulic cement Type IS or IP. Use portland cement pre-blended with a minimum of 5 percent limestone content and a maximum of 15 percent limestone content by weight for blended hydraulic cement Type IL. Ensure that a scaling test according to ASTM C 672 is completed on the mix design if more than 30 percent slag is used and that the concrete has a visual rating less than 3 after 50 cycles.

Do not add additional mineral admixtures to blended hydraulic cements Type IS or IP at the concrete plant unless approved by the ME. The use of additional mineral admixtures in blended hydraulic cement Type IL at the concrete plant is permitted if the mineral admixture is listed on the QPL

Do not mix different brands of cement, the same brand of cement from different mills, or different types of cement.

Provide suitable means for storing and protecting the cement against dampness. The ME will reject cement that has become partially set or that contains lumps of caked cement. Ensure that the temperature of the cement at the time of delivery to the mixer does not exceed 160 °F.

#### **DIVISION 1000 - EQUIPMENT**

#### **SECTION 1003 - HMA SITE EQUIPMENT**

#### 1003.01 MATERIALS TRANSFER VEHICLE (MTV)

#### THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

Ensure the MTVs Gross Weight and maximum speed limit do not exceed the load restrictions as shown in 105.09 Special Provisions.

#### **SECTION 1009 - HMA PLANT EQUIPMENT**

#### 1009.01 HMA PLANT

- A. Requirements for HMA Mixing Plants.
  - 8. Safety.

#### THE THIRD PARAGRAPH IS CHANGED TO:

When plant production occurs during night operations, provide permanently fixed lighting throughout the plant operations, plant laboratory, and truck scale areas to ensure a clear view of the operations. Also provide permanently mounted lighting at the sampling platforms to sufficiently illuminate the bed of the truck for inspection and sampling operations.

#### **NJDOT TEST METHODS**

#### NJDOT R-1 - DETERMINING RIDE QUALITY OF PAVEMENT SURFACES

#### B. Apparatus.

PART B IS CHANGED TO:

Use the following apparatus:

- Class 1 IPS that meets the requirements of ASTM E 950, Sections 4.0, 5.0 and 6.0 of AASHTO M 328, and the following:
  - a. Valid certification.
  - b Recertification after any major component repairs or replacements.
  - c. The data system provides the raw profile data in format readable in ProVal.
  - d. Current version of pavement profile analysis software installed on the IPS computer to compute the IRI.
- 2. Base plate and gauge blocks, of 1 inch and 2 inch thickness, provided by the manufacturer to verify daily vertical calibration.
- 3. Retro-reflective traffic marking tape or other approved mechanism to automatically trigger the start and stop of profile measurements.

#### C. Procedure.

PART C IS CHANGED TO:

Perform the following steps:

- 1. Turn on the inertial profiler and warm up all electronic equipment in accordance with the manufacturer recommendations before testing.
- 2. Perform Block and Bounce tests each day before collecting data. Record the results in the calibration log. Ensure tolerances are within the certified limits.
- 3. Ensure retro-reflective traffic marking tape or other approved mechanism is placed at the beginning and end of each direction of travel lane.
- 4. Enter project information in the test equipment system.
- 5. Make provisions to start and stop recording profile at the beginning and end of testing. If an automatic trigger mechanism is not installed, make provision to initiate start and end of data recording manually by pressing an appropriate key(s) on the computer.
- 6. Ensure that the required speed, as recommended by the manufacturer, is achieved and that the system is collecting profile data before recording profile.
- 7. For each test section, perform 3 test runs to collect data of both wheel paths of each lane in the longitudinal direction of travel. The wheel path is defined as being located approximately 3 feet on each side of the centerline of the lane and extending for the full length of the lane. Lanes are defined by striping.
- 8. Save data from each run separately before the next run or lane testing, clearly identifying each test run, lane identification, and run number.

## ADDITIONAL TECHNICAL SPECIFICATIONS FOR NON-NJDOT PARTICIPATORY ITEMS

#### **SECTION 042200.16 - DECK SURFACE SEALER**

#### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Fluid-applied waterproofing includes:
  - 1. Application to seal top of bridge deck.

#### 1.2 PERFORMANCE REQUIREMENTS

A. Provide waterproofing measures that establish and maintain watertight condition.

#### 1.3 SUBMITTALS

- A. Submit manufacturer's product specifications, handling, installation and curing instructions, and performance tested data sheets for each product required.
- B. Submit certificates from manufacturers of joint sealers attesting that their products comply with specification requirements and are suitable for the use indicated.

#### 1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an installer who has successfully completed within the last 3 years at least 3 waterproofing applications similar in type and size to that of this project and who will assign mechanics from these earlier applications to this project, of which one will serve as lead mechanic.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original unopened containers or bundles with labels indicating manufacturer, product name, and expiration date as applicable.
- B. Store and handle materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

#### 1.6 JOB CONDITIONS

- A. Do not proceed with installation of products under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer or below 40oF.
  - 2. When joint substrates are wet due to rain, frost, condensation, or other causes.
- B. Substrate Conditions: Do not proceed with installation of products until contaminants capable of interfering with adhesion are removed from substrates.

#### PART 2 - PRODUCTS

#### 2.1 SHEET WATERPROOFING

A. Self-adhering waterproof membrane for substructures: Provide cold-applied, flexible, preformed waterproof membrane conforming to ASTM D624. Use Bituthene 3000/3000 HC or approved equal.

#### 2.2 FLUID APPLIED WATERPROOFING

A. Fluid applied waterproofing for below grade deck waterproofing: Provide hotpoured liquid asphalt conforming to ASTM D449, Type I.

#### 2.3 MISCELLANEOUS MATERIALS

- A. Protection board for vertical waterproofing applications. Use Bituthene Protection Board or approved equal.
- B. Protection board for horizontal waterproofing applications. Use protection course #712 as manufactured by WR Meadows or approved equal.

#### PART 3 - EXECUTION

#### 3.1 INSPECTION

A. Installer shall inspect substrate indicated to receive waterproofing for compliance with requirements for surface preparation. Do not allow joint work to proceed until unsatisfactory conditions have been corrected.

#### 3.2 SURFACE PREPARATION

- A. Clean surfaces immediately before installation to comply with recommendations of manufacturers and the following requirements:
  - 1. Remove all foreign materials from joint substrates which could interfere with adhesion of joint sealer, including rust; paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; old joint sealers; oil; grease; waterproofing; water repellents; water; surface dirt; and frost.
  - 2. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond. Remove loose particles remaining from above cleaning operations by vacuuming or blowing with oil-free compressed air.
  - 3. Remove laitance and form release agents from concrete.
- B. Prime surfaces where indicated, and where recommended by manufacturer. Confine primer/sealer to areas of work; do not allow spillage or migration onto adjoining surfaces.

#### 3.3 INSTALLATION

#### A. Sheet Waterproofing

- Comply with manufacturer's printed instructions except where more stringent requirements
  are shown or specified, and except where manufacturer's technical representative directs
  otherwise.
- 2. Sheet waterproofing: surfaces must be smooth, regular and dry. Prime surfaces with one coat of Bituthene Primer (or approved equal) using brush or roller. Allow to dry completely before application of self-adhering sheets.
- 3. Where vertical surface meets footing install fillet of Bituthene Liquid Membrane (or approved equal) along joint.
- 4. Application of sheet to start at bottom of wall and proceed to top. Lap any joints a minimum of 6".

5. Install protection board with joints butted tight. Spot bond with Pak Adhesive (or approved equal) as needed to hold in place.

#### B. Liquid Applied Membrane

- 1. Comply with manufacturer's printed instructions except where more stringent requirements are shown or specified, and except where manufacturer's technical representative directs otherwise.
- 2. Install liquid applied membrane to depths as shown, or, if not shown, as recommended by manufacturer.
- 3. Install protection board with joints butted tight. Spot bond with Pak Adhesive (or approved equal) as needed to hold in place.

#### 3.4 PROTECTION

A. Install protection board at the end of each days waterproofing to both horizontal and vertical surfaces.

#### PART 4 – METHOD OF PAYMENT

#### 4.1 QUANTITY AND PAYMENT

A. Payment for the item Bridge Deck Sealer will be made on a square yard (SY) basis, and the cost thereof shall be included in the price for the item **DECK SURFACE SEALER** in the Bid Proposal, which price shall include the furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto.

END OF SECTION

#### **SECTION 079126 – DECK JOIN FILLER AND SEALER**

#### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. The applications for joint sealers as work of this section include exterior joints in the following vertical surfaces:
  - 1. Control, expansion, and deflection joints in cast-in-place concrete structures and stone masonry veneer.
  - 2. Other joints as indicated.
- B. The applications for joint sealers as work of this section also include exterior joints in the following horizontal surfaces:
  - 1. Bridge Parapet Joints.

#### 1.2 PERFORMANCE REQUIREMENTS

A. Provide joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

#### 1.3 SUBMITTALS

- A. Submit manufacturer's product specifications, handling, installation and curing instructions, and performance tested data sheets for each product required.
- B. With product data, submit certified test reports for sealants on aged performances as specified, including hardness, stain resistance, adhesion, cohesion or tensile strength, elongation, low temperature flexibility, compression set, modulus of elasticity, water absorption, and resistance (aging, weight loss, deterioration) to heat and exposures to ozone and ultraviolet.
- C. Submit color charts for each product exposed to view showing full range of colors available for color selection.
- D. Submit certificates from manufacturers of joint sealers attesting that their products comply with specification requirements and are suitable for the use indicated.

#### 1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an installer who has successfully completed within the last 3 years at least 3 joint sealer applications similar in type and size to that of this project and who will assign mechanics from these earlier applications to this project, of which one will serve as lead mechanic.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original unopened containers or bundles with labels indicating manufacturer, product name, color, expiration date, pot life, curing time and mixing instructions.
- B. Store and handle materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

#### 1.6 JOB CONDITIONS

A. Do not proceed with installation of liquid sealants under the following conditions:

- 1. When ambient and substrate temperature conditions are outside the limits permitted by ioint sealer manufacturer or below 40F.
- 2. When joint substrates are wet due to rain, frost, condensation, or other causes.
- B. Joint Width Conditions: Do not proceed with installation of joint sealers when joint widths are less than allowed by joint sealer manufacturer for application indicated.
- C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

#### 1.7 WARRANTY

- A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Installer's Warranty: Written warranty, signed by Installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
- C. Warranty Period: Ten years from date of Substantial Completion.
- D. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
  - 1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
  - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
  - 3. Mechanical damage caused by individuals, tools, or other outside agents.
  - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

#### PART 2 - PRODUCTS

#### 2.1 SEALANTS

- A. Elastomeric Sealant for Exterior Use: Provide one-part formulation silicone sealant conforming to ASTM C 920, Type S, Grade NS. Class 25, Dow 790, or approved equal. Colors will be selected by Engineer from manufacturer's standard colors.
- B. Paving Sealant: Shall be a 2-component self-leveling polyurethane, meeting Federal Specification TT-S-00227E, THC-900 by Tremco, NR-200 by Pecora, or approved equal. Colors will be selected by Engineer from standard colors available with "Multi-Systems Color-Pak".
- C. Hot-Poured Joint Sealer for Bridge Deck Joints: Provide sealer conforming to ASTM D 6690. Use Type II Sealer in accordance with AASHTO.

#### 2.2 CELLULAR FOAM JOINT FILLERS AND SEALANT BACKERS

A. Expanded Polyethylene Joint Filler (Backup): Provide flexible, compressible, closed cell, polyethylene of not less than 10 psi compression deflection, 25%; except provide higher compression deflection strength as may be necessary to withstand installation forces and

provide proper support for sealants; surface water absorption of not more than 0.1 lbs. per sq. ft.

#### 2.3 MISCELLANEOUS MATERIALS

- A. Bond Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer to be applied to sealant contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant. Provide self-adhesive tape where applicable.
- B. Preformed Joint Filler: Use preformed joint fillers conforming to AASHTO M33 or AASHTO M 213. Provide the filler for each joint in a single piece for the full depth and width required for the joint. If the RE approves the use of more than 1 piece for a joint, fasten the abutting ends securely, and hold to shape or other means of means of positive fastening.

#### PART 3 - EXECUTION

#### 3.1 INSPECTION

A. Installer shall inspect joints indicated to receive joint sealers or assemblies for compliance with requirements for joint configuration, installation tolerances and other conditions affecting joint performance. Do not allow joint sealer or assembly installation to proceed until unsatisfactory conditions have been corrected.

#### 3.2 JOINT PREPARATION

- A. Clean joint surfaces immediately before installation of sealant compounds to comply with recommendations of joint sealer manufacturers and the following requirements:
  - Remove all foreign materials from joint substrates which could interfere with adhesion of joint sealer, including rust; paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; old joint sealers; oil; grease; waterproofing; water repellents; water; surface dirt; and frost.
  - 2. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
  - 3. Remove laitance and form release agents from concrete.
  - 4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile; and other nonporous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- B. Prime or seal joint surfaces where indicated, and where recommended by sealant manufacturer. Confine primer/sealer to areas of sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

#### 3.3 INSTALLATION

- A. Comply with manufacturer's printed instructions except where more stringent requirements are shown or specified, and except where manufacturer's technical representative directs otherwise.
- B. Set joint filler units at proper depth or position in joint to coordinate with other work, including installation of bond breakers, backer rods and sealants. Do not leave voids or gaps between ends of joint filler units. Do not stretch, twist, puncture or tear joint fillers. Remove absorbent joint fillers which have become wet prior to sealant application and replace with dry materials.
- C. Install sealant backer rod for liquid applied sealants, except where shown to be omitted or recommended to be omitted by sealant manufacturer for application indicated.
- D. Install bond breaker tape where indicated and where required by manufacturer's recommendations to ensure that liquid applied sealants will perform properly.
- E. Employ only proven installation techniques, which will ensure that sealants are deposited in uniform, continuous ribbons without gaps or air pockets, with complete wetting of joint bond surfaces equally on opposite sides. Except as otherwise indicated, fill sealant rabbet to a slightly concave surface, slightly below adjoining surfaces. Where horizontal joints are between a horizontal surface and vertical surface, fill joint to form a slight cove, so that joint will not trap moisture and dirt.
- F. Install liquid applied sealant to depths as shown, or, if not shown, as recommended by sealant manufacturer but within the following general limitations, measured at center (thin) section of bead; (not applicable to sealants in lapped joints):
  - 1. For sidewalks, pavements and similar joints sealed with elastomeric sealants and subject to traffic and other abrasion and indentation exposures, fill joints to a depth equal to 75% of joint width, but neither more than 5/8" deep nor less than 3/8" deep.
  - 2. For normal moving joints sealed with elastomeric sealants but not subject to traffic, fill joints to a depth equal to 50% of joint width, but neither more than 1/2" deep nor less than 1/4" deep.
- G. Do not allow sealants or compounds to overflow from confines of joints, or to spill onto adjoining work, or to migrate into voids of exposed finishes. Clean adjoining surfaces by whatever means may be necessary to eliminate evidence of spillage.

#### 3.4 CURE AND PROTECTION

- A. Cure sealant compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength and surface durability. Advice Contractor of procedures required for cure and protection of joint sealers during construction period, so that they will be without deterioration or damage, other than normal wear and weathering, at time of substantial completion. Cure and protect sealants in a manner which will minimize increases in modulus of elasticity and other accelerated aging effects. Replace or restore sealants which are damaged or deteriorated during construction period.
- B. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

#### PART 4 – METHOD OF PAYMENT

#### 4.1 QUANTITY AND PAYMENT

A. Payment for the item Bridge Deck Joint will be made on a lineal foot (LF) basis, and the cost thereof shall be bid for the item **DECK JOINT FILLER AND SEALER** in the Bid Proposal, which price shall include the furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto.

**END OF SECTION** 

#### SECTION 101400 - SOLAR LED SIGN

#### PART 1 - GENERAL

#### 1.1 DESCRIPTION

A. This item shall include all labor, material and equipment for furnishing and the complete installation of a solar flashing LED crossing sign, including all hardware, in accordance with the manufacturer's installation specifications and in accordance with the contract plans and details. It shall include the transportation and/or delivery of the equipment, the disposal of any surplus materials, as required and other work as herein described.

#### PART 2 - PRODUCTS

#### 2.1 MATERIALS

A. All Solar Flashing LED Crossing Sign will be manufactured by:

#### **DORNBOS SING AND SAFETY**

619 W Harris Street Charlotte, Michigan 48813 1-800-922-0029

#### OR APPROVED EQUAL

#### PRODUCT FEATURED

- FHWA & MUTCH Compliant
- Type IX Diamond Grade Reflective Sheeting
- Keyed On/Off Switch
- Tufnut Mounting Hardware Included
- LED Life Expectancy over 100,000 hours
- Flash Rate = 50 60 Flashes per Minute
- 0.080 Highway Grade Aluminum/ Stainless Fasteners

#### PRODUCT SPECIFICATIONS

- Available in Solar or A/C Powered
- Solar Panel Included for Solar Powered Signs
- 24" Signs Featured 4 Flashing LED Lights
- 30", 36", 48" Signs Feature 8 Flashing LED Lights
- Available options: 24/7 Flash or Dusk-to-Dawn Sensor
- Dusk-to-Dawn Sensor activates flashing from dusk to dawn

#### PART 3 - EXECUTION

#### 3.1 INSTALLATION OF EQUIPMENT

A. All equipment shall be installed as recommended with manufacturer's written directions.

#### PART 4 - QUANTITY AND PAYMENT

#### 4.1 QUANTITY AND PAYMENT

A. Payment for the Solar LED Sign will be for the signage unit actually constructed in accordance with construction documents at the unit price bid for the item **SOLAR FLASHING LED** 

**CROSSING SIGN** in the Bid Proposal, which shall cover the cost all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the engineer.

END OF SECTION

## COUNTY OF UNION **BOARD OF COUNTY COMMISSIONERS**

# **2023 ROAD RESURFACING PROJECT (CA-2022)**

BA#7 - 2023; UNION COUNTY ENGINEERING PROJECT #2021 -011

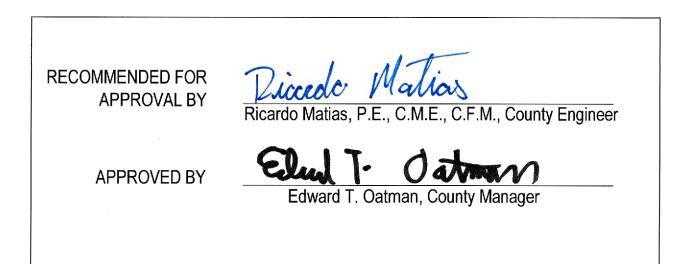
TOWN OF WESTFIELD, CITY OF PLAINFIELD, BOROUGH OF ROSELLE, BOROUGH OF ROSELLE PARK TOWNSHIP OF UNION, TOWNSHIP OF CLARK, CITY OF RAHWAY, TOWNSHIP OF CRANFORD, TOWNSHIP OF BERKELEY HEIGHTS, CITY OF SUMMIT, AND TOWNSHIP OF SPRINGFIELD

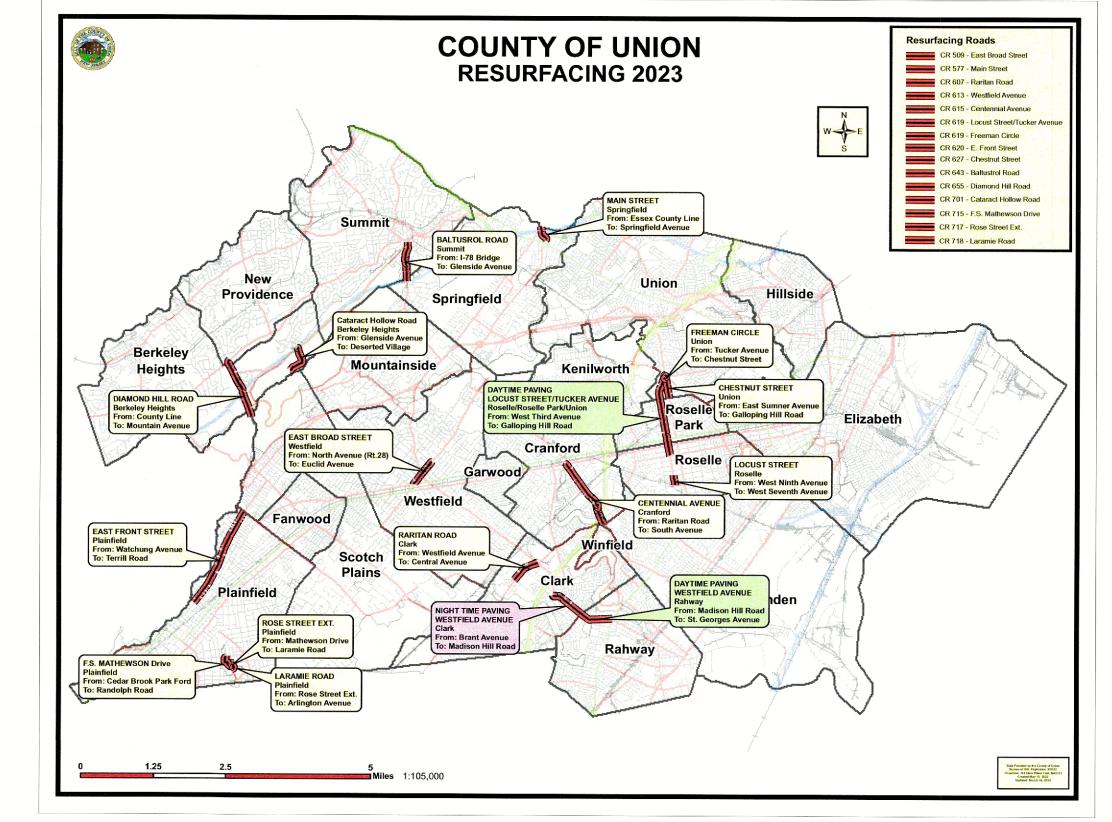


## **UNION COUNTY, NEW JERSEY**

**DECEMBER 1, 2022; ISSUED FOR BID: MAY 16, 2023** 

UTILITY COMPANY CONTACTS						
COMPANY	ADDRESS					
P.S.E. & G GAS	472 WESTON CANAL ROAD SOMERSET, NJ (732) 764 - 3067					
ELIZABETH GAS COMPANY	520 GREEN LANE UNION, NJ (908) 662 - 8321					
J.C.P. & L.	P.O. BOX 1911 MORRISTOWN, NJ (973) 401 - 8521					
P.S.E. & G ELECTRIC	80 PARK PLAZA T-12 NEWARK, NJ (973) 297 - 2128					
NEW JERSEY AMERICAN WATER	1341 NORTH AVENUE PLAINFIELD, NJ (973) 564 - 5701					
VERIZON	175 WEST MAIN STREET FREEHOLD, NJ (732) 357 - 2313					





**KEY MAP SOURCE: UNION COUNTY G.I.S. SCALE: AS SHOWN** 

## -NOTICE-

LOCATION OF UTILITIES AS SHOWN ON THESE PLANS ARE PLOTTED FROM AVALIABLE DATA ON FILE WITH THE UTILITY COMPANIES AND IS NOT GUARANTEED AS TO EXACTNESS. THE CONTRACTOR IS TO CONTACT UTILITY COMPANIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE EXACT LOCATION AND DEPTH OF ALL UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL USE THE UTILITY LOCATIONS AS AN AID IN DETERMINING EXACT LOCATIONS.

**NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS** FOR ROAD AND BRIDGE CONSTRUCTION 2019 TO GOVERN.

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PROFESSIONAL ENGINEER

SHEET INDEX							
DRAWING NO.	DRAWING TITLE						
1.00	COVER SHEET / KEY MAP						
2.00	GENERAL NOTES & STANDARD LEGEND						
3.00	QUANTITY TABLE & TYPICAL ROAD SECTION						
4.00 - 4.04	EAST BROAD STREET, TOWN OF WESTFIELD						
5.00 - 5.03	EAST FRONT STREET, CITY OF PLAINFIELD						
6.00 - 6.03	LOCUST STREET, TUCKER AVENUE & FREEMAN CIRCLE, TOWNSHIP OF ROSELLE PARK/BOROUGH OF ROSELLE/ TOWNSHIP OF UNION						
7.00 - 7.03	WESTFIELD AVENUE, TOWNSHIP OF CLARK / CITY OF RAHWAY						
8.00 - 8.03	CENTENNIAL AVENUE, TOWNSHIP OF CRANFORD						
9.00 - 9.02	DIAMOND HILL ROAD, TOWNSHIP OF BERKELEY HEIGHTS/ BOROUGH OF NEW PROVIDENCE						
10.00 - 10.01	BALTUSROL ROAD, CITY OF SUMMIT / TOWNSHIP OF SPRINGFIELD						
11.00 - 11.01	MATHEWSON DRIVE, ROSE STREET & LARAMIE ROAD, CITY OF PLAINFIELD						
12.00 - 12.01	CATARACT HOLLOW ROAD, TOWNSHIP OF BERKELEY HEIGHTS						
13.00 - 13.01	RARITAN ROAD, TOWNSHIP OF CLARK						
14.00 - 14.01	CHESTNUT STREET, TOWNSHIP OF UNION						
15.00 - 15.01	MAIN STREET, TOWNSHIP OF SPRINGFIELD						
16.00 - 16.01	LOCUST STREET, BOROUGH OF ROSELLE						
17.00 - 17.02	TRAFFIC CONTROL DETAILS I -III						
18.00 - 18.02	NJDOT CURB RAMP DETAILS I -III						

19.00 - 19.02



DATE

2023/03/20

2023/05/16

**REVISIONS** 

DESCRIPTION

REVISED PER NJDOT COMMENT LETTER

PROFESSIONAL ENGINEER N.J. LICENSE NO. 41635

IOMAS R. SOLFARO, P.E., C.M.E. | DAVID R. ATKINSON, P.E., C.M.E

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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL PLANNER

N.J. LICENSE NO. 33LI00569800

PROFESSIONAL LAND SURVEYOR

**COVER SHEET / KEY MAP 2023 ROAD RESURFACING PROJECT** (CA-2022) **VARIOUS MUNICIPALITIES** 

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**UNION COUNTY NEW JERSEY** UNIOCTY22.010

CONSTRUCTION DETAILS I - III

## A. Legal

- A1. The most current editions of The Standard Specifications for Road and Bridge Construction, Standard Inputs, and Standard Details, as published by the New Jersey Department of Transportation (NJDOT), the Plans, Technical Specifications, Advertisement, Contractor's Proposal and including but not limited to the amendments contained hereinafter shall comprise the Contract Documents. The Contractor shall read and understand the project specifications prior to construction. The municipality is under the jurisdiction of the state central law and the government.
- A2. The Contractor shall visit the site and familiarize himself with the existing conditions prior to submitting his bid. Any discrepancies between these plans and the actual conditions at the site shall be immediately reported to the Professional Engineer.
- A3. The Contractor shall comply with all laws, ordinances, rules, orders and regulations relating to the performance of the work, the protection of adjacent property and the maintenance of passageways.
- A4. The Contractor's attention is directed to the safety requirements as outlined in the General Conditions of the Construction Specifications. Neither the Engineer nor the Owner shall be held responsibility and/or liable for the safety of the work site. The Contractor is responsible for maintaining a safe work site at all times.
- A5. The Contractor is responsible to obey all the safety and health regulations. The Owner assumes no responsibility for the health and safety of the work

### B. Site Clearing and Construction

- B1. The Contractor shall obtain all required local, County, State, Federal opening permits and shall bare the cost of all accompanying fees. All permits must be secured prior to the commencement of work.
- B2. Whenever a question arises regarding the specifications or drawings or any supplementary drawings or instructions of the Field Engineer, same shall be immediately brought to the attention of the Professional Engineer responsible for the design.
- B3. One copy of the approved construction plans and specifications furnished to the Contractor must be kept on the project site. All work and materials necessary for the completion of the work according to the intent and meaning of the Contract Documents, shall be furnished, performed and done in accordance with the specifications and plans. Any conflict or inconsistency between the plans and specifications, or any discrepancy between the figures and scale of drawings shall be submitted by the Contractor to the Engineer, whose decision thereon shall be final. The decision of the Engineer as to which specification will govern will be final.
- B4. The Contractor is responsible to construct the project in accordance with the contract documents. All proposed field changes must be approved in writing by the Professional Engineer responsible for the design (Project Manager, PE) prior to the construction of any field changes.
- B5. All information shown or noted for existing facilities, grades, roadways and materials is approximate. The Contractor shall be responsible to verify all information which may affect his work.
- B6. All disturbed shrubs, fencing, walkways, signs, mailboxes, driveways, etc., shall be restored to their original condition and to the satisfaction of the Engineer and/or the Owner. No separate payment shall be made for this restoration work unless same is clearly specified elsewhere in the construction documents. The Contractor shall take prudent measures to protect all existing property evidence (monuments, iron pipe, pins, etc.) during construction.
- B7. All property corners or monuments removed or damaged during construction shall be replaced by a NJ Licensed Land surveyor at no additional cost to
- B8. Reconstructed curb shall be installed to match existing curb elevations and alignment unless otherwise specified on grading plans, profiles or cross sections. Separate payment will not be made for removal of existing curb in reconstructed areas. Payment for the removal of existing curb shall be included in the unit price bid for the Curb line item.
- B9. The Contractor shall sawcut and repair the pavement adjacent to newly constructed curb prior to proceeding on to subsequent stages of work. Curb trenches will not be left open overnight in areas where the roadway is to be opened to traffic. No separate payment will be given for such said sawcutting and restoration, the cost of which shall be included in the unit price bid for the Curb line item.
- B10. All asphalt material removed from the project must be transported to an approved recycling center and the tonnage certified to the Owner. No separate payment will be made for this work but shall be included in the various items in the proposal.
- B11. The Contractor shall be responsible for the disposal of all excess materials excavated, whatever nature, at his own expense. The Owner is not obligated to supply a disposal site. The Contractor must not deposit the excess materials within the municipal limits without express permission of the Professional Engineer. Excavated material may not be stored on site and shall be removed at the end of each day.
- B12. All excavated materials are to be disposed of in accordance with approved NJDOT/NJDEP methods and means, or transported at the direction of the Owner.
- B13. All disturbed areas outside the project limits or not intended to be included in this project, shall be restored to their original condition, and to the satisfaction of the Owner. No separate payment shall be made for this restoration, unless specified elsewhere.
- B14. The Contractor must provide a smooth sawcut edge in all cases where proposed pavement of whatever nature, concrete curbs or concrete sidewalks abut existing pavements, curbs or sidewalks. No separate payment will be made for sawcutting. The cost shall be included in the various items in the
- B15. The Contractor may discover that existing roadway may contain existing concrete base or cobble stone and shall make all necessary requirements for its removal where required. The cost for this work shall be included in the cost of Roadway Excavation, Unclassified.
- B16. The replacement of any sidewalk within the project area may require that sidewalk slabs be sawcut from the surrounding concrete walk. No specific payment for saw cutting will be made and therefore shall be included under prices bid for concrete sidewalk items in the proposal.
- B17. As part of this Contract, the Contractor is required to prepare the existing pavement and seal all cracks and joints per Section 404 of the NJDOT Specifications prior to resurfacing. This work shall include, but is not limited to, all labor, materials and equipment necessary to clean cracks prior to the installation of surface course and apply a sealant as outlined in the NJDOT Specification. Prior to commencement, the Contractor shall obtain approval from the Professional Engineer as to the intended methods and materials that will be used for this project. This item shall not be measured for payment, but the cost thereof shall be included in the unit price bids for the Hot Mix Asphalt Surface Course line item.
- B18. No construction, maintenance or utility work on, under or above the project road that will obstruct, interfere with and/or detour traffic on the road, shall be performed before the hour of 9:00 AM or after 4:00 PM. The Contractor's work hours shall conform to local Ordinance requirements.
- B19. All trenches in the existing pavement shall be saw cut. No separate payment will be made for saw cutting and the cost thereof shall be included under prices bid for various items in the proposal.
- B20. The Contractor shall be responsible for restoration and maintenance of all access driveways at all times during construction at no additional cost to the
- B21. All sediment and soil erosion control practices are to be installed in conformance with Soil Conservation District standards prior to any major soil disturbances. All work shall be completed in proper sequence and all erosion control devices shall be maintained until permanent protection is established.
- B22. Contractor shall maintain access to all properties at all times during construction.
- B23. The Contractor shall take all necessary measures to maintain dust control as required or directed by the Professional Engineer. All vehicles shall be clean and all roadways shall be maintained as directed by the Field Engineer.

| J.V. | J.V. | D.A

B24. Contractor shall keep the site clean at all times and sweep the street at the end of each work day.

REVISIONS

REVISED PER NJDOT COMMENT LETTER

ISSUED FOR BID

2023/03/20

2023/05/16

## B. Site Clearing and Construction/Cont.

- B25. All material encountered within the work zone area that must be removed to construct the project as directed by the Field Engineer, shall be included in the unit price bid for Clearing Site. This is inclusive of but not limited to the removal of all curbed edging and concrete gutter.
- B26. All trees are to be saved and protected from harm during construction with the exception of the trees marked with an X on the construction plans. If any trees are damaged during construction, the Contractor will be responsible for the removal and replacement as determined by the Municipality.
- B27. All trees to be removed shall be marked by the Contractor and approved by the Owner before any tree removal commences. Each Tree designated for removal shall be completely removed, except for stumps that cannot be removed by grubbing which shall be grinded to twelve (12) inches below the existing ground surface.
- B28. The Contractor shall install protective blocking, bracing or sheeting to support any exposed gas, water, sanitary, telecommunications, or electric utilities in accordance with the respective utility company's regulations.
- B29. The Contractor shall be responsible for tapering proposed work to meet existing conditions in a uniform manner.

## C. Utility Permits

- C1. Prior to the start of construction, the Contractor shall have all underground utilities located and physically marked out within the limits of the project (call 1-800-272-1000). The Contractor shall provide test holes in areas of possible conflict to verify the depth and location of the utility. No separate payment shall be made for delays that may be necessary to relocate utilities or the proposed location of underground utilities. No separate payment will be made for test pits but the cost shall be included in the various items in the proposal.
- C2. Location and depth of existing utilities are only indicated to bring attention to possible conflicts. Any damage to utilities shall be the sole responsibility of the Contractor and all costs for repairs shall be borne by the Contractor.
- C3. Any damage to utilities shall be the sole responsibility of the Contractor and all costs for repair shall be borne by the Contractor. All disturbed or damaged walkways, signs, curbing, trees, hydrants, utilities, paved surfaces, driveways, building facades, etc. shall be restored to their original condition and to the satisfaction of the Owner. No separate payment will be made for this restoration unless specified elsewhere in the Contract.
- C4. The locations of utilities shown are approximate. The Contractor is responsible for verifying the exact locations of the utilities prior to the start of
- C5. All gas and water valves and various manholes to remain shall be reset to finish grade.
- C6. The Contractor shall coordinate his work with the public utility companies. Electric, telephone, gas & cable utility manhole castings and valve box covers shall be reset by the respective utility companies.
- C7. Private utility companies must be contacted by the Contractor so that privately owned castings will be reset as required.
- C8. Water service valve boxes, gas service valve boxes, junction boxes, electric boxes, basement vault doors and all other appurtenances located in the sidewalk area shall be reset to the new sidewalk elevation. The cost for resetting any and all of these castings shall not be paid separately but shall be included in the various concrete sidewalk line items in the proposal.
- C9. The Contractor is responsible for accurately locating existing traffic signal loop detector and leads. The Contractor will only be compensated for the replacement of loop detectors and leads which have been removed at the direction of the Professional Engineer. The Contractor shall not remove loop detectors and leads unless he is directed to do so by the Professional Engineer.
- C10. Trenches shall be backfilled without delay. Open excavations shall be kept to a minimum and made safe at all times. All trenches shall be adequately compacted by approved methods and with materials approved by the Field Engineer. Any trench settlement shall be immediately brought to grade and temporary paving shall be placed where required. No trench (including curbs) shall be left open overnight.
- C11. The Contractor shall provide and maintain temporary ramps around all exposed utility castings, both public and private which have been uncovered during construction.

- D1. The Contractor is responsible to clean and maintain all existing drainage structures prior to the start of construction within the project limits.
- D2. All existing storm sewer pipes within project limits must be cleaned by the Contractor after completion of construction. The cost for cleaning shall not be paid separately but shall be included in the various drainage items in the proposal.
- D3. All roof leaders and curb drains are to remain free flowing, during construction.
- D4. All roof drain pipes in curb/sidewalk area to be maintained and reconnected, and shall be extended under the sidewalk and through the curb.
- D5. All inlets, manholes and vault castings to be reset shall be reset to the proposed finished grade as directed by the Field Engineer. These castings must be reset flush to the proposed grade and the new pavement shall not be mounded up or feathered down to meet these castings. All castings reset to the improper grade or not to the satisfaction of the Field Engineer shall be reset to the new grade at no additional expense to the Owner.
- D6. Existing grates are the property of the Municipality or utility authority and will be delivered, at no additional cost to the Owner, to the local Department of Public Works or utility authority yard. Payment will not be made for new grates unless the existing grates are returned to the Owner.
- D7. All open drainage excavations shall be backfilled at the end of each day and protected from pedestrian and vehicular traffic.
- D8. The Contractor will be responsible for maintaining positive drainage during and after construction. If a situation arises where water will pond at a particular location, the Professional Engineer responsible for the design must be notified immediately in order to make corrective measures in writing.
- D9. The Contractor is fully responsible for verifying that all proposed storm sewer connections are to the existing storm sewer systems.

## E. Traffic Control

E1. The Contractor shall be responsible for coordination of traffic control measures.

PROFESSIONAL ENGINEER

N.J. LICENSE NO. 41635

- E2. Maintenance and Protection of Pedestrian Traffic Control must conform to NJDOT and MUTCD standards along with the requirements of the municipality. Police Traffic Directors shall be coordinated with the municipality, as needed.
- E3. The Contractor shall be responsible to prepare a detour plan as needed or required by the Owner and/or local Police department for review and approval prior to starting work.

## <u>F. Signs</u>

- F1. Any signs located within the sidewalk areas should be reset/relocated in accordance with the standard NJDOT Standard Details. Separate payment will not be made for resetting objects located in the sidewalk. The cost shall be included in the unit price bid for the replacement of sidewalks, unless payment for such work is specified in the proposal.
- F2. The Contractor shall relocate/reset signs as shown on the plans or directed by the Professional Engineer. No separate payment will be made for this work but the cost shall be included in the various items in the proposal.
- F3. Signs for parking prohibition must be posted at least 48 hours in advance of construction. Contractor shall coordinate, obtain and place signs as directed by the Owner.

### G. Survey

- G1. Layout of all work shall be adjusted in the field to meet site conditions as approved in writing by the Professional Engineer responsible for the design.
- G2. The Contractor is responsible to layout all new work prior to construction for Field Engineer's approval. Any locations not approved by the Field Engineer and installed by the Contractor shall be removed and replaced as per the Field Engineer's instructions at no additional cost to the Owner.
- G3. All layout work shall be done by a New Jersey Licensed Land Surveyor.
- G4. All existing locations taken from a survey prepared by Neglia Engineering Associates.

## H. Trees

- H1. Contractor must retain a certified tree expert for tree evaluation where necessary. No additional payment will be made for tree expert; price to be included in site clearing.
- H2. All trees that have roots that encroach into the proposed curbs or pavement and are to be saved shall be evaluated by the Contractor's certified tree expert. All evaluations shall be in writing and shall accurately identify the tree in question by station and offset (left or right). All evaluations shall be submitted to the Professional Engineer for review and consultation with the Municipalities tree experts prior to cutting any roots. No separate payment will be made for this work but the cost thereof shall be included in the clearing site item.
- H3. Trees that are to be saved, where it is determined that root cutting may severely damage the tree, shall have a curb break and steel curb face plates installed as shown on the details.
- H4. The Contractor is responsible for the timely evaluation of all trees and there will not be change orders for delays resulting from root cutting.
- H5. In areas where the roots encroach into the curb line, the full pavement section shall be removed prior to removing the curb. Then the existing curb shall be removed by pulling it away from the tree towards the roadway to minimize root damage during the removal of the existing curb. No separate payment shall be made for this work but the cost thereof shall be included in the Clearing Site line item.

### I. ADA Requirements

- 11. The Contractor shall be fully responsible for complying with NJDOT and ADA requirements related to the installation of handicap accessible ramps and the associated slopes. The ramps and alignments illustrated on these plans shall be used for schematic purposes only. The Contractor shall be fully responsible for proper construction and alignment in the field.
- 12. It is the Contractor's responsibility to verify that the proposed drop curb ramps meet current NJDOT and ADA Standards. Those ramps that do not meet standards, once constructed, shall be replaced to meet said standards at no additional cost to the owner,
- 13. The Contractor is responsible for determining the extent of improvements required for those ramp locations identified and completing said work to ensure ramps are in conformance with current NJDOT and ADA Standards.
- 14. Contractor shall not begin site clearing operations on a ramp until he verifies that ramp can be constructed to comply with applicable standards. The Contractor shall be responsible for all corrections to a ramp should he proceed with demolition prior to confirmation of constructability at no additional cost to the owner.

## STANDARD PLAN LEGEND

#### **EXISTING CONDITIONS** WATER VALVE JUNCTION BOX GAS VALVE UTILITY POLE CLEAN OUT 0 FIRE HYDRANT MANHOLE CURB LINE DEPRESSED CURB DRAINAGE MANHOLE RAILROAD TIE CURB OR WALL GAS MAIN WATER MAIN \_\_\_\_\_ w \_\_\_\_ UNDERGROUND ELECTRIC LINE ROOF DRAIN AT CURB UNDERGROUND TELEPHONE LINE UNDERGROUND FIBER OPTIC LINE EDGE OF PAVEMENT

=====

SANITARY SEWER / STORM PIPE

## PROPOSED CONDITIONS

RESET VALVES & CLEANOUTS

LANDSCAPED AREA

RESET MANHOLE CASTING

RESET INLET

RECONSTRUCT INLET

PROPOSED DEPRESSED CURB PROPOSED CURB

LIMIT OF CONSTRUCTION

## PROPOSED HATCHING

MILLING AND RESURFACING

BRICK PAVERS

HOT MIX ASPHALT WALKWAY

## PAVEMENT MARKING STANDARD

UNLESS OTHERWISE SHOWN, PAVEMENT MARKINGS

CONCRETE SIDEWALK

CENTER LINES \_\_\_\_\_ 4" WIDE DOUBLE YELLOW LINE

LANE LINE \_\_\_\_\_\_ 4" WIDE WHITE LINE

SHOULD CONFORM TO THE FOLLOWING:

CROSSWALK LINES \_\_\_\_\_ 8" WIDE WHITE LINE

STOP LINE \_\_\_\_\_\_ 24" WIDE WHITE LINE HATCHING \_\_\_\_\_\_ 24" WIDE WHITE LINE

PARKING STALL \_\_\_\_\_\_ 6" WIDE WHITE LINE

HANDICAP STALL \_\_\_\_\_ 6" WIDE BLUE LINE

CONTROL DEVICES.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC

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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

**2023 ROAD RESURFACING PROJECT** (CA-2022)

SCALE: N.T.S.

GENERAL NOTES AND STANDARD LEGEND

UNION COUNTY

**NEW JERSEY** 

UNIOCTY22.010

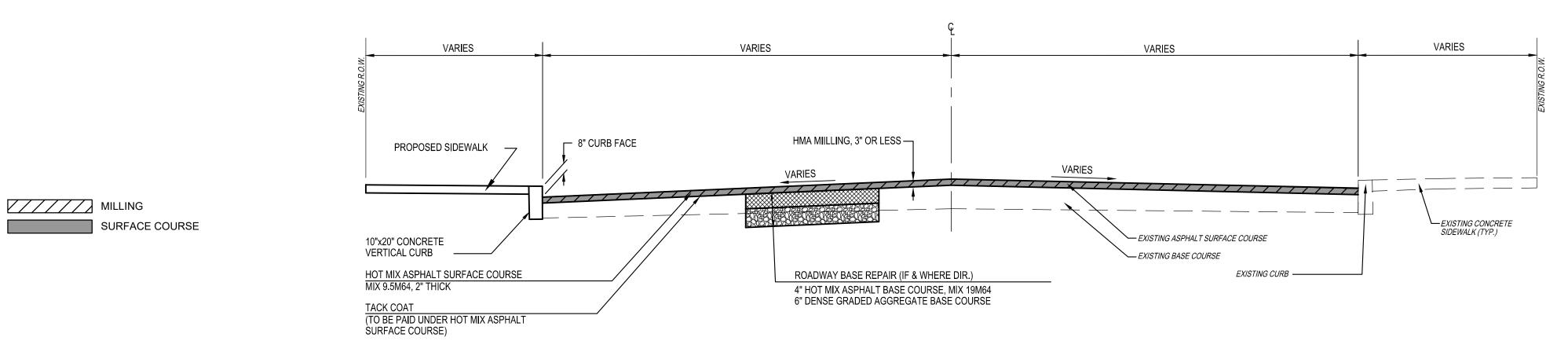
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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

PROFESSIONAL ENGINEER PROFESSIONAL LAND SURVEYOR PROFESSIONAL PLANNER N. L. LICENSE NO. 331 100569800 N.J. LICENSE NO. 38604 N. LUCENSE NO. 38604

PROFESSIONAL ENGINEER

ESTIMATE OF QUANTITIES							
ITEM	DESCRIPTION	APP	ROX.				
NO	DESCRIPTION	QTY	UNIT				
1	PORTABLE VARIABLE MESSAGE SIGN	4	UNIT				
2	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	2	UNIT				
3	BREAKAWAY BARRICADE	100	UNIT				
4	DRUM	100	UNIT				
5	TRAFFIC CONE	1,000	UNIT				
6	CONSTRUCTION SIGNS	2,400	S.F.				
7	TRAFFIC DIRECTOR, FLAGGER	500	HOUR				
8	TRAFFIC DIRECTOR, UNIFORM POLICE	1	ALLOW.				
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	635	CY				
10	HMA MILLING, 3" OR LESS	250,497	SY				
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	500	CY				
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	37,595	SY				
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	28,760	TON				
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	1,470	TON				
15	FUEL PRICE ADJUSTMENT	1	DOLL.				
16	ASPHALT PRICE ADJUSTMENT	1	DOLL.				
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	750	SY				
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	500	LF				
19	CURB PIECE	27	UNIT				
20	BICYCLE SAFE GRATE	18	UNIT				
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	661	UNIT				
22	RESET WATER VALVE BOX	254	UNIT				
23	INLET, TYPE B	1	UNIT				
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	3	UNIT				
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	43	UNIT				
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	25	UNIT				
27	10"X20" CONCRETE VERTICAL CURB	6,765	LF				
28	GRANITE CURB	420	LF				
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	855	SY				
30	CONCRETE SIDEWALK, 4" THICK	1,345	SY				
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	1,080	SY				
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	164	SY				
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	55	SY				
34	TRAFFIC STRIPES, 4"	135,635	LF				
35	TRAFFIC STRIPES, 6"	11,525	LF				
36	TRAFFIC STRIPES, 8"	14,835	LF				
37	TRAFFIC MARKINGS, SYMBOLS	6,750	SF				
38	TRAFFIC MARKING, LINES, 12"	20,045	LF				
39	TRAFFIC MARKING, LINES, 24"	3,455	LF				
40	REGULATORY AND WARNING SIGN	320	SF				
41	SOLAR FLASHING LED CROSSING SIGN	2	UNIT				
42	RPM, MONO-DIRECTIONAL, AMBER LENS	100	UNIT				
43	RPM, BI-DIRECTIONAL, AMBER LENS	1,000	UNIT				
44	TOPSOIL SPREADING, 4" THICK	2,810	SY				
45	FERTILIZING AND SEEDING, TYPE A	2,810	SY				
46	STRAW MULCHING	2,810	SY				
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	85,000	LF				
48	CLEARING SITE	1	LS				
49	FINAL CLEANUP	1	LS				

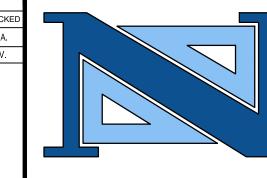


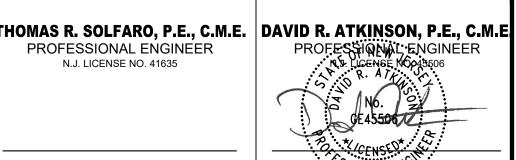
## **TYPICAL ROAD SECTION**

NOT TO SCALE

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REVISIONS 2023/03/20 REVISED PER NJDOT COMMENT LETTER J.V. J.V. D.A. 2023/05/16 ISSUED FOR BID





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PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**QUANTITIES & TYPICAL ROAD SECTION 2023 ROAD RESURFACING PROJECT** (CA-2022)
VARIOUS MUNICIPALITIES **NEW JERSEY UNION COUNTY** 

 NO SEPARATE PAYMENT WILL BE MADE FOR TACK COAT AND PRIME COAT. THE COST FOR ALL LABOR, EQUIPMENT, AND MATERIALS ASSOCIATED THEREWITH SHALL BE INCLUDED IN THE UNIT PRICE FOR VARIOUS BITUMINOUS PAYMENT ITEMS. TACK COAT

SECTION 401.03.06 OF THE 2019 NJDOT SPECIFICATIONS.

SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 401.03.05 OF THE 2019 NJDOT SPECIFICATIONS. PRIME COAT SHALL BE CONSTRUCTED IN ACCORDANCE WITH

WHERE PROPOSED PAVEMENT ABUTS EXISTING PAVEMENT, A CLEAN JOINT SHALL BE

COSTS FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE

ASPHALT DRIVEWAYS SHALL CONSIST OF 2" HOT MIX ASPHALT SURFACE COURSE AND

IN THE UNIT PRICE BID FOR HOT MIX ASPHALT DRIVEWAY REPAIR.

CONTRACTOR TO COORDINATE CURB GRADES WITH DESIGN ENGINEER DURING

4" HOT MIX ASPHALT BASE COURSE. THE COSTS FOR THIS WORK SHALL BE INCLUDED

PROVIDED USING SAWCUTTING METHODS AND APPROPRIATE BUTT JOINTS. THE

NOTES:

PROPOSAL.

CONSTRUCTION.

3.00 UNIOCTY22.010 SCALE: N.T.S.

## TOWN OF WESTFIELD

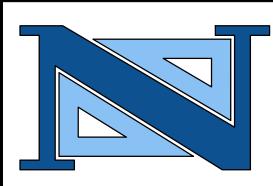
							ADA R	AMPS					
				CURB RAN	1P LAYOUT					QUAN <sup>-</sup>	TITIES		
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
2+75	LT	1			Χ		30				5	1	20
2+75	RT	1			Х		25				5	1	15
3+17	LT	1			Х		30				5	1	15
3+17	RT	1			Х		25				5	1	10
10+71	LT	1	Х				30				5	1	10
10+72	RT	1			Х		30				5	1	25
11+32	RT	1			Х		25				5	1	15
14+51	RT	6	Х				30				10	1	15
20+12	RT	4	Х				35				10	1	15

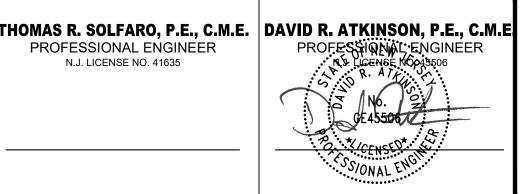
INLET TYPES & LOCATIONS									
			QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET			
1+82	LT	А				Х			
2+52	LT	А				Х			
2+62	LT	В	Х	Χ		Х			
2+78	RT	В				X			
2+80	LT	В	Х	Χ		Х			
5+11	LT	В		Χ		Х			
5+50	RT	В	Х	Х		Х			
5+81	LT	В	Х	Х		Х			
6+43	LT	В	Х	Х		Х			
8+48	LT	В				Х			
8+65	RT	В				Х			
13+79	LT	В		_		Х			
19+29	LT	В				Х			
18+65	LT	В				Х			
24+12	RT	В	Х			Х			

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	13,670
44	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	0)/	,
11	DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	SY	2,050
12	& WHERE DIRECTED)	31	2,050
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,580
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	80
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	6
20	BICYCLE SAFE GRATE	UNIT	6
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	74
22	RESET WATER VALVE BOX	UNIT	23
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	280
28	GRANITE CURB	LF	190
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	140
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	55
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	9
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	6,615
35	TRAFFIC STRIPES, 6"	LF	1,465
36	TRAFFIC STRIPES, 8"	LF	1,300
37	TRAFFIC MARKINGS, SYMBOLS	SF	620
38	TRAFFIC MARKING, LINES, 12"	LF	1,665
39	TRAFFIC MARKING, LINES, 24"	LF	425
40	REGULATORY AND WARNING SIGN	SF	20
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
<b>4</b> 6	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





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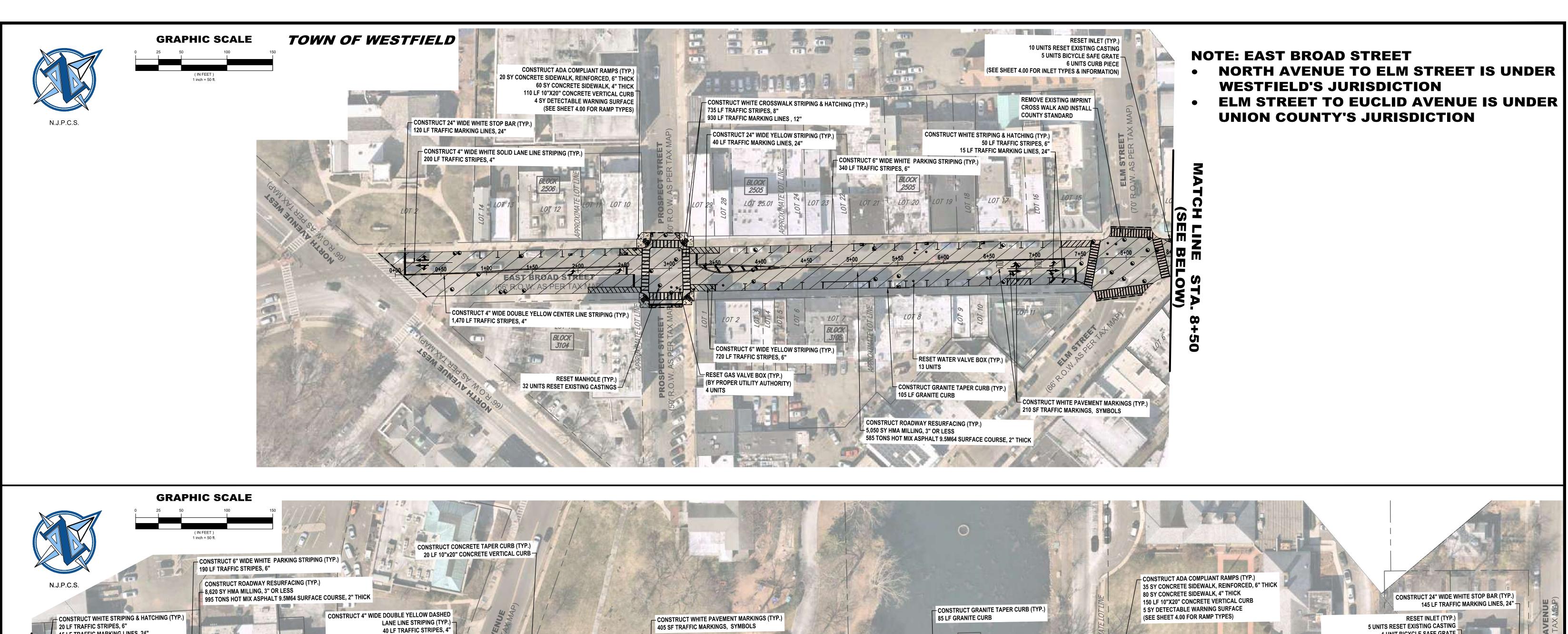
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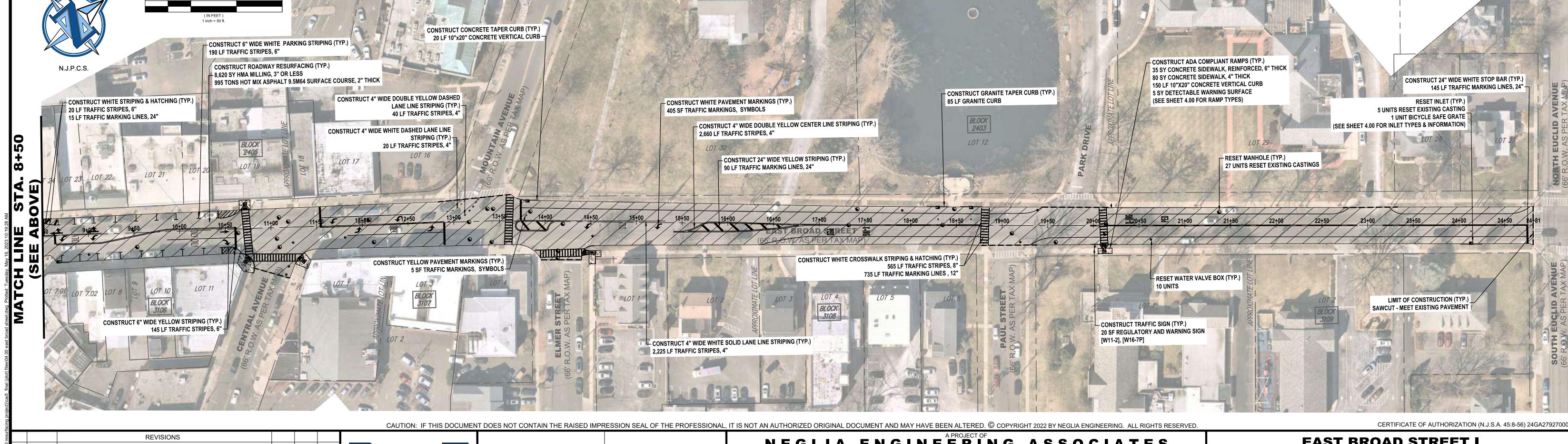
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

		REET QUANTITY SHEET					
2023 ROAD RESURFACING PROJECT							
	(CA-2022)						
	TOWN O	F WESTFIELD					
UNION	COUNTY	<b>NEW JERSEY</b>					
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.: 4.00					
DESIGNED BY: J.V.	SCALE:	UNIOCTY22.010 <b>4.00</b>					
FIELD BOOK NO.:	PAGE:	DATE: DECEMBER 1, 2022					





**NEW JERSEY** 

4.01

NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE **EAST BROAD STREET I** IOMAS R. SOLFARO, P.E., C.M.E. | DAVID R. ATKINSON, P.E., C.M.E **2023 ROAD RESURFACING PROJECT** PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635 REVISED PER NJDOT COMMENT LETTER 2023/03/20 J.V. J.V. D.A. E-MAIL: NEA@NEGLIAENGINEERING.COM TEL: 201-939-8805 2023/05/16 ISSUED FOR BID (CA-2022) TOWN OF WESTFIELD MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 **UNION COUNTY** N.J. LICENSE NO. 33LI00569800 UNIOCTY22.010 SCALE: 1" = 50'

## CITY OF PLAINFIELD

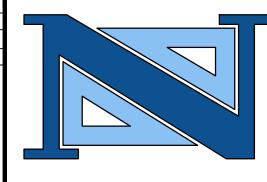
						ADA F	RAMPS					
			CURB RAMP LAYOUT		QUANTITIES							
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	I GRANITE CURB I	ESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALF 4" THICK
0+17	LT	1		X		20		15		5	1	
0+20	RT	1		X		20		10		5	1	
0+70	LT	1		X		25		20		5	1	
0+74	RT	1		X		20		10		5	1	
7+67	LT	1		Х		20				5	1	15
7+67	RT	1		X		20				5	1	15
8+33	LT	1		Х		20				5	1	15
8+33	RT	1		X		20				5	1	15
14+56	LT	1		X		20				5	1	10
14+56	RT	1	Х			20				10	1	15
14+98	LT	1		Х		20				10	1	15
19+85	RT	7		Х		25				10	1	10
19+97	LT	1		X		25				10	1	15
20+37	LT	1		X		25				15	1	10
20+48	RT	1		X		30				10	1	10
34+26	RT	1		X		20				10	1	10
34+66	RT	6	X			25				5	1	10
41+07	LT	1		X		20				10	1	10
50+94	RT	1		X		20				5	1	10
51+42	RT	6	X			20				10	1	10
54+87	RT	6	X			20				5	1	5
55+33	RT	6	X			20				10	1	10
58+85	RT	1		X		20				10	1	5
59+09	LT	6	X			15				5	1	5
59+47	LT	1		X		15				10	1	10
64+85	RT	1		X		15				10	1	10
64+91	LT	1		X		25				5	1	10
65+33	RT	1		X		20				10	1	5
65+42	LT	1		X		25				10	1	10
68+41	RT	1		X		15				5	1	10
68+76	RT	1		X		20				5	1	10
68+95	LT	1		X		20				10	1	5
69+18	LT	<u>+</u>	X	, , , , , , , , , , , , , , , , , , ,		20				5	1	5
70+37	LT	<u>5</u>	X			20				5	1	5
70+37	LT	6	x			15				10	1	10
71+46	RT	1		X		20				5	1	10
71+48	LT	1	X			20				10	1	15
71+48	RT	1		X		20				5	1	10
74+51	RT	1		X		20	+			5	1	10
74+31	RT	<u>+</u>	X			20			1	5	1	5
85+26	RT	5	X			20				5	1	5
85+59	RT	<u>5</u>	X			20	+		+	5	1	10
86+12	LT	5	X			15				5	1	5
86+12	LT	5 5	X			15			+	5		
	<u> </u>		+						+		1	10
88+97	LT	5	X			15				5	1	5
89+31	LT	5	X	V		20				5	1	5
91+89	LT LT	1 1		X X		20			-	5	1 1	5 10

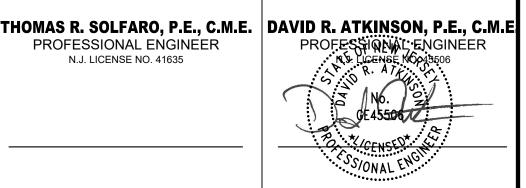
		INLET TYP	PES & LOCAT	TIONS		
				NTITY		
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
0+20	LT	Α				Х
0+22	RT	Α				Х
0+81	LT	В				Х
0+87	RT	В				Х
3+83	RT	В				Х
4+49	RT	В				Х
15+10	RT	В				Х
20+74	RT	В				Х
23+76	RT	В				Х
35+77	RT	В				Х
48+64	LT	В				Х
65+45	RT	В				Х
65+56	LT	В				Х
92+40	LT	В				Х

	ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
	1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
	2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	ŲNIT	
	3	BREAKAWAY BARRICADE	UNIT	
	4	DRUM	UNIT	
	5	TRAFFIC CONE	UNIT	
	6	CONSTRUCTION SIGNS	SF	
	7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
F	8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
F	9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
	10	HMA MILLING, 3" OR LESS	SY	42,947
	11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	CY	12,011
	40	DIRECTED) HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	0)/	0.445
	12	& WHERE DIRECTED)	SY	6,445
	13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	4,955
	14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	250
	15	FUEL PRICE ADJUSTMENT	DOLL.	
	16	ASPHALT PRICE ADJUSTMENT	DOLL.	
	17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
	18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
	19	CURB PIECE	UNIT	
	20	BICYCLE SAFE GRATE	UNIT	
	21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	111
F	22	RESET WATER VALVE BOX	UNIT	27
F	23	INLET, TYPE B	UNIT	
	24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	2
	25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	37
H				31
F	26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	4.750
L	27	10" X 20" CONCRETE VERTICAL CURB	LF ·-	1,750
_	28	GRANITE CURB	LF	
	29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
L	30	CONCRETE SIDEWALK, 4" THICK	SY	415
L	31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	335
	32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	48
L	33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	55
L	34	TRAFFIC STRIPES, 4"	LF	27,890
	35	TRAFFIC STRIPES, 6"	LF	610
	36	TRAFFIC STRIPES, 8"	LF	3,115
	37	TRAFFIC MARKINGS, SYMBOLS	SF	520
	38	TRAFFIC MARKING, LINES, 12"	LF	4,070
	39	TRAFFIC MARKING, LINES, 24"	LF	310
	40	REGULATORY AND WARNING SIGN	SF	80
	41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
	42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
	<b>4</b> 3	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
	44	TOPSOIL SPREADING, 4" THICK	S.Y.	400
	45	FERTILIZING AND SEEDING, TYPE A	S.Y.	400
	<b>4</b> 6	STRAW MULCHING	S.Y.	400
	47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
	48	CLEARING SITE	L.S.	
	49	FINAL CLEANUP	L.S.	

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER 2023/05/16 ISSUED FOR BID





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

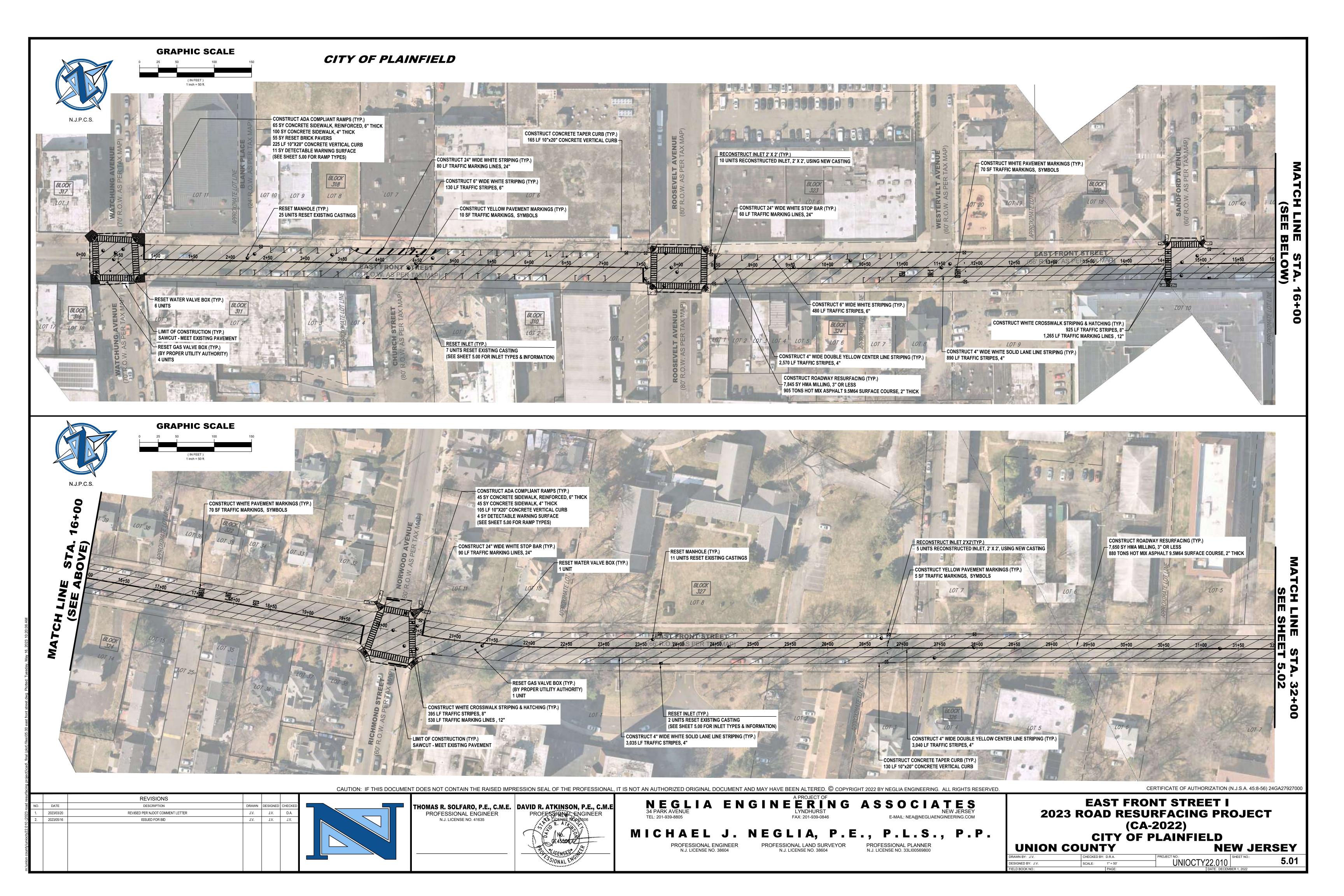
A PROJECT OF
LYNDHURST
FAX: 201-939-0846

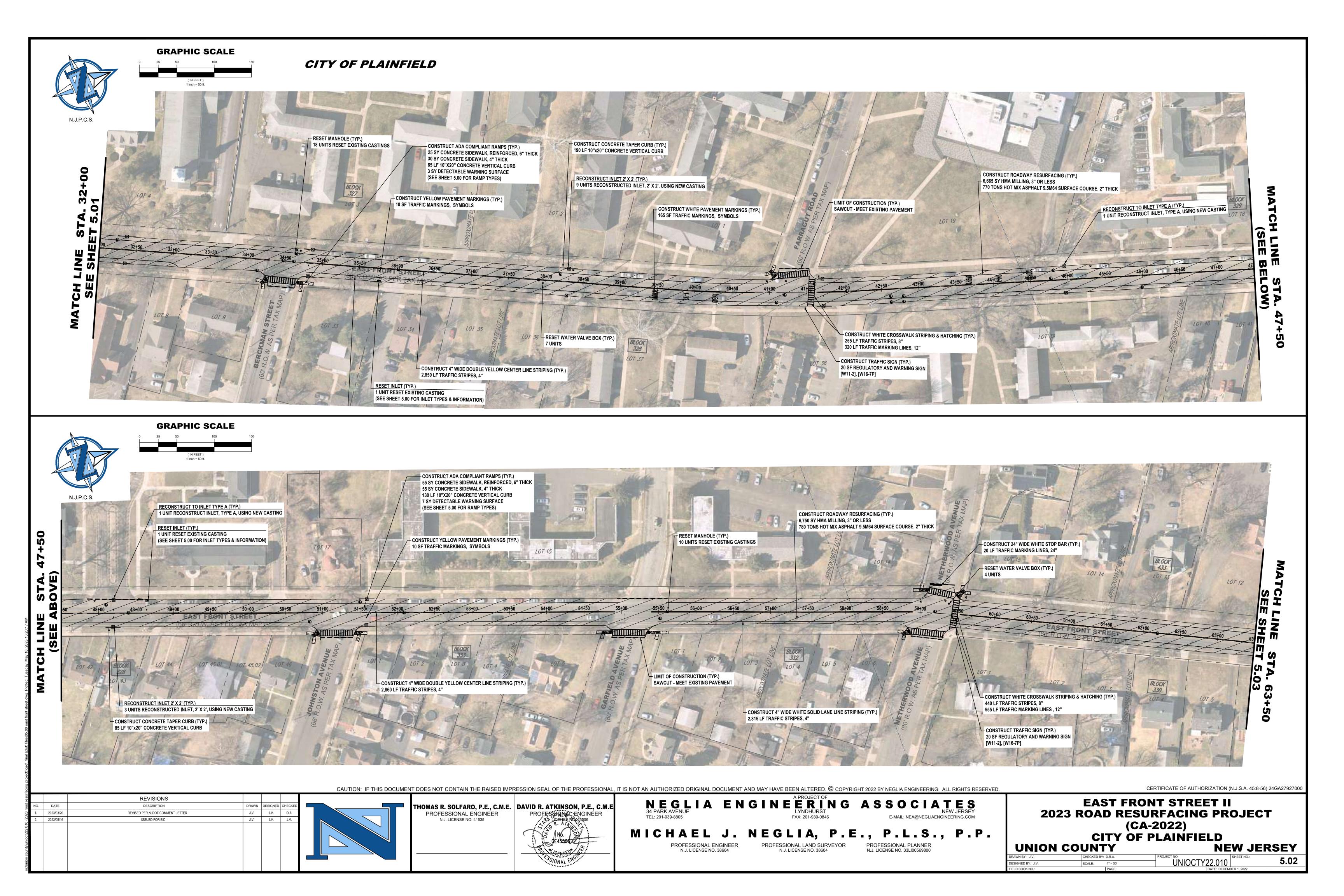
A SSOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

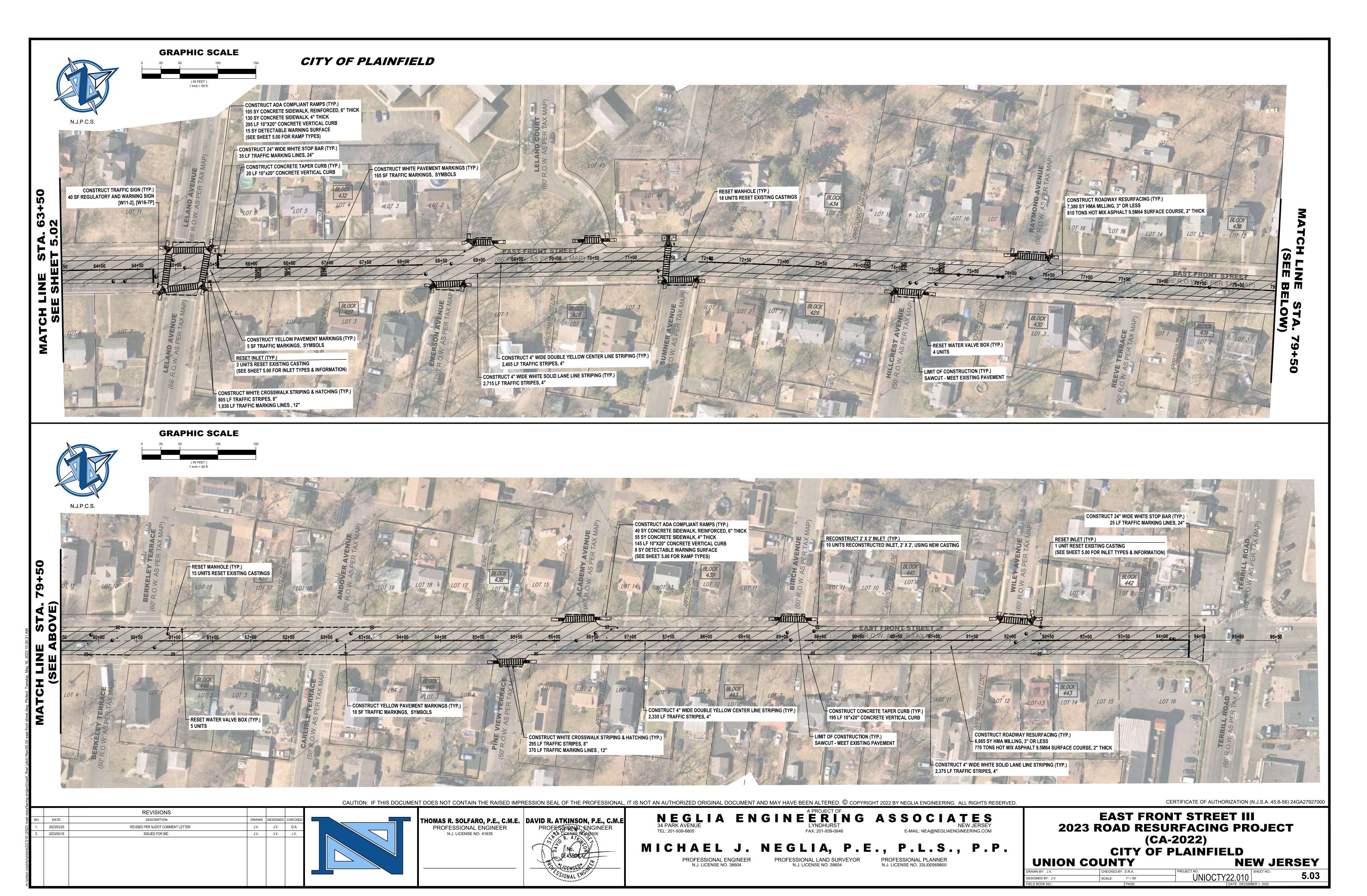
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

	23 ROAD RES	REET QUANTITY SHEET SURFACING PROJECT					
	(CA-2022) CITY OF PLAINFIELD						
UNION	COUNTY	<b>NEW JERSEY</b>					
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.: 5.00					
DESIGNED BY: J.V.	SCALE:	UNIOCTY22.010 <b>5.00</b>					
FIELD BOOK NO.:	PAGE:	DATE: DECEMBER 1, 2022					







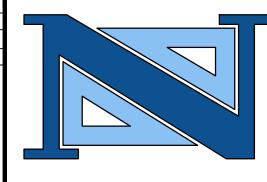
	ADA RAMPS													
			CURB RAMP LAYOUT			QUANTITIES								
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK	
5+21	LT	1	X				20				15	2	10	
24+18	LT	1			Х		25				5	1	5	
24+19	RT	1			Х		25				5	1	5	
24+60	RT	1			Х		25				10	1	5	
24+61	LT	1			Х		25				10	1	15	
37+97	LT	1			Х		20				5	1	10	
37+98	RT	1			Х		20				10	1	10	
38+39	LT	1			Х		20				10	1	10	
38+39	RT	1			Х		20				10	1	10	
42+56	LT	1			Х		25				5	1	5	
42+60	RT	1			Х		20				5	1	5	
43+00	RT	1			Х		25				5	1	10	
43+01	LT	1			Х		25				5	1	5	
52+16	LT	5	X				20				5	1	5	
52+19	RT	1			Х		20				5	1	5	
57+19	RT	3	X				25				5	1	10	
59+83	LT	3	X				20				5	1	10	
59+86	RT	3	Х				20				5	1	10	
68+90	LT	1			Х		15				5	1	10	
69+30	LT	5			Х		15				5	1	5	
74+51	RT	1			Х		15				10	1		
74+77	RT	1	X				15				5	1		
74+87	RT	1	Х				15				5	1		
75+02	LT	1	Х				15				5	1	5	

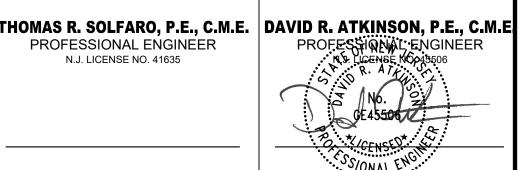
		INLET TYF	PES & LOCAT	TIONS		
				QUA	NTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
0+03	RT	В				Х
0+06	LT	В				Х
0+75	RT	В				Х
0+76	LT	В				Х
4+49	RT	В				Х
4+51	LT	В				Х
4+66	RT	В				Х
5+16	RT	В				Х
5+35	RT	В				Х
13+66	RT	В				Х
13+80	LT	В				Х
21+73	LT	В				Х
22+07	RT	А	Х			
22+18	LT	В				Х
24+71	RT	В				Х
24+72	LT	В				Х
29+31	LT	В				Х
33+16	LT	В				Х
33+18	RT	В				Х
37+87	LT	В				Х
37+87	RT	В				Х
38+53	LT	В				Х
43+11	LT	В	Х	Х		
47+72	RT	В				Х
47+73	LT	В				Х
52+33	RT	В		Х		Х
68+31	LT	В	Х	Х		
69+54	RT	В	Х	Х		
74+49	RT	Α	Х			
74+90	LT	В		Х		Х

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTI
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	31,055
	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	-	0.,000
11	DIRECTED)	CY	
	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF		
12	& WHERE DIRECTED)	SY	4,660
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	3,585
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	180
15	FUEL PRICE ADJUSTMENT	DOLL.	1
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	7
20	BICYCLE SAFE GRATE	UNIT	5
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	84
22	RESET WATER VALVE BOX	UNIT	39
23	INLET, TYPE B	UNIT	39
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	5
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	<del>                                     </del>
27	10" X 20" CONCRETE VERTICAL CURB	LF	945
28	GRANITE CURB	LF	940
29		SY	
	HOT MIX ASPHALT SIDEWALK, 2" THICK		165
30	CONCRETE SIDEWALK, 4" THICK	SY	
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	160
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	25
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	00.00
34	TRAFFIC STRIPES, 4"	LF	20,93
35	TRAFFIC STRIPES, 6"	LF	580
36	TRAFFIC STRIPES, 8"	LF	2,620
37	TRAFFIC MARKINGS, SYMBOLS	SF	795
38	TRAFFIC MARKING, LINES, 12"	LF	3,190
39	TRAFFIC MARKING, LINES, 24"	LF	200
40	REGULATORY AND WARNING SIGN	SF	20
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	250
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	250
46	STRAW MULCHING	S.Y.	250
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
LYNDHURST
FAX: 201-939-0846

A SSOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

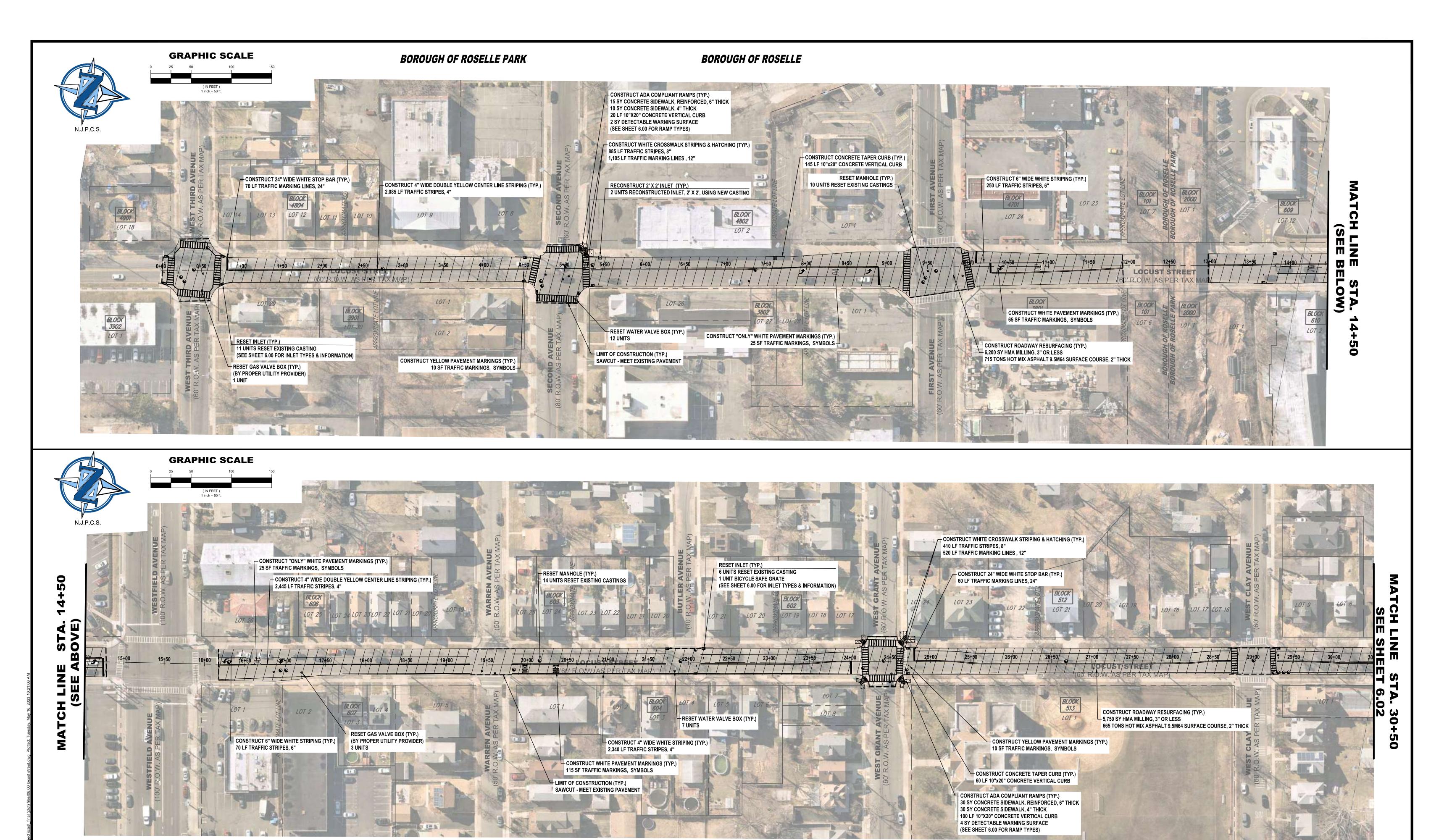
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

LOCUST STREET, TUCKER AVENUE & FREEMAN CIRCLE QUANTITY SHEET
2023 ROAD RESURFACING PROJECT
(CA-2022)

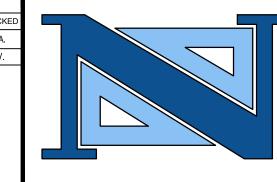
BOROUGH OF ROSELLE PARK / BOROUGH OF ROSELLE / TOWNSHIP OF UNION UNION COUNTY NEW JERSEY PROJECT NO.:

UNIOCTY22.010

DATE: DECEMBER 1, 202



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oad	NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED
(2023 r	1.	2023/03/20	REVISED PER NJDOT COMMENT LETTER	J.V.	J.V.	D.A.
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HOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
OF THE PROFESSION OF THE

NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
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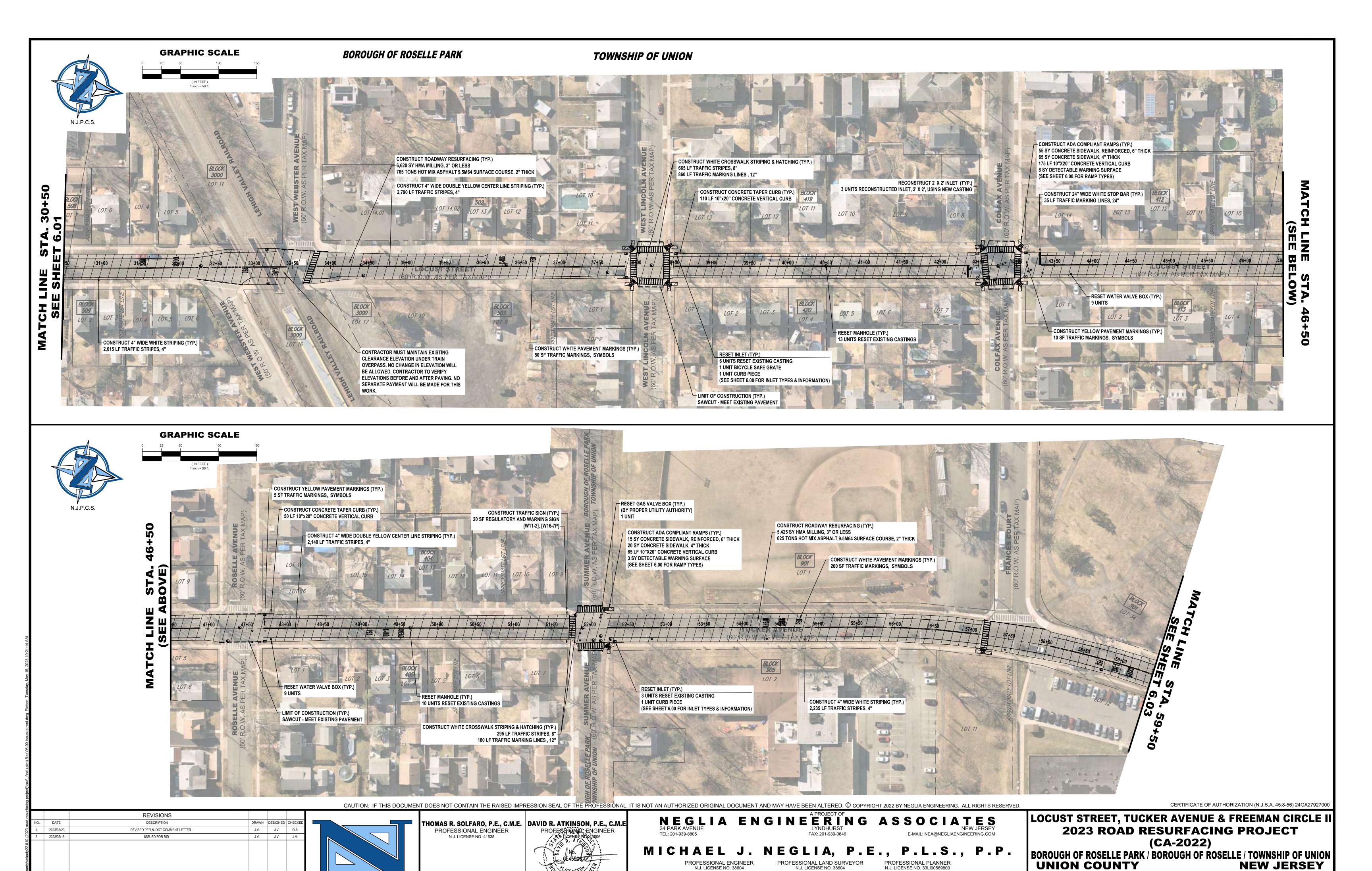
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

LOCUST STREET, TUCKER AVENUE & FREEMAN CIRCLE **2023 ROAD RESURFACING PROJECT** (CA-2022)

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

BOROUGH OF ROSELLE PARK / BOROUGH OF ROSELLE / TOWNSHIP OF UNION **UNION COUNTY NEW JERSEY** 6.01 UNIOCTY22.010

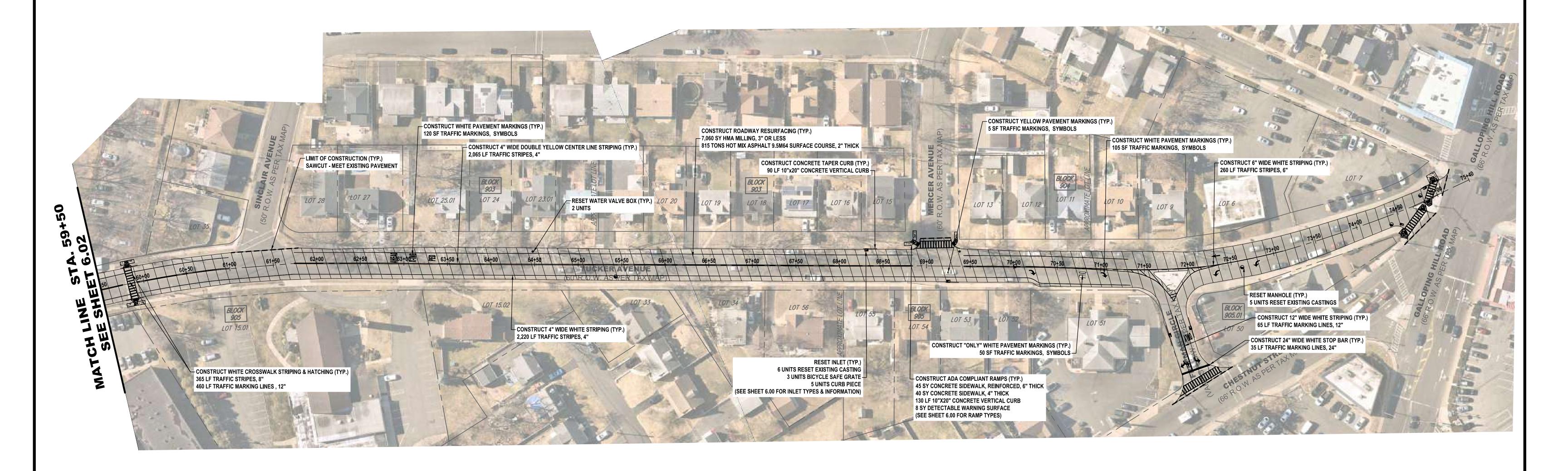


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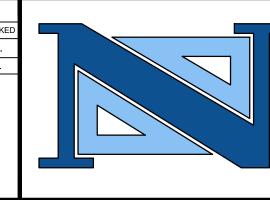
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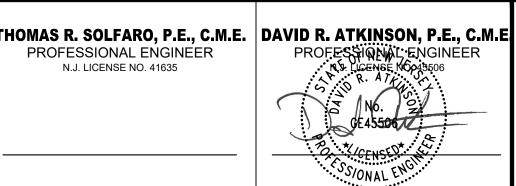
SCALE: 1" = 50'

## TOWNSHIP OF UNION



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NEGLIA ENGINEERING ASSOCIATES
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A PROJECT OF
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FAX: 201-939-0846

A SSOCIATES
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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000 LOCUST STREET, TUCKER AVENUE & FREEMAN CIRCLE III

**2023 ROAD RESURFACING PROJECT** (CA-2022)

BOROUGH OF ROSE UNION CO			GH OF ROSEL		WNSHIP 0 W JER	
DRAWN BY: J.V.	CHECKED BY:	D.R.A.	PROJECT NO.:		SHEET NO.:	6.02
DESIGNED BY: J.V.	SCALE:	1" = 50'	UNIOCTY	<u> 22.010</u>		6.03
FIELD BOOK NO.:		PAGE:		DATE: DECEM	BER 1, 2022	

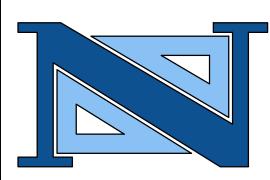
	ADA RAMPS													
				CURB RAM	1P LAYOUT					QUANT	TITIES			
STATION	OFFSET (LT/RT)		CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
6+34	LT	7			Х		30				10	1	10	
6+81	LT	7			Х		30				10	1	10	
9+45	RT	5	Х				20				10	1		
11+47	LT	1			Х		25				5	1	10	
11+57	RT	5	Х				20				10	1		
13+56	LT	5	Х				20				5	1	5	
13+97	LT	5	Х				20				5	1	5	
15+12	RT	5	Х				20				5	1	5	
15+55	RT	5	Х				20				5	1	5	
16+06	LT	5	X				15				5	1	5	
16+49	LT	5	Х				20				10	1		
18+56	LT	5	Х				20				10	1		
18+98	LT	5	Х				15				5	1	5	
19+82	RT	1			Х		30				5	1	10	
20+16	RT	1,5				Х	30				10	2	5	
20+29	LT	1	Х				20				5	1	10	
21+04	LT	5					20				5	1	5	
21+50	LT	1			Х		20				5	1	5	
23+61	LT	1			Х		20				5	1	10	
23+97	LT	1			Х		20				5	1	10	
30+47	LT	1			Х		20				5	1	5	
31+69	RT	1				X	35				10	2	25	
36+17	RT	7				X	30				10	2	5	
45+98	RT	5	Х				15				5	1	5	
46+39	RT	5	Х				20				5	1	5	
48+57	RT	5	Х				20				5	1	5	
48+94	RT	7			Х		20				5	1	10	
51+16	RT	7			Х		20				15	1	10	
51+31	LT	7			Х		25				10	1	10	
51+67	RT	7			Х		20				10	1	5	
51+86	LT	1			Х		25				5	1	10	
56+46	LT	5	Х				20				5	1	5	
56+85	LT	5	X				20				10	1	10	

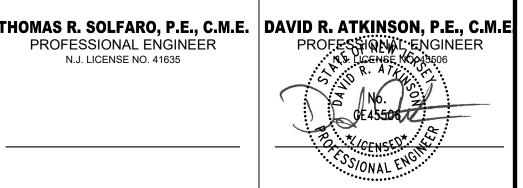
		INLET TYP	PES & LOCAT	TIONS		
				QUA	NTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
1+29	RT	В				Х
2+78	RT	В				Х
8+10	LT	В				Х
8+99	RT	В				Х
11+01	RT	В				Х
11+03	LT	Е				Х
13+48	LT	В				Х
14+94	RT	В				Х
16+02	LT	В				Х
18+51	LT	В				Х
19+73	RT	В				Х
21+02	LT	В				Х
21+80	LT	В				Х
21+82	RT	В				Х
23+51	LT	В				Х
24+06	LT	В				Х
26+10	LT	В				Х
30+42	LT	В				Х
30+53	LT	В		Х		Х
31+00	RT	В				Х
31+19	RT	В				Х
31+89	RT	В				Х
35+70	RT	В				Х
39+45	RT	В				Х
39+82	LT	В				Х
51+02	RT	В				Х
51+04	LT	В				Х
54+73	RT	В				Х
54+80	LT	В				Х
54+84	LT	В				Х
56+42	LT	В				Х
56+87	LT	В				х
60+63	LT	В				Х
60+82	RT	В				Х
61+14	LT	В				Х

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	31,515
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	4,730
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	3,640
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	185
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	1
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	101
22	RESET WATER VALVE BOX	UNIT	59
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	1,185
28	GRANITE CURB	LF	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	250
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	230
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	35
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	17,595
35	TRAFFIC STRIPES, 6"	LF	535
36	TRAFFIC STRIPES, 8"	LF	2,135
37	TRAFFIC MARKINGS, SYMBOLS	SF	565
38	TRAFFIC MARKING, LINES, 12"	LF	3,095
39	TRAFFIC MARKING, LINES, 24"	LF	555
40	REGULATORY AND WARNING SIGN	SF	40
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	270
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	270
46	STRAW MULCHING	S.Y.	270
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	
<u> </u>			

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

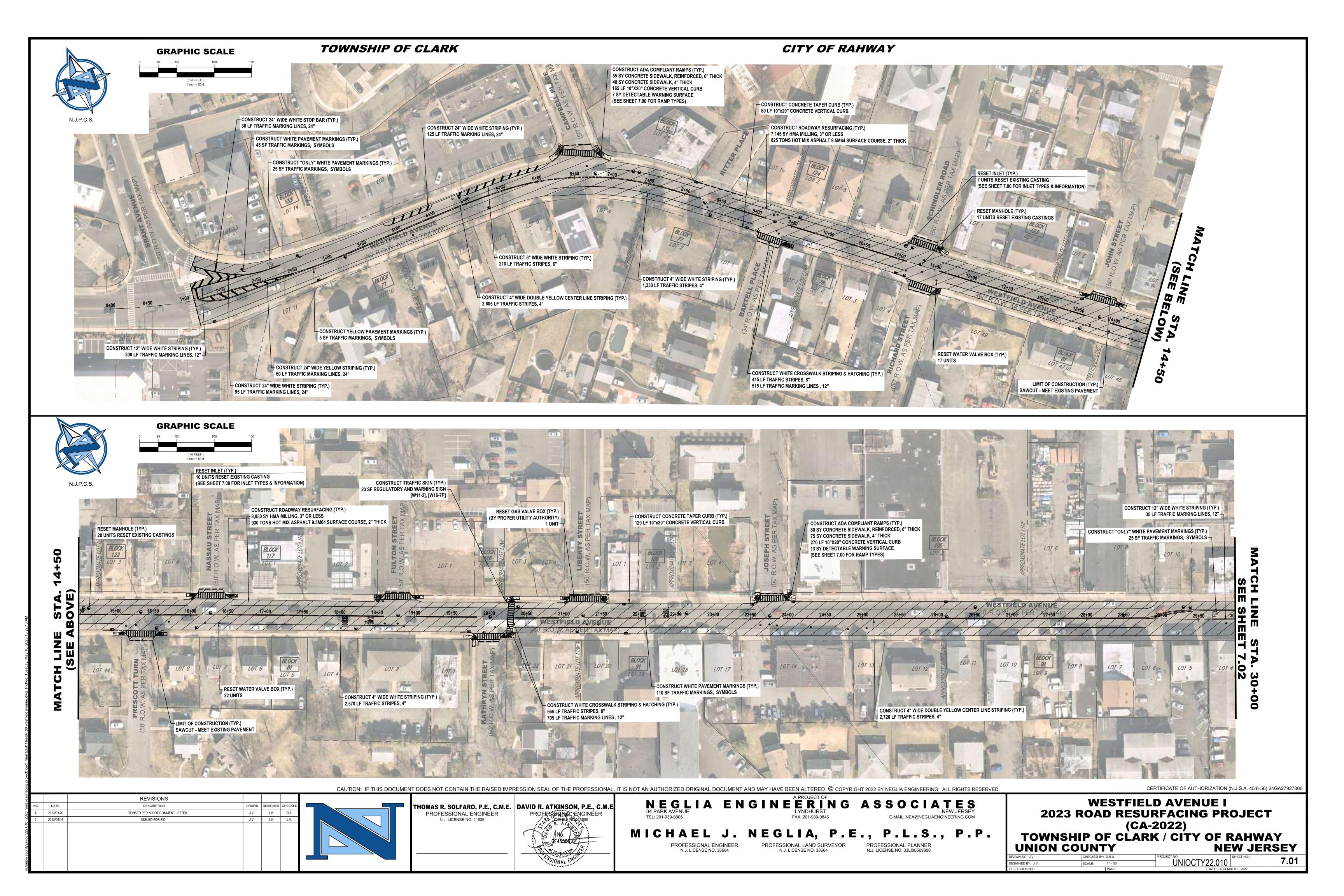
A PROJECT OF
LYNDHURST
FAX: 201-939-0846

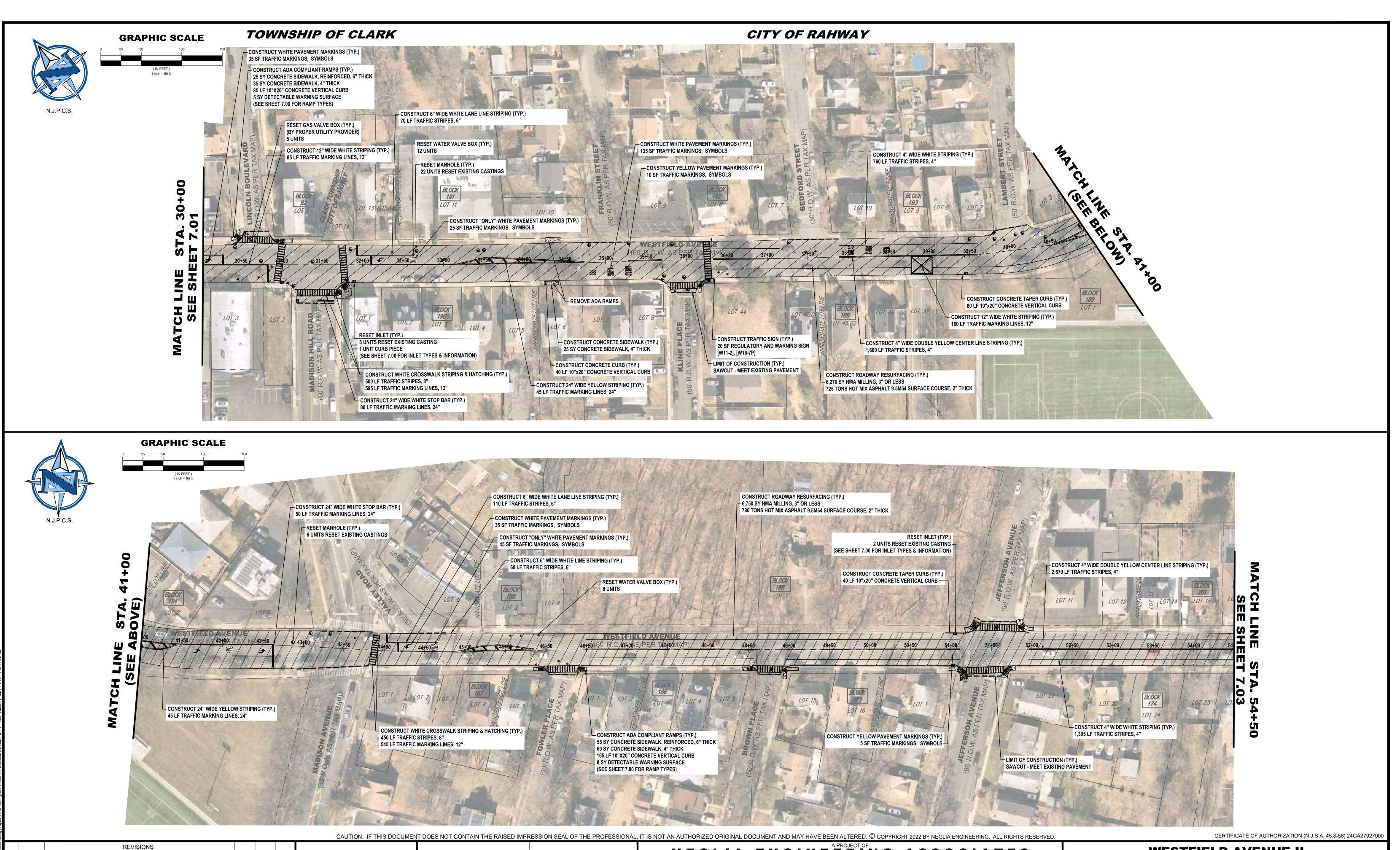
A SOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

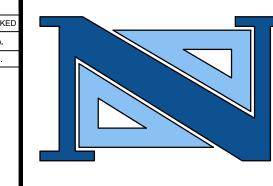
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

202 TOWN	3 ROAD RES (C	NUE QUANTITY SHEET SURFACING PROJECT (A-2022) ARK / CITY OF RAHWAY NEW JERSEY
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.:
DESIGNED BY: J.V.	SCALE:	UNIOCTY22.010 <b>7.00</b>
FIELD BOOK NO.:	PAGE:	DATE: DECEMBER 1, 2022





REVISED PER NJDOT COMMENT LETTER 2023/03/20 J.V. J.V. D.A. ISSUED FOR BID 2023/05/16



PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

HOMAS R. SOLFARO, P.E., C.M.E. DAVID R. ATKINSON, P.E., C.M.E

NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
A PROJ

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

**WESTFIELD AVENUE II 2023 ROAD RESURFACING PROJECT** (CA-2022) TOWNSHIP OF CLARK / CITY OF RAHWAY **UNION COUNTY NEW JERSEY** 

7.02 UNIOCTY22.010 SCALE: 1" = 50'

		REVISIONS				
NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	
1.	2023/03/20	REVISED PER NJDOT COMMENT LETTER	J.V.	J.V.	D.A.	
2.	2023/05/16	ISSUED FOR BID	J.V.	J.V.	J.V.	
i						



NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF
A PROJ

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

	WESTFI	<b>ELD AVENUE</b>			
202	23 ROAD RES	SURFACING	PRO	DJEC'	T
TOW	ONSHIP OF CI	A-2022) LARK / CITY	OF	RAH	VAY
	COUNTY			W JE	
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.:		SHEET NO.:	7.0

SCALE: 1" = 50'

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

UNIOCTY22.010

7.03

## TOWNSHIP OF CRANFORD

						ADA R	AMPS						
			CURB RAMP LAYOUT			QUANTITIES							
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR PARAL	LEL DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK	
26+30	LT	1		Х		20				5	1	10	
27+00	RT	1		Х		15				10	1	15	
27+44	RT	1		Х		15				5	1	15	
56+83	LT	5	Х			30				15	1		
57+17	LT	1		Х		25				5	1	10	
60+14	RT	7		Х		30				5	1	10	
60+71	RT	1		Х		30				5	1	10	

		INLET TYP	ES & LOCA	TIONS					
			QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET			
3+24	RT	В				Х			
3+33	Ľ	В				Х			
4+87	LT	В				Х			
5+43	RT	Α				Х			
5+74	LT	В				Х			
6+16	RT	Α				Х			
12+80	LT	В		Χ		Х			
13+30	RT	В		Χ		Х			
14+08	RT	Α				Х			
16+21	LT	В				Х			
16+21	RT	В				Х			
16+77	LT	В				Х			
16+84	RT	В				Х			
17+04	RT	В				Х			
17+06	RT	В				Х			
17+11	RT	В	Х	Х		Х			
19+88	RT	В				Х			
19+94	LT	В				Х			
25+74	LT	В				Х			
26+39	LT	В				Х			
26+80	RT	В				Х			
29+48	RT	В				Х			
29+49	LT	В				Х			
30+16	RT	В				Х			
33+99	RT	В				Х			
38+61	RT	В				Х			
44+39	RT	В				Х			
45+53	RT	В				Х			
48+94	RT	В	Х			Х			
59+99	RT	В				Х			
60+88	RT	В				Х			
60+99	LT	В				Х			
64+85	RT	В				Х			
65+51	LT	В				Х			
66+23	RT	В	X	Х		Х			

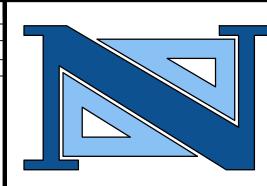
ITEM	TO BE CONSTRUCTED	UNIT	QUANTITY
NO.		-	
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	36,790
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	5,520
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	4,225
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	215
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	4
20	BICYCLE SAFE GRATE	UNIT	3
			<del></del>
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	114
22	RESET WATER VALVE BOX	UNIT	41
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	725
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	70
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	50
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	7
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	16,170
35	TRAFFIC STRIPES, 6"	LF	1,545
36	TRAFFIC STRIPES, 8"	LF	1,905
37	TRAFFIC MARKINGS, SYMBOLS	SF	1,305
38	TRAFFIC MARKING, LINES, 12"	LF	3,325
39	TRAFFIC MARKING, LINES, 24"	LF	645
40	REGULATORY AND WARNING SIGN	SF	0,70
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
43	TOPSOIL SPREADING, 4" THICK	S.Y.	170
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	170
46	STRAW MULCHING	S.Y.	170
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

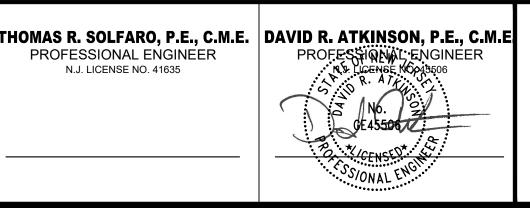
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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

8.00

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





NEGLIA ENGINEERING ASSOCIATES
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A PROJECT OF
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LYNDHURST
FAX: 201-939-0846

E-MAIL: NEA@NEGLIAENGINEERING.COM

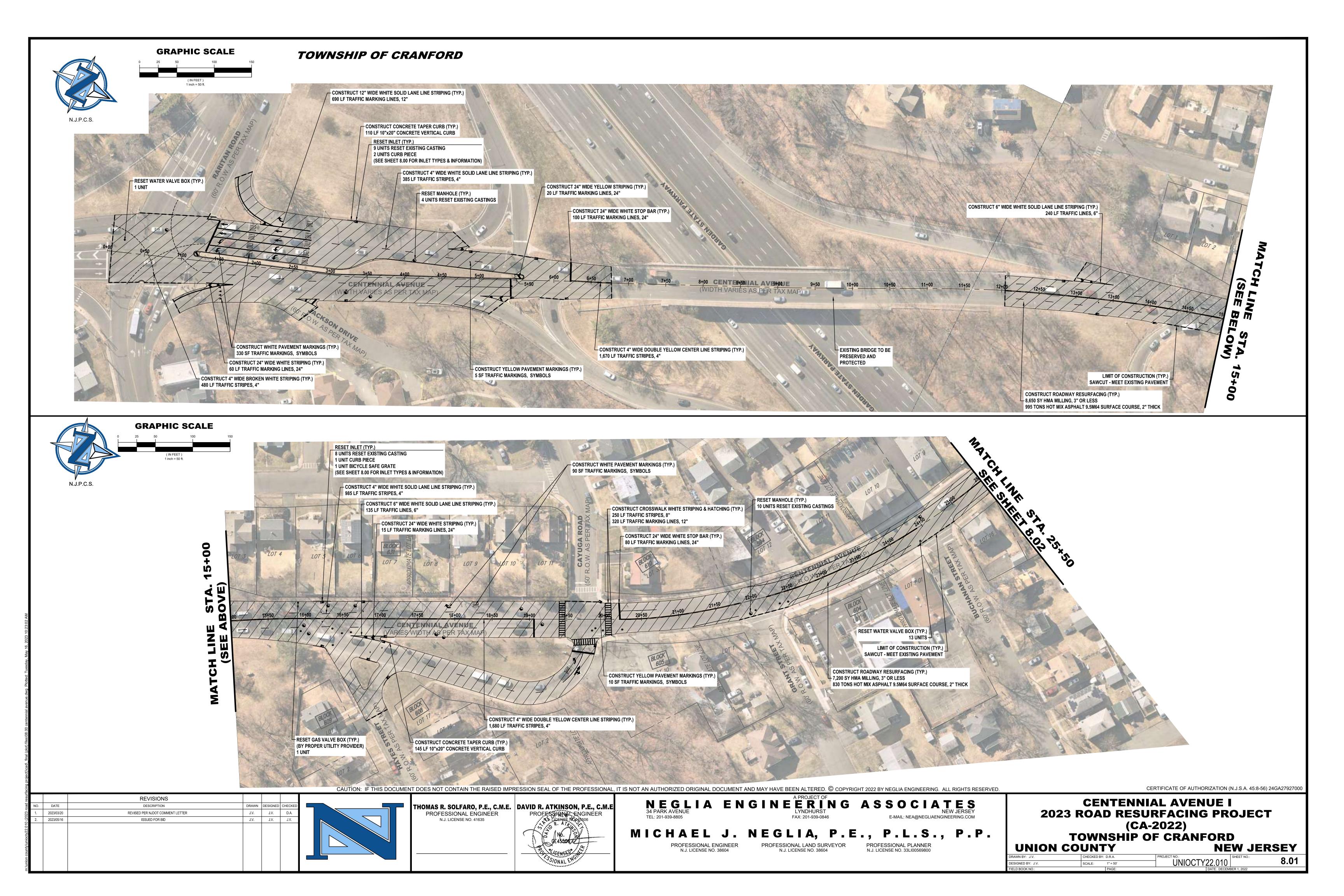
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

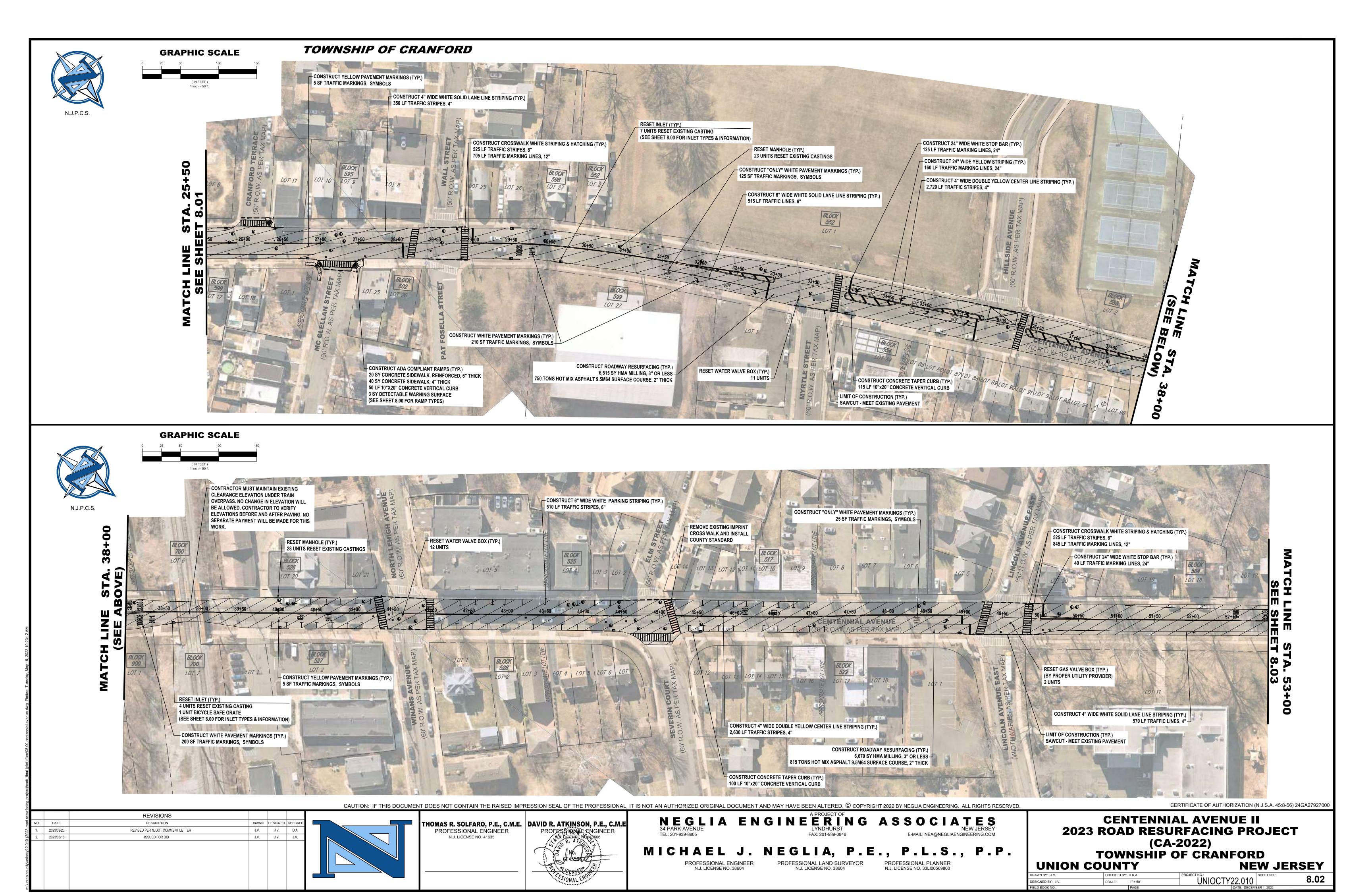
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

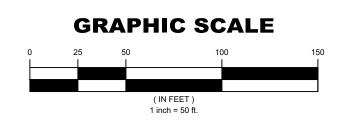
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

		ENUE QUANTITY SHEET SURFACING PROJECT							
(CA-2022) TOWNSHIP OF CRANFORD									
UNION	COUNTY	NEW JERSE							
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.:							
DESIGNED BY: J.V. FIELD BOOK NO.:	SCALE: PAGE:	UNIOCTY22.010 8.1							







CONSTRUCT ADA COMPLIANT RAMPS (TYP.) 30 SY CONCRETE SIDEWALK, REINFORCED, 6" THICK 30 SY CONCRETE SIDEWALK, 4" THICK 115 LF 10"X20" CONCRETE VERTICAL CURB 4 SY DETECTABLE WARNING SURFACE (SEE SHEET 8.00 FOR RAMP TYPES) CONSTRUCT 24" WIDE WHITE STOP BAR (TYP.)
45 LF TRAFFIC MARKING LINES, 24"— CONSTRUCT 4" WIDE WHITE SOLID LANE LINE STRIPING (TYP.) 2,245 LF TRAFFIC LINES, 4" RESET MANHOLE (TYP.)
5 UNITS RESET EXISTING CASTINGS - CONSTRUCT YELLOW PAVEMENT MARKINGS (TYP.) RESET WATER VALVE BOX (TYP.) 5 SF TRAFFIC MARKINGS, SYMBOLS 4 UNITS 145 LF TRAFFIC LINES, 6" CONSTRUCT CONCRETE TAPER CURB (TYP.)
90 LF 10"x20" CONCRETE VERTICAL CURB— RESET INLET (TYP.) 2,455 LF TRAFFIC LINES, 4" CONSTRUCT "ONLY" WHITE PAVEMENT MARKINGS (TYP.) **6 UNITS RESET EXISTING CASTING** 45 SF TRAFFIC MARKINGS, SYMBOLS 1 BICYCLE SAFE GRATE CONSTRUCT ROADWAY RESURFACING (TYP.) 1 UNIT CURB PIECE 7,755 SY HMA MILLING, 3" OR LESS -(SEE SHEET 8.00 FOR INLET TYPES & INFORMATION) CONSTRUCT CROSSWALK WHITE STRIPING & HATCHING (TYP.) 605 LF TRAFFIC STRIPES, 8" 765 LF TRAFFIC MARKING LINES, 12" -880 TONS HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK LIMIT OF CONSTRUCTION (TYP.)
SAWCUT - MEET EXISTING PAVEMENT

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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

CENTENNIAL A	AVENUE III
2023 ROAD RESURF	ACING PROJECT
(CA-202	22)
TOWNSHIP OF	CRANFORD
INION COUNTY	NEW JERSE

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**NEW JERSEY** UNION COUNTY 8.03 UNIOCTY22.010 SCALE: 1" = 50'

REVISIONS DESCRIPTION DRAWN DESIGNED CHECKE
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER 2023/05/16 ISSUED FOR BID

## **BOROUGH OF NEW PROVIDENCE**

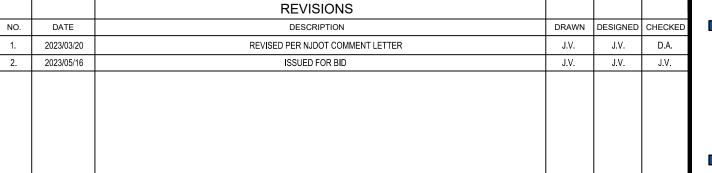
							ADA F	RAMPS					
	OFFSET (LT/RT)	CURB RAMP TYPE	CURB RAMP LAYOUT				QUANTITIES						
STATION			PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
8+08	LT	1			Х		30				5	1	
8+49	RT	1			Х		25				5	1	
54+29	LT	1			χ		20				5	1	5
55+03	LT	1			Х		20				10	1	

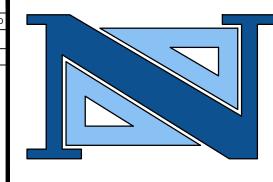
		INLET TYF	PES & LOCAT	TIONS					
			QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET			
0+97	RT	В				Х			
1+00	LT	В				Х			
8+84	LT	В				Х			
8+88	RT	В				Х			
12+46	LT	В				Х			
12+51	LT	В				Х			
15+88	LT	В				Х			
15+92	LT	В				Х			
16+16	RT	В				Х			
16+21	RT	В				Х			
19+27	LT	В				Х			
19+32	LT	В				Х			
20+02	LT	В				Х			
20+07	RT	В				X			
20+12	RT	В				Х			
22+92	LT	В				Х			
35+78	RT	В				Х			
35+80	LT	В				Х			
42+62	RT	В				Χ			
43+50	LT	В		Х		Х			
43+71	LT	В		Х		Х			
43+77	RT	В		Х		Х			
48+75	LT	В				Х			
48+75	RT	В				Х			

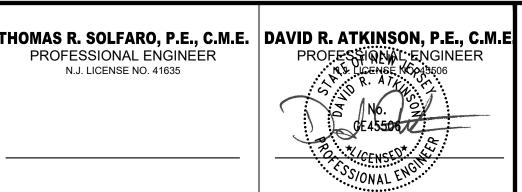
ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	29,815
	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE		
11	DIRECTED)	CY	
40	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	0)/	4.475
12	& WHERE DIRECTED)	SY	4,475
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	3,440
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	175
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	3
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	73
22	RESET WATER VALVE BOX	UNIT	19
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	475
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	10
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	25
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	4
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	14,765
35	TRAFFIC STRIPES, 6"	LF	4,240
36	TRAFFIC STRIPES, 8"	LF	750
37	TRAFFIC MARKINGS, SYMBOLS	SF	905
38	TRAFFIC MARKING, LINES, 12"	LF	970
39	TRAFFIC MARKING, LINES, 24"	LF	700
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
<b>4</b> 2	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	110
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	110
<b>4</b> 6	STRAW MULCHING	S.Y.	110
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
<b>4</b> 8	CLEARING SITE	L.S.	
<b>4</b> 9	FINAL CLEANUP	L.S.	-

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FAX: 201-939-0846

A SSOCIATES
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

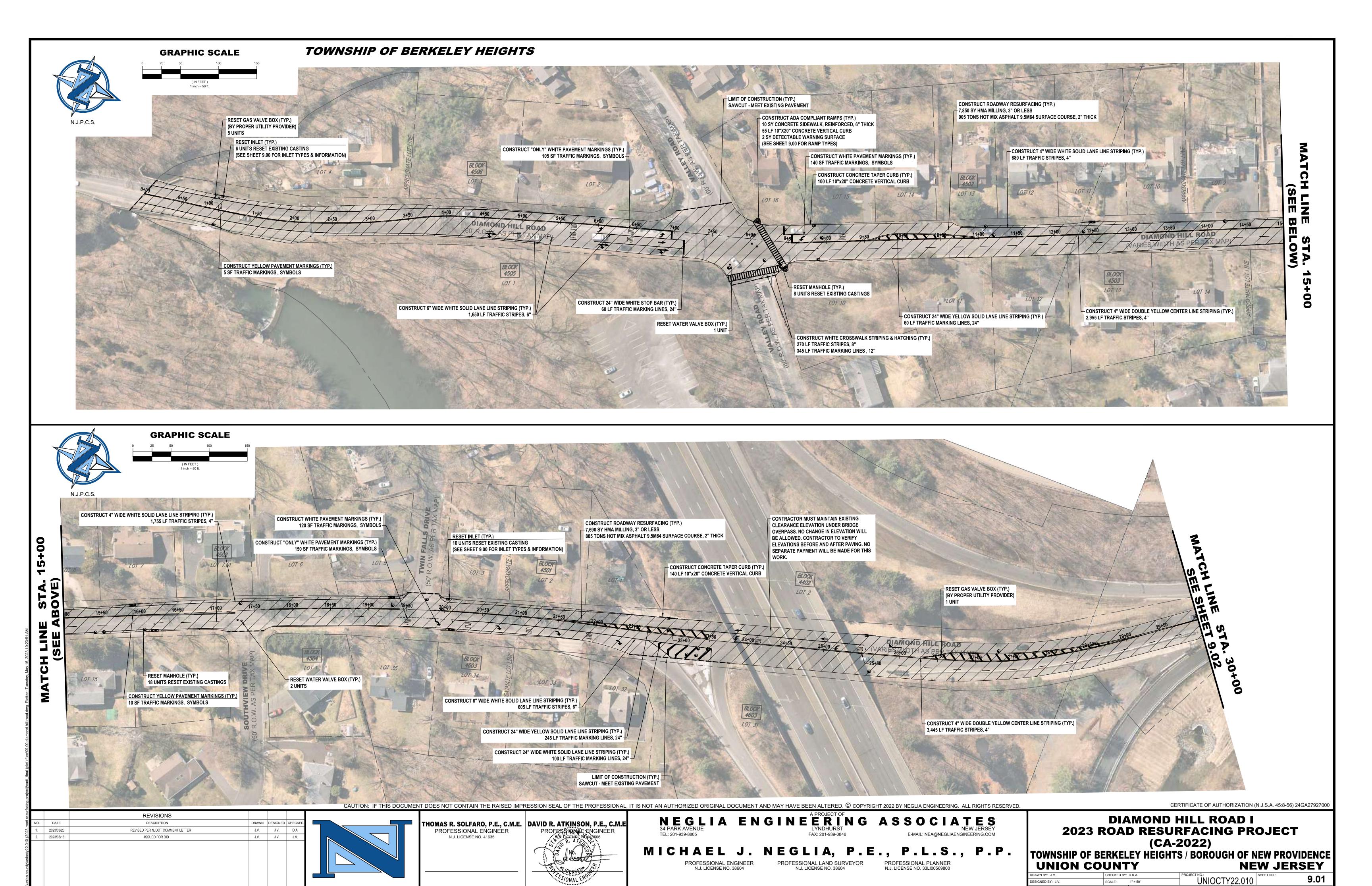
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

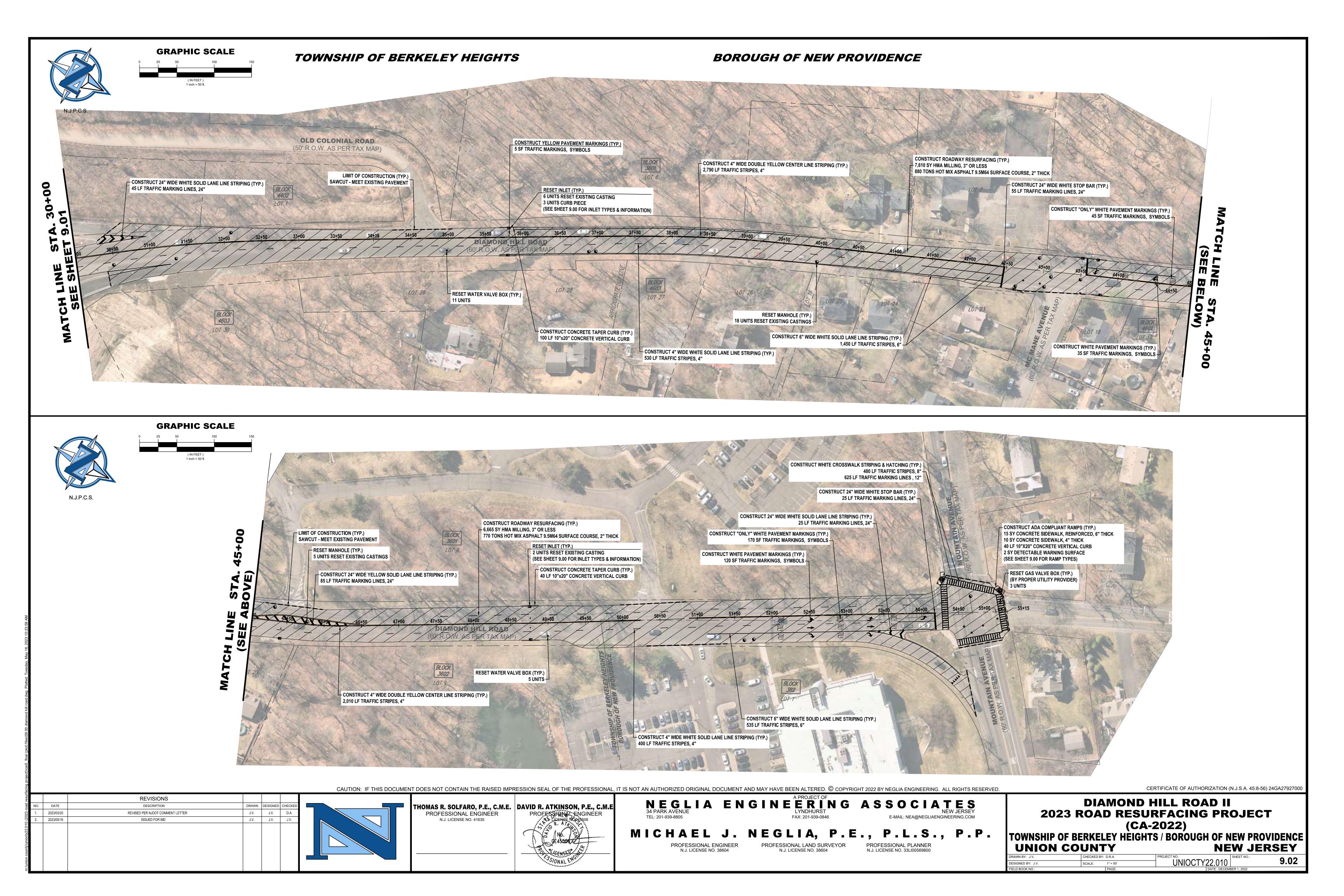
PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

DIAMOND HILL ROAD QUANTITY SHEET
2023 ROAD RESURFACING PROJECT
(CA-2022)
DWNSHIP OF BERKELEY HEIGHTS / BOROUGH OF NEW PROVIDEN

TOWNSHIP OF BI				IEW PROVIDENCE W JERSEY
DRAWN BY: J.V.	CHECKED BY: D.R.A.	. PI	ROJECT NO.:	SHEET NO.:
DESIGNED BY: J.V.	SCALE:		UNIOCTY22.010	9.00
FIELD BOOK NO.:	PAGE:	<u> </u>	DATE: DECEMI	BER 1, 2022



SCALE: 1" = 50'



							ADA R	AMPS							
			CURB RAMP LAYOUT					QUANTITIES							
STATION	OFFSET (LT/RT)		PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK		
0+26	LT	5	Х				25				5	1	5		
0+72	LT	5	Х				20				5	1	5		
5+04	LT	5	Х				30				5	1	5		
5+48	LT	5	Х				30				5	1	5		
19+39	LT	5	Х				20				5	1	5		
20+00	LT	5	Х				20				5	1	5		
29+24	LT	5	Х				20				5	1	5		
29+76	LT	5	Х				20				5	1	10		

		INLET TYP	PES & LOCA	TIONS					
			QUANTITY						
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RES			
5+95	RT	В				х			
6+93	LT	В				Х			
7+95	LT	В				Х			
7+96	RT	В				×			
10+50	RT	В				<b>&gt;</b>			
17+08	RT	В				Х			
18+02	RT	В		Х		Х			
19+91	LT	В				Х			
19+91	RT	В				Х			
19+96	LT	В				×			
19+96	RT	В				×			
21+43	LT	В				<b>&gt;</b>			
22+11	LT	В				>			
30+69	LT	В		Х		>			
31+68	RT	В		Х		>			

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	<del> </del>
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	<del> </del>
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, I DAGGER  TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	, and the second	CY	
10	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	SY	12.025
10	HMA MILLING, 3" OR LESS		12,825
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF		
12	& WHERE DIRECTED)	SY	1,925
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,480
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	75
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	3
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	35
22	RESET WATER VALVE BOX	UNIT	14
23	INLET, TYPE B	UNIT	1
23	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	'
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
	10" X 20" CONCRETE VERTICAL CURB		205
27		LF	205
28	GRANITE CURB	LF	230
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	40
30	CONCRETE SIDEWALK, 4" THICK	SY	40
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	45
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	8
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	110==
34	TRAFFIC STRIPES, 4"	LF ·-	11,955
35	TRAFFIC STRIPES, 6"	LF	1.15
36	TRAFFIC STRIPES, 8"	LF	440
37	TRAFFIC MARKINGS, SYMBOLS	SF	230
38	TRAFFIC MARKING, LINES, 12"	LF ·-	515
39	TRAFFIC MARKING, LINES, 24"	LF	15
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
46	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

NEGLIA ENGINEERING ASSOCIATES
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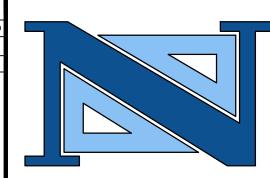
**BALTUSROL ROAD QUANTITY SHEET 2023 ROAD RESURFACING PROJECT** 

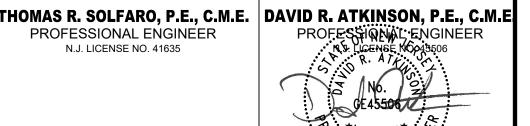
CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

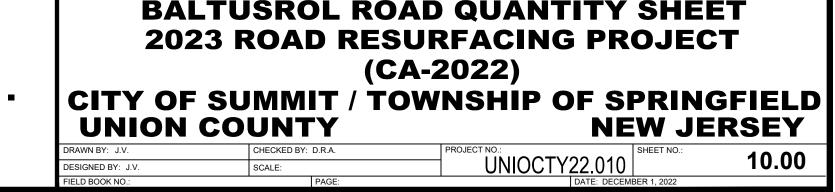
MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

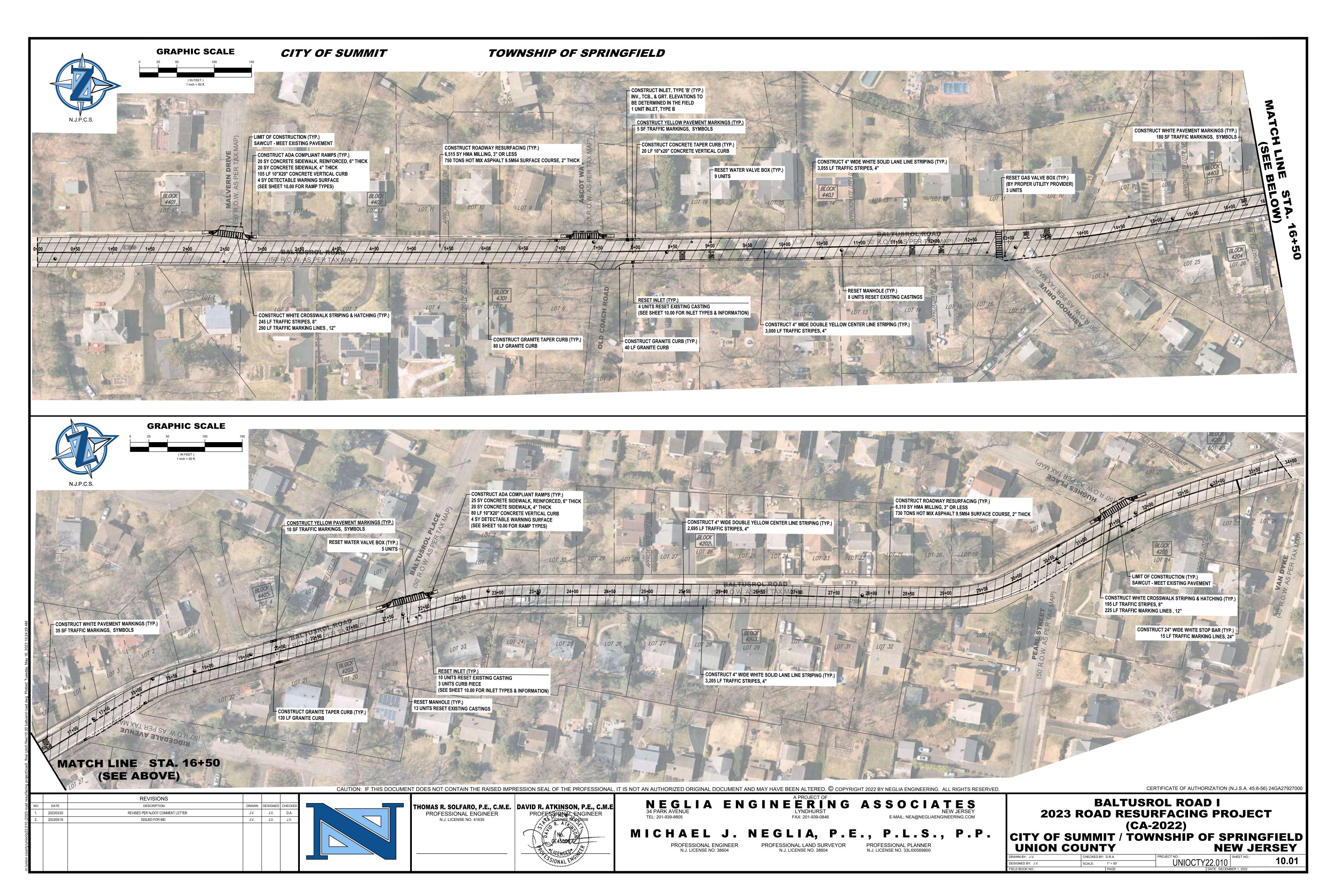
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

		REVISIONS			
Ο.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED
١.	2023/03/20	REVISED PER NJDOT COMMENT LETTER	J.V.	J.V.	D.A.
2.	2023/05/16	ISSUED FOR BID	J.V.	J.V.	J.V.









## CITY OF PLAINFIELD

	ADA RAMPS														
			CURB RAMP LAYOUT					QUANTITIES							
STATION	OFFSET		T CURB RAMP	SET CURB RAMP					10"X20" CONC.		RESET BRICK	12" X 13"	CONC. SIDEWALK,	DETECTABLE WARNING	CONC SIDEMAIN
SIAMON	(LT/RT)		PERPENDICULAR	PERPENDICULAR PARALLEL DIAGONAL		COMBINIATION	VERTICAL CURB	PAVERS	CONCRETE	REINFORCED 6"	SURFACE	4" THICK			
							VERTICAL CORB		TAVERS	SLOPING CURB	THIĆK	JOIN ACE	4 Trilek		
17+25	LT	5	Х				20				5	1	5		
17+25	RT	5	Х				20				10	1			
17+28	LT	2	Х				20				5	1	5		
17+59	LT	2	Х				20				5	1	10		

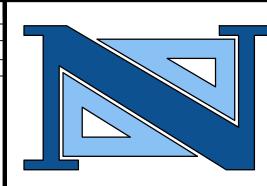
INLET TYPES & LOCATIONS								
				QUAI	YTITV			
STATION	OFFSET	EXISTING	BICYCLE	CURB				
31411011	(LT/RT)	INLET TYPE	SAFE	PIECE	PLATE	RESET		
			GRATE	FILCE				
1+76	LT	Α	Х			Х		
2+08	RT	В	Х			Х		
2+30	RT	В				Х		
4+98	LT	Α		·		Х		

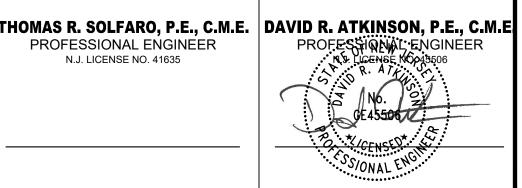
ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	135
10	HMA MILLING, 3" OR LESS	SY	8,765
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	1,315
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,010
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	55
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE ,	UNIT	
20	BICYCLE SAFE GRATE	UNIT	2
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	8
22	RESET WATER VALVE BOX	UNIT	
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	1
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	1
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	80
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	855
30	CONCRETE SIDEWALK, 4" THICK	SY	20
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	25
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	4
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	705
35	TRAFFIC STRIPES, 6"	LF	
36	TRAFFIC STRIPES, 8"	LF	365
37	TRAFFIC MARKINGS, SYMBOLS	SF	705
38	TRAFFIC MARKING, LINES, 12"	LF	500
39	TRAFFIC MARKING, LINES, 24"	LF	30
40	REGULATORY AND WARNING SIGN	SF	60
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	2
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	500
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	500
46	STRAW MULCHING	S.Y.	500
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	

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REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





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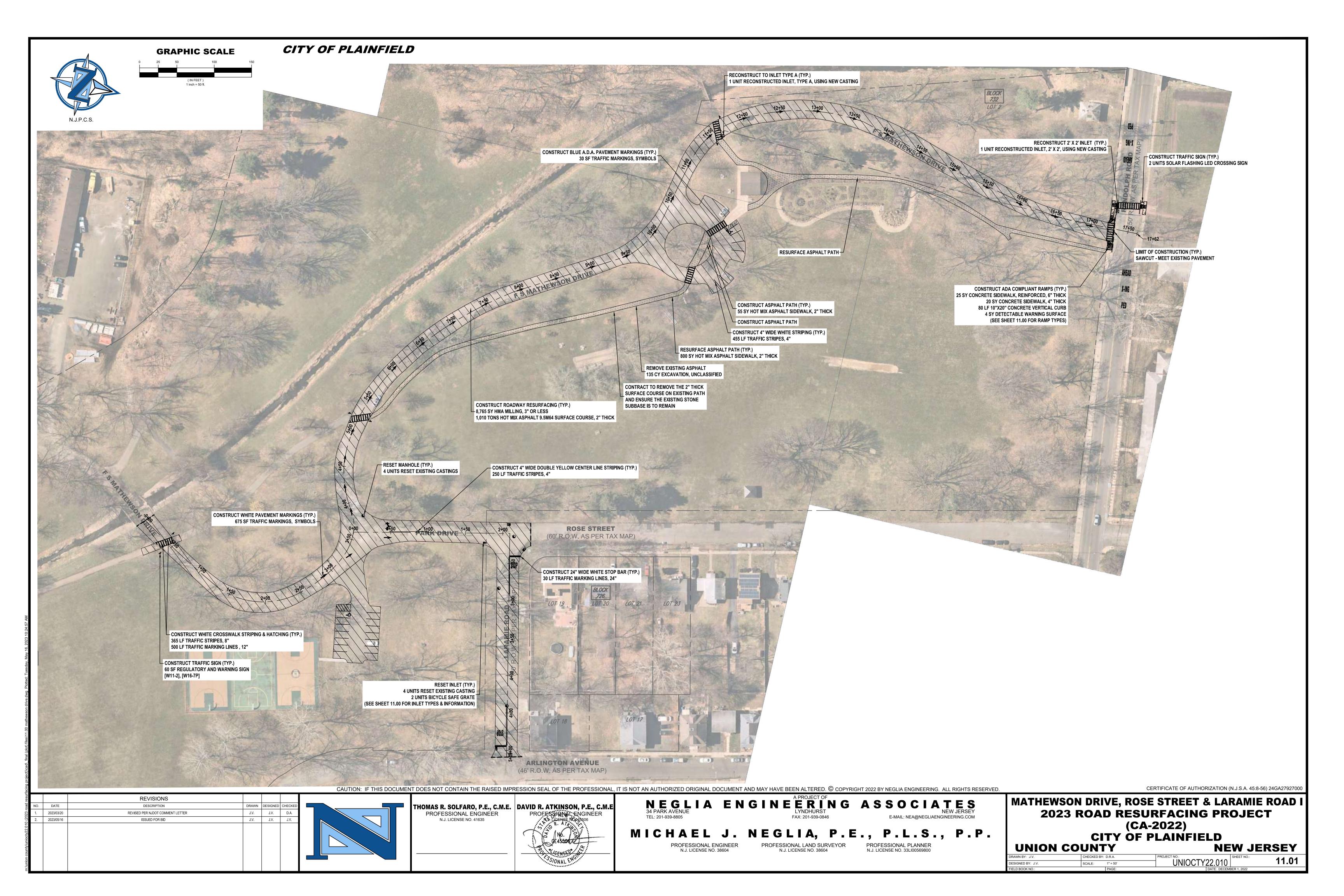
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

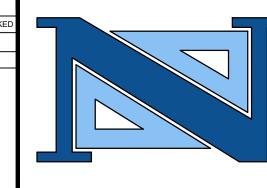
	•	EET & LARAMIE ROAD QUANTITY URFACING PROJECT	
	•	A-2022) FPLAINFIELD	
UNION	COUNTY	NEW JER	SEY
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.:	44.00
DESIGNED BY: J.V.	SCALE:	UNIOCTY22.010	11.00
FIELD BOOK NO.:	PAGE:	DATE: DECEMBER 1, 2022	

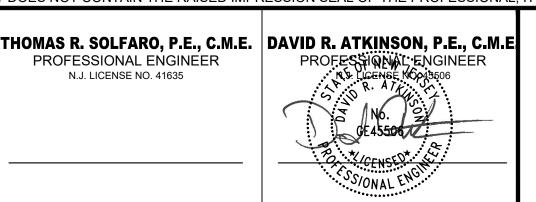


### TOWNSHIP OF BERKELEY HEIGHTS

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	<del> </del>
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	<del> </del>
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	7,265
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	CY	7,200
	DIRECTED) HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF		4.000
12	& WHERE DIRECTED)	SY	1,090
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	835
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	45
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE ,	UNIT	
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	
22	RESET WATER VALVE BOX	UNIT	
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	
34	TRAFFIC STRIPES, 4"	LF	
35	TRAFFIC STRIPES, 6"	LF	1,210
36	TRAFFIC STRIPES, 8"	LF	-,-,-
37	TRAFFIC MARKINGS, SYMBOLS	SF	135
38	TRAFFIC MARKING, LINES, 12"	LF	
39	TRAFFIC MARKING, LINES, 24"	LF	15
40	REGULATORY AND WARNING SIGN	SF	<del>                                     </del>
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	500
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	500
46	STRAW MULCHING	S.Y.	500
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

		REVISIONS			
NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED
1.	2023/03/20	REVISED PER NJDOT COMMENT LETTER	J.V.	J.V.	D.A.
2.	2023/05/16	ISSUED FOR BID	J.V.	J.V.	J.V.
1.					





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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

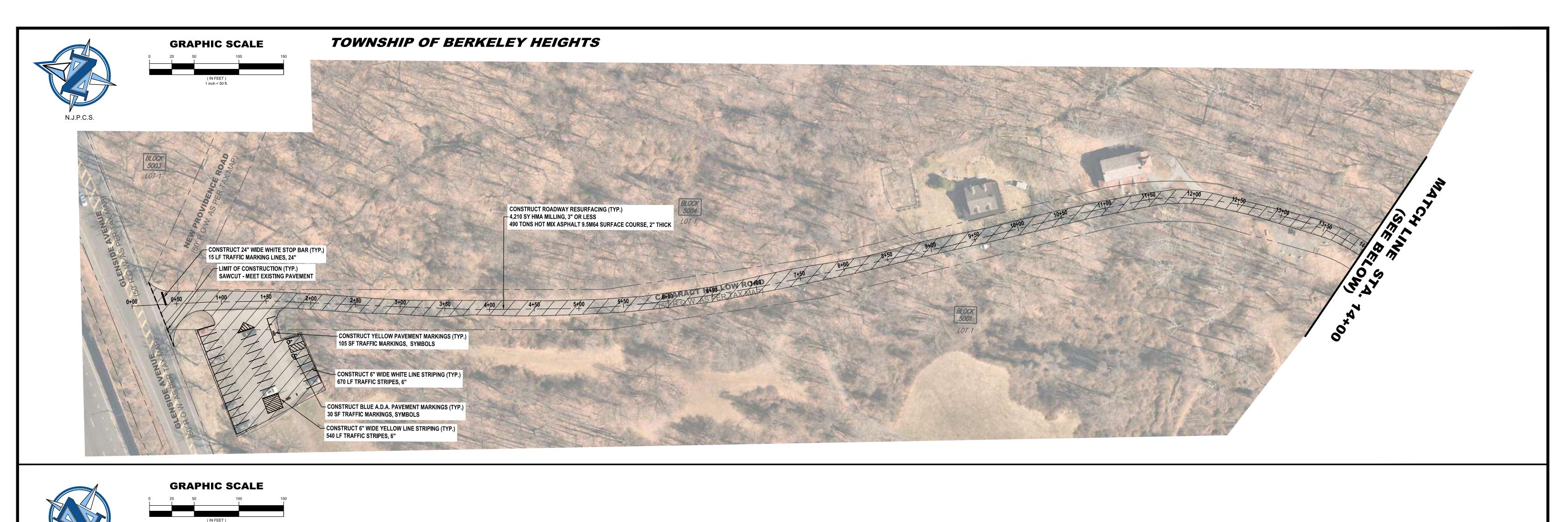
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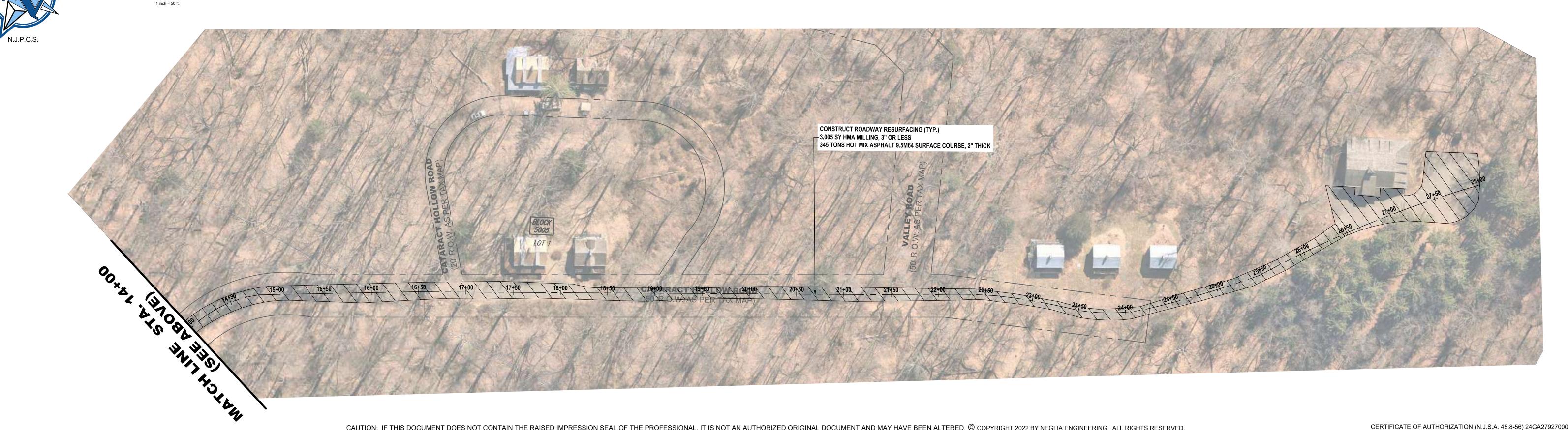
**CATARACT HOLLOW ROAD QUANTITY SHEET 2023 ROAD RESURFACING PROJECT** (CA-2022)
TOWNSHIP OF BERKELEY HEIGHTS **UNION COUNTY NEW JERSEY** 

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

UNIOCTY22.010 DATE: DECEMBER 1, 20

12.00





PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

HOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
OF THE PROFESSIONAL ENGINEER

REVISIONS

REVISED PER NJDOT COMMENT LETTER
ISSUED FOR BID

2023/03/20

2023/05/16

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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 **CATARACT HOLLOW ROAD I** 

**2023 ROAD RESURFACING PROJECT** 

(CA-2022)
TOWNSHIP OF BERKELEY HEIGHTS

UNIOCTY22.010

**UNION COUNTY** 

**NEW JERSEY** 

12.01

## TOWNSHIP OF CLARK

							ADA R	RAMPS					
			CURB RAMP LAYOUT			QUANTITIES							
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
1+45	RT	1			X		25				10	1	15
5+11	LT	1			x		25				5	1	10
5+74	LT	1			Х		25				5	1	10
9+41	RT	1			Х		30				10	1	10
9+47	LT	7	X				15				10	1	
9+96	LT	7	X				15				10	1	
10+11	RT	1			Х		30				10	1	10
13+80	RT	1			Х		30				5	1	10
14+31	RT	1			Х		30				5	1	10
16+74	LT	5	X				30				5	1	5
17+33	LT	1			Х		30				5	1	10
18+96	RT	1			Х		25				5	1	5
19+53	RT	1			Х		25				5	1	10
19+64	LT	5	Х				20				5	1	5
20+30	LT	5	Х				25				5	1	10

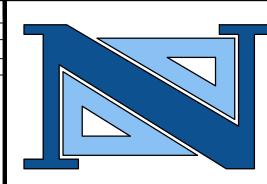
		INLET TYP	PES & LOCAT	TIONS		
				QUAI	YTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
13+59	LT	В				Х
13+63	RT	В				Х
13+78	LT	ROUND				Х
19+28	LT	В				Х
19+60	RT	В				Х
25+82	LT	В				Х
26+79	LT	Α				Х

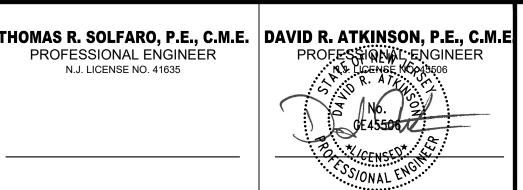
ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	17,390
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	·
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	2,610
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	2,080
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	105
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	29
22	RESET WATER VALVE BOX	UNIT	27
23	INLET, TYPE B	UNIT	<del>  -</del> -
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	480
28	GRANITE CURB	LF	400
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	120
31	CONCRETE SIDEWALK, 4 THICK  CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	100
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	15
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	10
34	TRAFFIC STRIPES, 4"	LF	6,840
35	TRAFFIC STRIPES, 6"	LF	1,070
36	TRAFFIC STRIPES, 8"	LF	1,265
37	TRAFFIC MARKINGS, SYMBOLS	SF	755
38	TRAFFIC MARKING, LINES, 12"	LF	1,545
39	TRAFFIC MARKING, LINES, 24"	LF	435
40	REGULATORY AND WARNING SIGN	SF	100
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	110
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	110
46	STRAW MULCHING	S.Y.	110
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	110
48	CLEARING SITE	L.S.	
	FINAL CLEANUP	L.S.	<del> </del>

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J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





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LYNDHURST
FAX: 201-939-0846

A S S O C I A T E S
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E-MAIL: NEA@NEGLIAENGINEERING.COM

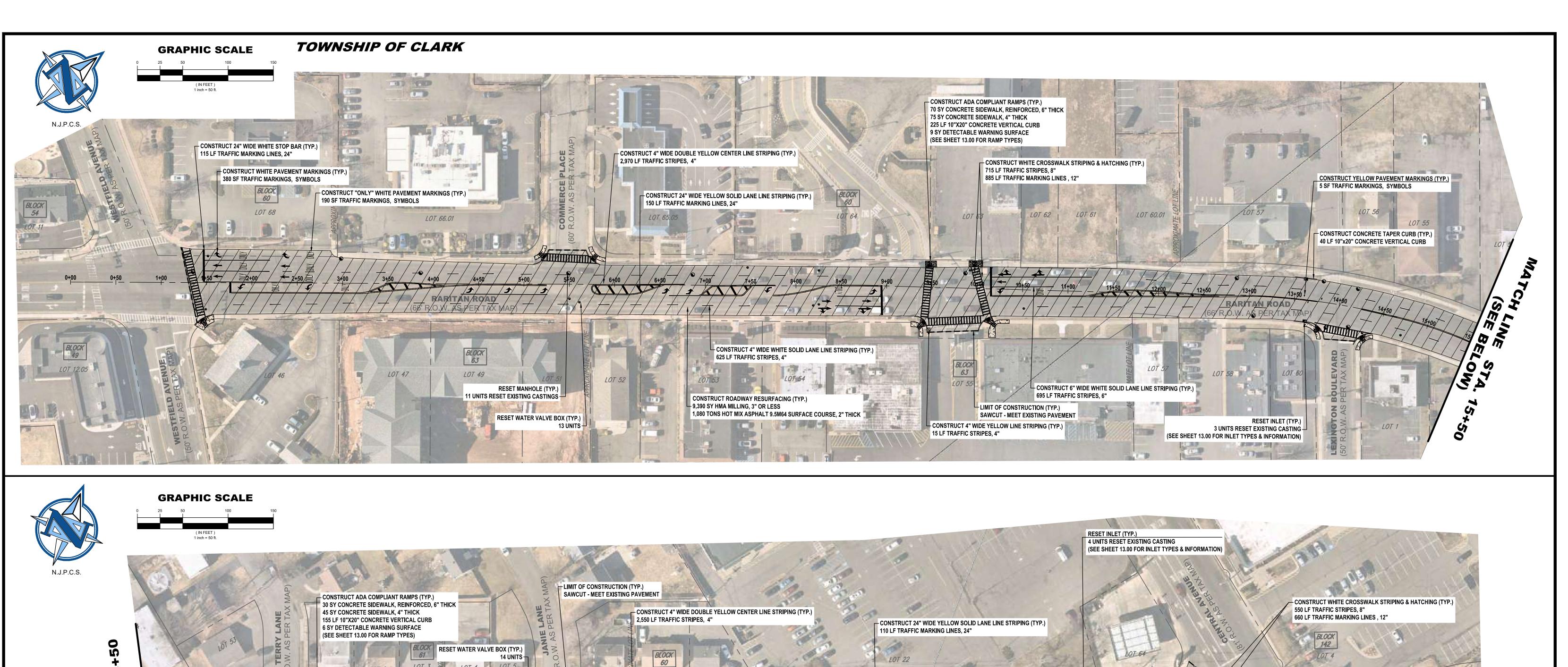
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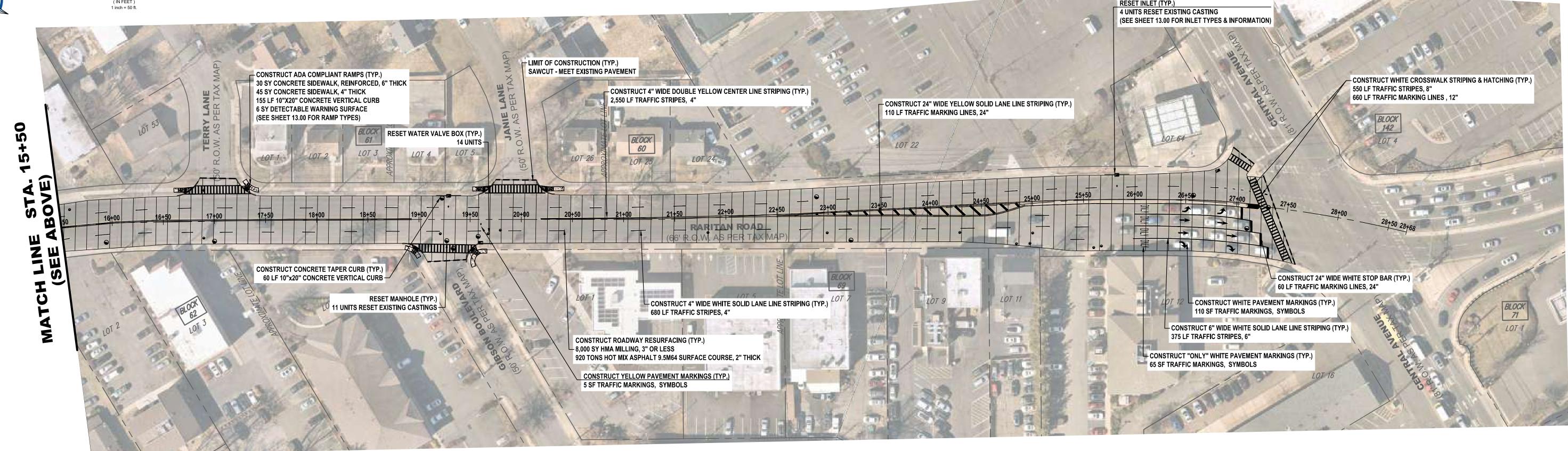
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PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

	3 ROAD RES	D QUANTITY SHEET SURFACING PROJECT	
INIIONI A	TOWNS	CA-2022) HIP OF CLARK	
MION	COUNTY	NEW JERSEY	
BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.: 13.00	
ED BY: J.V.	SCALE:	0111001122.010	
OOK NO.:	PAGE:	DATE: DECEMBER 1, 2022	





REVISIONS REVISED PER NJDOT COMMENT LETTER 2023/03/20 2023/05/16 ISSUED FOR BID

HOMAS R. SOLFARO, P.E., C.M.E.
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PROFESSIONAL ENGINEER

NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
TEL: 201-939-8805

A PROJECT OF A PROJ

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

**RARITAN ROAD I 2023 ROAD RESURFACING PROJECT** (CA-2022) TOWNSHIP OF CLARK **NEW JERSEY UNION COUNTY** 13.01 UNIOCTY22.010

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

## TOWNSHIP OF UNION

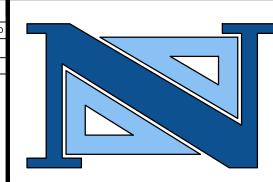
							ADA R	AMPS					
				CURB RAN	1P LAYOUT					QUAN <sup>-</sup>	TITIES		
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	GRANITE CURB	RESET BRICK PAVERS	12" X 13" CONCRETE	REINFORCED 6"	DETECTABLE WARNING SURFACE	CONC. SIDEWALK,
3+72	RT	ς	Y				30			SLOPING CURB	THICK	1	10
4+20	RT	5	X				30				5	1	10

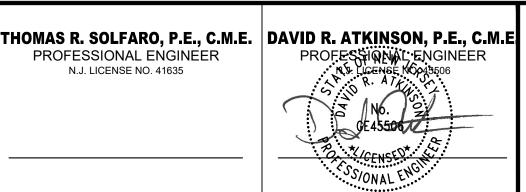
		INLET TYP	ES & LOCA	TIONS		
				QUAI	YTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE	CURB PIECE	PLATE	RESET
			GRATE	PIECE		
9+05	RT	В				Х
9+10	RT	В				Х
9+36	LT	В				Х
9+71	RT	В				Х
9+82	LT	В				Х
18+94	LT	В				Х
19+33	RT	В				Х
19+66	RT	В				Х
20+39	LT	В				Х

ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	9,630
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	1,445
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	1,110
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	60
15	FUEL PRICE ADJUSTMENT	DOLL.	-
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	
20	BICYCLE SAFE GRATE	UNIT	
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	11
22	RESET WATER VALVE BOX	UNIT	2
23	INLET, TYPE B	UNIT	_
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	210
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	20
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	10
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	2
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	_
34	TRAFFIC STRIPES, 4"	LF	6,745
35	TRAFFIC STRIPES, 6"	LF	185
36	TRAFFIC STRIPES, 8"	LF	335
37	TRAFFIC MARKINGS, SYMBOLS	SF	195
38	TRAFFIC MARKING, LINES, 12"	LF	385
39	TRAFFIC MARKING, LINES, 24"	LF	90
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
46	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	
· -			<u> </u>

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS DRAWN DESIGNED CHECKER
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
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A PROJECT OF
LYNDHURST
FAX: 201-939-0846

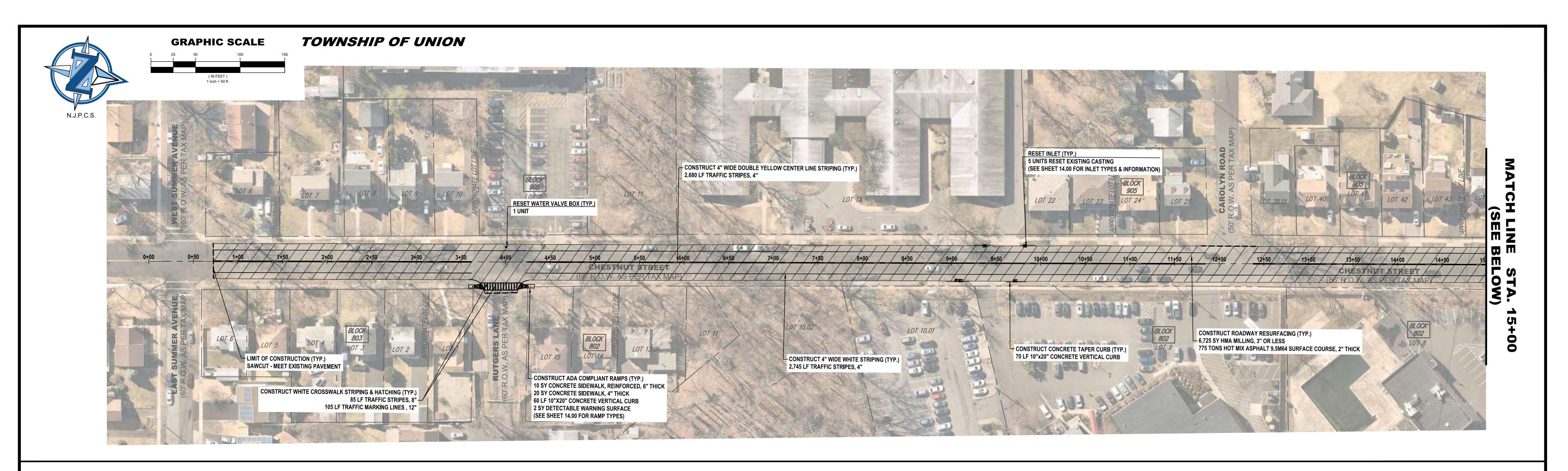
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LYNDHURST
FAX: 201-939-0846

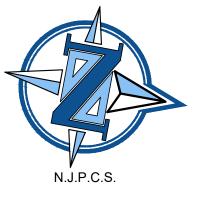
E-MAIL: NEA@NEGLIAENGINEERING.COM

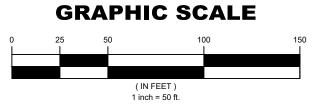
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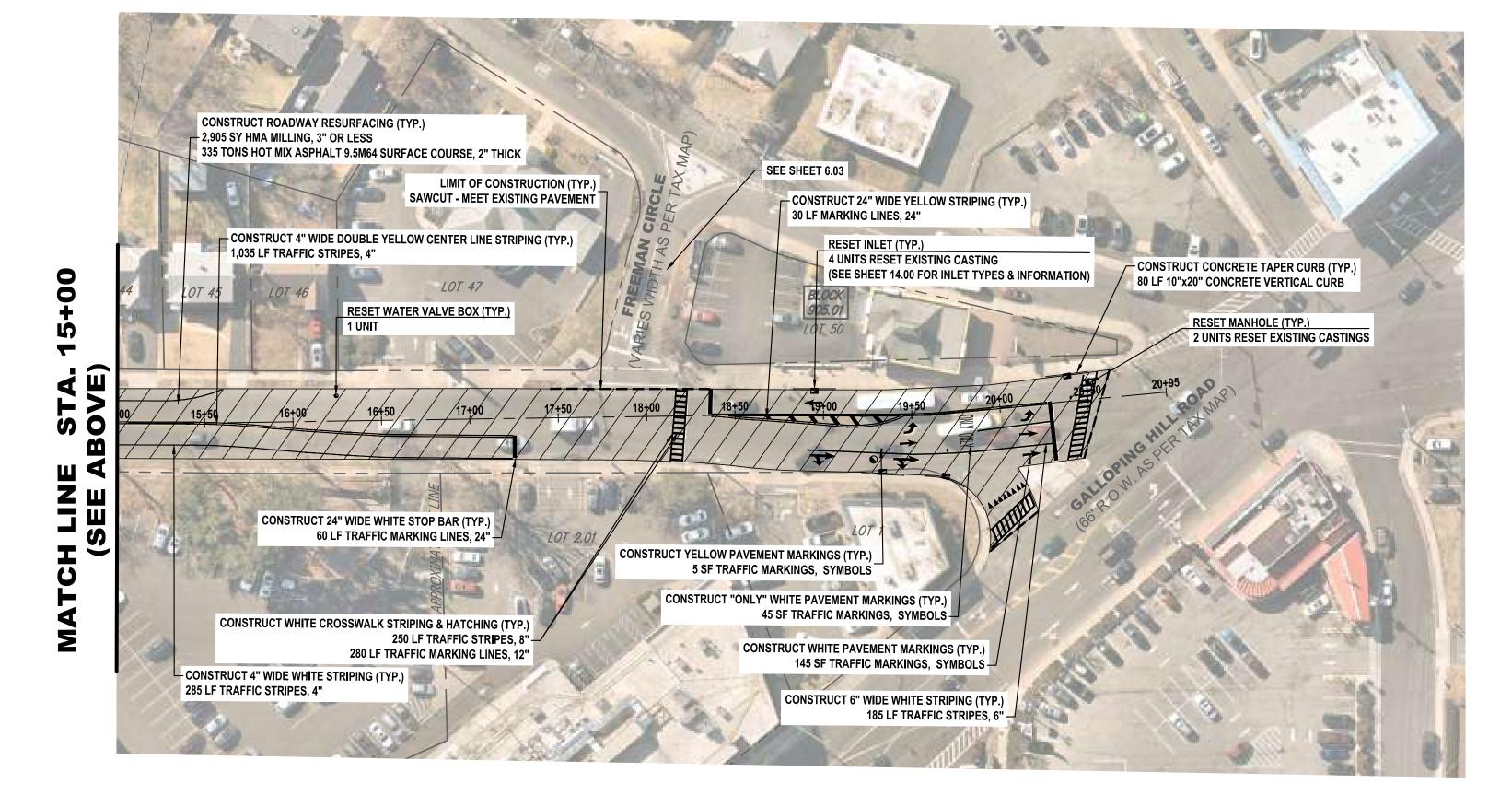
MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

•	2023 F	ROAD RESUI CA-: TOWNSHII	T QUANTITY RFACING PR 2022) P OF UNION	OJECT
	UNION CO	UNTY	NE	W JERSEY
	DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.:	SHEET NO.:
	DESIGNED BY: J.V.	SCALE:	UNIOCTY22.010	14.00
	FIELD BOOK NO.:	PAGE:	DATE: DECEM	BER 1, 2022

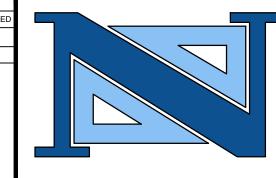




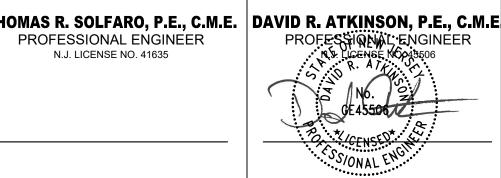




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N.J. LICENSE NO. 41635



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PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

**CHESTNUT STREET I 2023 ROAD RESURFACING PROJECT** (CA-2022) TOWNSHIP OF UNION **NEW JERSEY UNION COUNTY** 

14.01 UNIOCTY22.010 SCALE: 1" = 50'

#### TOWNSHIP OF SPRINGFIELD

		INLET TYP	ES & LOCA	TIONS		
				QUAI	YTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
1+07	LT	В				Х
1+07	RT	В		Х		Х
3+23	RT	В				Х
6+98	LT	4X4				Х
12+70	LT	В				Х
12+70	RT	В				Х

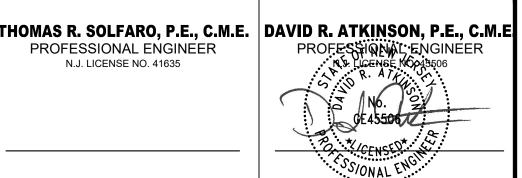
ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTIT
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	
10	HMA MILLING, 3" OR LESS	SY	4,725
	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE		1,720
11	DIRECTED)	CY	
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF & WHERE DIRECTED)	SY	710
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	345
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	20
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE ,	UNIT	1
20	BICYCLE SAFE GRATE	UNIT	_
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	6
22	RESET WATER VALVE BOX	UNIT	<del>                                     </del>
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	100
28	GRANITE CURB	LF	100
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	
	·		
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	0.000
34	TRAFFIC STRIPES, 4"	LF	2,220
35	TRAFFIC STRIPES, 6"	LF	85
36	TRAFFIC STRIPES, 8"	LF 0.5	
37	TRAFFIC MARKINGS, SYMBOLS	SF	10
38	TRAFFIC MARKING, LINES, 12"	LF 	
39	TRAFFIC MARKING, LINES, 24"	LF	20
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
<b>4</b> 6	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

GNED	CHECKED	
.V.	D.A.	
.V.	J.V.	

REVISIONS

REVISED PER NJDOT COMMENT LETTER

2023/03/20



NEGLIA ENGINEERING ASSOCIATES
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PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

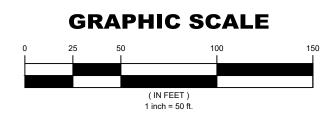
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800 MAIN STREET QUANTITY SHEET

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

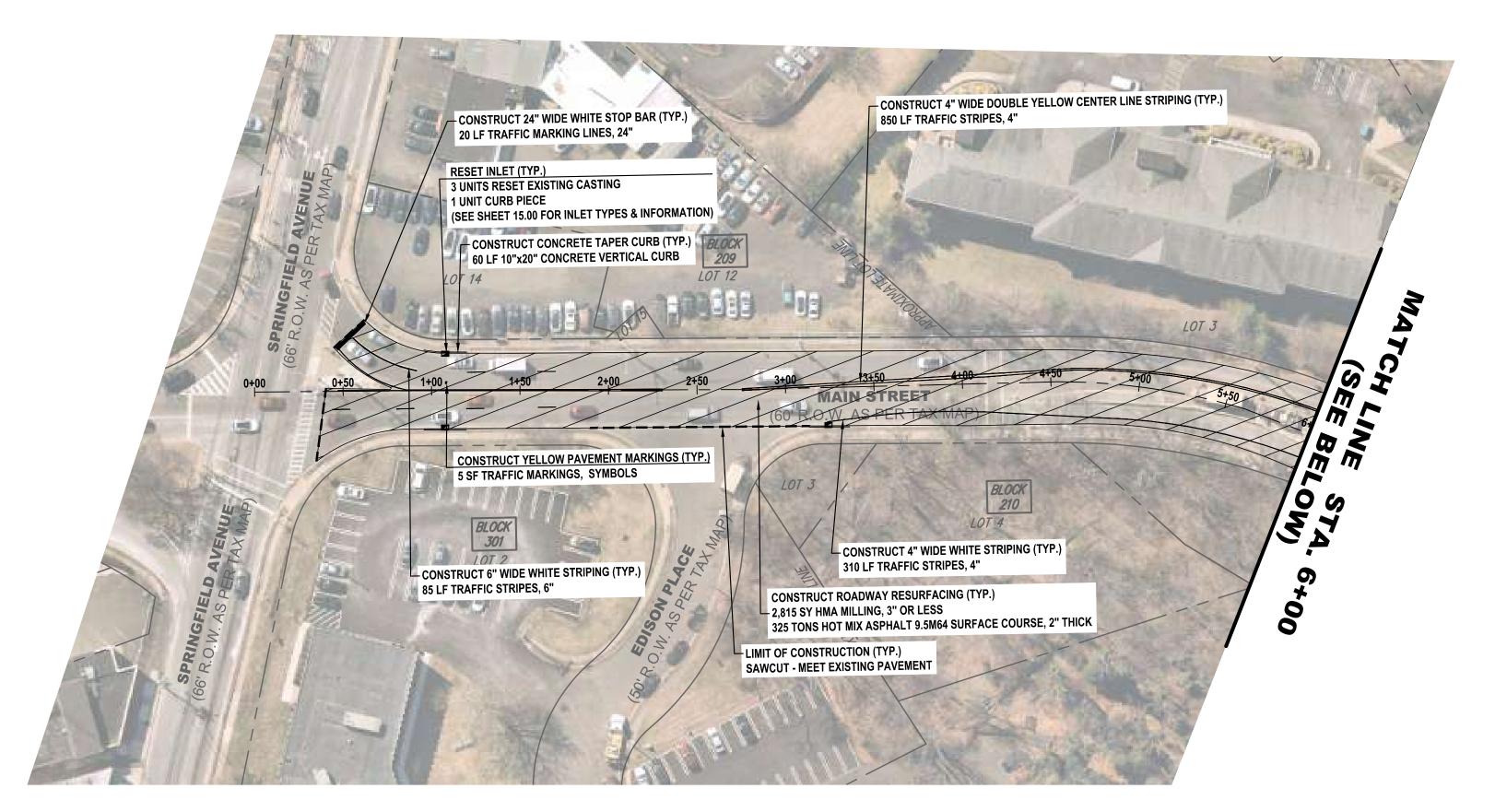
**2023 ROAD RESURFACING PROJECT** (CA-2022)
TOWNSHIP OF SPRINGFIELD

**UNION COUNTY NEW JERSEY** 15.00 UNIOCTY22.010 DATE: DECEMBER 1, 2

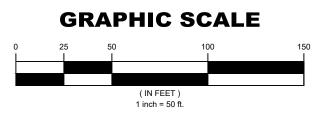




#### TOWNSHIP OF SPRINGFIELD







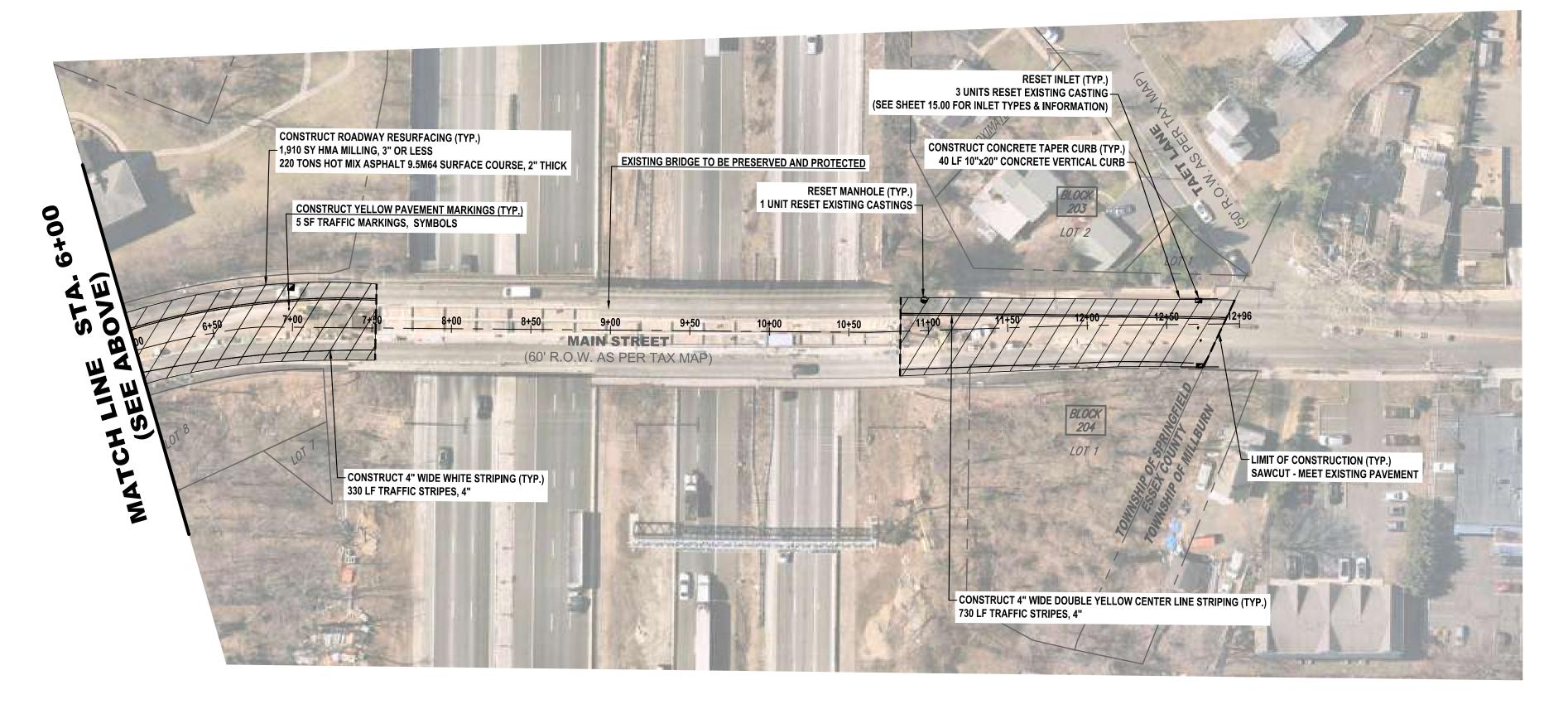
REVISIONS

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2023/03/20

2023/05/16



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PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

15.01 UNIOCTY22.010 SCALE: 1" = 50'

MAIN STREET I **2023 ROAD RESURFACING PROJECT** 

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

(CA-2022) TOWNSHIP OF SPRINGFIELD **UNION COUNTY NEW JERSEY** 

## **BOROUGH OF ROSELLE**

							ADA R	AMPS					
				CURB RAN	MP LAYOUT					QUANT	TITIES		
STATION	OFFSET (LT/RT)	CURB RAMP TYPE	PERPENDICULAR	PARALLEL	DIAGONAL	COMBINATION	10"X20" CONC. VERTICAL CURB	I GRANITE CHRRI	PAVERS	12" X 13" CONCRETE SLOPING CURB	CONC. SIDEWALK, REINFORCED 6" THICK	DETECTABLE WARNING SURFACE	CONC. SIDEWALK, 4" THICK
4+40	RT	1			Х		30				5	1	10
4+83	RT	1			Х		35				10	1	15
4+90	LΤ	1	X				20				10	1	10
8+96	RT	1			Х		35				5	1	15
8+98	LT	1			Х		35				5	1	15
9+43	LT	1			Х		35				5	1	15
9+46	RT	1			Х		30				5	1	15

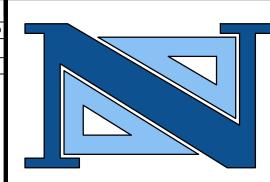
		INLET TYP	ES & LOCA	TIONS		
				QUAI	YTITY	
STATION	OFFSET (LT/RT)	EXISTING INLET TYPE	BICYCLE SAFE GRATE	CURB PIECE	PLATE	RESET
0+37	LT	В				Х
0+40	RT	В				Х
4+27	LT	В				Х
4+29	RT	В				Х
4+46	RT	В	Х	Х		Х
4+76	RT	В	Х	Χ		Х
4+93	RT	В				Х
6+19	LT	В				Х
7+20	LT	В				Х
8+84	LT	В				Х

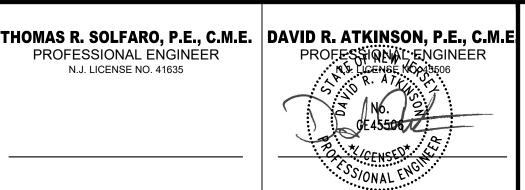
ITEM NO.	TO BE CONSTRUCTED	UNIT	QUANTITY
1	PORTABLE VARIABLE MESSAGE SIGN	UNIT	
2	TRAFFIC CONTROL TRUCK MOUNTED CRASH CUSHION	UNIT	
3	BREAKAWAY BARRICADE	UNIT	
4	DRUM	UNIT	
5	TRAFFIC CONE	UNIT	
6	CONSTRUCTION SIGNS	SF	
7	TRAFFIC DIRECTOR, FLAGGER	HOUR	
8	TRAFFIC DIRECTOR, I LAGGER  TRAFFIC DIRECTOR, UNIFORM POLICE	ALLOW.	
9			
	EXCAVATION, UNCLASSIFIED (IF & WHERE DIRECTED)	CY	4.405
10	HMA MILLING, 3" OR LESS	SY	4,105
11	DENSE GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS (IF & WHERE	CY	
	DIRECTED)		
12	HOT MIX ASPHALT PAVEMENT REPAIR (EXCAVATION, 4" DGA, 6" BASE COURSE) (IF	SY	620
12	& WHERE DIRECTED)	TON	475
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	475
14	HOT MIX ASPHALT 9.5M64 INTERMEDIATE COURSE	TON	25
15	FUEL PRICE ADJUSTMENT	DOLL.	
16	ASPHALT PRICE ADJUSTMENT	DOLL.	
17	DECK SURFACE SEALER (IF & WHERE DIRECTED)	SY	
18	DECK JOINT FILLER AND SEALER (IF & WHERE DIRECTED)	LF	
19	CURB PIECE	UNIT	2
20	BICYCLE SAFE GRATE	UNIT	2
21	RESET EXISTING CASTING (INLETS AND MANHOLES)	UNIT	15
22	RESET WATER VALVE BOX	UNIT	3
23	INLET, TYPE B	UNIT	
24	RECONSTRUCTED INLET, TYPE A, USING NEW CASTING	UNIT	
25	RECONSTRUCTED INLET, 2' X 2', USING NEW CASTING	UNIT	
26	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING (IF & WHERE DIRECTED)	UNIT	
27	10" X 20" CONCRETE VERTICAL CURB	LF	330
28	GRANITE CURB	LF	
29	HOT MIX ASPHALT SIDEWALK, 2" THICK	SY	
30	CONCRETE SIDEWALK, 4" THICK	SY	95
31	CONCRETE SIDEWALK, REINFORCED 6" THICK	SY	45
32	DETECTABLE WARNING SURFACE (CAST-IN-PLACE)	SY	7
33	RESET BRICK PAVER (IF & WHERE DIRECTED)	SY	<u> </u>
34	TRAFFIC STRIPES, 4"	LF	3,200
35	TRAFFIC STRIPES, 6"	LF	5,200
36	TRAFFIC STRIPES, 8"	LF	605
37	TRAFFIC STRIFES, 6 TRAFFIC MARKINGS, SYMBOLS	SF	10
38	TRAFFIC MARKING, LINES, 12"	LF	785
	TRAFFIC MARKING, LINES, 12 TRAFFIC MARKING, LINES, 24"	LF LF	15
39			15
40	REGULATORY AND WARNING SIGN	SF	
41	SOLAR FLASHING LED CROSSING SIGN	UNIT	
42	RPM, MONO-DIRECTIONAL AMBER LENS	UNIT	
43	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	400
44	TOPSOIL SPREADING, 4" THICK	S.Y.	100
45	FERTILIZING AND SEEDING, TYPE A	S.Y.	100
46	STRAW MULCHING	S.Y.	100
47	SEALING OF CRACKS IN HOT MIX ASPHALT SURFACE COURSE	L.F.	
48	CLEARING SITE	L.S.	
49	FINAL CLEANUP	L.S.	

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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

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J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER





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TEL: 201-939-8805

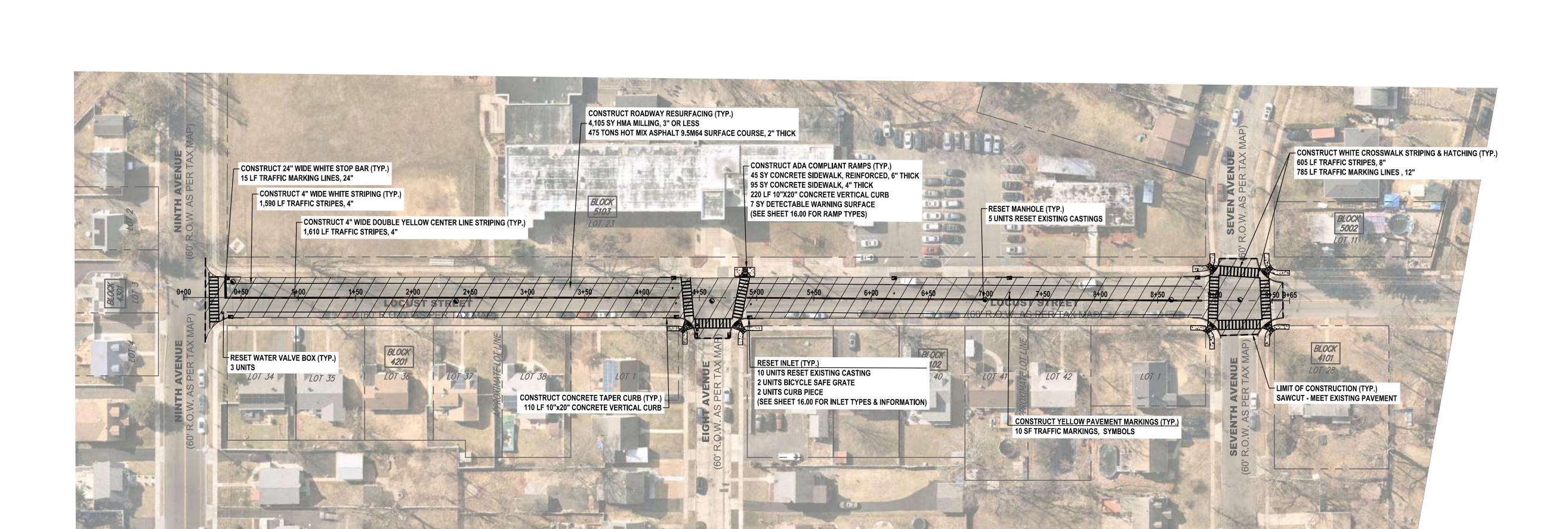
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	23 ROAD RES	ET QUANTITY SHEET SURFACING PROJECT A-2022)
	<b>BOROUG</b>	H OF ROSELLE
UNION	COUNTY	<b>NEW JERSEY</b>
DRAWN BY: J.V.	CHECKED BY: D.R.A.	PROJECT NO.: SHEET NO.:
DESIGNED BY: J.V.	SCALE:	UNIOCTY22.010 16.00
FIELD BOOK NO.:	PAGE:	DATE: DECEMBER 1, 2022

• WORK FOR LOCUST STREET TO BE DONE WHEN SCHOOL IS OUT OF SESSION



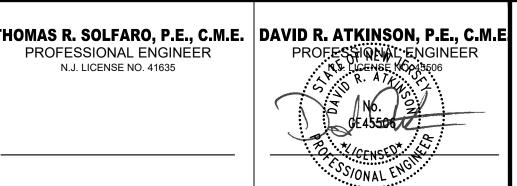
REVISIONS

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REVISED PER NJDOT COMMENT LETTER

2023/03/20

2023/05/16



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PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

LOCUST STREET I **2023 ROAD RESURFACING PROJECT** (CA-2022) BOROUGH OF ROSELLE **UNION COUNTY NEW JERSEY** 

16.01 UNIOCTY22.010 SCALE: 1" = 50'

#### **GENERAL NOTES:**

- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS INDICATED BELOW.
- ALL SMALL SIGN SUPPORTS SHALL BE OF THE BREAKAWAY TYPE WITH EXCEPTION OF
- THOSE INSTALLED BEHIND GUIDE RAIL OR OTHER ROADSIDE BARRIER. ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED
- BEFORE GALVANIZING. GALVINIZING SHALL BE IN CONFORMANCE WITH ASTM A123. ALL STEEL U-POST SIGN SUPPORTS MUST BE INSTALLED FACING THE PREDOMINANT
- TRAFFIC FLOW. A MOUNTING BRACKET SHOULD BE USED ON SIDE MOUNTED SIGNS SUCH AS "ONE WAY" SIGNS INSTALLED IN MEDIANS.
- SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.

WHEN SIGNS ARE INSTALLED ON SLOPES 10H:1V OR FLATTER, THE MINIMUM VERTICAL

3/4" BEYOND THE NUT WHEN TIGHT, BUT SHALL

ENGAGE ALL THREADS IN THE NUT.

BOLTS SHALL NOT PROTRUDE MORE THAN

ABOVE THE EDGE OF PAVEMENT

SIGN POST

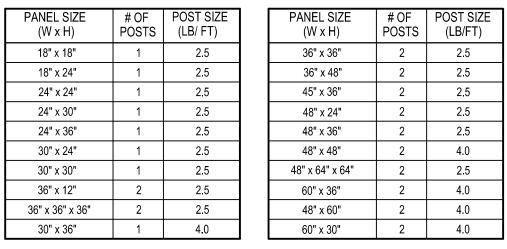
2023/03/20

2023/05/16

- CLEARANCE REQUIREMENTS FOR SIGNS ARE: FOR SINGLE POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE BOTTOM OF ANY PANEL MUST BE 7 FEET, AND THE MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO THE TOP OF ANY SIGN PANEL MUST BE 9 FEET. FOR MULTI-POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT
- AND THE BOTTOM OF A MAIN SIGN PANEL MUST BE 7 FEET. SECONDARY SIGN PANELS (LAND SERVICE HIGHWAYS) - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A SECONDARY SIGN PANEL IS 6 FEET.

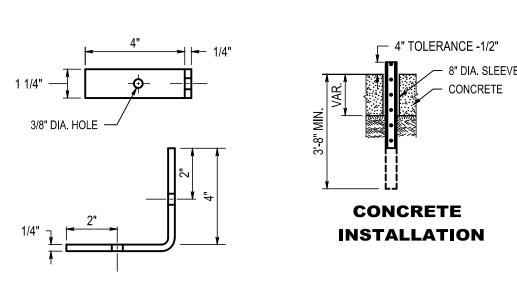
SECONDARY SIGN PANELS (INTERSTATE AND FREEWAYS) - THE BOTTOM OF THE MAIN SIGN SHALL BE A MINIMUM OF 8 FEET AND THE SECONDARY SIGN PANEL A MINIMUM OF 5 FEET

- WHERE GRADING OF 10H:1V OR FLATTER CANNOT BE OBTAINED. OR WHERE CURB OR BERM IS GREATER THAN 4 INCHES, THE MINIMUM VERTICAL CLEARANCE WILL BE MEASURED FROM THE GROUND LINE TO THE BOTTOM OF THE SIGN.
- THE HORIZONTAL OFFSET FROM EDGE OF PAVEMENT TO EDGE OF SIGN IS DERIVED FROM SECTION 2A.19 OF THE MUTCD AS FOLLOWS:
  - FOR URBAN INSTALLATIONS IN AREAS WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL OFFSET OF 2 FEET IS DESIRABLE. A MINIMUM OFFSET OF 1 FOOT FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE THE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.
- FOR RURAL INSTALLATIONS 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT 12 FEET MINIMUM DESIRABLE FROM EDGE OF TRAFFIC OR AUXILIARY LANE.
- FOR INTERSTATE AND FREEWAY INSTALLATIONS 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF TRAFFIC OR AUXILIARY LANE.
- FOR RAMP INSTALLATIONS 6 FEET MINIMUM FROM EDGE OF ROAD.
- WHERE BEHIND GUIDE RAIL 4 FEET MINIMUM FROM BACK OF BEAM GUIDE RAIL ELEMENT TO
- PERMANENT SIGN SUPPORTS SHOULD NOT BE INSTALLED ON SLOPES GREATER THAN 10H:1V, EXCEPT WHERE GRADING OF 10H:1V CANNOT BE OBTAINED OR THE SIGN SUPPORTS WILL BE BEHIND A TRAFFIC BARRIER. THE SLOPE SHALL EXTEND A MINIMUM OF 3 FEET BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
- EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH STEEL U-POST SIGN SUPPORTS.
- STEEL U-POST SIGN SUPPORTS SHALL NOT BE PLACED IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
- TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTER LINE OF SPLICE.

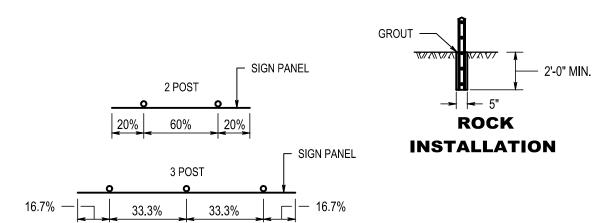


BREAKAWAY SIGN SUPPORT

#### U-POST SELECTION TABLE

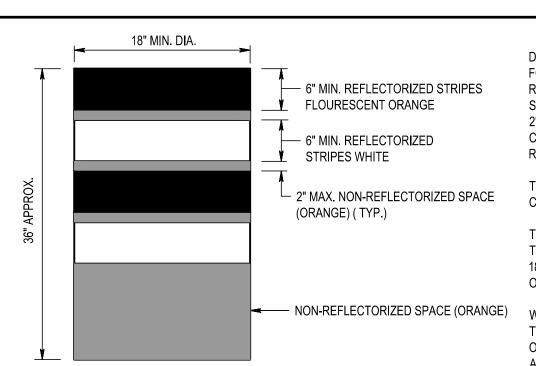


#### **DETAIL OF BRACKET** FOR SIDE MOUNTED SIGNS



STEEL U-POST SPACING

- THE 9" MIN. x 48", OR 12" MAX. x 48" BARRICADE RAILS SHALL BE FABRICATED FROM 0.125" MAX. PLASTIC SHEETING AND SHALL BE ATTACHED, 4 PER RAIL, WITH 1 INCH NO. 14 PAN HEAD METAL SCREWS OR PLASTIC RIVETS. ALL CORNERS SHALL BE ROUNDED.
- ORANGE AND SILVER (WHITE) STRIPES SHALL BE RETROREFLECTIVE SHEETING, ASTM D 4956 TYPE III, AS SHOWN FOR CONSTRUCTION SIGNS. ALTERNATE ORANGE AND SILVER (WHITE) STRIPES 6" WIDE SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS.
- 3. IF NECESSARY, THE SANDBAGS SHALL BE FABRICATED AND PLACED ACCORDING TO THE MANUFACTURE'S RECOMMENDATION.
- THE FRAMING FOR BARRICADE PANELS SHALL BE NCHRP-350 CRASHED TESTED AND FHWA APPROVED.



DRUMS SHALL BE MADE OF ORANGE PLASTIC WITH A MINIMUM OF FOUR ALTERNATE FLUORESCENT ORANGE AND WHITE RETROREFLECTIVE STRIPES. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE STRIPES, THEY SHALL BE NO MORE THAN 2" WIDE. RETROREFLECTIVE SHEETING FOR STRIPES SHALL CONFORM WITH ASTM D 4956 TYPE VII OR VIII WITH S2

THE REFLECTORIZED AREA OF DRUMS SHALL BE ROUND EXCEPT THAT OTHER SHAPES, WHICH PROVIDE THE SAME VISIBILITY AS AN 18 INCH DIAMETER ROUND DRUM REGARDLESS OF

WHEN BALLAST IS REQUIRED BY THE R.E., SAND SHALL BE USED. THE MAXIMUM WEIGHT OF THE BALLAST SHALL BE 50 LBS. AND BE LOCATED APPROXIMATELY AT GROUND LEVEL.

BASE DIA. MAY BE LARGER THAN TOP DIA.

(L OR R) W1-6

48" x 24" (8 S.F.)

PREPARED

TO STOP

W20 - 7b

48" x 48"

(16 S.F.)

ROAD CLOSED

THRU TRAFFIC

R11 - 4

60" x 30" (12.5 S.F.)

END

ROAD WORK

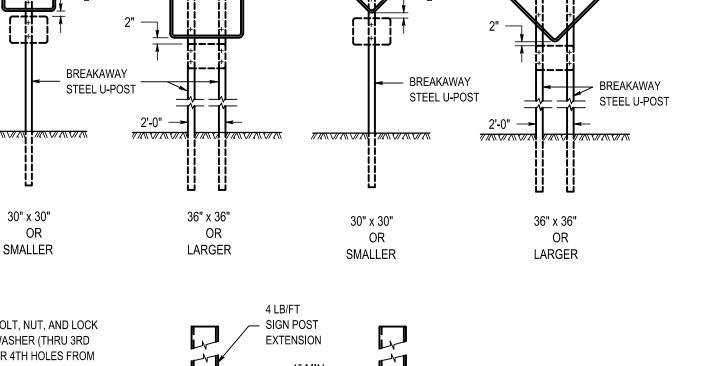
G20 - 2A

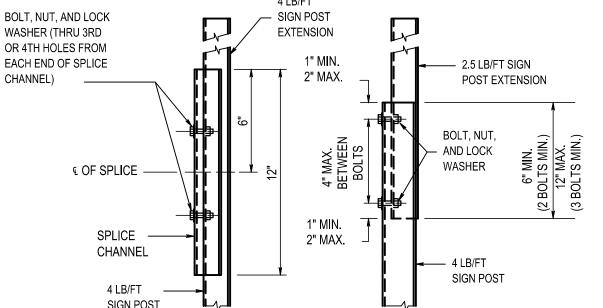
48" x 24" (8 S.F.)

TO

CD-159-1.1

# BREAKAWAY - BREAKAWAY BREAKAWAY STEEL U-POST STEEL U-POST STEEL U-POST



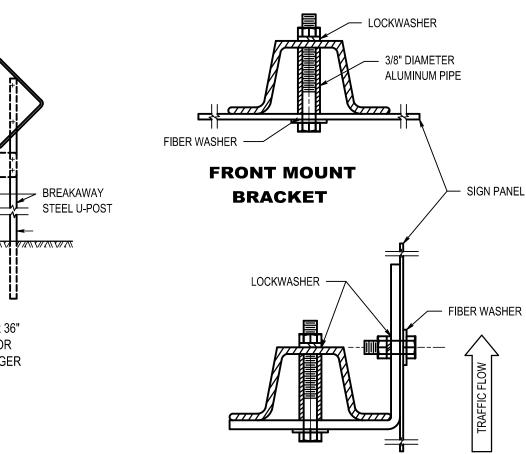


**SIGN POST EXTENSION SPLICE DETAILS** 

REVISIONS

ISSUED FOR BID

REVISED PER NJDOT COMMENT LETTER



EDGE OF PAVEMENT

**SIDE MOUNT BRACKET** 

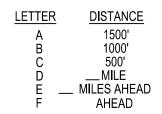
STEEL U-POST GRADING DETAIL

TYPE III BARRICADE - FRONT VIEW

- DIMENSIONS, COLORS AND DETAILS OF VARIOUS SIZE SIGNS, AND ACCESSORY PANELS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGN PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- 2. (S) REPRESENTS A SPECIAL SIZE SIGN.

**GENERAL NOTES FOR SIGNS:** 

- LETTERS AND NUMERALS SHALL CONFORM TO THE CURRENT MANUAL, "STANDARD ALPHABETS FOR HIGHWAY SIGNS" U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
- THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER FOR THE DISTANCE TO BE USED ON THE ADVANCE WARNING SIGNS, AND FOR THE SPEED LIMIT TO BE USED ON
- DISTANCE LEGEND SIGN NUMBER FOLLOWED BY



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#### BACKING MATERIAL

1. ALUMINUM SHALL BE FLAT SHEET OF ALLOY 5052-H38 OR 6061-T6 ALLOY, 0.100" GAUGE.

#### TEMPORARY SIGN SUPPORTS

- 1. SIGN SUPPORTS SHALL BE OF WELL SEASONED LUMBER, S4S, FREE OF SPLITS, KNOTS AND WARPS OR, OF STEEL COMPONENTS.
- 2. WOOD POSTS SHALL HAVE A UNIFORM CROSS-SECTION AND SHALL NOT EXCEED THE FOLLOWING DIMENSIONS FOR: SINGLE POST = 4" x 6"; TWO POSTS = 3" x 6" OR 4" x 5"; THREE POSTS = 3" x 5" OR 4" x 4"
- ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY CENTERLINE. 3. NO BRACING IS PERMITTED. VERTICAL CLEARANCES FOR SIGNS MOUNTED ON WOOD SUPPORTS SHALL BE 7' MINIMUM. EMBEDMENT DEPTH FOR THE WOOD POST SHALL NOT

4" x 6" WOOD POSTS SHALL BE MODIFIED BY DRILLING 1 1/2" DIAMETER HOLES 4" AND 18"

- 4. STEEL POSTS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAIL FOR U-POST SIGN
- 5. TEMPORARY SIGN SUPPORTS NOT MEETING THIS CRITERIA SHALL BE SHIELDED BY A LONGITUDINAL BARRIER OR CRASH CUSHIONS.

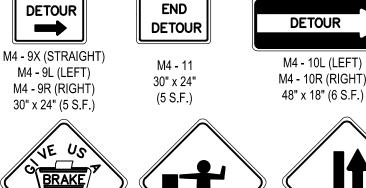
#### SIGN FACES

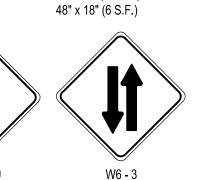
**BREAKAWAY BARRICADES** 

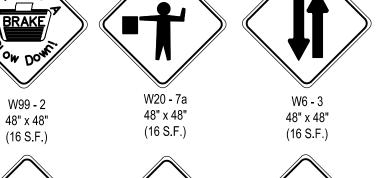
**NOT TO SCALE** 

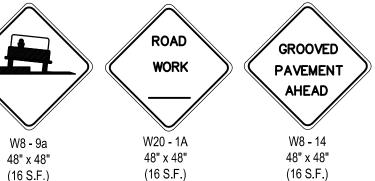
CD-159-1.3

- 1. SIGN FACES SHALL BE RETROREFLECTIVE SHEETING, TYPE II OR IIIA, EXCEPT FOR THE W20 SERIES AND W4-2 SIGN FACES WHICH SHALL BE TYPE IV-B SHEETING.
- 1. ALL SIGNS SHALL BE SECURELY FASTENED TO THEIR SUPPORTS WITH BOLTS, NUTS AND WASHERS IN ACCORDANCE WITH THE SPECIFICATIONS.









#### **CONSTRUCTION SIGNS NOT TO SCALE**

# - 3" TO 4" SPACE FOR HANDLING. 6" SILVER (WHITE) RETROREFLECTIVE SHEETING, ASTM D-4956 TYPE III 2" SPACE 4" SILVER (WHITE) RETROREFLECTIVE SHEETING, ASTM D-4956 TYPE III - PLASTIC OR RUBBER MIN. WEIGHT 7 LBS. ───── 7 1/2" MIN. O.D.

**──** 1 3/4" MIN. O.D.

- TRAFFIC CONES SHALL BE PREDOMINATELY ORANGE IN COLOR.
- 2. BASES MAY BE OF BREAKAWAY BALLASTED TYPE.

14" MIN.

MINOR MANUFACTURER'S VARIATIONS MAY BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER.

### **TRAFFIC CONES**

**NOT TO SCALE** CD-159-1.2

## REQUIREMENTS. THE TOP OF THE DRUM SHALL NOT BE OPEN. DRUMS SHALL BE CONSTRUCTED TO INHIBIT ROLLING IF KNOCKED OVER.

ORIENTATION, MAY BE USED.

ALTERNATE TYPES OF BALLAST SHALL BE APPROVED BY THE R.E..

## **DRUMS NOT TO SCALE**

#### GENERAL NOTES MAINTENANCE AND PROTECTION OF TRAFFIC

- 1. All devices and procedures for the maintenance and protection of traffic shall be in accordance with the "Manual on Uniform Traffic Control Devices" for streets and highways. The contractor shall plan and carry out his work to provide for the convenient and safe passage of all vehicular and pedestrian traffic.
- 2. Contractor to develop detailed maintenance and protection of traffic plan for review by the engineer prior to construction.
- 3. The contractor shall follow the recommended traffic control procedures. If the contractor desires to change the procedure, he shall present his changes in writing to the engineer for review There may be utility relocations, adjustments and improvements which are necessitated by the proposed construction. The contractor shall coordinate his work with each of the utility companies located within the project limits.
- 4. The contractor is responsible for providing maintenance and protection of traffic throughout the duration of construction. The costs for the individual devices used to maintain and protect traffic shall be included in the lump sum price bid for maintenance and protection of traffic. No separate payments will be made for relocating the devices as required, or as directed by the municipality, during the course of construction.
- 5. The contractor will not be permitted to close down the entire street. The contractor shall provide means of access at all times for pedestrians and vehicular traffic at all private driveways and occupied buildings affected by the work of this contract. During construction, in the vicinity of a driveway, the access width at the driveway entrance shall be plainly marked by lights, barricades or other such devices approved by the municipality.
- 6. The contractor shall maintain at least one lane of traffic at all
- 7. During construction, all roads shall be properly maintained to accommodate emergency vehicles at all times.
- 8. All barricades shall be Type III breakaway barricades.
- 9. Fill material for escape ramps shall be on-site material. All costs for storing, placing, moving and removing fillet material shall be included in the price bid for the various items in the

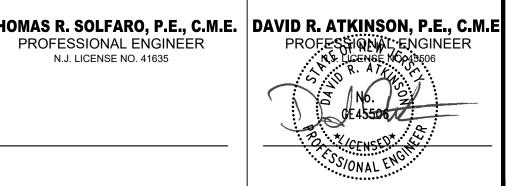
CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA2792700

## STEEL U-POST SIGN SUPPORTS

J.V. J.V.

NOT TO SCALE CD-612-4

PROFESSIONAL ENGINEER N.J. LICENSE NO. 41635



NEGLIA ENGINEERING ASSOCIATES TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

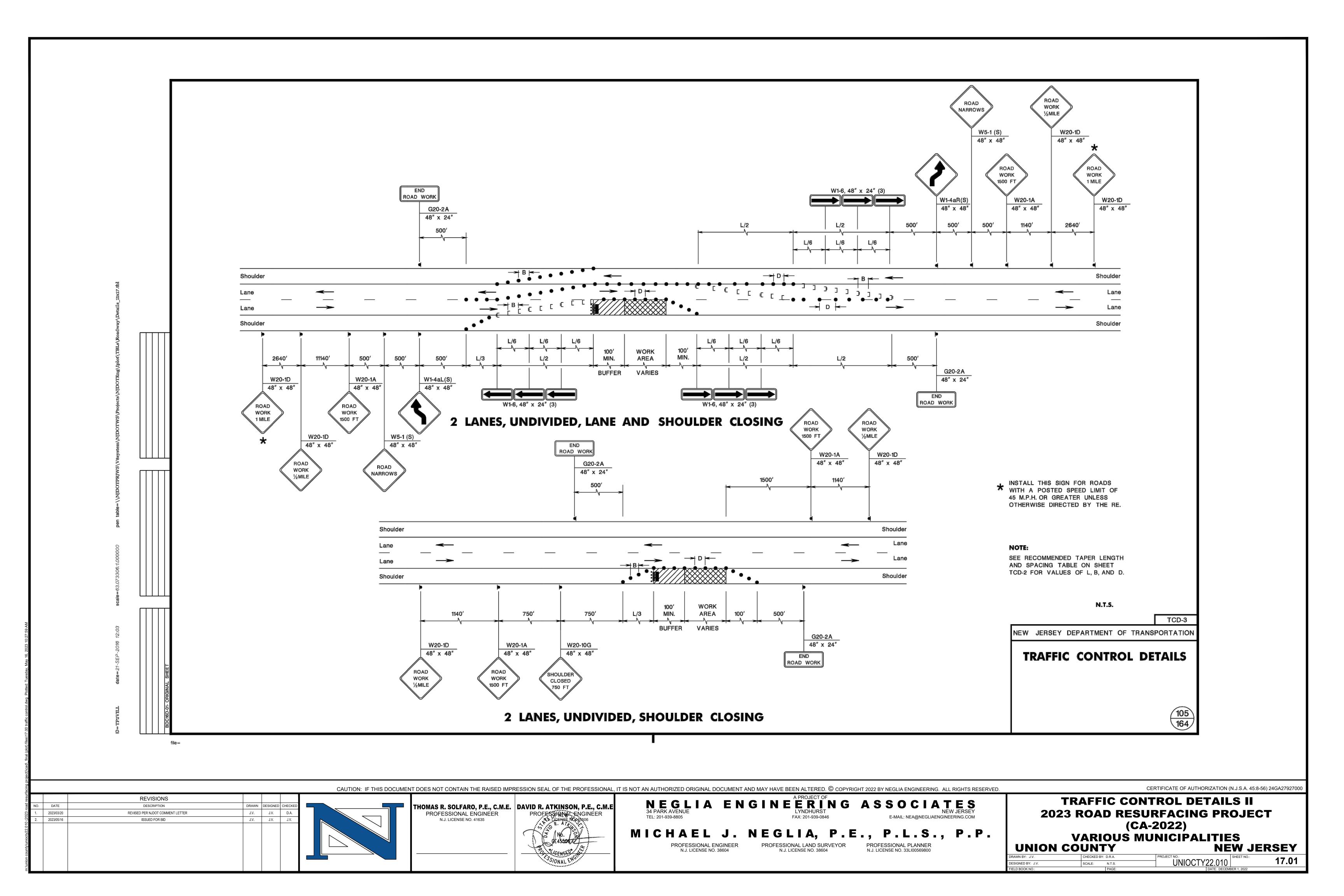
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

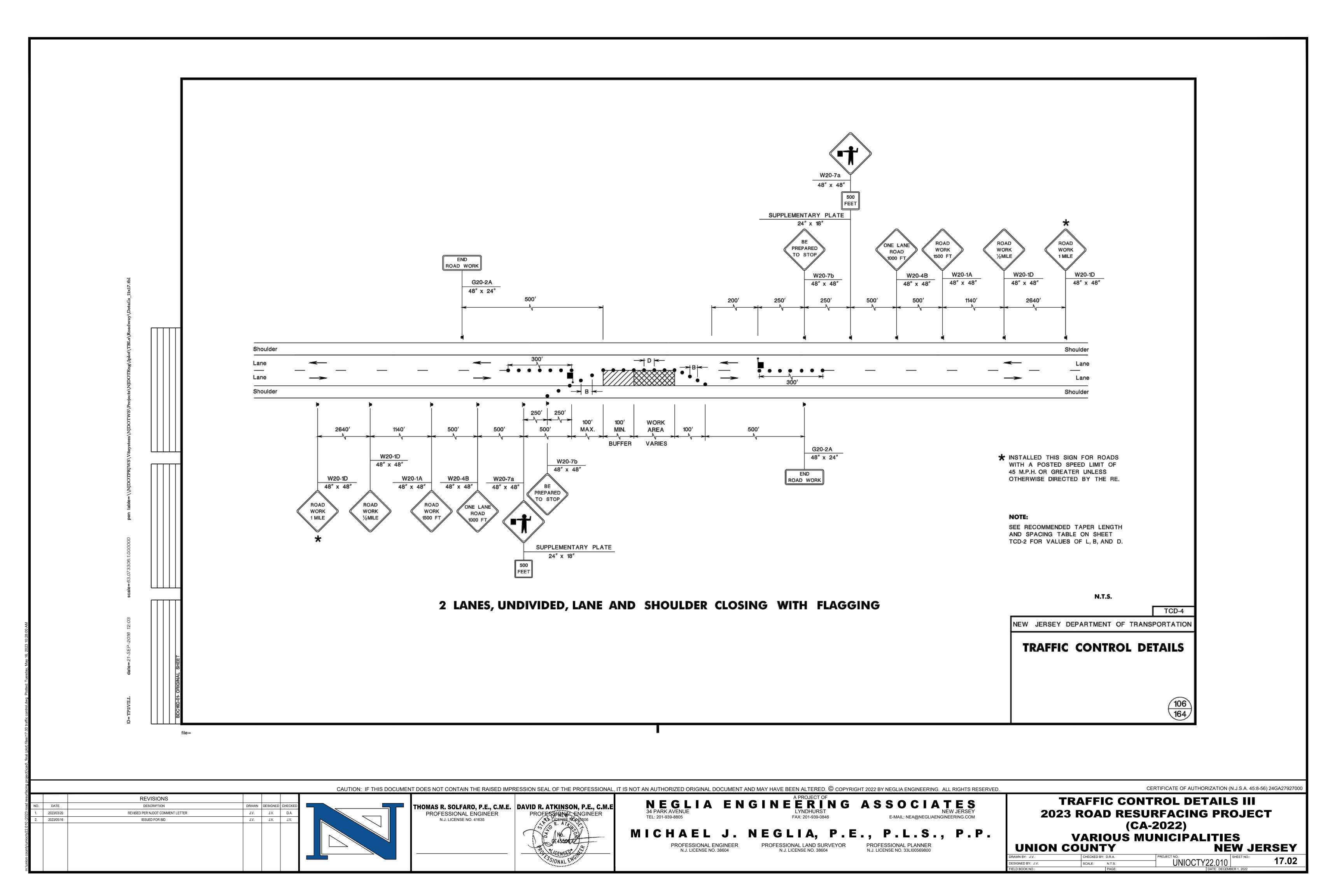
PROFESSIONAL ENGINEER PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 N.J. LICENSE NO. 38604

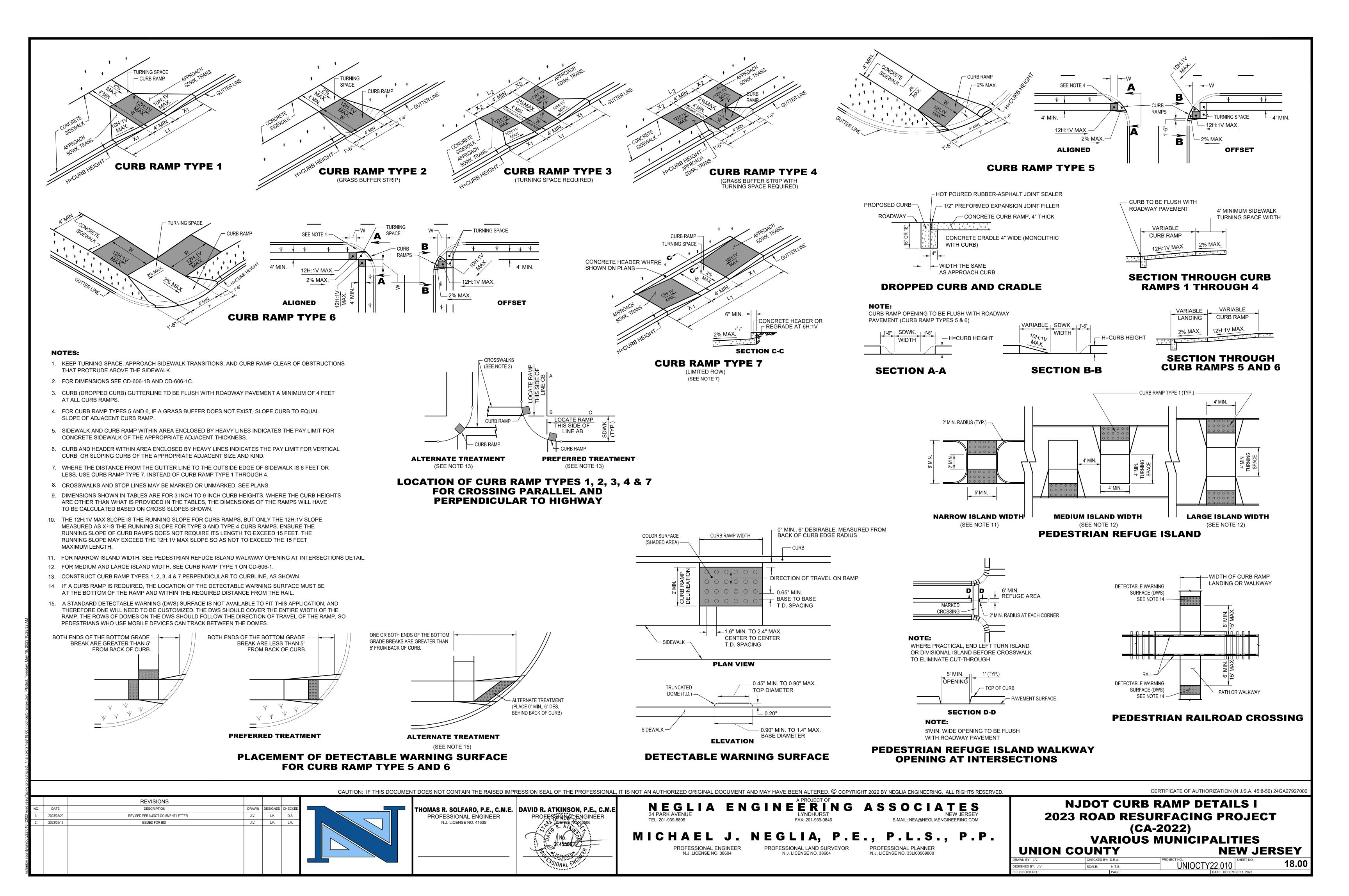
PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

# TRAFFIC CONTROL DETAILS I (CA-2022) **VARIOUS MUNICIPALITIES**

## **2023 ROAD RESURFACING PROJECT NEW JERSEY UNION COUNTY** 17.00 UNIOCTY22.010 SCALE: N.T.S.







CURB RAMP TYPE 1  0.0 % GUTTER LINE PROFILE	CURBR	PAMP	TYPI	<b>E</b> 3																										
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8 8 6.67 6.67 17.33	7	5.83 6.67	5.83 6.67	15.67 17.33	Ž		.91 13.83 .91 15.83	7			5.30 15.78 6.06 17.47	4 ==	5.58 4.39 6.72 5.28	13.97	7		7.29 8.33	4.86 16 5.56 17	.15	6.47 7.78	3.96 4.77	14.43	7		8.33 9.52	77 T R P 77 T 8	16.82 18.65	7. 9.	.68 3.61 .24 4.35	15.29 17.59
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3 3 3.13 2.08 9.21	3	*	*	*	-	*	* *	<b>3</b>	$\vdash$	U-1	* * 3.03 10.73	<del> </del>	1.09 0.86	5.95	4		4.17	2.78 10	0.94	1.27	0.78	6.04	3	-	4.76	2.56	11.33		50 0.71	6.21
4     4     4.17     2.78     10.94       5     5     5.21     3.47     12.68	5	4.17	4.17	12.33	VI N. 70	1.96 1.	.96 7.92	5		4.63	3.79 12.42		2.23 1.75	7.98	5	10000	5.21	3.47 12	.68	2.58	1.58	8.16	5		5.95	1	13.16	3.	ASS. NO.	
5 5 5.21 3.47 12.68 6 6 6.25 4.17 14.42	6 4.0	5.00 5.83	5.00 5.83	14.00 15.67	4.0	00 T M F 800 E 2007 H 700 T	.96 9.93 .96 11.93	6	4.0	5.56 6.48	4.55     14.10       5.30     15.78	4.0	3.37 2.65 4.50 3.54	10.01 12.04	7	4.0	6.25 7.29	4.17 14 4.86 16	.42 4.0	3.90 5.22	2.39 3.20	10.29	6	4.0	7.14		14.99 16.82	4.0	mental temperature	
7 7 7.29 4.86 16.15	8	6.67	6.67	17.33		(200 N.S. )	.96 13.93	8	E	Visual Transport of	6.06 17.47		5.64 4.43	14.07	8		8.33	5.56 1	.89	6.53	4.00	14.53	8		9.52	LUCALI V	18.65	7	19 2.91 76 3.65	1
8     8     8.33     5.56     17.89       9     9     9.38     6.25     19.63	9	7.50	7.50	19.00		5.96 5.	.96 15.93	9		8.33	6.82 19.15		6.78 5.32	16.10	9		9.38	6.25	.63	7.85	4.81	16.66	9		10.71	5.77	20.48	9.	32 4.38	17.71
3.0 % GUTTER LINE PROFILE																														
H W X <sub>10</sub> X <sub>10</sub> L <sub>1</sub>	4.0 % GU1	TER LINE P	ROFILE					5.0	% GUTTER	LINE PROFIL					6.0	% GUTTE	R LINE PRO	FILE					7.0	% GUTTER	R LINE PROF	FILE				
INCHES   FEET   FEET   FEET   FEET     FEET	H	X <sub>1U</sub>	X <sub>11</sub>	L <sub>1</sub> FEET	Y	X <sub>2U</sub>	X <sub>2L</sub> L <sub>2</sub>	Н	W FEET	X <sub>1U</sub>	·X <sub>11</sub>	MCDEC	X <sub>2U</sub> X <sub>2L</sub>		H	W.	X <sub>1U</sub>	X <sub>1L</sub>	L Y	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>	H	W	X <sub>1U</sub>	X <sub>1L</sub>	L		( <sub>2U</sub> X <sub>2L</sub>	L <sub>2</sub>
			I FEEL																		PECT		INICUIEC	FFFF	FFFF		CCCT IIA			
4 4 4.76 2.56 11.33	INCHES FEET	8270 1263 5	1.79	7 4 7 4 2	INCHES		EET FEET   6.37	INCHES 3		10 State   12	FEET         FEET           1.67         10.67	INCHES	FEET FEE 0.5	6.85	INCHES 3	FEET	6.25	FEET F	EET INCH	4.1	0.53	7.79	INCHES 3	FEET	8.33	1.47	13.80 IN	TANAL AND BUILDING TO BE SEEN TO	EET FEET .71 0.50	المراسية الألب
4     4     4.76     2.56     11.33       5     5     5.95     3.21     13.16	3 4	4.17 5.56	1.79 2.38	9.95 11.94	HNCHES	1.75 0. 3.68 1	.62 6.37 .29 8.97	3 4		5.00 6.67	1.67 10.67 2.22 12.89	INCHES	2.28     0.5       4.78     1.19	6.85 9.98	3 4	<u>ree</u> i	6.25 8.33	1.56 1 2.08 1	l.81 l.42	3.26 6.84	0.53 1.11	7.79 11.95	INCHES 3	FEET	8.33 11.11	1.47 1.96	13.80 17.07	5 11	.71 0.50 .97 1.04	10.20 17.01
4 4 4.76 2.56 11.33	3 4 5 6 2.75	4.17 5.56 6.94	1.79 2.38 2.98	9.95	2.75	1.75     0       3.68     1       5.60     1	0.62 6.37 0.29 8.97 0.97 11.57	3 4 5	2:75	5.00 6.67 8.33	1.67     10.67       2.22     12.89       2.78     15.11	2.75	2.28     0.5       4.78     1.19       7.29     1.83	6.85 9.98 13.10	3 4 5	2.75	6.25 8.33 10.42	1.56 1 2.08 1 2.60 1	1.42 7.02	3.26 6.84 10.41	0.53 1.11 1.69	7.79 11.95 16.10	3 4 5	FEET -	8.33 11.11 13.89	1.47 1.96 2.45	13.80 17.07 20.34	5 14 15	.71 0.50 1.97 1.04 5.00 1.58	10.20 17.01 20.58
4     4     4.76     2.56     11.33       5     5     5.95     3.21     13.16       6     6     7.14     3.85     14.99       7     7     8.33     4.49     16.82       8     8     9.52     5.13     18.65	3 4 5 6 2.75	4.17 5.56	1.79 2.38	9.95 11.94	2.75	1.75     0       3.68     1       5.60     1	.62 6.37 .29 8.97	3 4 5 6	2.75	5.00 6.67 8.33	1.67 10.67 2.22 12.89	2.75	2.28     0.5       4.78     1.19	6.85 9.98 13.10 16.23	3 4 5 6	2.75	6.25 8.33	1.56 1 2.08 1 2.60 1	l.81 l.42	3.26 6.84	0.53 1.11	7.79 11.95	3 4 5 6	2.75	8.33 11.11	1.47 1.96 2.45	13.80 17.07	2.75 5 11 15 2.75 15	.71 0.50 .97 1.04	10.20 17.01 20.58 21.13 21.67
4     4     4.76     2.56     11.33       5     5     5.95     3.21     13.16       6     6     7.14     3.85     14.99       7     7     8.33     4.49     16.82	3 4 5 6 2.75 7 8	4.17 5.56 6.94 8.33 9.72 11.11	1.79 2.38 2.98 3.57 4.17 4.76	9.95 11.94 13.92 15.90	2.75	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4.	0.62 6.37 0.29 8.97 0.97 11.57 0.64 14.17 0.32 16.77 0.00 19.37	3 4 5 6 7 8	2.75	5.00 6.67 8.33 10.00 11.67 13.33	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78	2.75	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70	6.85 9.98 13.10 16.23	3 4 5 6 7	2.75	6.25 8.33 10.42 12.50 14.58 15.00	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2	1.81 1.42 7.02 0.63 2.23 3.17	3.26 6.84 10.41 13.99 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44	7.79 11.95 16.10 20.26 21.86 22.44	3 4 5 6 7 8	2.75	8.33 11.11 13.89 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92	13.80 17.07 20.34 21.94 22.43 22.92	2.75   5   11   15   15   15   15	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 2.67 5.00 3.21	10.20 17.01 20.58 21.13
4     4     4.76     2.56     11.33       5     5     5.95     3.21     13.16       6     6     7.14     3.85     14.99       7     7     8.33     4.49     16.82       8     8     9.52     5.13     18.65	3 4 5 6 2.75 7 8 9	4.17 5.56 6.94 8.33 9.72	1.79 2.38 2.98 3.57 4.17 4.76	9.95 11.94 13.92 15.90 17.89	2.75	1.75 0 3.68 1 5.60 1 7.53 2 9.45 3 11.38 4 13.30 4	0.62 6.37 .29 8.97 .97 11.57 .64 14.17 .32 16.77	3 4 5 6 7 8 9	2.75	5.00 6.67 8.33 10.00 11.67 13.33 15.00	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56	2.75	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0	6.85 9.98 13.10 16.23 19.36 22.49 23.32	3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2	1.42 7.02	3.26 6.84 10.41 13.99 15.00	0.53 1.11 1.69 2.27 2.86	7.79 11.95 16.10 20.26 21.86	3 4 5 6 7 8 9	2:75	8.33 11.11 13.89 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92	13.80 17.07 20.34 21.94 22.43	2.75   5   14   15   15   15   15	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 2.67	10.20 17.01 20.58 21.13 21.67 22.21 22.76
4 4 4.76 2.56 11.33 5 5 5.95 3.21 13.16 6 6 7.14 3.85 14.99 7 7 8.33 4.49 16.82 8 8 9.52 5.13 18.65 9 9 10.71 5.77 20.48 4.0 % GUTTER LINE PROFILE H W X <sub>1U</sub> X <sub>1L</sub> L <sub>1</sub>	3 4 5 6 2.75 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94	2.75	1.75     0       3.68     1       5.60     1       7.53     2       9.45     3       11.38     4       13.30     4       1.39     0       3.31     1	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48	3 4 5 6 7 8 9	2.75	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89	2.75	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.4       4.31     1.00	6.85 9.98 13.10 16.23 19.36 22.49 23.32	3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1	1.81 1.42 7.02 0.63 2.23 3.17 3.69	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16	3 4 5 6 7 8 9 3	2.75	8.33 11.11 13.89 15.00 15.00 15.00 15.00 8.33 11.11	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47	13.80 17.07 20.34 21.94 22.43 22.92	2.75   5   14   15   15   15   15   4   10	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 2.67 5.00 3.21 5.00 3.76 5.2 0.39 0.78 0.94	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91
4       4       4.76       2.56       11.33         5       5       5.95       3.21       13.16         6       6       7.14       3.85       14.99         7       7       8.33       4.49       16.82         8       8       9.52       5.13       18.65         9       9       10.71       5.77       20.48	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95	2.75	1.75     0       3.68     1       5.60     1       7.53     2       9.45     3       11.38     4       13.30     4       1.39     0       3.31     1       5.24     1	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88	3 4 5 6 7 8 9 3 4 5	2.75	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67	2.75	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.4	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26	3 4 5 6 7 8 9 3 4 5	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1	1.81 1.42 7.02 0.63 2.23 3.17 3.69	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00	3 4 5 6 7 8 9 3 4 5	2.75	8.33 11.11 13.89 15.00 15.00 15.00 15.00 8.33	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80	2.75   15   15   15   15   15   16   4   10   15	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 2.67 5.00 3.21 5.00 3.76	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48
4 4 4.76 2.56 11.33 5 5 5.95 3.21 13.16 6 6 7.14 3.85 14.99 7 7 8.33 4.49 16.82 8 8 9.52 5.13 18.65 9 9 10.71 5.77 20.48  4.0 % GUTTER LINE PROFILE H W X <sub>1U</sub> X <sub>1L</sub> L <sub>1</sub> INCHES FEET FEET FEET FEET 3 3 4.17 1.79 9.95 4 4 5.56 2.38 11.94	3 4 5 6 2.75 7 8 9 3 4 5 6 3 7	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89	2.75 3.0	1.75     0       3.68     1       5.60     1       7.53     2       9.45     3       11.38     4       13.30     4       1.39     0       3.31     1       5.24     1       7.16     2       9.09     3	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       2.52     13.68       .19     16.28	3 4 5 6 7 8 9 3 4 5 6	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11	3.0	2.28     0.5       4.78     1.19       7.29     1.83       9.79     2.49       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.49       4.31     1.00       6.81     1.70       9.31     2.3       11.81     2.99	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77	3 4 5 6 7 8 9 3 4 5 6	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2	1.81 1.42 7.02 0.63 2.23 3.17 3.69 1.81 1.42 7.02 0.63 2.23	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16 9.73 13.31 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75	3 4 5 6 7 8 9 3 4 5 6	2:75 3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43	2.75   15   15   15   15   15   16   4   10   15   3.0   15	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 3.21 5.00 3.76 5.2 0.39 0.78 0.94 5.00 1.48 5.00 2.02 5.00 2.57	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57
4 4 4.76 2.56 11.33 5 5 5.95 3.21 13.16 6 6 7.14 3.85 14.99 7 7 8.33 4.49 16.82 8 8 9.52 5.13 18.65 9 9 10.71 5.77 20.48   4.0 % GUTTER LINE PROFILE H W X <sub>1U</sub> X <sub>1L</sub> L <sub>1</sub> INCHES FEET FEET FEET 3 3 4.17 1.79 9.95 4 4 5.56 2.38 11.94 5 5 6.94 2.98 13.92	3 4 5 6 2.75 7 8 9 3 4 5 6 3 4 5 6 3.0	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3.	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       .52     13.68       .19     16.28       .87     18.88	3 4 5 6 7 8 9 3 4 5 6 7 8	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78	3.0	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.4       4.31     1.0       6.81     1.70       9.31     2.3       11.81     2.9       14.32     3.5	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89	3 4 5 6 7 8 9 3 4 5 6 7	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2	1.81 1.42 7.02 2.63 2.23 3.17 3.69 1.81 1.42 7.02	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47	3 4 5 6 7 8 9 3 4 5 6 7	2.75 3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92	2.75   15   15   15   15   15   15   15   3.0   15   15   15   15   15   15   15   15	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 3.21 5.00 3.76 5.00 3.76 5.00 1.48 5.00 2.57 5.00 3.11	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11
4	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0.	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       2.52     13.68       .19     16.28	3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67	3.0	2.28     0.5       4.78     1.19       7.29     1.83       9.79     2.49       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.49       4.31     1.00       6.81     1.70       9.31     2.3       11.81     2.99	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89	3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2	1.81 1.42 7.02 0.63 2.23 3.17 3.69 1.81 1.42 7.02 0.63 2.23	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16 9.73 13.31 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42	3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75 3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43	2.75   15   15   15   15   15   15   15   3.0   15   15   15   15   15   15   15   15	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 3.21 5.00 3.76 5.2 0.39 0.78 0.94 5.00 1.48 5.00 2.02 5.00 2.57	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32
4       4       4.76       2.56       11.33         5       5       5.95       3.21       13.16         6       6       7.14       3.85       14.99         7       7       8.33       4.49       16.82         8       8       9.52       5.13       18.65         9       9       10.71       5.77       20.48            4.0 % GUTTER LINE PROFILE         H       W       X <sub>10</sub> X <sub>11</sub> L <sub>1</sub> INCHES       FEET       FEET       FEET       FEET         3       3       4.17       1.79       9.95         4       4       5.56       2.38       11.94         5       5       6.94       2.98       13.92         6       6       8.33       3.57       15.90         7       7       9.72       4.17       17.89         8       8       11.11       4.76       19.87	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0.	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       2.52     13.68       .19     16.28       .87     18.88       .54     21.48       0.23     4.89       0.91     7.49	3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89	3.0	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.4       4.31     1.0       6.81     1.70       9.31     2.3       11.81     2.9       14.32     3.5       15.00     4.20       0.85     0.2       3.36     0.84	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20	3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 3.16 2 4.17 2 4.69 2 1.56 1 2.08 1	1.81 1.42 7.02 0.63 2.23 3.17 3.69 1.81 1.42 7.02 0.63 2.23	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58	3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75 3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07	3.0   55   15   15   15   15   15   15   1	.71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 2.67 5.00 3.21 5.00 3.76 5.00 1.48 5.00 2.02 5.00 2.57 5.00 3.65 5.00 3.65 5.00 3.65 5.00 3.65	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13
4	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9 3 4 5 6 3.0	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92	3.5	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1.	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       .52     13.68       .19     16.28       .87     18.88       .54     21.48       0.23     4.89       0.91     7.49       .58     10.09	3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67	3.0	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70       15.00     4.3       4.31     1.0       6.81     1.70       9.31     2.3       11.81     2.9       14.32     3.5       15.00     4.20       0.85     0.2	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32	3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75 3.0	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.08 1	1.81 1.42 7.02 2.63 2.75 3.69 1.81 1.42 7.02 2.63 3.17 3.69 1.81	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42	3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80	3.0   55   14   15   15   15   15   15   15	.71     0.50       1.97     1.04       5.00     1.58       5.00     2.67       5.00     3.21       5.00     3.76       5.2     0.39       0.78     0.94       5.00     1.48       5.00     2.57       5.00     3.65       14     0.19       40     0.73       1.67     1.27       5.00     1.82	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94
4 4 4.76 2.56 11.33 5 5 5.95 3.21 13.16 6 6 7.14 3.85 14.99 7 7 8.33 4.49 16.82 8 8 9.52 5.13 18.65 9 9 10.71 5.77 20.48   4.0 % GUTTER LINE PROFILE H W X <sub>1U</sub> X <sub>1L</sub> L <sub>1</sub> INCHES FEET FEET FEET FEET 3 3 4.17 1.79 9.95 4 4 5.56 2.38 11.94 5 5 6.94 2.98 13.92 6 6 8.33 3.57 15.90 7 7 9.72 4.17 17.89 8 8 11.11 4.76 19.87 9 9 12.50 5.36 21.86	3 4 5 6 7 8 9 3 4 5 6 3 0 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87	3.5	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2.	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       .52     13.68       .19     16.28       .87     18.88       .54     21.48       0.23     4.89       0.91     7.49       .58     10.09       .26     12.69       .93     15.29	3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 15.00 11.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56	3.0	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.4       4.31     1.0       6.81     1.70       9.31     2.3       11.81     2.99       14.32     3.5       15.00     4.20       0.85     0.2       3.36     0.8       5.86     1.40       8.36     2.09       10.86     2.7	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58	3 4 5 6 7 8 9 3 4 5 6 7 8	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2	1.81 1.42 7.02 9.63 1.23 1.17 3.69 1.81 1.42 7.02 9.63 3.17 3.69 1.81 1.42 7.02 9.63 3.17 3.69 1.81 1.42 7.02 9.63 1.81 1.42 7.02 9.63 1.81 1.81 1.42 7.02 9.63 1.81	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 1.22 4.80 8.37 11.95 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4	3.0	8.33 11.11 13.89 15.00 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	.71     0.50       1.97     1.04       5.00     1.58       5.00     2.67       5.00     3.21       5.00     3.76       5.2     0.39       5.00     1.48       5.00     2.02       5.00     2.57       5.00     3.11       5.00     3.65       .14     0.19       .40     0.73       3.67     1.27       5.00     2.36	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36
4       4       4.76       2.56       11.33         5       5       5.95       3.21       13.16         6       6       7.14       3.85       14.99         7       7       8.33       4.49       16.82         8       8       9.52       5.13       18.65         9       9       10.71       5.77       20.48            4.0 % GUTTER LINE PROFILE         H       W       X <sub>1U</sub> X <sub>1L</sub> L <sub>1</sub> INCHES       FEET       FEET       FEET       FEET         3       3       4.17       1.79       9.95         4       4       5.56       2.38       11.94         5       5       6.94       2.98       13.92         6       6       8.33       3.57       15.90         7       7       9.72       4.17       17.89         8       8       11.11       4.76       19.87         9       9       12.50       5.36       21.86	3 4 5 6 7 8 9 3 4 5 6 3 0 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 4.76 5.36 1.79 2.38 2.98 3.57 4.17	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       3.32     16.77       0.00     19.37       0.67     21.97       0.49     5.88       .16     8.48       .84     11.08       2.52     13.68       0.19     16.28       8.87     18.88       .54     21.48       0.23     4.89       0.91     7.49       .58     10.09       .26     12.69	3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 15.00 11.67 13.33	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       17.33	3.0	2.28     0.5       4.78     1.19       7.29     1.83       9.79     2.49       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.49       4.31     1.00       6.81     1.70       9.31     2.3       11.81     2.99       14.32     3.56       15.00     4.20       0.85     0.2       3.36     0.86       5.86     1.46       8.36     2.00	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71	3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1	1.81 1.42 7.02 9.63 2.23 3.17 3.69 1.81 1.42 7.02 9.63 3.17 3.69 1.81 1.42 7.02 9.63 3.5	3.26 6.84 10.41 13.99 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6	3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.92	3.0   5.   1.5   1	.71     0.50       1.97     1.04       5.00     1.58       5.00     2.67       5.00     3.21       5.00     3.76       5.2     0.39       0.78     0.94       5.00     1.48       5.00     2.57       5.00     3.65       14     0.19       40     0.73       1.67     1.27       5.00     1.82	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90
4	3 4 5 6 7 8 9 3 4 5 6 3 0 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86	3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4.	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       .52     13.68       .19     16.28       .87     18.88       .54     21.48       0.23     4.89       0.91     7.49       .58     10.09       .26     12.69       .93     15.29       .61     17.89       .29     20.49       *     *	3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *	3.0	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.7       15.00     4.3       1.80     0.4       4.31     1.0       6.81     1.7       9.31     2.3       11.81     2.9       14.32     3.5       15.00     4.2       0.85     0.2       3.36     0.8       5.86     1.4       8.36     2.0       10.86     2.7       13.37     3.3       15.00     3.9       *     *	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96	3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 4.17 2 4.69 2 4.17 2 4.69 2	1.81 1.42 2.02 2.63 2.23 3.17 3.69 1.81 1.42 2.02 2.63 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 3.5	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 *	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 23.41 24.80 25.92 26.92 27.92 28.41 29.92 29.94 29	3.5   15   15   15   15   15   15   15	.71     0.50       1.97     1.04       5.00     1.58       5.00     2.13       5.00     3.21       5.00     3.76       5.2     0.39       5.78     0.94       5.00     1.48       5.00     2.02       5.00     3.65       5.00     3.65       14     0.19       40     0.73       467     1.27       5.00     2.36       5.00     2.36       5.00     3.45       *     *	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45
4	3 4 5 6 7 8 9 3 4 5 6 3 0 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 **	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 17.89 19.87 21.86 **	3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. **	0.62     6.37       .29     8.97       .97     11.57       .64     14.17       .32     16.77       .00     19.37       .67     21.97       0.49     5.88       .16     8.48       .84     11.08       .52     13.68       .19     16.28       .87     18.88       .54     21.48       0.23     4.89       0.91     7.49       .58     10.09       .26     12.69       .93     15.29       .61     17.89       .29     20.49       *     *       0.65     6.50	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89	3.0	2.28     0.5       4.78     1.19       7.29     1.8       9.79     2.4       12.29     3.0       14.79     3.70       15.00     4.3       1.80     0.4       4.31     1.0       6.81     1.70       9.31     2.3       11.81     2.99       14.32     3.5       15.00     4.20       0.85     0.2       3.36     0.8       5.86     1.40       8.36     2.0       10.86     2.7       13.37     3.3       15.00     3.90       *     *       2.41     0.60	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 *	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33	1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 2 4.17 2 4.69 2 1.56 1	1.81 1.42 7.02 9.63 2.79 3.69 1.81 1.42 7.02 9.63 3.17 3.69 1.81 1.42 7.02 9.63 3.17 3.69	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 1.22 4.80 8.37 11.95 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00	STATES   S	3.0	8.33 11.11 13.89 15.00 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 17.07	3.5   15   15   15   15   15   15   15	.71     0.50       1.97     1.04       5.00     1.58       5.00     2.67       5.00     3.21       5.00     3.76       5.2     0.39       5.78     0.94       5.00     1.48       5.00     2.57       5.00     3.65       5.00     3.65       14     0.19       40     0.73       5.00     1.82       5.00     2.36       5.00     2.90       5.00     3.45       *     *       .03     0.52	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 *
4       4       4.76       2.56       11.33         5       5       5.95       3.21       13.16         6       6       7.14       3.85       14.99         7       7       8.33       4.49       16.82         8       8       9.52       5.13       18.65         9       9       10.71       5.77       20.48            4.0 % GUTTER LINE PROFILE         H       W       X <sub>10</sub> X <sub>1L</sub> L <sub>1</sub> INCHES       FEET       FEET       FEET       FEET         3       3       4.17       1.79       9.95         4       4       5.56       2.38       11.94         5       5       6.94       2.98       13.92         6       6       8.33       3.57       15.90         7       7       9.72       4.17       17.89         8       8       11.11       4.76       19.87         9       9       12.50       5.36       21.86         5.0 % GUTTER LINE PROFILE         H       W       X <sub>10</sub> X <sub>11</sub> L <sub>1</sub> INCHES	3 4 5 6 7 8 9 3 4 5 6 3 0 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 ** ** 5.56 6.94 8.33	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2.	0.62       6.37         0.29       8.97         0.97       11.57         0.64       14.17         0.32       16.77         0.00       19.37         0.67       21.97         0.49       5.88         0.16       8.48         0.84       11.08         0.52       13.68         0.19       16.28         0.87       18.88         0.54       21.48         0.23       4.89         0.91       7.49         0.58       10.09         0.26       12.69         0.93       15.29         0.61       17.89         0.29       20.49         *       *         0.65       6.50         0.33       9.10         0.00       11.70	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 6.67 8.33 10.00 11.67 8.33 10.00 11.67 8.33 10.00	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       17.33     17.33	3.0	2.28       0.5         4.78       1.19         7.29       1.8         9.79       2.4         12.29       3.0         14.79       3.70         15.00       4.3         1.80       0.4         4.31       1.0         6.81       1.70         9.31       2.3         11.81       2.9         14.32       3.5         15.00       4.20         0.85       0.2         3.36       0.8         5.86       1.40         8.36       2.0         10.86       2.7         13.37       3.3         15.00       3.90         *       *         2.41       0.60         4.91       1.2         7.41       1.80	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58	1.56 1 2.08 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.60 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 2.08 1 2.08 1 2.08 1 2.08 1 2.08 1 2.08 1 2.08 1 2.08 1 2.08 1 3.13 1 3.65 2 4.17 2 4.69 2 1.56 1 3.13 1 3.65 1 2.08 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1 3.65 1 3.13 1	1.81 1.42 2.02 2.63 3.17 3.69 1.81 1.42 2.02 2.63 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.81 1.42 2.02 3.69 1.81 1.42 2.02 3.69 1.81 1.42 2.02 3.69 4.00	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31	S	3.0	8.33 11.11 13.89 15.00 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.96 2.45 2.94 3.43 3.92 4.41 1.96 2.45 2.94 3.43 3.92 4.41	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34	3.0   15   15   15   15   15   15   15   1	.71     0.50       1.97     1.04       5.00     1.58       5.00     2.67       5.00     3.21       5.00     3.76       5.2     0.39       5.78     0.94       5.00     1.48       5.00     2.57       5.00     3.11       5.00     3.65       .14     0.19       .40     0.73       3.67     1.27       5.00     2.36       5.00     2.36       5.00     3.45       *     *       .03     0.52       5.00     1.61	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61
4         4         4.76         2.56         11.33           5         5         5.95         3.21         13.16           6         6         7.14         3.85         14.99           7         7         8.33         4.49         16.82           8         8         9.52         5.13         18.65           9         9         10.71         5.77         20.48           4.0 % GUTTER LINE PROFILE           H         W         X <sub>10</sub> X <sub>11</sub> L <sub>1</sub> INCHES         FEET         FEET         FEET         FEET           3         3         4.17         1.79         9.95           4         4         5.56         2.38         11.94           5         5         6.94         2.98         13.92           6         6         8.33         3.57         15.90           7         7         9.72         4.17         17.89           8         8         11.11         4.76         19.87           9         9         12.50         5.36         21.86           5.0 % GUTTER LINE PROFILE           H <td>3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9 3 4 5 6 3.5 7</td> <td>4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 * * 5.56 6.94 8.33</td> <td>1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17</td> <td>9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 ** 11.94 13.92 15.90 17.89 19.87 21.86 ** 11.94 13.92 15.90 17.89</td> <td>3.5 3.5</td> <td>1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2. 7.62 2.</td> <td>.62       6.37         .29       8.97         .97       11.57         .64       14.17         .32       16.77         .00       19.37         .67       21.97         .49       5.88         .16       8.48         .84       11.08         .52       13.68         .19       16.28         .87       18.88         .54       21.48         .23       4.89         .91       7.49         .58       10.09         .26       12.69         .93       15.29         .61       17.89         .29       20.49         *       *         .65       6.50         .33       9.10         .00       11.70         .68       14.30</td> <td>3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9</td> <td>3.5</td> <td>5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67</td> <td>1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56</td> <td>3.0</td> <td>2.28       0.5         4.78       1.19         7.29       1.8         9.79       2.4         12.29       3.0         14.79       3.70         15.00       4.3         1.80       0.4         4.31       1.0         6.81       1.70         9.31       2.3         11.81       2.99         14.32       3.56         15.00       4.20         0.85       0.2         3.36       0.8         5.86       1.40         8.36       2.0         10.86       2.7         13.37       3.3         15.00       3.90         *       *         2.41       0.60         4.91       1.2         7.41       1.8         9.91       2.4</td> <td>6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39</td> <td>3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9</td> <td>2.75</td> <td>6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58</td> <td>1.56</td> <td>1.81 1.42 2.02 2.33 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.42 2.23 3.17 3.69 4.00</td> <td>3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00</td> <td>0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72</td> <td>7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47</td> <td>3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6</td> <td>3.0</td> <td>8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00</td> <td>1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43</td> <td>13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 17.07 20.34 21.94 22.43 22.92 23.41</td> <td>3.0   15   15   15   15   15   15   15   1</td> <td>.71     0.50       1.97     1.04       5.00     1.58       5.00     2.67       5.00     3.21       5.00     3.76       5.2     0.39       5.78     0.94       5.00     1.48       5.00     2.02       5.00     2.57       5.00     3.65       .14     0.19       40     0.73       1.67     1.27       5.00     2.36       5.00     2.36       5.00     3.45       *     *       .03     0.52       2.29     1.07       5.00     1.61       5.00     1.61       5.00     1.61       5.00     2.15</td> <td>10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15</td>	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9 3 4 5 6 3.5 7	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 * * 5.56 6.94 8.33	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 ** 11.94 13.92 15.90 17.89 19.87 21.86 ** 11.94 13.92 15.90 17.89	3.5 3.5	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2. 7.62 2.	.62       6.37         .29       8.97         .97       11.57         .64       14.17         .32       16.77         .00       19.37         .67       21.97         .49       5.88         .16       8.48         .84       11.08         .52       13.68         .19       16.28         .87       18.88         .54       21.48         .23       4.89         .91       7.49         .58       10.09         .26       12.69         .93       15.29         .61       17.89         .29       20.49         *       *         .65       6.50         .33       9.10         .00       11.70         .68       14.30	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.5	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56	3.0	2.28       0.5         4.78       1.19         7.29       1.8         9.79       2.4         12.29       3.0         14.79       3.70         15.00       4.3         1.80       0.4         4.31       1.0         6.81       1.70         9.31       2.3         11.81       2.99         14.32       3.56         15.00       4.20         0.85       0.2         3.36       0.8         5.86       1.40         8.36       2.0         10.86       2.7         13.37       3.3         15.00       3.90         *       *         2.41       0.60         4.91       1.2         7.41       1.8         9.91       2.4	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58	1.56	1.81 1.42 2.02 2.33 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.42 2.23 3.17 3.69 4.00	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6	3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 17.07 20.34 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	.71     0.50       1.97     1.04       5.00     1.58       5.00     2.67       5.00     3.21       5.00     3.76       5.2     0.39       5.78     0.94       5.00     1.48       5.00     2.02       5.00     2.57       5.00     3.65       .14     0.19       40     0.73       1.67     1.27       5.00     2.36       5.00     2.36       5.00     3.45       *     *       .03     0.52       2.29     1.07       5.00     1.61       5.00     1.61       5.00     1.61       5.00     2.15	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15
4       4       4.76       2.56       11.33         5       5       5.95       3.21       13.16         6       6       7.14       3.85       14.99         7       7       8.33       4.49       16.82         8       8       9.52       5.13       18.65         9       9       10.71       5.77       20.48            4.0 % GUTTER LINE PROFILE         H       W       X <sub>10</sub> X <sub>1L</sub> L <sub>1</sub> INCHES       FEET       FEET       FEET       FEET         3       3       4.17       1.79       9.95         4       4       5.56       2.38       11.94         5       5       6.94       2.98       13.92         6       6       8.33       3.57       15.90         7       7       9.72       4.17       17.89         8       8       11.11       4.76       19.87         9       9       12.50       5.36       21.86         5.0 % GUTTER LINE PROFILE         H       W       X <sub>10</sub> X <sub>11</sub> L <sub>1</sub> INCHES	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9 3 4 5 6 3.5 7	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 ** ** 5.56 6.94 8.33	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 4.77 4.76 5.36	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2. 7.62 2. 9.55 3.	0.62       6.37         0.29       8.97         0.97       11.57         0.64       14.17         0.32       16.77         0.00       19.37         0.67       21.97         0.49       5.88         0.16       8.48         0.84       11.08         0.52       13.68         0.19       16.28         0.87       18.88         0.54       21.48         0.23       4.89         0.91       7.49         0.58       10.09         0.26       12.69         0.93       15.29         0.61       17.89         0.29       20.49         *       *         0.65       6.50         0.33       9.10         0.00       11.70	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.5	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 11.67 13.33	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       17.33     17.33	3.0	2.28       0.5         4.78       1.19         7.29       1.8         9.79       2.4         12.29       3.0         14.79       3.70         15.00       4.3         1.80       0.4         4.31       1.0         6.81       1.70         9.31       2.3         11.81       2.9         14.32       3.5         15.00       4.20         0.85       0.2         3.36       0.8         5.86       1.40         8.36       2.0         10.86       2.7         13.37       3.3         15.00       3.90         *       *         2.41       0.60         4.91       1.2         7.41       1.80	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39 19.52	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58	1.56	1.81 1.42 2.02 2.63 3.17 3.69 1.81 1.42 2.02 2.63 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.81 1.42 2.02 3.69 1.81 1.42 2.02 3.69 1.81 1.42 2.02 3.69 4.00	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72 2.30 2.89	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31	S	3.0	8.33 11.11 13.89 15.00 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34	3.0   15   15   15   15   15   15   15   1	.71         0.50           1.97         1.04           5.00         1.58           5.00         2.13           5.00         3.21           5.00         3.76           5.2         0.39           0.78         0.94           5.00         1.48           5.00         2.57           5.00         3.11           5.00         3.65           .14         0.19           .40         0.73           3.67         1.27           5.00         2.36           5.00         2.36           5.00         3.45           *         *           .03         0.52           5.00         2.15           5.00         2.70	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15
4       4       4.76       2.56       11.33         5       5       5.95       3.21       13.16         6       6       7.14       3.85       14.99         7       7       8.33       4.49       16.82         8       8       9.52       5.13       18.65         9       9       10.71       5.77       20.48            4.0 % GUTTER LINE PROFILE         H       W       X <sub>10</sub> X <sub>1L</sub> L <sub>1</sub> INCHES       FEET       FEET       FEET       FEET         3       3       4.17       1.79       9.95         4       4       5.56       2.38       11.94         5       5       6.94       2.98       13.92         6       6       8.33       3.57       15.90         7       7       9.72       4.17       17.89         8       8       11.11       4.76       19.87         9       9       12.50       5.36       21.86         5.0 % GUTTER LINE PROFILE         H       W       X <sub>10</sub> X <sub>11</sub> L <sub>1</sub> INCHES	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9 3 4 5 6 3.5 7	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 * 5.56 6.94 8.33 9.72 11.11	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 4.77 4.76 5.36	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87	3.5 3.5	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2. 7.62 2. 9.55 3. 11.47 4.	0.62       6.37         0.29       8.97         0.97       11.57         0.64       14.17         0.32       16.77         0.00       19.37         0.67       21.97         0.49       5.88         0.16       8.48         0.84       11.08         0.52       13.68         0.19       16.28         0.87       18.88         0.54       21.48         0.23       4.89         0.91       7.49         0.58       10.09         0.26       12.69         0.93       15.29         0.61       17.89         0.29       20.49         *       *         0.65       6.50         0.33       9.10         0.68       14.30         0.69       19.50	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.5	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 11.67 13.33	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.01     1.78       5.02     1.78       5.03     1.73       5.04     1.78       5.05     1.78       5.06     1.	3.0	2.28       0.5         4.78       1.19         7.29       1.8         9.79       2.4         12.29       3.0         14.79       3.7         15.00       4.3         1.80       0.4         4.31       1.0         6.81       1.7         9.31       2.3         11.81       2.9         14.32       3.5         15.00       4.2         0.85       0.2         3.36       0.8         5.86       1.4         8.36       2.0         10.86       2.7         13.37       3.3         15.00       3.9         *       *         2.41       0.6         4.91       1.2         7.41       1.8         9.91       2.4         12.42       3.1	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39 19.52	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58	1.56	.81	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72 2.30 2.89	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47 21.89	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	.71         0.50           1.97         1.04           5.00         1.58           5.00         2.13           5.00         3.21           5.00         3.76           5.2         0.39           0.78         0.94           5.00         1.48           5.00         2.57           5.00         3.11           5.00         3.65           .14         0.19           .40         0.73           3.67         1.27           5.00         2.36           5.00         2.36           5.00         3.45           *         *           .03         0.52           5.00         2.15           5.00         2.70	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15 21.70
4	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9 3 4 5 6 3.5 7	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 * 5.56 6.94 8.33 9.72 11.11	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 4.77 4.76 5.36	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2. 7.62 2. 9.55 3. 11.47 4.	0.62       6.37         0.29       8.97         0.97       11.57         0.64       14.17         0.32       16.77         0.00       19.37         0.67       21.97         0.49       5.88         0.16       8.48         0.84       11.08         0.52       13.68         0.19       16.28         0.87       18.88         0.54       21.48         0.23       4.89         0.91       7.49         0.58       10.09         0.26       12.69         0.93       15.29         0.61       17.89         0.29       20.49         *       *         0.65       6.50         0.33       9.10         0.68       14.30         0.35       16.90         0.03       19.50	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 * 6.67 8.33 10.00 11.67 13.33 15.00	1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       1.67     10.67       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.00     24.00       *     *       2.22     12.89       2.78     15.11       3.33     17.33       3.89     19.56       4.44     21.78       5.01     1.78       5.02     1.78       5.03     1.73       5.04     1.78       5.05     1.78       5.06     1.	3.0	2.28       0.5         4.78       1.19         7.29       1.8         9.79       2.4         12.29       3.0         14.79       3.7         15.00       4.3         1.80       0.4         4.31       1.0         6.81       1.7         9.31       2.3         11.81       2.9         14.32       3.5         15.00       4.2         0.85       0.2         3.36       0.8         5.86       1.4         8.36       2.0         10.86       2.7         13.37       3.3         15.00       3.9         *       *         2.41       0.6         4.91       1.2         7.41       1.8         9.91       2.4         12.42       3.1	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39 19.52	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58	1.56	.81	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72 2.30 2.89	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47 21.89	S	3.0	8.33 11.11 13.89 15.00 15.00 15.00 8.33 11.11 13.89 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * * 1.96 2.45 2.94 3.43 3.92 4.41 * * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	.71       0.50         1.97       1.04         5.00       1.58         5.00       2.67         5.00       3.21         5.00       3.76         5.2       0.39         0.78       0.94         5.00       2.02         5.00       2.57         5.00       3.65         .14       0.19         .40       0.73         3.67       1.27         5.00       1.82         5.00       2.36         5.00       2.36         5.00       3.45         *       *         .03       0.52         5.00       2.70         5.00       2.70         5.00       2.70         5.00       3.24	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15 21.70
4	3 4 5 6 2.75 7 8 9 3 4 5 6 3.0 7 8 9 3 4 5 6 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 * 5.56 6.94 8.33 9.72 11.11 12.50	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86	2.75 3.0	1.75 0 3.68 1 5.60 1 7.53 2 9.45 3 11.38 4 13.30 4 1.39 0 3.31 1 5.24 1 7.16 2 9.09 3 11.01 3 12.94 4 0.66 0 2.58 0 4.51 1 6.43 2 8.36 2 10.28 3 12.20 4 * 1.85 0 3.78 1 5.70 2 7.62 2 9.55 3 11.47 4	9.62 6.37 9.29 8.97 9.64 14.17 9.32 16.77 9.00 19.37 9.67 21.97 9.49 5.88 9.16 8.48 9.84 11.08 9.52 13.68 9.19 16.28 9.87 18.88 9.19 16.28 9.87 18.88 9.10 16.28 9.10 16.28 9.10 16.28 9.10 16.28 9.10 16.28 9.10 16.28 9.10 16.28 9.10 17.49 9.10 17.89 9.26 12.69 9.29 20.49 10.65 6.50 10.33 9.10 10.00 11.70 10.68 14.30 10.03 19.50	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75 3.0 3.5	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 10.00 11.67 13.33 15.00 * 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33	1.67       10.67         2.22       12.89         2.78       15.11         3.33       17.33         3.89       19.56         4.44       21.78         5.00       24.00         1.67       10.67         2.22       12.89         2.78       15.11         3.33       17.33         3.89       19.56         4.44       21.78         5.00       24.00         1.67       10.67         2.22       12.89         2.78       15.11         3.33       17.33         3.89       19.56         4.44       21.78         5.00       24.00         *       2.22         12.89         2.78       15.11         3.33       17.33         3.89       19.56         4.44       21.78         5.00       24.00	3.0	2.28       0.5         4.78       1.19         7.29       1.8         9.79       2.4         12.29       3.0         14.79       3.70         15.00       4.3         1.80       0.4         4.31       1.0         6.81       1.70         9.31       2.3         11.81       2.9         14.32       3.5         15.00       4.20         0.85       0.2         3.36       0.8         5.86       1.40         8.36       2.0         10.86       2.7         13.37       3.3         15.00       3.90         *       *         2.41       0.60         4.91       1.2         7.41       1.80         9.91       2.40         12.42       3.7         14.92       3.7	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39 19.52 22.65	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58	1.56	.81	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72 2.30 2.89	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47 21.89	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	8.33 11.11 13.89 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * 1.96 2.45 2.94 3.43 3.92 4.41 * * * * * * * * * * * * * * * * * * *	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 3.21 5.00 3.76 5.2 0.39 0.78 0.94 6.00 1.48 6.00 2.02 6.00 3.65 6.00 3.65 6.00 3.65 6.00 3.65 6.00 1.82 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 3.45 **  **  **  **  **  **  **  **  **  *	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15 21.70 22.24
4	3 4 5 6 7 8 9 3 4 5 6 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 *  5.56 6.94 8.33 9.72 11.11 12.50	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86	2.75 3.0	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2. 7.62 2. 9.55 3. 11.47 4.  NOTES  1. FOR  2. THE	0.62       6.37         0.29       8.97         0.97       11.57         0.64       14.17         0.32       16.77         0.00       19.37         0.67       21.97         0.49       5.88         0.16       8.48         0.84       11.08         0.52       13.68         0.19       16.28         0.87       18.88         0.54       21.48         0.23       4.89         0.91       7.49         0.58       10.09         0.26       12.69         0.93       15.29         0.61       17.89         0.29       20.49         *       *         0.65       6.50         0.33       9.10         0.68       14.30         0.35       16.90         0.03       19.50	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.5 3.5 3.5 BASED	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 * 6.67 8.33 10.00 11.67 13.33 15.00 * 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 6	1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00	2.75	2.28 0.53 4.78 1.19 7.29 1.83 9.79 2.49 12.29 3.00 14.79 3.70 15.00 4.33 1.80 0.49 4.31 1.03 6.81 1.70 9.31 2.33 11.81 2.99 14.32 3.53 15.00 4.20 0.85 0.23 3.36 0.84 5.86 1.40 8.36 2.00 10.86 2.7 13.37 3.34 15.00 3.90 * * 2.41 0.60 4.91 1.23 7.41 1.89 9.91 2.43 12.42 3.10 14.92 3.7	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39 19.52 22.65	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.5	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58 15.00 14.58	1.56	.81	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72 2.30 2.89	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47 21.89	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	8.33 11.11 13.89 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * * 1.96 2.45 2.94 3.43 3.92 4.41  * * * * * * * * * * * * * * * * * *	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41  *  17.07 20.34 21.94 22.43 22.92 23.41  *  17.07 20.34 21.94 22.43 22.92 23.41  *  17.07 20.34 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	.71       0.50         1.97       1.04         5.00       1.58         5.00       2.67         5.00       3.21         5.00       3.76         5.2       0.39         0.78       0.94         5.00       2.02         5.00       2.57         5.00       3.65         .14       0.19         .40       0.73         3.67       1.27         5.00       1.82         5.00       2.36         5.00       2.36         5.00       3.45         *       *         .03       0.52         5.00       2.70         5.00       2.70         5.00       2.70         5.00       3.24	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15 21.70 22.24
4	3 4 5 6 7 8 9 3 4 5 6 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 * 5.56 6.94 8.33 9.72 11.11 12.50	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 5.36	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86	3.5 3.5	1.75 0. 3.68 1. 5.60 1. 7.53 2. 9.45 3. 11.38 4. 13.30 4. 1.39 0. 3.31 1. 5.24 1. 7.16 2. 9.09 3. 11.01 3. 12.94 4. 0.66 0. 2.58 0. 4.51 1. 6.43 2. 8.36 2. 10.28 3. 12.20 4. * 1.85 0. 3.78 1. 5.70 2. 7.62 2. 9.55 3. 11.47 4.  NOTES  1. FOR  2. THE	9.62 6.37 9.29 8.97 9.97 11.57 9.64 14.17 9.32 16.77 9.00 19.37 9.49 5.88 9.16 8.48 9.84 11.08 9.52 13.68 9.19 16.28 9.37 18.88 9.54 21.48 9.91 7.49 9.58 10.09 9.26 12.69 9.3 15.29 9.61 17.89 9.29 20.49 9 8 8 9.65 6.50 9.33 9.10 9.00 11.70 9.68 14.30 9.35 16.90 9.03 19.50  SE CURB RAME  ABOVE TAE  Y DO NOT  BE USED BY	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 7 8 9 3 7 7 8 9 7 7 8 9 7 7 8 9 7 7 8 7 7 8 7 8	3.5  3.5  3.5  BASED ACCOUNTSIGNERS	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67 8.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33 10.00 6.67 8.33	1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00	JTTER PROTICE TO GET	2.28 0.53 4.78 1.19 7.29 1.83 9.79 2.49 12.29 3.00 14.79 3.70 15.00 4.33 1.80 0.49 4.31 1.03 6.81 1.70 9.31 2.33 11.81 2.99 14.32 3.53 15.00 4.20 0.85 0.23 3.36 0.86 5.86 1.40 8.36 2.00 10.86 2.7 13.37 3.30 15.00 3.90 *  2.41 0.60 4.91 1.23 7.41 1.89 9.91 2.40 12.42 3.10 14.92 3.7	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39 19.52 22.65	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75 3.0	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 *  8.33 10.42 12.50 14.58 15.00 15.00	1.56	.81	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72 2.30 2.89	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47 21.89	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	8.33 11.11 13.89 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * * 1.96 2.45 2.94 3.43 3.92 4.41  * * * * * * * * * * * * * * * * * *	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 3.21 5.00 3.76 5.2 0.39 0.78 0.94 6.00 1.48 6.00 2.02 6.00 3.65 6.00 3.65 6.00 3.65 6.00 3.65 6.00 1.82 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 3.45 **  **  **  **  **  **  **  **  **  *	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15 21.70 22.24
4	3 4 5 6 7 8 9 3 4 5 6 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 7 8 9 3 4 7 8 9 9 3 4 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 4.17 5.56 6.94 8.33 9.72 11.11 12.50 * 5.56 6.94 8.33 9.72 11.11 12.50 *  Table AM UTTER LINI V X1	1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 1.79 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 2.38 2.98 3.57 4.17 4.76 5.36 ** 5.36	9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 9.95 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86 * 11.94 13.92 15.90 17.89 19.87 21.86	3.0	1.75 0 3.68 1 5.60 1 7.53 2 9.45 3 11.38 4 13.30 4 1.39 0 3.31 1 5.24 1 7.16 2 9.09 3 11.01 3 12.94 4 0.66 0 2.58 0 4.51 1 6.43 2 8.36 2 10.28 3 12.20 4 * 1.85 0 3.78 1 5.70 2 7.62 2 9.55 3 11.47 4   NOTES  1. FOR  2. THE THE TO THE	9.62 6.37 9.29 8.97 9.97 11.57 9.64 14.17 9.32 16.77 9.00 19.37 9.67 21.97 9.49 5.88 9.16 8.48 9.84 11.08 9.52 13.68 9.19 16.28 9.87 18.88 9.19 16.28 9.87 18.88 9.10 16.28 9.10 16.28 9.10 16.28 9.10 16.28 9.10 16.28 9.10 16.29 9.10 17.49 9.10 17.89 9.20 12.69 9.31 15.29 9.65 6.50 9.33 9.10 9.65 6.50 9.33 9.10 9.65 6.50 9.33 9.10 9.65 6.50 9.33 9.10 9.65 6.50 9.31 1.70 9.65 6.50 9.33 9.10 9.65 6.50 9.31 19.50	3 4 5 6 7 8 9 3 4 5 6 7 8 8 9 3 4 5 6 7 8 8 9 3 4 6 7 8 8 9 7 8 8 9 8 9 8 7 8 8 9 8 8 9 8 8 8 9 8 8 8 9 8 8 8 8	3.0  3.0  3.0  3.0  3.0  3.0  3.0  3.0	5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00 5.00 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 11.67 13.33 15.00  * 6.67 8.33 10.00 11.67 13.38 15.00  * 6.67 8.38 10.00 11.67 13.38 15.00  * 6.67 8.38 10.00 11.67 13.38 15.00  * 6.67 8.38 10.00 11.67 13.38 15.00	1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 1.67   10.67 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * * 2.22   12.89 2.78   15.11 3.33   17.33 3.89   19.56 4.44   21.78 5.00   24.00 * * * * * * * * * * * * *	JTTER PROTICE GUTT TO GET NS WILL E	2.28 0.53 4.78 1.19 7.29 1.83 9.79 2.49 12.29 3.00 14.79 3.70 15.00 4.33 1.80 0.49 4.31 1.03 6.81 1.70 9.31 2.33 11.81 2.99 14.32 3.53 15.00 4.20 0.85 0.23 3.36 0.86 5.86 1.40 8.36 2.00 10.86 2.7 13.37 3.30 15.00 3.90 *  2.41 0.60 4.91 1.23 7.41 1.89 9.91 2.40 12.42 3.10 14.92 3.7	6.85 9.98 13.10 16.23 19.36 22.49 23.32 6.26 9.38 12.51 15.64 18.77 21.89 23.20 5.07 8.20 11.32 14.45 17.58 20.71 22.96 * 7.01 10.14 13.26 16.39 19.52 22.65	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	2.75 3.0	6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 6.25 8.33 10.42 12.50 14.58 15.00 15.00 15.00 15.00	1.56	1.81 1.42 2.02 2.33 3.17 3.69 1.81 1.42 2.02 2.33 3.17 3.69 1.81 1.42 2.02 2.23 3.17 3.69 1.42 2.23 3.17 3.69 1.42 2.23 3.17 3.69 1.42 2.23 3.17 3.69 1.42 2.23 3.17 3.69	3.26 6.84 10.41 13.99 15.00 15.00 15.00 2.58 6.16 9.73 13.31 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00	0.53 1.11 1.69 2.27 2.86 3.44 4.02 0.42 1.00 1.58 2.16 2.75 3.33 3.91 0.20 0.78 1.36 1.94 2.52 3.11 3.69 * 0.56 1.14 1.72 2.30 2.89 3.47	7.79 11.95 16.10 20.26 21.86 22.44 23.02 7.00 11.16 15.31 19.47 21.75 22.33 22.91 5.42 9.58 13.74 17.89 21.52 22.11 22.69 * 8.00 12.16 16.31 20.47 21.89 22.47	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9	3.0	8.33 11.11 13.89 15.00	1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 1.47 1.96 2.45 2.94 3.43 3.92 4.41 * * 1.96 2.45 2.94 3.43 3.92 4.41  * * * * * * * * * * * * * * * * * *	13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 13.80 17.07 20.34 21.94 22.43 22.92 23.41 * 17.07 20.34 21.94 22.43 22.92 23.41  *  17.07 20.34 21.94 22.43 22.92 23.41  *  17.07 20.34 21.94 22.43 22.92 23.41  *  17.07 20.34 21.94 22.43 22.92 23.41	3.0   15   15   15   15   15   15   15   1	71 0.50 1.97 1.04 5.00 1.58 5.00 2.13 5.00 3.21 5.00 3.76 5.2 0.39 0.78 0.94 6.00 1.48 6.00 2.02 6.00 3.65 6.00 3.65 6.00 3.65 6.00 3.65 6.00 1.82 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 2.36 6.00 3.45 **  **  **  **  **  **  **  **  **  *	10.20 17.01 20.58 21.13 21.67 22.21 22.76 8.91 15.72 20.48 21.02 21.57 22.11 22.65 6.32 13.13 19.94 20.82 21.36 21.90 22.45 * 10.55 17.36 20.61 21.15 21.70 22.24

7.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	FEET	X <sub>IL</sub>	FEET				
3	3	8.33	1.47	13.80				
4	4	11.11	1.96	17.07				
5	5	13.89	2.45	20.34				
6	6	15.00	2.94	21.94				
7.	7	15.00	3.43	22.43				
8	8	15.00	3.92	22.92				
9	9	15.00	4.41	23.41				

REVISIONS

U-0	76 GOTTE	RLINEPRO	ALITE.	
H INCHES	W FEET	X <sub>1U</sub> FEET	FEET	L <sub>1</sub>
3	3	1.50	1.50	7.00
4	4	1.50	1.50	7.00
5	5	1.50	1.50	7.00
6	6	1.50	1.50	7.00
.7	7	1.50	1.50	7.00
8	8	1.50	1.50	7.00
9	9	1.50	1.50	7.00

- 3. THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 12H:1V SLOPE MEASURED AS X IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH. THE TABLES ALREADY APPLY THE 15 FEET RULE FOR THOSE CALCULATED LENGTHS WHICH EXCEED 15 FEET.
- 4. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.

U = UPPER SIDE OF GUTTER LINE PROFILE

L = LOWER SIDE OF GUTTER LINE PROFILE

FOR THE OTHER ABBREVIATIONS - REFER TO CD-606-1

- \* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1
- \*\* TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2

CD-606-3.1

NJDOT CURB RAMP DETAILS II **2023 ROAD RESURFACING PROJECT** 

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

DAVID R. ATKINSON, P.E., C.M.E.

PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER DRAWN DESIGNED CHECKE
J.V. J.V. D.A. 2023/03/20 REVISED PER NJDOT COMMENT LETTER 2023/05/16 (CA-2022)
VARIOUS MUNICIPALITIES MICHAEL J. NEGLIA, P.E., P.L.S., P.P. PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 **NEW JERSEY UNION COUNTY** 18.01 UNIOCTY22.010 SCALE: N.T.S.

NEGLIA ENGINEERING ASSOCIATES
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A PROJECT OF
LYNDHURST
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A S S O C I A T E S
NEW JERSEY
E-MAIL: NEA@NEGLIAENGINEERING.COM

## **CURB RAMP TYPE 4**

0.0	% GUTTE	R LINE PRO	SEILE!		
H)	W	Y	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>
INCHES	FEET	INCHES	FEET	FEET	FEET
3	- Gerson 18		0.91	0.91	5.82
4			1.91	1.91	7.82
5			2.91	2.91	9.82
6	2.75	2.75	3.91	3.91	11.82
7			4.91	4.91	13.83
8			5.91	5.91	15.83
9			6.91	6.91	17.83
3			**	**	**
4			1.72	1.72	7.44
[5]			2.72	2.72	9.44
6	3.0	3.0	3.72	3.72	11.45
7	Uml		4.72	4.72	13.45
8			5.72	5.72	15.45
9			6.72	6.72	17,45
3			**	**	**
4			1.34	1.34	6.68
5			2.34	2.34	8.68
6	3.5	3.5	3.34	3.34	10.69
<sup>b</sup> .7			4.34	4.34	12.69
8			5.34	5.34	14.69
.9			6.34	6.34	16.69
<b>83</b>			**	**	·(**
4			**	**	**
<b>5</b>	হৈছে লেখ	(53) 980	1.96	1.96	7.92
.6	4.0	4.0	2.96	2.96	9.93
7			3.96	3.96	11.93
8			4.96	4.96	13.93
9			5.96	5.96	15.93

1.0	% GUTTE	R LINE PRO	DFILE		
Н	W	Y	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>
NCHES	FEET	INCHES	FEET	FEET	FEET
3			1.04	0.81	5.85
4			2.17	1.71	7.88
5			3.31	2.60	9.91
6	2.75	2.75	4.45	3.49	11.94
7			5.58	4.39	13.97
<sup>1</sup> .8			6.72	5.28	16.00
9			7.86	6.17	18.03
3	3		0.82	0.64	5.46
4		3.0	1.96	1.54	7.49
.5			3.09	2.43	9.52
6	3.0		4.23	3.32	11.55
7			5.37	4.22	13.58
8			6.50	5.11	15.61
9			7.64	6.00	17.64
3			0.39	0.30	4.69
4			1.53	1.20	6.72
5			2.66	2.09	8.75
6	3.5	3.5	3.80	2.98	10.78
7			4.94	3.88	12.81
8			6.07	4.77	14.84
9			7.21	5.66	16.87
3			**	**	**
4			1.09	0.86	5.95
5			2.23	1.75	7.98

3.37 2.65 10.01

4.43

2.0	% GUTTE	R LINE PRO	FILE			3.0	% GUTTI	ER LINE PRO	FILE		
Н	W	Y	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>	Н	W	Y-3	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>
INCHES	FEET	INCHES	FEET	FEET	FEET	INCHES	FEET	INCHES	FEET	FEET	FEET
3		2	1.20	0.73	5.93	.3			1.42	0.67	6.09
4			2.52	1.54	8.06	4			2.99	1.41	8.39
5			3.83	2.35	10.18	-5			4.55	2.14	10.69
6	2.75	2.75	5.15	3.16	12.30	6	2.75	2.75	6.11	2.88	12.99
7			6.47	3.96	14.43	<b>Z</b>			7.68	3.61	15.29
8			7.78	4.77	16.55	· 8			9.24	4.35	17.59
9			9.10	5.58	18.67	.9			10.81	5.08	19.89
3			0.95	0.58	5.53	3			1.13	0.53	5.66
4			2.27	1.39	7.65	4			2.69	1.27	7.96
.5			3.58	2.20	9.78	.5			4.25	2.00	10.26
6	3.0	3.0	4.90	3.00	11.90	,6	3.0	3.0	5.82	2.74	12.55
7			6.22	3.81	14.02	7			7.38	3.47	14.85
8			7.53	4.62	16.15	8		6	8.94	4.21	17.15
9			8.85	5.42	18.27	9			10.51	4.94	19.45
3			0.45	0.28	4.72	3			0.53	0.25	4.78
4			1.77	1.08	6.85	74			2.10	0.99	7.08
5			3.08	1.89	8.97	5			3.66	1.72	9.38
6	3.5	3.5	4.40	2.70	11.09	6	3.5	3.5	5.22	2.46	11.68
7			5.72	3.50	13.22	<b>7</b>			6.79	3.19	13.98
8		l i	7.03	4.31	15.34	8		1 [	8.35	3.93	16.28
<b>,</b> 9			8.35	5.12	17.46	<b>.9</b>			9.91	4.66	18.58
3			**	**	**	3			**	**	**
34			1.27	0.78	6.04	4			1.50	0.71	6.21
5			2.58	1.58	8.16	5			3.07	1.44	8.51
6	4.0	4.0	3.90	2.39	10.29	6	4.0	4.0	4.63	2.18	10.81
7	Carrie		5.22	3.20	12.41	7			6.19	2.91	13.11
8		İ	6.53	4.00	14.53	8			7.76	3.65	15.41
9			7.85	4.81	16.66	9		, a	9.32	4.38	17.71

4.0	% GUTTE	R LINE PRO	FILE		
Н	W.	Y	X <sub>2U</sub>	X <sub>2</sub> L	L <sub>2</sub>
INCHES	FEET	INCHES	FEET	FEET	FEET
3			1.75	0.62	6.37
4		l [	3.68	1.29	8.97
.5		[	5.60	1.97	11.57
6	2.75	2.75	7.53	2.64	14.17
7	6 <u>2.34</u> 25 211		9.45	3.32	16.77
8		l	11.38	4.00	19.37
9			13.30	4.67	21.97
3			1.39	0.49	5.88
4		[	3.31	1.16	8.48
5			5.24	1.84	11.08
6	3.0	3.0	7.16	2.52	13.68
7	FORES UBLIS &	8 8.36	9.09	3.19	16.28
8			11.01	3.87	18.88
9			12.94	4.54	21.48
3			0.66	0.23	4.89
4			2.58	0.91	7.49
5			4.51	1.58	10.09
6	3.5	3.5	6.43	2.26	12.69
7			8.36	2.93	15.29
8			10.28	3.61	17.89
9			12.20	4.29	20.49
3			**	**	**
4			1.85	0.65	6.50
5		[	3.78	1.33	9.10
6	4.0	4.0	5.70	2.00	11.70
7	CEMP -	225-	7.62	2.68	14.30
8			9.55	3.35	16.90
-9			11.47	4.03	19.50

5.0	% GUTTE	R LINE PRO	OFILE		
H	W	Y	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>
INCHES	FEET	INCHES	FEET	FEET	FEET
3			2.28	0.57	6.85
4			4.78	1.19	9.98
5			7.29	1.82	13.10
6	2.75	2.75	9.79	2.45	16.23
7	8 2000ges 205 °		12.29	3.07	19.36
8			14.79	3.70	22.49
9			15.00	4.32	23.32
3			1.80	0.45	6.26
4			4.31	1.08	9.38
5			6.81	1.70	12.51
6	3.0	3.0	9.31	2.33	15.64
7	727 2238 8	[0] 0.07	11.81	2.95	18.77
8			14.32	3.58	21.89
9			15.00	4.20	23.20
3			0.85	0.21	5.07
4			3.36	0.84	8.20
5		l j	5.86	1.46	11.32
6	3.5	3.5	8.36	2.09	14.45
7	.23 = -3	(c) a si	10.86	2.71	17.58
8			13.37	3.34	20.71
9			15.00	3.96	22.96
3			**	**	**
4			2.41	0.60	7.01
5			4.91	1.23	10.14
6	4.0	4.0	7.41	1.85	13.26
7	E 257	BALL D	9.91	2.48	16.39
8			12.42	3.10	19.52
9			14.92	3.73	22.65

6.0	% GUTTE	R LINE PRO	OFILE		
Н	W.	Y	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>
INCHES	FEET	INCHES	FEET	FEET	FEET
3			3.26	0.53	7.79
4			6.84	1.11	11.95
5			10.41	1.69	16.10
6	2.75	2.75	13.99	2.27	20.26
7			15.00	2.86	21.86
8			15.00	3.44	22.44
9			15.00	4.02	23.02
3			2.58	0.42	7.00
4			6.16	1.00	11.16
5			9.73	1.58	15.31
6	3.0	3.0	13.31	2.16	19.47
7	8 8430		15.00	2.75	21.75
8			15.00	3.33	22.33
9			15.00	3.91	22.91
3			1.22	0.20	5.42
4			4.80	0.78	9.58
5			8.37	1.36	13.74
6	3.5	3.5	11.95	1.94	17.89
7	* *===0	(20-1-5)	15.00	2.52	21.52
8			15.00	3.11	22.11
9			15.00	3.69	22.69
3			**	**	**
. 4			3.44	0.56	8.00
5			7.02	1.14	12.16
6	4.0	4.0	10.59	1.72	16.31
7		M-MARKEL	14.17	2.30	20.47
8			15.00	2.89	21.89
9			15.00	3.47	22.47

H	W	Y	X <sub>2U</sub>	X <sub>2L</sub>	L <sub>2</sub>
INCHES	FEET	INCHES	FEET	FEET	FEET
3			5.71	0.50	10.20
4		l [	11.97	1.04	17.01
5			15.00	1.58	20.58
6	2.75	2.75	15.00	2.13	21.13
7			15.00	2.67	21.67
8		[	15.00	3.21	22.21
9			15.00	3.76	22.76
3			4.52	0.39	8.91
4			10.78	0.94	15.72
5			15.00	1.48	20.48
6	3.0	3.0∷	15.00	2.02	21.02
7	. 500		15.00	2.57	21.57
.8			15.00	3.11	22.11
9			15.00	3.65	22.65
3			2.14	0.19	6.32
-4		l [	8.40	0.73	13.13
5			14.67	1.27	19.94
6	3.5	3.5	15.00	1.82	20.82
7	8 2 20		15.00	2.36	21.36
.8			15.00	2.90	21.90
9			15.00	3.45	22.45
3			**	**	**
4			6.03	0.52	10.55
5			12.29	1.07	17.36
6	4.0	4.0	15.00	1.61	20.61
7	450	(3-x-74-1)	15.00	2.15	21.15
8			15.00	2.70	21.70
.9			15.00	3.24	22.24

7.0 % GUTTER LINE PROFILE

## CURB RAMP TYPE 7

0.0 % GUTTER LINE PROFILE							
H INCHES	W. FEET	X <sub>1U</sub> FEET	X <sub>1</sub> L FEET	L <sub>1</sub> FEET			
3		3.00	3.00	10.00			
4		4.00	4.00	12.00			
5	4' MIN.	5.00	5.00	14.00			
6	7' MAX.	6.00	6.00	16.00			
7	/ IVIAX.	7.00	7.00	18.01			
8		8.00	8.00	20.01			
9		9.00	9.00	22.01			

H INCHES	FEET	X <sub>1U</sub> FEET	X <sub>1L</sub> FEET	L1. FEET
3		5.77	2.03	11.80
4	ĺ	7.70	2.70	14.40
5	4º MIN.	9.62	3.38	17.00
6	BP LI-DALL-SURED	11.55	4.06	19.60
7	7' MAX.	13.47	4.73	22.20
8		15.40	5.41	24.80
9		17.32	6.08	27.40

1.0 % GUTTER LINE PROFILE									
H INCHES	FEET	X <sub>1U</sub> FEET	X <sub>1</sub> L FEET	L <sub>1</sub>					
3		3.41	2.68	10.09					
4		4.55	3.57	12.12					
5	AUNAINI	5.68	4.47	14.15					
6	4' MIN	6.82	5.36	16.18					
7	7' MAX.	7.96	6.25	18.21					
8	Ì	9.10	7.15	20.24					
9		10.23	8.04	22.27					

5.0 % GUTTER LINE PROFILE									
H INCHES	FEET	X <sub>1U</sub> FEET	X <sub>IL</sub> FEET	FEET					
3		7.51	1.88	13.38					
4		10.01	2.50	16.51					
5	4' MIN.	12.51	3.13	19.64					
6		15.00	3.75	22.75					
7	/ IVIAX.	15.00	4.38	23.38					
8	ĺ	15.00	5.00	24.00					
9		15.00	5.63	24.63					
8	7' MAX.	15.00 15.00	4.38 5.00						

2.0 % GUTTER LINE PROFILE									
H	W	X <sub>1U</sub>	X <sub>1L</sub>	$\mathbf{L_1}$					
INCHES	FEET	FEET	FEET	FEET					
3		3.95	2.42	10.37					
4	ľ	5.27	3.23	12.49					
5	4' MIN.	6.58	4.03	14.62					
6	600 1-07901-51-51	7.90	4.84	16.74					
7	7' MAX.	9.22	5.65	18.86					
8	ĺ	10.53	6.45	20.99					
9		11.85	7.26	23.11					

H	W	X <sub>1U</sub>	X <sub>1L</sub>	11	
INCHES	FEET	FEET	FEET	FEET	
3		10.73	1.74	16.47	
4	l l	14.31	2.33	20.63	
5	4' MIN.	15.00	2.91	21.91	
6	E-9 1/	15.00	3.49	22.49	
7	7' MAX.	15.00	4.07	23.07	
8		15.00	4.65	23.65	
9		15.00	5.23	24.23	

3.0 % GUTTER LINE PROFILE									
H INCHES	FEET	X <sub>1U</sub> FEET	X <sub>1</sub> L FEET	L <sub>1</sub>					
3		4.69	2.21	10.90					
4	i [	6.25	2.94	13.20					
5	4' MIN.	7.82	3.68	15.49					
6	227 (85.20)	9.38	4.41	17.79					
7	7' MAX.	10.94	5.15	20.09					
8		12.51	5.88	22.39					
9		14.07	6.62	24.69					

7.0 % GUTTER LINE PROFILE										
INCHES	FEET	X <sub>1U</sub> FEET	X <sub>1</sub> L FEET	L1. FEET						
3		15.00	1.63	20.63						
4	i i	15.00	2.17	21.17						
5	4' MIN.	15.00	2.72	21.72						
6	MES DECRETSON WERE OF D	15.00	3.26	22,26						
7	7' MAX.	15.00	3.81	22.81						
8		15.00	4.35	23.35						
9	i i	15.00	4.89	23.89						

## **NOTES:**

1. FOR CURB RAMP TYPES, SEE CD-606-1.

- 2. THE ABOVE TABLES ARE BASED ON THE SPECIFIC GUTTER PROFILE REFERENCED. THEY DO NOT TAKE INTO ACCOUNT VARIATIONS IN THE GUTTER PROFILE. THE ABOVE TABLES TO BE USED BY THE DESIGNERS AND CONTRACTORS TO GET APPROXIMATE DIMENSIONS OF THE CURB RAMP AT EACH LOCATION. FINAL DIMENSIONS WILL BE DETERMINED BY ACTUAL MEASUREMENTS IN THE FIELD DURING CONSTRUCTION.
- 3. THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 12H:1V SLOPE MEASURED AS X IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH. THE TABLES ALREADY APPLY THE 15 FEET RULE FOR THOSE CALCULATED LENGTHS WHICH EXCEED 15 FEET.
- 4. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.

## LEGEND

U = UPPER SIDE OF GUTTER LINE PROFILE

L = LOWER SIDE OF GUTTER LINE PROFILE

FOR THE OTHER ABBREVIATIONS - REFER TO CD-606-1

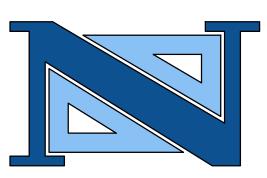
- \* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1
- \*\* TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2

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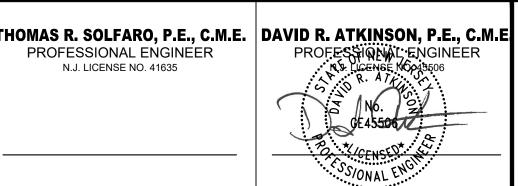
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REVISIONS 2023/03/20 REVISED PER NJDOT COMMENT LETTER J.V. J.V. D.A. 2023/05/16



PROFESSIONAL ENGINEER N.J. LICENSE NO. 41635



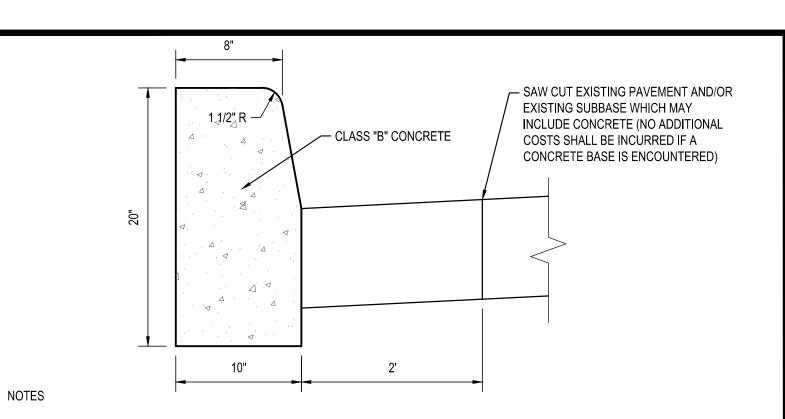
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MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604 PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

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P DETAILS III
CING PROJECT
2)
CIPALITIES
<b>NEW JERSEY</b>

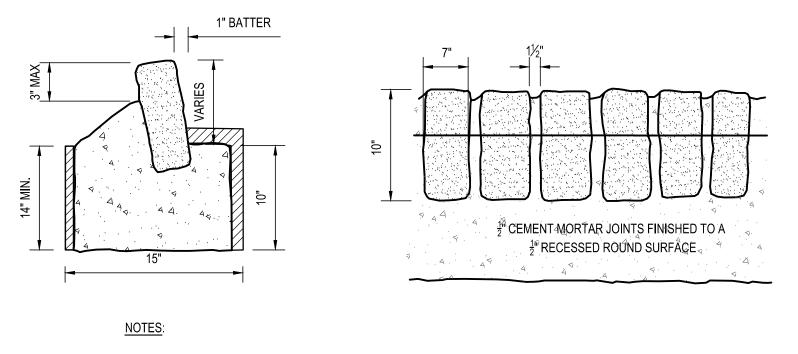
DRAWN BY: J.V. CHECKED BY: D.R.A. 18.02 UNIOCTY22.010 SCALE: N.T.S.



- FULL FORM CURBS MUST BE USED.
- 2. ALL QUANTITIES WITHIN THE 2 FOOT PAY LIMIT SHALL BE INCORPORATED IN THE UNIT PRICE BID FOR LINEAR FOOT OF CURB.
- 3. ALL EXCAVATION INCLUDES THE REMOVAL OF EXISTING CURB AND SHALL BE INCORPORATED IN THE UNIT PRICE BID PER LINEAR FOOT OF CURB.
- 4. CONTRACTOR SHALL NOTE THAT ALL CONCRETE CURBS AND CONCRETE SIDEWALK/APRONS/RAMPS SHALL BE FORMED AND POURED SEPARATE OF EACH OTHER. MONOLITHIC POURS WILL NOT BE PERMITTED.

### 10"x20" CONCRETE VERTICAL CURB

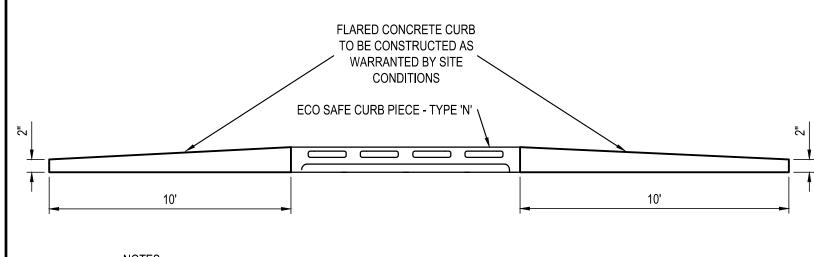
NOT TO SCALE



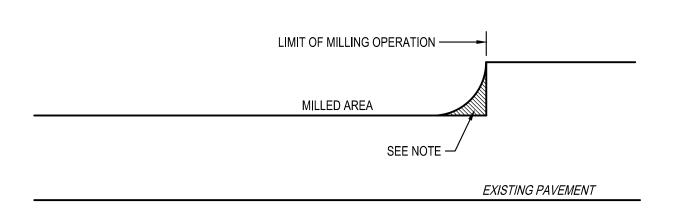
1. BELGIAN BLOCK CURB SHALL CONFORM TO CURBS SECTION OF NEW JERSEY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS 2019.

**GRANITE CURB** 

NOT TO SCALE



- 1. THE CURBS AT ALL 'TIRE BUSTERS' SHALL BE ACCOMPANIED BY FLARED CONCRETE CURBS AS INDICATED ABOVE.
- 2. A PORTION OF THE CURB QUANTITY SHALL BE USED FOR THIS WORK AND IN AN 'IF & WHERE DIRECTED' MANNER.
- 3. THE ABOVE CURB SHALL BE CONSTRUCTED AS DIRECTED IN THE FIELD.



REMOVE THE HMA MATERIAL LEFT BY THE DRUM RADIUS AT THE LIMITS OF THE MILLING OPERATION, ENSURE THAT THE FACE IS CLEAN AND VERTICAL BY SAWCUTTING OR TRANSVERSE MILLING. THIS END TREATMENT IS NOT APPLICABLE TO TEMPORARY LIMITS OF MILLING (i.e. END OF WORKDAY). IT IS APPLICABLE TO ALL AREAS WHERE THE COMPLETED MILLING OPERATION MATCHES ANY EXISTING PAVEMENT INCLUDING

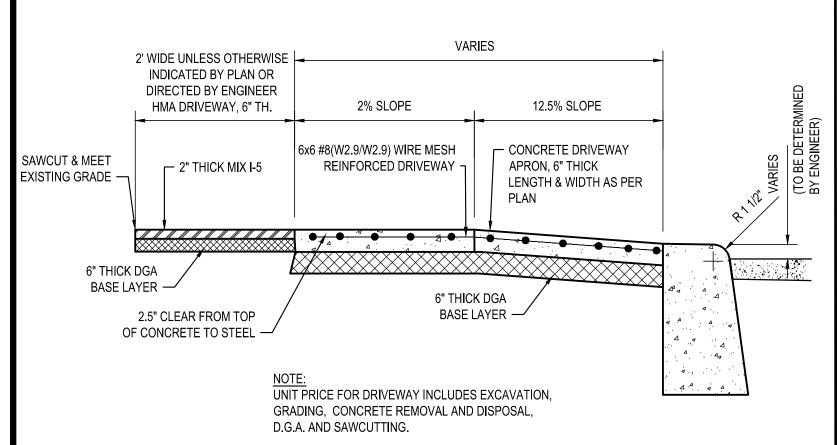
CD-401-1.2

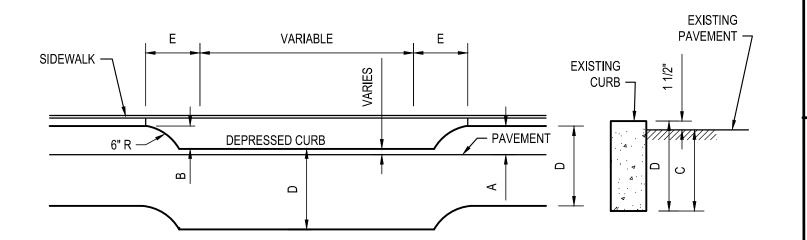
#### **CURB ENDS AT INLET**

NOT TO SCALE

## **END TREATMENT FOR MILLING OPERATION**

**NOT TO SCALE** 





NOTE: CONTRACTOR SHALL NOTE THAT ALL CONCRETE CURBS AND CONCRETE SIDEWALK/APRONS/RAMPS SHALL BE FORMED AND POURED SEPARATE OF EACH OTHER. MONOLITHIC POURS WILL NOT BE PERMITTED.

DEPRESSED CU	JRB @ DRIVE	WAY (TABLE)	)					
DESCRIPTION	Α	В	С	D	Е			
9"X 18" CONCRETE CURB (W/3' TREE OR GRASS BELT)	6"	4 1/2"	16"	18"	18"			
9"X 18" CONCRETE CURB (S/W AGAINST CURB)	6"	4 1/2"	16"	18"	1:8 SLOPE			
10"X 20" CONCRETE CURB (WITH 3' TREE OR GRASS BELT)*	8"	6 1/2"	18"	20"	18"			
10"X 20" CONCRETE CURB (S/W AGAINST CURB)*	8"	6 1/2"	18"	20"	1:8 SLOPE			
* DETAIL TO BE UTILIZED								

### **CONCRETE SIDEWALK, 6" REINFORCED**

NOT TO SCALE

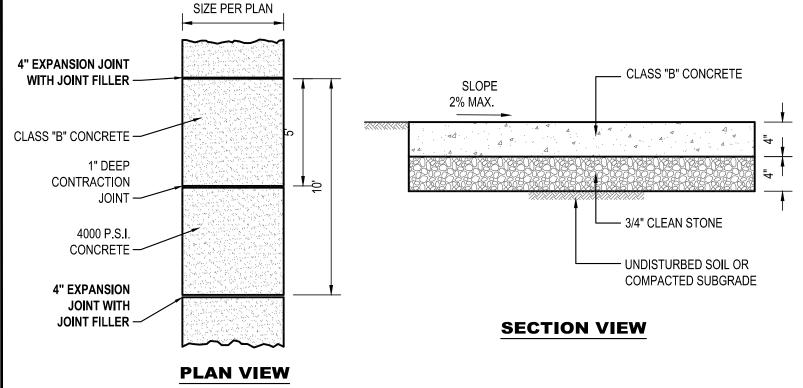
REVISIONS

DESCRIPTION

REVISED PER NJDOT COMMENT LETTER

DATE

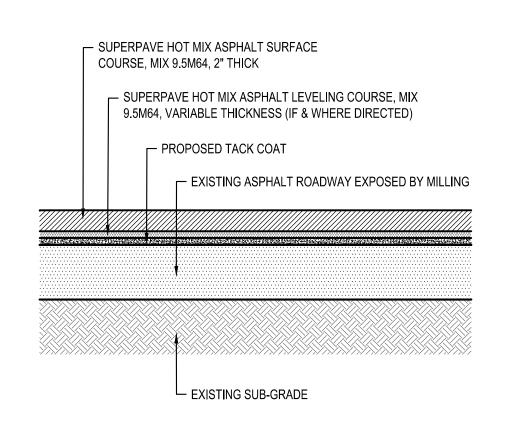
2023/03/20



- 1. UNIT PRICE FOR SIDEWALK INCLUDES EXCAVATION, GRADING, CONCRETE REMOVAL,CONC. SAWCUTTING AND DISPOSAL, AND D.G.A. 2. EXISTING GREEN BELT MATERIALS (GRASS, BRICK, CONCRETE, ETC.) TO BE REPLACED WITH SAME MATERIAL UNLESS OTHERWISE
- APPROVED OR DIRECTED BY THE BOROUGH ENGINEER. 3. PAY LIMIT FOR TOPSOIL, SEED, & MULCHING IS AS SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.

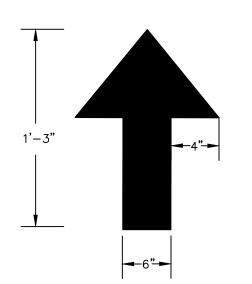
# 4" THICK CONCRETE SIDEWALK

NOT TO SCALE



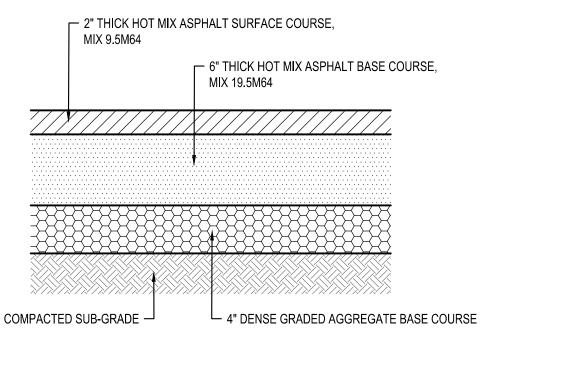
#### MILL & PAVE SECTION

**NOT TO SCALE** 



#### PAVEMENT MARKING FOR INLET

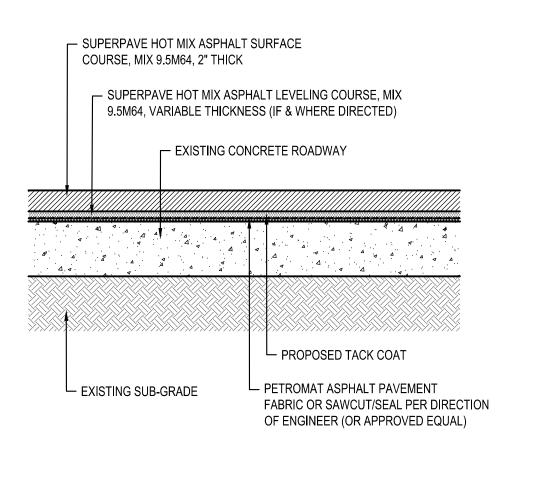
**NOT TO SCALE** 



FULL DEPTH ASPHALT PAVEMENT INCLUDES SAWCUTTING, EXCAVATION, D.G.A., ASPHALT PAVEMENT CONSTRUCTION (BASE COURSE), GRADING, CONCRETE & ASPHALT REMOVAL, AND PROPER DISPOSAL OF ALL WASTE AS A RESULT THEREOF. COSTS FOR FULL DEPTH ASPHALT PAVEMENT TO BE INCLUDED IN THE APPROPRIATE BID ITEMS AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS. SHOULD ROADWAY RECONSTRUCTION BE NECESSARY DUE TO INLET RECONSTRUCTION OR RESETTING, NO SPECIFIC PAYMENT SHALL BE MADE FOR SUCH WORK.

### **HOT MIX ASPHALT PAVEMENT REPAIR**

NOT TO SCALE



**NOT TO SCALE** 

PAVEMENT OVERLAY SECTION

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PROFESSIONAL ENGINEER N.J. LICENSE NO. 41635



NEGLIA ENGINEERING ASSOCIATES TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604

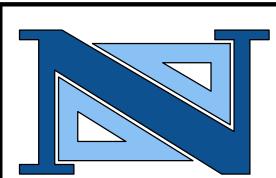
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800 CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA2792700

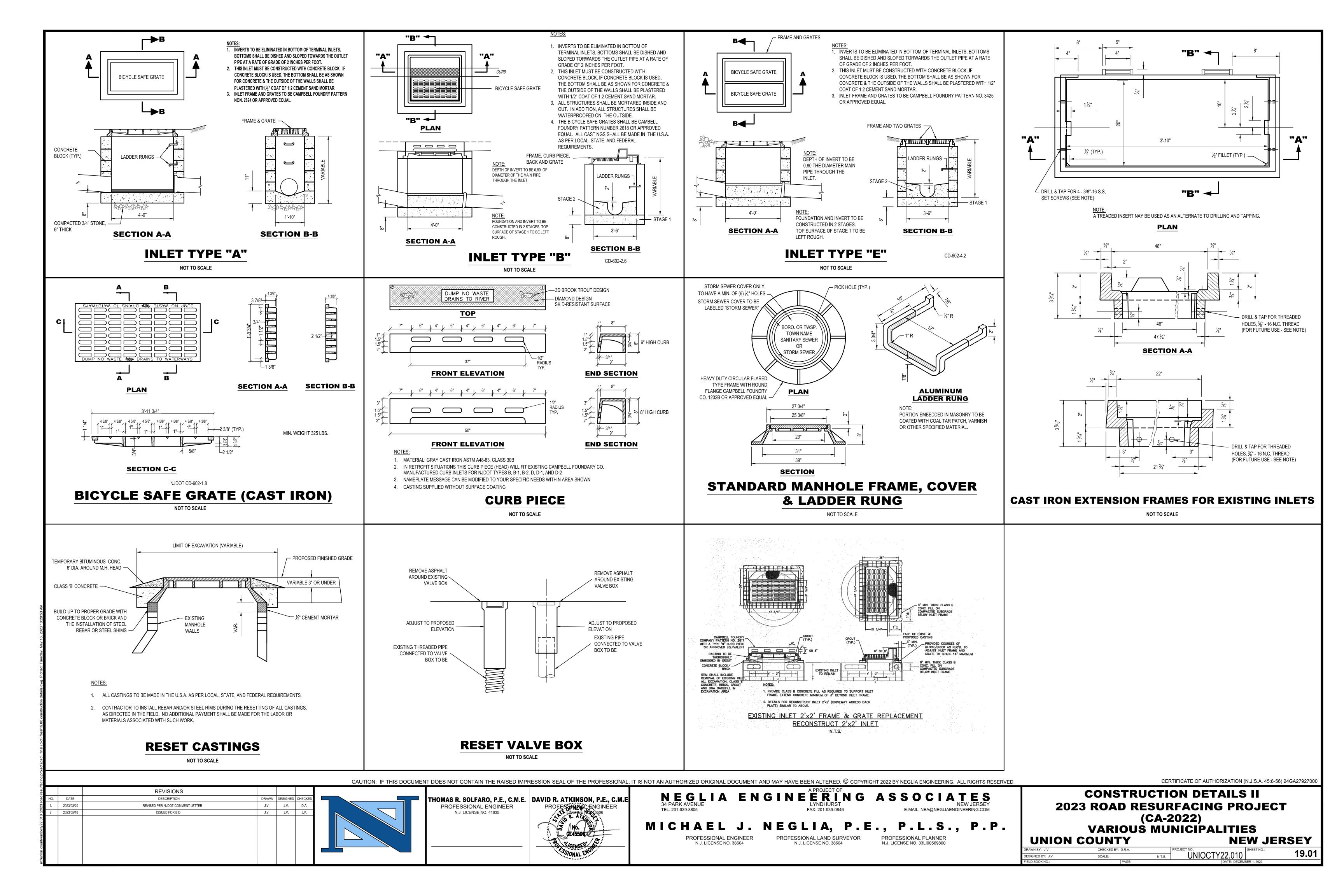
**CONSTRUCTION DETAILS I 2023 ROAD RESURFACING PROJECT** (CA-2022) **VARIOUS MUNICIPALITIES** 

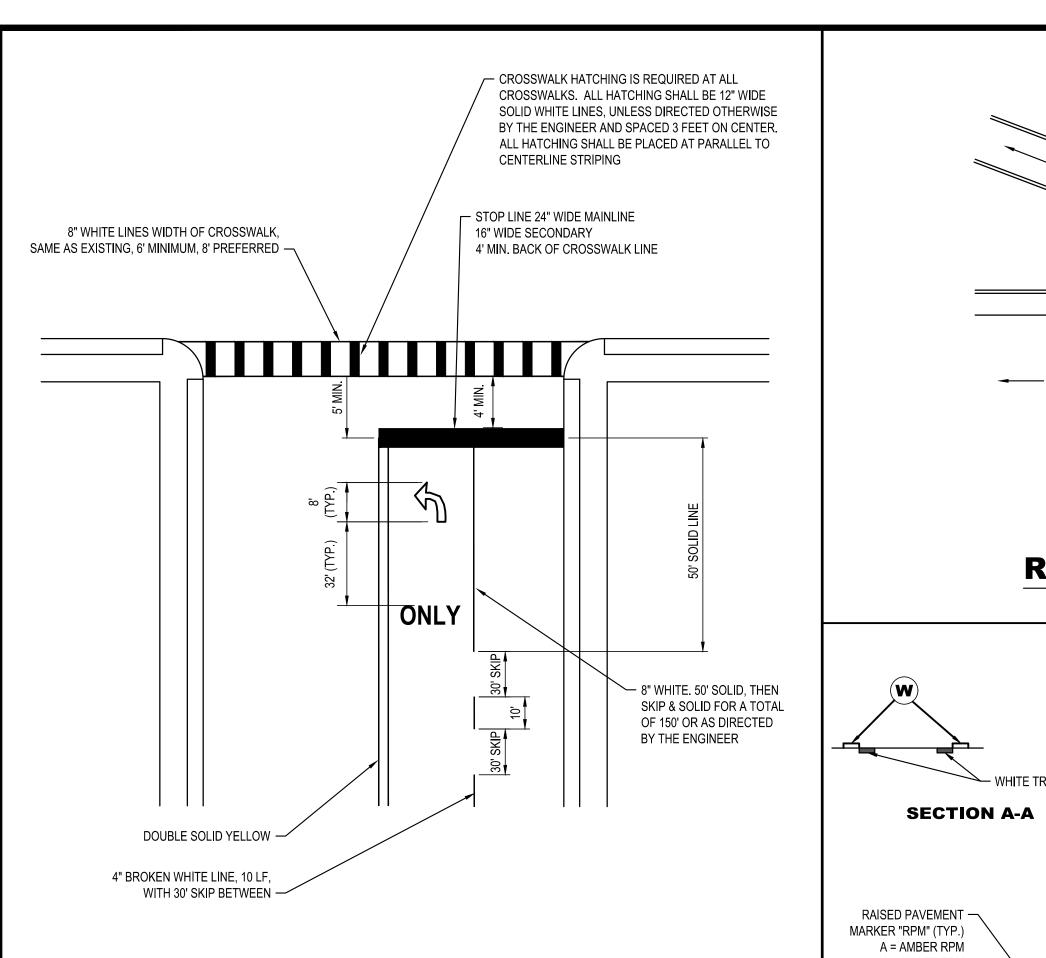
**UNION COUNTY NEW JERSEY** 19.00 SIGNED BY: J.V.

N.T.S. PROJECT NO.:
UNIOCTY22.010 SCALE:



HOMAS R. SOLFARO, P.E., C.M.E. | DAVID R. ATKINSON, P.E., C.M.E





ALL TRAFFIC MARKINGS IN CONFORMANCE WITH THE M.U.T.C.D.

PAVEMENT SYMBOL MARKINGS SHALL BE DESIGNED IN CONFORMANCE WITH THE STANDARD ALPHABET FOR HIGHWAY SIGNS & PAVEMENT MARKINGS.

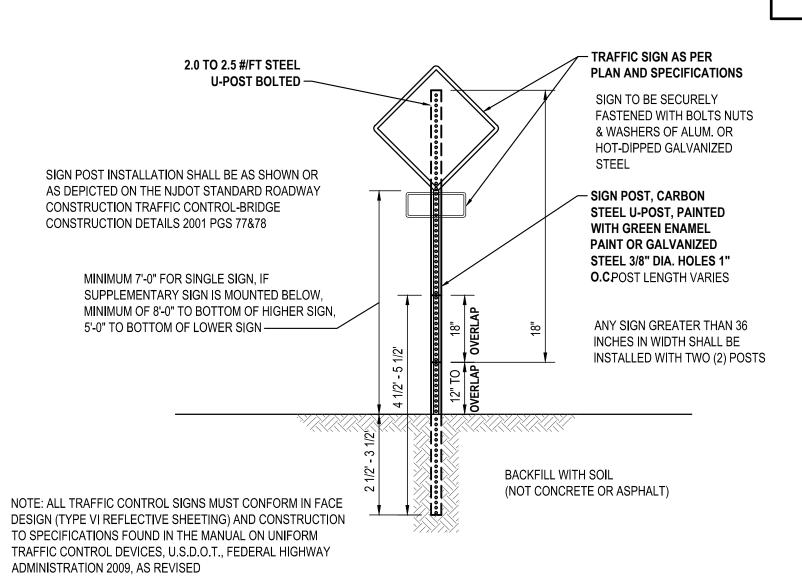
ALL PAVEMENT MARKINGS SHALL BE APPLIED TO WITH THERMOPLASTIC MATERIAL.

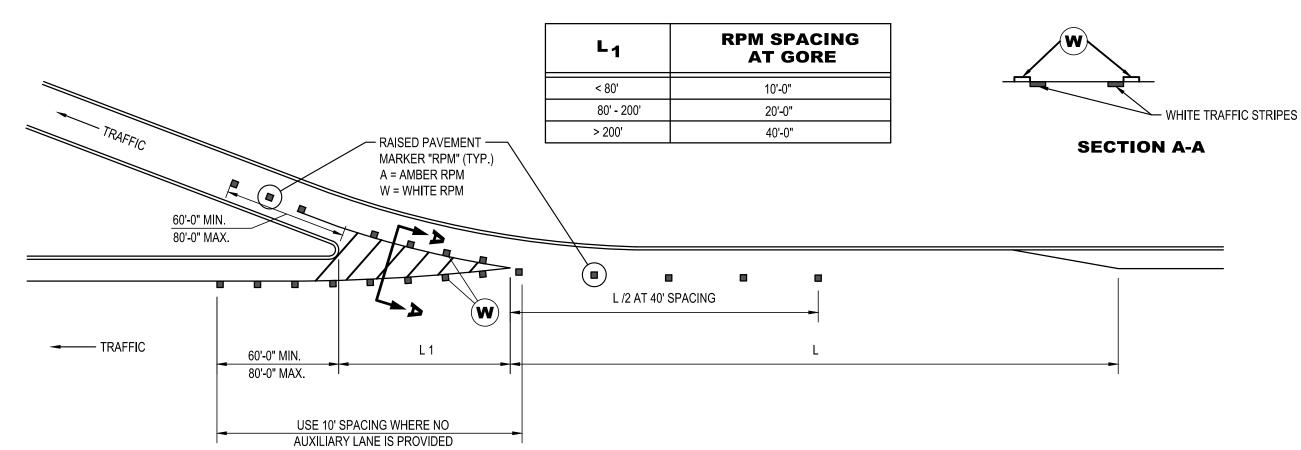
ALL PERMANENT AND TEMPORARY STRIPING SHALL OCCUR WITHIN THE TIMELINES SET FORTH IN THE TECHNICAL SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER AND/OR ENGINEER THE STRIPING FOR ALL SECONDARY STREET CROSSWALKS. IN THE EVENT THE EXISTING CROSSWALK LINES UP WITH THE NEW HANDICAP RAMP NO STRIPING MAY BE DONE ALONG THE SECONDARY ROADWAY.

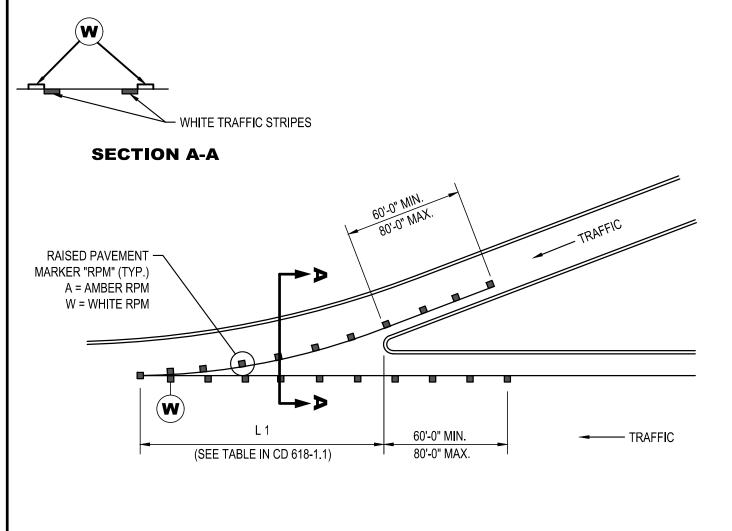
### TRAFFIC STRIPING

NOT TO SCALE



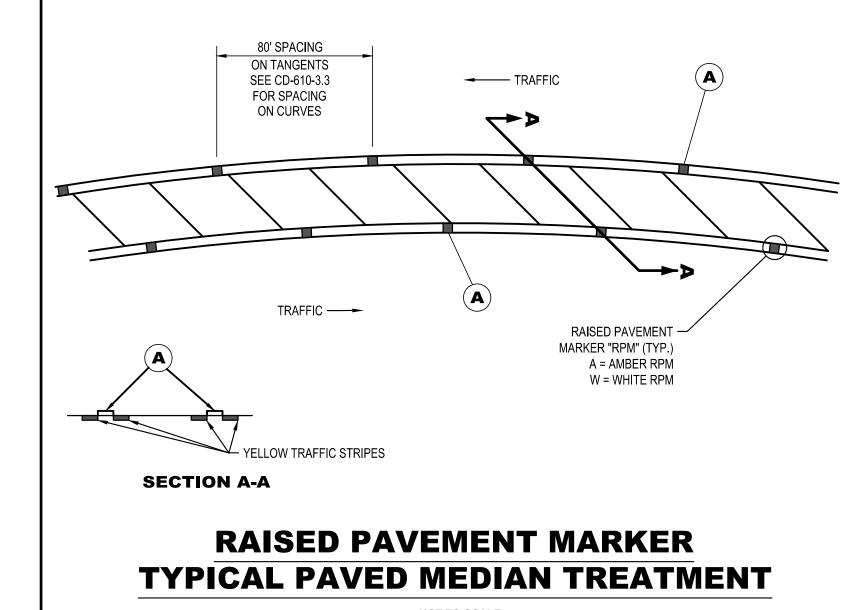


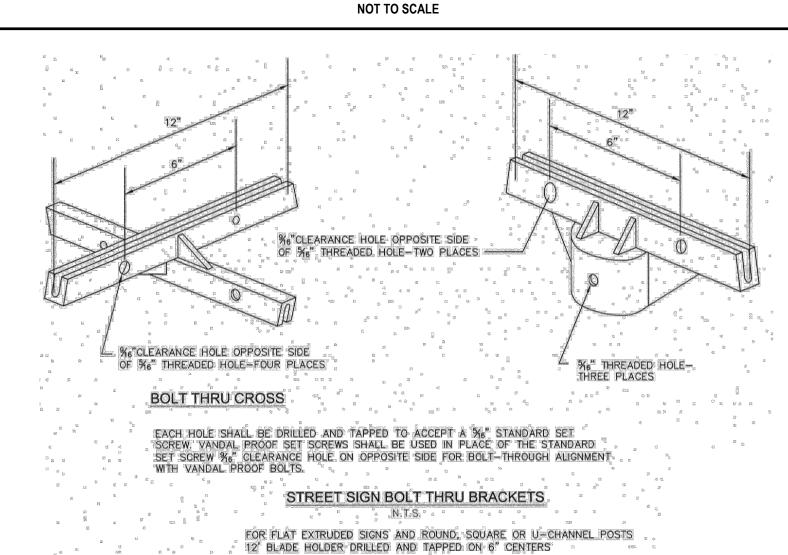
## RAISED PAVEMENT MARKER - TYPICAL DECELERATION LANE TREATMENT



## RAISED PAVEMENT MARKER TYPICAL ACCELERATION LANE TREATMENT

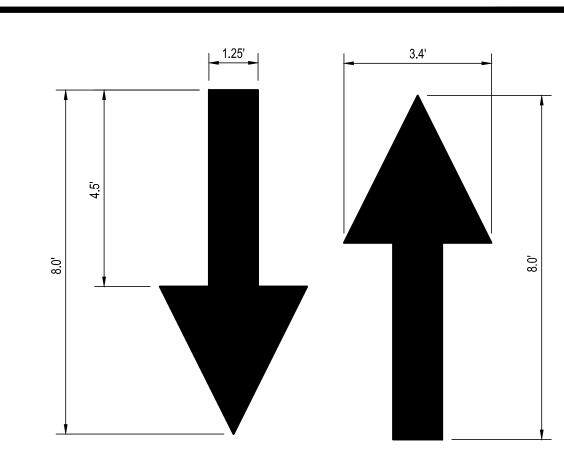
NOT TO SCALE





STREET SIGNS

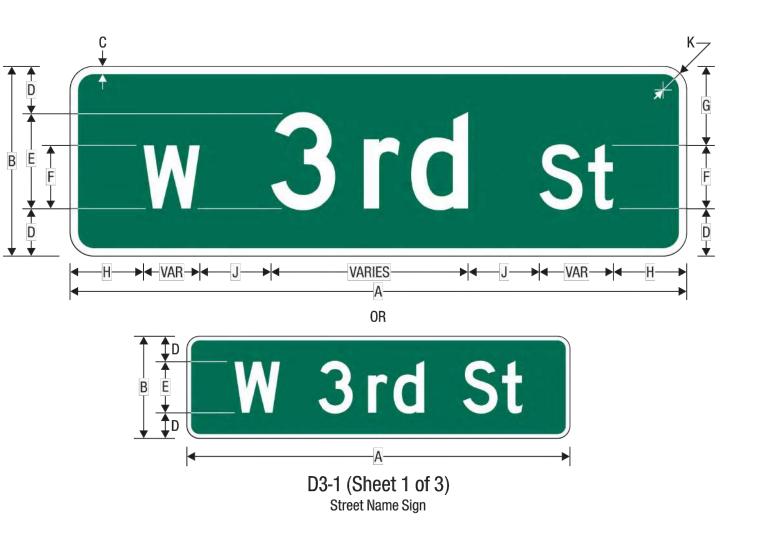
**NOT TO SCALE** 



ALL STRIPES AND MARKINGS TO BE THERMOPLASTIC

# **DIRECTIONAL PAVEMENT ARROW MARKINGS**

NOT TO SCALE







D3-1 — WITHOUT BORDER, PRINCIPAL LEGEND WITH OR WITHOUT DESCENDING STROKES

	Α	В	С	D	Е	F	G	Н	J	K	L	M	N
	VAR	8	0.375	2	4 D	3 D	3	3 (MIN)	3	1	1.75	2.25	2.75
C	VAR	12	0.5	3	6 D	4 D	5	4.5 (MIN)	4.5	1.5	2.75	3.25	4.75
	VAR	18	0.75	5	8 D	5.33 D	7.67	5.33 (MIN)	6	1.875	5	5	7.67
	VAR	24	1	6	12 D	8 D	10	9 (MIN)	9	2.25	5.5	6.5	9.5

COLORS: LEGEND, BORDER BACKGROUND

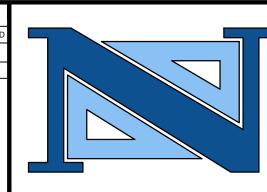
WHITE (RETROREFLECTIVE) GREEN (RETROREFLECTIVE)

BACKGROUND (ALTERNATE) — BLUE OR BROWN (RETROREFLECTIVE)

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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA2792700

REVISIONS DESCRIPTION DATE 2023/03/20 REVISED PER NJDOT COMMENT LETTER



SITE SIGNAGE

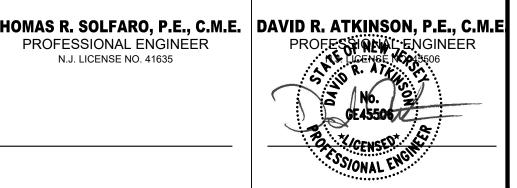
**NOT TO SCALE** 

W16 - 7P [24" X 12"]

PROFESSIONAL ENGINEER N.J. LICENSE NO. 41635

W11 - 2 [30"x30"]

(6.3 S.F.)



SOLAR LED FLASHING CROSS

WALK SIGN TO BE PROVIDED.

DRAWINGS FOR REVIEW BY

THE COUNTY AND ENGINEER

PRIOR TO ORDERING.

CONTRACTOR TO SUBMIT SHOP

NEGLIA ENGINEERING ASSOCIATES TEL: 201-939-8805 E-MAIL: NEA@NEGLIAENGINEERING.COM FAX: 201-939-0846

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**CONSTRUCTION DETAILS III 2023 ROAD RESURFACING PROJECT** (CA-2022)**VARIOUS MUNICIPALITIES** 

**NEW JERSEY UNION COUNTY** 19.02 UNIOCTY22.010 SIGNED BY: J.V. N.T.S. SCALE: