					SHEET NUM.		PART.		ITEM	GRAND		
10	11	18	19	23			01/S50/ 11/NEWA	ITEM	EXT	TOTAL	UNIT	DE
LS	LS						LS	201	11000	LS		CLEARING AND GRUBBING
478	309						787	202	23000	787	SY	PAVEMENT REMOVED, ASPHALT
510							510	202	30000	510	SF	WALK REMOVED
266	206						472	202	32000	472	FT	
121							121	202	35100	121	FT	PIPE REMOVED, 24" AND UNDER
44	40						84	202	35200	84	FT	PIPE REMOVED, OVER 24"
2	1						3	202	58000	3	EACH	MANHOLE REMOVED
1							1	202	58100	1	EACH	CATCH BASIN REMOVED
	62						62	202	75000	62	FT	FENCE REMOVED
	1						1	202	98100	1	EACH	REMOVAL MISC.:BIRD HOUSE
155	130						285	203	10000	285	CY	EXCAVATION
133	15						203	203	20000	203	CY	EMBANKMENT
980	1,365						2,345	608	10000	2,345	SF	4" CONCRETE WALK
	550						550	608	52000	550	SF	CURB RAMP
266	206						472	609	26000	472	FT	CURB, TYPE 6
											· ·	
												EROS
1	1						2	659	00100	2	EACH	SOIL ANALYSIS TEST
36	36						72	659	00300	72	CY	TOPSOIL
323	322						645	659	00500	645	SY	SEEDING AND MULCHING, CLASS 1
5,000	5,000						10,000	832	30000	10,000	EACH	EROSION CONTROL
												C
1							1	602	20000	1	CY	CONCRETE MASONRY
270	206						476	605	06000	476	FT	4" BASE PIPE UNDERDRAINS
24							24	611	01800	24	FT	8" CONDUIT, TYPE B
95							95	611	04600	95	FT	12" CONDUIT, TYPE C
	5						5	611	10400	5	FT	24" CONDUIT, TYPE B
5	21						26	611	16400	26	FT	36" CONDUIT, TYPE B
67	13						80	611	16600	80	FT	36" CONDUIT, TYPE C
2	1						3	<u>611</u> 611	98180 99574	1 3	EACH EACH	CATCH BASIN, NO. 3A MANHOLE, NO. 3
							0	011	0007+	0	E/(Off	
05	4.5						110	004	50000	110		
65	45						110	301	56000	110		ASPHALT CONCRETE BASE, PG64-22, (449
65	53						118	304	20000	118	CY	AGGREGATE BASE
46	31						33	<u>407</u> 441	70000		GAL CY	TACK COAT ASPHALT CONCRETE SURFACE COURSE
19 23	14						<u> </u>	441	70300	33 38	CY CY	ASPHALT CONCRETE SURFACE COURSE
23	15				Qty Revised —		+		70300			
18	3						21	452	10050	21	SY	6" NON-REINFORCED CONCRETE PAVEMI
	5						5	253	90100	5		PAVEMENT REPAIR, MISC.:BRICK DRIVEW
	1						1	441	70500	1	CY	ASPHALT CONCRETE SURFACE COURSE
1.dgn												
GG001.	-						LS	614	12420	LS		DETOUR SIGNING
dway/Sheets/111654_Newark_												
30							30	630	03100	30	FT	GROUND MOUNTED SUPPORT, NO. 3 POS
16		A A	10				16	630	80100	16	SF	SIGN, FLAT SHEET
y/Shr		<u>    14    </u> 133	16 79				30 212	<u>    644    </u> 644	00500	30 212	FT FT	STOP LINE CROSSWALK LINE 12"
adwa	+	30	19				30	<u> </u>	00620 20036	30	FT FT	CROSSWALK LINE, 12" CROSSWALK LINE, 12", TYPE B125, AS PEI
ng\Road		30						047	20030		11	
.=												STRUCTURE OVER 20
ark\400-Engineer				LS			LS	202	11002	LS		STRUCTURE REMOVED, OVER 20 FOOT S
100-E				LS			LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS
/ark/				80			80	202	23500	80	SY	WEARING COURSE REMOVED
Zex Zex				LS			LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING
gn/111654_Newar				LS			LS	503	21300	LS		UNCLASSIFIED EXCAVATION
				9,814		(	9,814	509	10000	9,814	LB	EPOXY COATED REINFORCING STEEL
				222	Qty Revised	(	222	<u> </u>	10000	222		EPOXY COATED REINFORCING STEEL EPOXY COATED REINFORCING STEEL, AS
ă j				12			1222	519	34448	12	CY	CLASS QC2 CONCRETE, BRIDGE DECK (P
19/C. De			<b>I</b>						+			
\00549\C. De				13			13	511	46010	13	CY	CLASS QC1CONCRETE, RETAINING/WING
0:\2020\00549\C. Desig				13 84			13 84	511 511	46010 46510	13 84	CY CY	CLASS QC1CONCRETE, RETAINING/WING CLASS QC1CONCRETE, FOOTING

LIC-CR813-1.03/LIC-MR491-0.43

ESCRIPTION	SEE SHEET	
	NO.	
ROADWAY		-
	5	
		-
	5	-
		-
		-
		-
OSION CONTROL		
		SUMMARY
		Σ[
DRAINAGE		
		AL A
		ENERAL
		Ū
		-
PAVEMENT		-
149)		
		-
SE, TYPE 1, (449), PG64-22		
OURSE, TYPE 2, (449)		-
MENT, CLASS QC MS		
EWAY SE, TYPE 1, (449), (DRIVEWAYS)	20	-
ENANCE OF TRAFFIC		-
AFFIC CONTROL OST		
PER PLAN		DESIGN AGENCY
20 FOOT SPAN (LIC-MOULL-03433)		
Γ SPAN		
AS PER PLAN	23	<b>C</b> AN
ING		
		DESIGNER
		AS REVIEWER
AS PER PLAN (PARAPET)	23	AJL 05/13/22 PROJECT ID
NGWALL NOT INCLUDING FOOTING		111654
		SHEET TOTAL P.08 P.43

23     29     1000     EXT     TOTAL       128     128     1010     128     512     10100     128     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     3300     67     512     67     612     61     67     613     61     61     67     613     61     67     612     61	DI		UNIT	GRAND	ITEM	ITEM			 JM.		· · · · · · · · · · · · · · · · · · ·	·	
67     67     512     33000     67     SY     TYPE 3/W       36     36     36     516     13601     38     SF     TYPE 3/W       36     21     518     21200     21     CY     POROUS1       47     21     518     21200     21     CY     POROUS1       47     21     76     6011     32204     76     CY     POROUS1       47     21     76     6011     32204     76     CY     POROUS1       48     2140     140     613     41200     140     CY     LOW STRUCTU       48     20     1400     613     41200     140     CY     LOW STRUCTU       LS     20     11002     LS     PORTIONS     PORTIONS     PORTIONS       66     202     1201     LS     PORTIONS     PORTIONS     PORTIONS       157     20     11000     LS     S03     11100     LS     CY     CLASS 0			UNIT	TOTAL	EXT							29	23
67     67     612     33000     67     SY     TYPE 2 W       36     36     616     13601     36     SF     TYPE 2 W       36     21     210     168     5718     21200     21     CPROUSE       47     21     21     5718     21200     21     CPROUSE       47     21     76     6011     32204     76     CY     DROUSE       47     200     21     CT     CONDUT,     Treperoy     DROUSE       47     200     140     CY     DROUSE     DROUSE     DROUSE       47     200     140     CY     DROUSE     DROUSE     DROUSE     DROUSE     DROUSE       48     200     1400     CY     LOW SY     DROUNE     DROUSE     DROUS	STRUCTURE OVER 2												
168     168     512     33010     168     SY     TYPE 3 W       36     36     1     168     161     1301     36     SF     TYPE 3 W       21     21     518     21200     21     CY     POROUS I       47     21     518     39800     47     FT     A'PERPOR       76     76     76     76     CY     CONDUT     76     CY     CONDUT       47     611     70000     47     FT     CONDUT     CONDUT       48     410     613     41200     140     CY     CONDUT       48     48     SPECIAL 89012050     48     SY     REINFORM       48     SPECIAL 891200     LS     SPECIAL 891200     LS     SPECIAL 891200       157 <td>OF CONCRETE SURFACES (EF</td> <td>SEAL</td> <td>SY</td> <td>128</td> <td>10100</td> <td>512</td> <td>128</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>128</td>	OF CONCRETE SURFACES (EF	SEAL	SY	128	10100	512	128						128
36     36     516     13601     36     SF     1" PREPOR       21     518     21200     21     CY     POROUS       47     6     61     32204     76     CY     POROUS       47     6     75     601     32204     76     CY     PROXE       47     140     76     601     32204     76     CY     ROKCHA       48     140     140     613     41200     140     CY     CONDUT,       140     143     1200     140     CY     CONDUT,     Its     FRINFORC       48       15     202     11002     LS     STRUCTU       LS       15     202     1100     LS     CY     CONTRING       15        15     503     1100     LS     CY     CY     CX     CY     CX     CY     CX     CY     CX     CX     CX     CX	VATERPROOFING		SY	67	33000	512	67						67
21     21     518     21200     21     CY     POROUS E       47     578     39800     47     FT     4*PERFO       76     611     760     611     7600     47     FT     CY     POROUS E       48     48     48     48     5*PECIAL     69012050     48     SY     REINFORC       1.S     48     48     5*PECIAL     69012050     48     SY     REINFORC       1.S     48     5*PECIAL     69012050     48     SY     REINFORC       1.S     5     5     5     5     5     FTRICTU     1.S     FTRICTU       1.S     5     5     5     5     5     5     FTRICTU     1.S     5     5     7     5     7     FTRICTU     1.S     5     5     7     7     1.000     1.5     5     7     1.000     1.5     7     1.000     1.5     1.000     1.5     1.000     1.5     1.000 <td< td=""><td>VATERPROOFING</td><td>TYPE</td><td>SY</td><td>168</td><td>33010</td><td>512</td><td>168</td><td></td><td></td><td></td><td></td><td></td><td>168</td></td<>	VATERPROOFING	TYPE	SY	168	33010	512	168						168
21     21     518     21200     21     CY     POROUS E       47     76     47     518     39600     47     FT     4*PERFO       47     518     3204     76     CV     POROUS E       47     518     3204     47     518     38600     47     FT     4*PERFO       48     48     48     48     59ECIAL 69012050     48     SY     REINFORC       1.S     48     48     59ECIAL 69012050     48     SY     REINFORC       1.S     500     1000     CV     1000     CV     1000     STRUCTUR       1.S     503     11000     LS     503     11000     LS     590     10001     6.756     10001     CV     CV     CLASS OC       1.S     503     11000     LS     503     11000     LS     CV     CLASS OC       1.S     503     1000     6.756     1000     6.756     CV     CLASS OC     CV <td< td=""><td>DRMED EXPANSION JOINT FILL</td><td>1" PR</td><td>SF</td><td>36</td><td>13601</td><td>516</td><td>36</td><td></td><td></td><td></td><td></td><td></td><td>36</td></td<>	DRMED EXPANSION JOINT FILL	1" PR	SF	36	13601	516	36						36
76     76     601     32204     76     CY     ROCK OH/ T       47     611     7000     613     41200     440     CY     LOW STREE       48     48     48     SPECIAL     6912050     48     SY     REINFORC       LS     48     SPECIAL     6012050     48     SY     WEARING       LS     41     LS     503     11100     LS     STRUCTUR       LS     41     State     LS     503     11100     LS     UNCLASSI       6,755     44     401000     6,755     LB     EPOXY CC     CY     CLASS CC       12     41	BACKFILL WITH GEOTEXTILE F												
47     47     611     70000     47     FT     CONDUT       140     613     4120     140     613     4120     140     CY     LOW STRE       48     48     SPECIAL     60012050     48     SY     REINFORC       LS     LS     LS     202     11002     LS     STRUCTU       LS     LS     202     11002     LS     STRUCTU       LS     LS     202     11001     LS     COPRETIONS       66     C     C     CS     STRUCTU     LS     STRUCTU       LS     C     CS     COPRETIONS     666     SPORTIONS     COPRETIONS       66     C     C     CS     STRUCTU     LS     CS     UNCLASS       157     C     C     COPRESID     CS     SPORTIONS     COPRESID     CS     LB     EPOXY CC       167     C     CS     CS     LB     EPOXY CC     CS     CS     CS     CS     CS	DRATED CORRUGATED PLASTIC	4" PE	FT	47	39800	518	47						47
140     140     613     41200     140     CY     LOW STRENGT       48     48     SPECIAL     69012050     48     SY     REINFORC       LS     60112050     48     SY     REINFORC     69012050     48     SY     REINFORC       LS     66     6     66     66     57     WEARING     503     21300     LS     DPORTIONS       LS     66     66     66     53     WEARING     LS     503     21300     LS     UNCLASS       LS     66     6755     66     SY     WEARING     LS     503     21300     LS     UNCLASS       157     675     675     68     99     10001     157     LB     EPOXY CC       12     675     99     10001     157     LB     EPOXY CC     CY     CLASS GC       41     66     99     0001     157     LB     EPOXY CC     CY     CLASS GC       41     CY     CLASS	HANNEL PROTECTION, TYPE C	ROCI	CY	76	32204	601	76						76
48     48     SPECIAL     69012050     46     SY     REINFORC       LS     LS     LS     LS     LS     STRUCTU     STRUCTU       LS     LS     202     11002     LS     STRUCTU       LS     Coversity     66     202     23500     66     SY     WERRING       LS     Coversity     Coversity     66     202     23600     66     SY     WERRING       LS     Coversity     Coversity <td>T, TYPE A, PRECAST REINFORC</td> <td>CONI</td> <td>FT</td> <td>47</td> <td>70000</td> <td>611</td> <td>47</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>47</td>	T, TYPE A, PRECAST REINFORC	CONI	FT	47	70000	611	47						47
LS     LS     LS     202     11002     LS     PORTIONS       66          LS     202     11002     LS     PORTIONS       66         LS     202     11001     LS     PORTIONS       LS        LS     503     11100     LS     COFFERD       LS        LS     503     11100     LS     COFFERD       6,755         6,755     509     10000     8,756     LB     EPOXY CC       157         157     509     10001     157     LB     EPOXY CC       12         157     34484     -9     CY     CLASS OC       41         119     511     46610     41     CY     CLASS OC       119	RENGTH MORTAR BACKFILL	LOW	CY	140	41200	613	140						140
LS     LS     202     11201     LS     PORTIONS       66       66     202     23500     66     SY     WEARING       LS     LS     503     11100     LS     COFFERD     UNCLASS       6,755       Ogy Revised     6,755     S09     10000     6,755     LB     EPOXY CC       157     509     10000     6,755     LB     EPOXY CC     9     GY     CLASS OC       12        Ogy Revised     41     S11     46610     -42     CY     CLASS OC       41       Ogy Revised     41     S11     46610     -42     CY     CLASS OC       119         Ogy Revised     41     S11     46610     41     CY     CLASS OC       119        107     S51     46610     41     CY     CLASS OC       119	RCED MESH FOR TRANSVERSE	REIN	SY	48	69012050	SPECIAL	48						48
LS     LS     202     11201     LS     PORTIONS       66       66     202     23500     66     SY     WEARING       LS     LS     503     11100     LS     COFFERD     UNCLASS       6,755       Ogy Revised     6,755     S09     10000     6,755     LB     EPOXY CC       157     509     10000     6,755     LB     EPOXY CC     9     GY     CLASS OC       12        Ogy Revised     41     S11     46610     -42     CY     CLASS OC       41       Ogy Revised     41     S11     46610     -42     CY     CLASS OC       119         Ogy Revised     41     S11     46610     41     CY     CLASS OC       119        107     S51     46610     41     CY     CLASS OC       119	STRUCTURE OVER 2												
66     22     23500     66     SY     WEARING       LS       LS     503     11100     LS     COFFERD       6,755          LS     503     21300     LS     UNCLASS       6,755         6,755     LB     EPOXY CC       157         6,755     S09     10001     157     LB     EPOXY CC       9         9,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4	URE REMOVED, OVER 20 FOOT												
LS     LS     503     11100     LS     COFFERD       LS     LS     503     21300     LS     UNCLASS       6,755     C     C     C     503     21300     LS     UNCLASS       6,755     C     C     C     503     21300     LS     UNCLASS       157     C     C     157     S09     10001     157     LB     EPOXYCC       9     C     C     157     S14     46040     12     CY     CLASS OC       12     C     C     OtyRevised     41     CY     CLASS OC       41     C     OtyRevised     41     CY     CLASS OC       119     C     C     CY     CLASS OC     CY     CLASS OC       107     C     C     CY     CLASS OC     CY     CLASS OC       119     C     C     CY     CLASS OC     CY     CLASS OC       107     S     S     TYPE 2 WA     SS	NS OF STRUCTURE REMOVED,												
LS     Model     LS     503     21300     LS     UNCLASSI       6,755     0     0/2 Revised     6,755     509     10000     6,755     LB     EPOXY CC       157     0     0     0/2 Revised     157     509     10000     6,755     LB     EPOXY CC       9     0     0     0     0     0/2 Revised     157     509     10000     6,755     LB     EPOXY CC       12     0     0     0     0     0/2 Revised     11     46910     12     CY     CLASS QC       41     0 <t< td=""><td>G COURSE REMOVED</td><td></td><td>SY</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	G COURSE REMOVED		SY										
6,755     0     0     0y Revised     6,755     509     10000     6,757     LB     EPOXY CC       9     0     0     44     0     0     46016     41     11     46016     41     CY     CLASS QC       4     0     0     0     41     46610     41     CY     CLASS QC       4     0     0     0     12     0     0     4     CY     CLASS QC       4     0     0     0     4     511     46610     4     CY     CLASS QC       44     0     0     0     4     511     46610     4     CY     CLASS QC       119     0     0     119     512     10100     119     SY     SEALING Q       107     0     0     107     512     33000     66     SY     TYPE 3W       34     0     107     512     3300     107     SY     POROUSE       38     <	DAMS AND EXCAVATION BRACI												
6.755     0     0     0     0     0.755     509     10000     6.755     2     LB     EPOXY CC       9     0     0     0     0     0.757     509     10001     157     1B     EPOXY CC       12     0     0     0     9     0     0     0     9     0     0.757     1B     EPOXY CC       12     0     0     0     9     0     0     107     0.84448     9     CY     CLASS OC       41     1     0     0     0     0     0.119     SY     SEALING C       4     0     0     0     0.66     SY     TYPE 2 WA       107     0     0     0.66     SY     TYPE 2 WA       34     0     0     107     518     21200     17     CY     POROUSE       38     0     0     38     518     39800     38     FT<4"PERFOR	SIFIED EXCAVATION											LS	
157     157     509     10001     157     LB     EPOXY CC       9     12     13     14     14     12     12     14     14     14     14     14     14     14     14     14     14     15     14     146010     14     14     15     14     15     14     1601     14     17     17     17     17     17     17     17     17     17     17     17     17 <td></td> <td>6 755</td> <td></td>												6 755	
9     0	COATED REINFORCING STEEL			,			· · ·	Qty Revised	 				
12   12   12   511   46010   12   CY   CLASS QC     41   1   1   4510   41   511   46510   41   CY   CLASS QC     4   119   119   119   512   10100   119   SY   SEALING Q     66   66   66   512   33000   66   SY   TYPE 2 WA     107   107   107   516   13601   34   SF   1"PREFOR     17	COATED REINFORCING STEEL, A												
41   1				-									
4   CY   CLASS QC     119   119   119   119   119   SEALING Q     66   66   66   119   512   10100   119   SY     107	C1CONCRETE, RETAINING/WIN C1CONCRETE, FOOTING		- <u>N</u>					Oty Povisod					
119     119     119     119     512     10100     119     SY     SEALING O       66     66     66     66     66     512     33000     66     SY     TYPE 2 WA       107     107     107     512     33010     107     SY     TYPE 2 WA       107     107     107     512     33010     107     SY     TYPE 2 WA       107     107     107     512     33010     107     SY     TYPE 2 WA       107     107     107     107     SY     TYPE 2 WA       107     107     107     SY     TYPE 2 WA       107     107     107     SY     TYPE 2 WA       34     117     107     SY     TYPE 3 WA       38     107     107     SY     TYPE 3 WA       38     107     107     SY     TYPE 3 WA       38     601     32204     38     CY     ROCK CH/       40     119     613	C1CONCRETE, FOOTING							Qıy Revised					
66   66   512   33000   66   SY   TYPE 2 WA     107   107   107   107   512   33010   107   SY   TYPE 3 WA     34   107   107   512   33010   107   SY   TYPE 3 WA     17   17   10   10   10   SF   1"PREFOR     17   17   10   10   10   SF   1"PREFOR     18   18   10   10   10   34   SF   1"PREFOR     38   10 <td></td> <td></td> <td>01</td> <td>T</td> <td>-0010</td> <td>011</td> <td><del>_</del></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			01	T	-0010	011	<del>_</del>						
66     66     512     33000     66     SY     TYPE 2 WA       107     107     107     107     512     33010     107     SY     TYPE 3 WA       34     107     107     512     33010     107     SY     TYPE 3 WA       34     107     107     512     33010     107     SY     TYPE 3 WA       34     107     107     512     33010     107     SY     TYPE 3 WA       17     17     17     17     17     17     CY     POROUS E       17     17     17     17     17     CY     POROUS E       18     18     18     18     18     18     1900     38     CY     ROCK CHA       38     119     138     138     139800     38     CY     ROCK CHA       40     119     613     41200     119     CY     LOW STRE       42     119     119     613     41200     119	OF CONCRETE SURFACES (EF	SEAL	SY	119	10100	512	119					119	
107   107   107   107   512   33010   107   SY   TYPE 3 WA     34   34   17   34   17   34   516   13601   34   SF   1"PREFOR     17   17   17   17   17   17   518   21200   17   CY   POROUSE     38   38   18   18   18   38   39800   38   FT   4"PERFOR     38   19   107   110   107   110	VATERPROOFING											66	
17   17   17   518   21200   17   CY   POROUSE     38   38   10	VATERPROOFING			107	33010	512	107					107	
38     20     20     20     20     38     518     39800     38     FT     4"PERFOR       38     20     20     20     20     20     38     601     32204     38     CY     ROCK CHA       40     20     20     20     20     38     601     32204     38     CY     ROCK CHA       40     20	ORMED EXPANSION JOINT FILL	1" PR	SF	34	13601	516	34					34	
38   Image: style styl	BACKFILL WITH GEOTEXTILE F	POR	CY	17	21200	518	17					17	
38        38   601   32204   38   CY   ROCK CHA     40         40   611   96488   40   FT   20'X 5'CO     119            119   613   41200   119   CY   LOW STRE     42	DRATED CORRUGATED PLASTIC	4" PF	FT	38	39800	518	38					38	
40        40   611   96488   40   FT   20'X 5'CO     119          119   613   41200   119   CY   LOW STRE     42           42   SPECIAL   69012050   42   SY   REINFORD <td>HANNEL PROTECTION, TYPE C</td> <td></td>	HANNEL PROTECTION, TYPE C												
119   Image: style sty	ONDUIT, TYPE A, 706.05												
42   42   69012050   42   SY   REINFORCE     1 <td>RENGTH MORTAR BACKFILL</td> <td></td>	RENGTH MORTAR BACKFILL												
	RCED MESH FOR TRANSVERSE												
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2													
	NING TRAFFIC, AS PER PLAN	ΜΔΙΝ		19	11001	614							
	UCTION LAYOUT STAKES AND S												
Image: series of the				_									
Image: series of the													
Monotorial constraints of the second seco													
Opposite													
Vertication Image: state in the state in													
Note: N													
And     And <td></td>													
Additional of a base of a bas													
Verticity   Image: Second se													
Main Parting Pa													
Image: Notice of the state													
Operation													
Joint Structure													
Jack     Jack <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>													
Normal Sector Norm													
4     1													
								1 1	1			I I I	

LIC-CR813-1.03/LIC-MR491-0.43

ESCRIPTION	SEE SHEET NO.	
20 FOOT SPAN (LIC-MOULL-03433)		
POXY-URETHANE)		
ER, AS PER PLAN FABRIC	23	
C PIPE WITH GEOTEXTILE FABRIC		
ED CONCRETE THREE SIDED FLAT TOPPED CULVER		
	00	
AND/OR LONGITUDINAL JOINTS AND CRACKS	23	
20 FOOT SPAN (LIC-JEFRD-30150) <sup>-</sup> SPAN		
AS PER PLAN	29	
NG		
AS PER PLAN	29	Ŕ
(PARAPET)	20	SUMMARY
NGWALL NOT INCLUDING FOOTING		
POXY-URETHANE)		A
ER, AS PER PLAN	29	
FABRIC	20	GENERAL
		U U
C PIPE		
WITH GEOTEXTILE FABRIC		
AND/OR LONGITUDINAL JOINTS AND CRACKS	29	
INCIDENTALS		
	5	
SURVEYING		
		DESIGN AGENCY
		NIO.
		REP
		S
		DESIGNER AS
		AS REVIEWER
		AJL 05/13/22
		PROJECT ID 111654
		SHEET TOTAL
		P.09 P.43

#### **DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

#### **OPERATIONAL IMPORTANCE**

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL

#### **DESIGN LOADING**

HL-93 FUTURE WEARING SURFACE (FWS) OF 0.06 KSF

#### **DESIGN DATA**

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (FOOTINGS, HEADWALL, WINGWALLS)

REINFORCING STEEL - MINIMUM STRENGTH 60 KSI

#### **EXISTING STRUCTURE VERIFICATION**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05 AND 105.02.

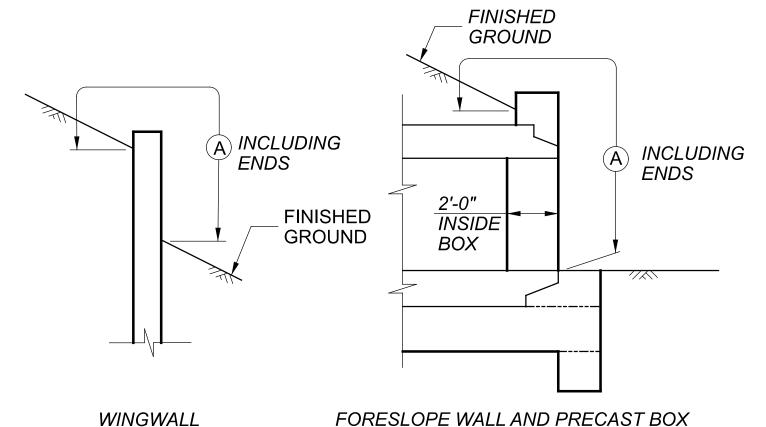
BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER. THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

#### FOUNDATION BEARING RESISTANCE:

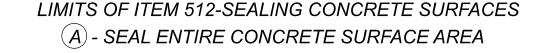
CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 2.16 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT BEARING PRESSURE OF 3.07 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 3.1 KIPS PER SQUARE FOOT.

#### SEALING OF FORESLOPE WALL AND WINGWALLS:

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 -SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



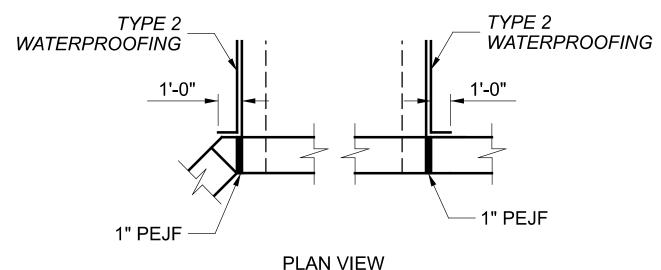
(CULVERT OUTLET BEVEL SHOWN)

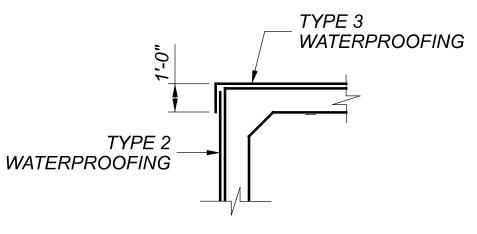


#### WATERPROOFING:

TYPE 2 WATERPROOFING. PER CMS 512.09 AND 711.25. SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

TYPE 3 WATERPROOFING. PER CMS 512.10 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.





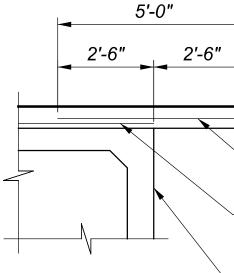
#### POROUS BACKFILL WITH GEOTEXTILE FABRIC:

2'-0" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN UP 6".

## **ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE**

AND/OR LONGITUDINAL JOINTS AND CRACKS: THIS ITEM SHALL BE USED TO REINFORCE TRANSVERSE JOINTS. PLACE REINFORCING MESH ON PROPOSED SURFACE AS SHOWN IN THE DETAIL BELOW, 5' WIDE, ALONG THE ENTIRE LENGTH OF THE CULVERT ON BOTH SIDES. APPLY TACK COAT BENEATH REINFORCING MESH PER MANUFACTURER'S SPECIFICATIONS.

REINFORCING MATERIAL SHALL BE GLASGRID CG200 OR EQUIVALENT AND SHALL BE PLACED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND THIS NOTE. ALL MATERIALS. LABOR. EQUIPMENT. TOOLS, AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS.



() () 4 9  $\overline{}$ :-MR49 .03/LIC  $\overline{}$ 3  $\overline{}$ CR8

### WATERPROOFING DETAILS

PLAN VIEW

SECTION VIEW

TOP PAVT.

JOINT MESH

TYPE 3 WATERPROOFING

END OF CULVERT

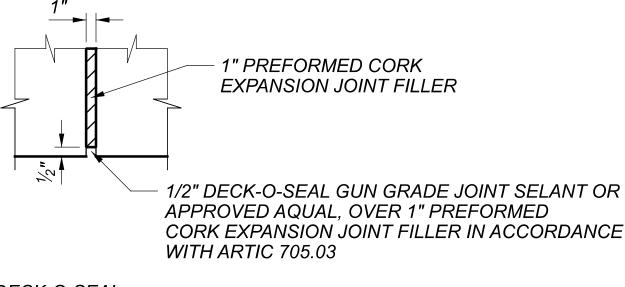
#### ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS WORK CONSISTS OF SAW CUTTING AND REMOVAL OF PORTIONS OF THE EXISTING RETAINING WALLS AS NECESSARY TO CONSTRUCT THE PROPOSED STRUCTURE WINGWALLS. THE PROVISIONS OF 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING WALL REMOVAL TO PROTECT PORTIONS OF THE RETAINING WALLS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05. INCLUDE ANY TEMPORARY SHORING OR SUPPORTS NECESSARY TO MAINTAIN THE EXISTING WALLS DURING CONSTRUCTION WITH THIS ITEM FOR PAYMENT.

ALL EXISTING RETAINING WALLS INDICATED IN THE PLANS AS "DO NOT DISTURB" THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT

#### ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN:

1" PEJF PLACED AT THE INTERFACE OF THE PROPOSE WINGWALLS AND EXISTING RETAINING WALLS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS THAT ARE ABOVE GRADE WITH DECK-O SEAL GUN GRADE JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.



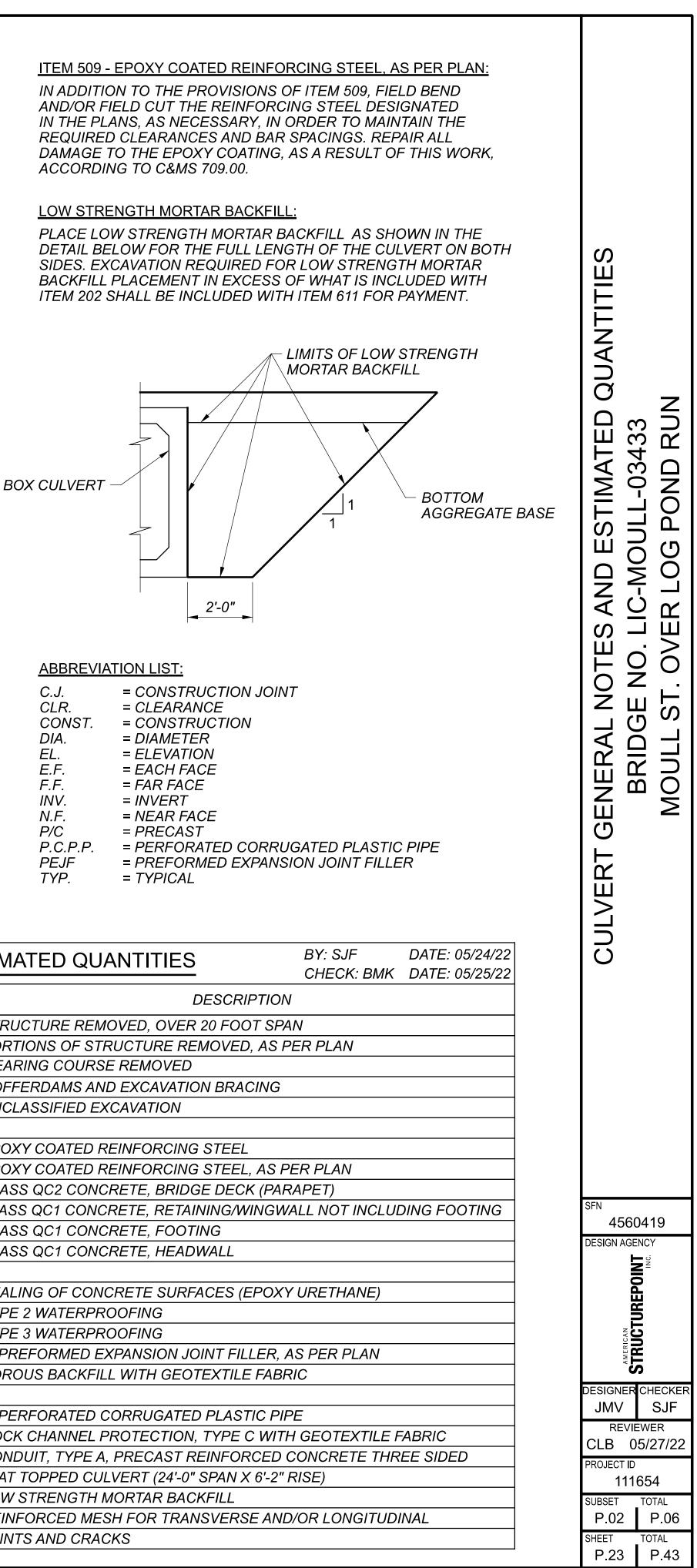
DECK-O-SEAL P.O. BOX 397 HAMPSHIRE, IL 60140 PHONE: 800-542-7665

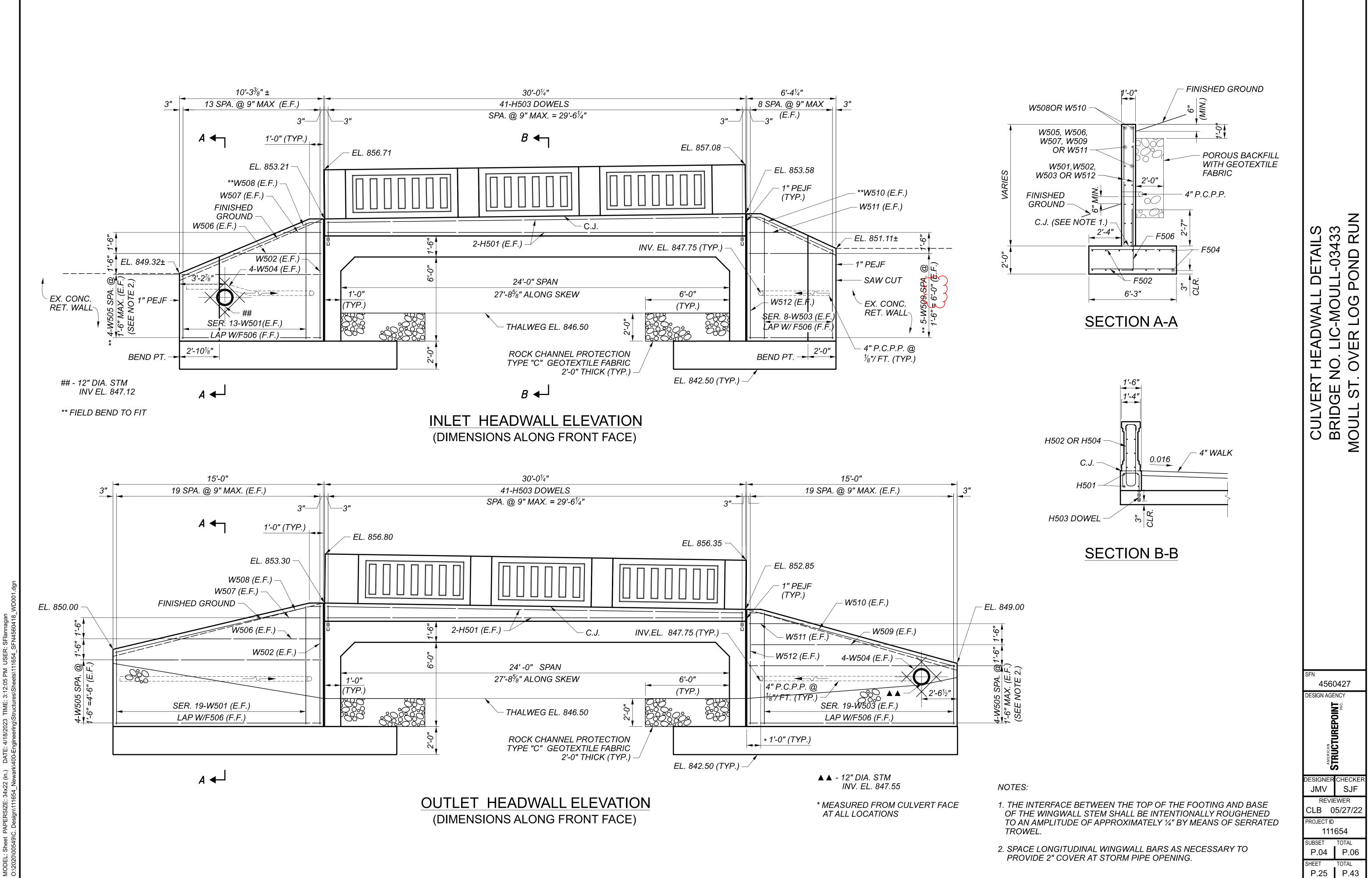
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER. AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

			-	ESTIMATED
ITEM	ITEM EXT	TOTAL	UNIT	
202	11002	LS		STRUCTUR
202	11201	LS		PORTIONS
202	23500	80	SY	WEARING C
503	11100	LS		COFFERDA
503	21300	LS		UNCLASSIF
		(		
509	10000	9,814 2	LB	EPOXY COA
509	10001	222	LB	EPOXY COA
511	34448	12	СҮ	CLASS QC2
511	46010	13	СҮ	CLASS QC1
511	46510	84	СҮ	CLASS QC1
511	46610	4	CY	CLASS QC1
512	10100	128	SY	SEALING OI
512	33000	67	SY	TYPE 2 WAT
512	33010	168	SY	TYPE 3 WAT
516	13601	36	SF	1" PREFORI
518	21200	21	CY	POROUS BA
518	39800	47	FT	4" PERFORA
601	32204	76	СҮ	ROCK CHAN
611	70000	47	FT	CONDUIT, T
				FLAT TOPPE
613	41200	140	СҮ	LOW STREM
SPECIAL	690E12050	48	SY	REINFORCE
				JOINTS AND

# C.J. CLR.

DIA. EL. E.F. F.F. INV. N.F. P/C PEJF TYP.





CR813-1.03/LIC-MR491-0.43

	NUMBER			ui			ווס	MENSIOI	vs
MARK		LENGTH	WEIGHT	ТҮРЕ					
	TOTAL			L	Α	B	С	D	E
			P	ARAF	PET/HEA	DWALL (	INLET)		
H401	8	5'-3"	28	3	1'-2"	1'-2"			
H402	8	2'-4"	12	2	0'-8"	1'-2"	0'-8"		
H403	8	3'-4"	18	14	0'-8"	0'-0"	1'-2"	9"	1'-7"
H501	4	29'-6"	123	STR					
H502	33	8'-11"	307	2	4'-3"	0'-8"	4'-3"		
	1 SR	3'-10"					2'-2"		
H503	OF	ТО	173	2	0'-9"	1'-2"	TO		
	41	4'-3"					2'-7"		
H504	14	9'-5"	138	2	4'-3"	1'-2"	4'-3"		
H505	33	3'-5"	118	2	1'-6"	0'-8"	1'-6"		
H506	16	10'-5"	174	STR					
H507	14	3'-11"	57	2	1'-6"	1'-2"	1'-6"		
H508	8	7'-8"	70	STR					
	S	UB-TOTAL	1218						

	NUMBER			Ш			DII	MENSION	IS		
MARK	TOTAL	LENGTH	WEIGHT	ТҮРЕ	A	B	C	D	E	R	INC
				Ŵ	'INGWAL	LS (INLE	± E <b>T</b> )				
	2 SR	4'-6"									
W501	OF	ТО	172	STR							3½"
	13	8'-2"									
W502	2	8'-3"	17	STR							
	2 SR	6'-4"									
W503	OF	ТО	124	STR							3%"
	8	8'-7"									
W504	8	2'-6"	21	STR							
W505	8	9'-11"	83	STR							
W506	2	6'-8"	14	STR							
W507	2	3'-5"	7	STR							
W508	2	10'-8"	~22~	STR							
W509	<b>6</b> 10 <b>2</b>	6'-0"	63	STR							
W510		6'-7"	4	STR							
W511	2	3'-4"	7	STR							
W512	2	8'-8"	18	STR							
		UB-TOTAL	(562)								
	0			1							

		NUMBER			ш			DII	MENSION	vs
	MARK		LENGTH	WEIGHT	ТҮРЕ					
		TOTAL			F	Α	B	C	D	E
						FOC	TING			1
	F501	278	8'-6"	2465	STR					
	F502	76	5'-9"	456	STR					
*	F503	2	10'-1"	21	STR					
	F504	28	16'-3"	475	STR					
	F505	40	27'-9"	1158	STR					
	F506	63	5'-1"	334	1	10"	4'-4"			
	F507	40	29'-4"	1224	STR					
*	F508	2	9'-0"	19	STR					
		S	UB-TOTAL	6152						

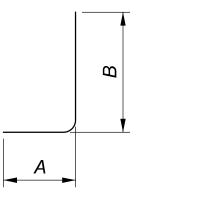
SFla -CR813-1.03/LIC-MR491-0.43 РМ 30 ė õ (22 (in.) SIZE 

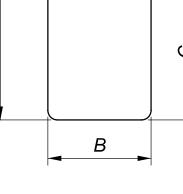
Š

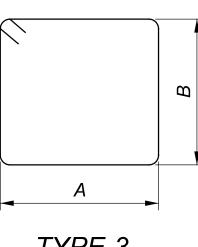
	NUMBER			Ĩ			DI	MENSION	VS			
MARK	TOTAL	LENGTH	WEIGHT	TYPE	Α	B	C	D	E	R	INC	
			PA	RAPE	ET/HEAL	) WALL (C	UTLET)					
H401	8	5'-3"	28	3	1'-2"	1'-2"	_					
H402	8	2'-4"	12	2	0'-8"	1'-2"	0'-8"					
H403	8	3'-4"	18	14	0'-8"	0'-0"	1'-2"	9"	1'-7"			
11504	4		400									
H501	4	29'-6"	123	STR	41.01		41.01					
H502	33	8'-5"	290	2	4'-0"	0'-8"	4'-0"					
	1 SR OF	3'-4" TO	151		0'-7"	41.0"	1'-10" TO				1⁄8"	
H503	41	3'-9"	151	2	0-7	1'-2"	2'-3"				/8	
H504	14	<u> </u>	130	2	4'-0"	1'-2"	4'-0"					
H505	33	3'-5"	118	2	<u>4 -0</u> 1'-6"	0'-8"	1'-6"					
11505		<u> </u>	110		1-0	0-0	1-0					
H506	16	10'-5"	174	STR								ა ო
H507	10	3'-11"	57	2	1'-6"	1'-2"	1'-6"					
H508	8	7'-8"	70	STR								<
		UB-TOTAL	1171									
	NUMBER			ш			DI	MENSION	vs			
MARK	TOTAL	LENGTH	WEIGHT	TYPE	Α	В	С	D	E	R	INC	ADWAL
	0.00				NGWALL	.S (OUTL	E1)		1	1		
	2 SR	5'-3"	000								01/11	L Ž
W501	OF 10	TO	269	STR							2 <sup>1</sup> ⁄8"	
	19	8'-4"	10									
W502	2 2 SR	8'-5" 4'-3"	18	STR								> ŏ -
W503	OF		241	STR							2 <sup>1</sup> ⁄ <sub>2</sub> "	J R 3
vv303	19	7'-11"	241								2/2	
W504	8	2'-6"	21	STR								
W505	16	14'-8"	245	STR								
W506	2	11'-0"	23	STR								
W507	2	4'-3"	9	STR								
W508	2	14'-11"	31	19	14'-2"	0'-9"	0'-2"					
W509	2	9'-7"	20	STR								
W510	2	15'-0"	31	19	14'-3"	0'-9"	0'-2"					
W511	2	3'-10"	8	STR								
W512	2	8'-0"	17	STR								
	S	<u>UB-TOTAL</u>	933							E		
							A			< <sup>-</sup> >		
1		<b>A</b>	$\overline{\left\langle \cdot\right\rangle }$				- ,					
						<b>▲</b>						
マ					В	В	$\setminus$		1			
							$\mathbf{N}$				B	SFN 4560427
		<u> </u>				<u> </u>						DESIGN AGENCY
			<u> </u>					С			A	
	B		л		1		1			-	A	
	B		A		-					I	I	
	B FYPE-2		A <u>TYPE</u>	<u>-3</u>	-			<u> YPE-10</u>		<u>TYP</u>	<u>PE-14</u>	TUREPO
				<u>-3</u>	-  1	NOTES:	<u></u>	<u> YPE-10</u>		<u>TYP</u>	<u>9E-14</u>	AMERICAN IRUCTUREPO
-				<u>-3</u>	_	NOTES:		<u> YPE-10</u>		<u>TYP</u>	<u>9E-14</u>	
				<u>-3</u>	*	FIELD BEN	ND		. <i>BE EPOX</i> Y		2 <u>E-14</u> GRADE 60	DESIGNER CHEC
•				<u>-3</u>	- * /	FIELD BEN	ND DRCING STE	EEL SHALL		′ COATED,		DESIGNER CHEC

	NUMBER	<b>,</b>		<u> </u>			DIN	MENSIOI	vs			
MARK	TOTAL	LENGTH	WEIGHT	TYPE	A	В	С	D	E	R	INC	
			ΡΔ	RAPI	ΞΤ/ΗΕΔΓ	) WALL (C					+	
H401	8	5'-3"	28		1'-2"	1'-2"						
H402	8	2'-4"	12	2	0'-8"	1'-2"	0'-8"					
H403	8	3'-4"	12	14	0'-8"	0'-0"	1'-2"	9"	1'-7"			
H501	4	29'-6"	123	STR								
H502	33	8'-5"	290	2	4'-0"	0'-8"	4'-0"					
	1 SR	3'-4"					1'-10"					
H503	OF	ТО	151	2	0'-7"	1'-2"	ТО				1⁄8"	
	41	3'-9"					2'-3"					
H504	14	8'-11"	130	2	4'-0"	1'-2"	4'-0"					
H505	33	3'-5"	118	2	1'-6"	0'-8"	1'-6"					_
												S co la
H506	16	10'-5"	174	STR								
H507	14	3'-11"	57	2	1'-6"	1'-2"	1'-6"					
H508	8	7'-8"	70	STR								
	S	UB-TOTAL	1171									
	「											
	NUMBER			ш			DIA	MENSIOI	vs			רבו איני
MARK		LENGTH	WEIGHT	ТҮРЕ								₹ ĕ C
	TOTAL				Α	В	С	D	E	R	INC	> , -
									-			
				WII	NGWALL	LS (OUTL	ET)					<u> Ш_,&gt;</u>
	2 SR	5'-3"										Ι Ξ Q C
W501	OF	ТО	269	STR							2 <sup>1</sup> ⁄ <sub>8</sub> "	
	19	8'-4"										
W502	2	8'-5"	18	STR								
	2 SR	4'-3"										
W503	OF	ТО	241	STR							2 <sup>1</sup> ⁄ <sub>2</sub> "	CUI
	19	7'-11"										
W504	8	2'-6"	21	STR								
W505	16	14'-8"	245	STR								
W506	2	11'-0"	23	STR								
W507	2	4'-3"	9	STR								
W508	2	14'-11"	31	19	14'-2"	0'-9"	0'-2"					
W509	2	9'-7"	20	STR								
W510	2	15'-0"	31	19	14'-3"	0'-9"	0'-2"					
W511	2	3'-10"	8	STR								
W512	2	8'-0"	17	STR								
	S	UB-TOTAL	933									
							A		Ļ	E	D	
		•							-		U	
						4						
A		<u>ن</u>			B	В						
							$\backslash$		D		B	SFN
						V						4560427
	В							С				DESIGN AGENCY
-			A		-				1	-	A	NO
-							<b>·</b>			-		SEP.
<u> </u>	<u> YPE-2</u>		<u>TYPE</u>	<u>:-3</u>			<u> </u>	<u> (PE-10</u>		<u> 1 YP</u>	<u>9E-14</u>	
					-							AMERICAN STRUCTUREPOINT ING.
					<u>1</u>	NOTES:						STE
					*	* FIELD BEN	VD					
							DRCINIC OTI	בו כחיי			GRADE 60	JMV SJF
					F			LL SHALL		UUAIED,	SNAUE UU	REVIEWER
											S IN THE BAR SITS ARE USED,	CLB 05/27/

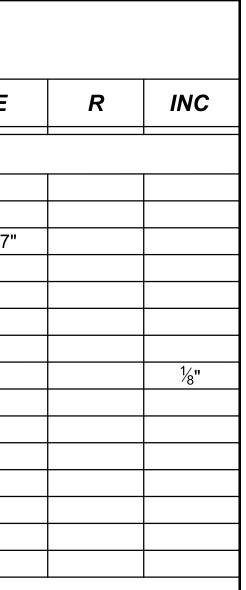
	TOTAL				
	1	I I		WI	NGV
	2 SR	5'-3"			
W501	OF	ТО	269	STR	
	19	8'-4"			
W502	2	8'-5"	18	STR	
	2 SR	4'-3"			
W503	OF	то	241	STR	
	19	7'-11"			
W504	8	2'-6"	21	STR	
W505	16	14'-8"	245	STR	
W506	2	11'-0"	23	STR	
W507	2	4'-3"	9	STR	
W508	2	14'-11"	31	19	14
W509	2	9'-7"	20	STR	
W510	2	15'-0"	31	19	14
	2	2! 10"	8		
W511		3'-10"		STR	
W512	2	8'-0"	17	STR	
	S	UB-TOTAL	933		

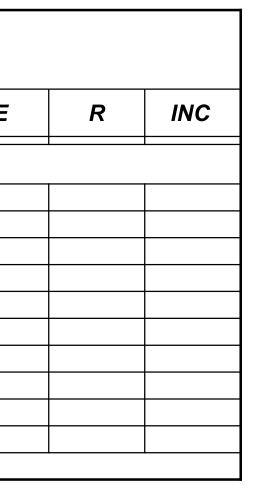












В Α ပ] \_\_\_\_\_

<u>TYPE-19</u>

<u> TYPE-1</u>

AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

SUBSET

TOTAL

P.06 P.06

SHEET TOTAL P.27 P.43

#### DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS. 2020 AND THE ODOT BRIDGE DESIGN MANUAL. 2020.

#### **OPERATIONAL IMPORTANCE:**

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL

#### **DESIGN LOADING**

HL-93

FUTURE WEARING SURFACE (FWS) OF 0.06 KSF

#### <u>DESIGN DATA:</u>

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (FOOTINGS, HEADWALL, WINGWALLS)

**REINFORCING STEEL - MINIMUM STRENGTH 60 KSI** 

#### **EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05 AND 105.02.

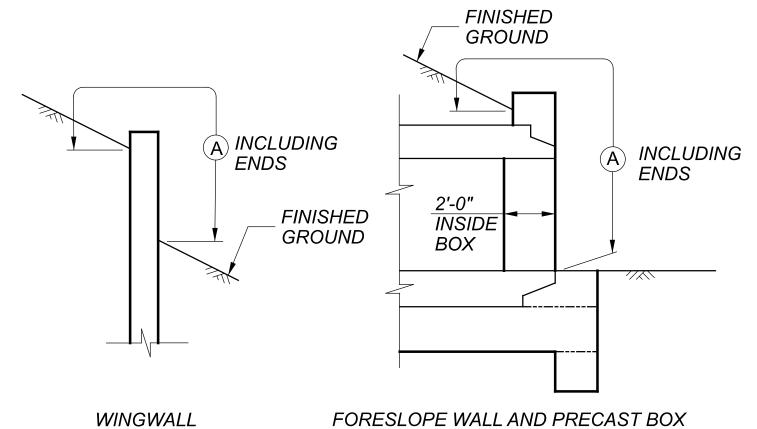
BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

#### FOUNDATION BEARING RESISTANCE:

WINGWALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 1.2 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT BEARING PRESSURE OF 1.7 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 3.5 KIPS PER SQUARE FOOT.

#### SEALING OF FORESLOPE WALL AND WINGWALLS:

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 -SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).



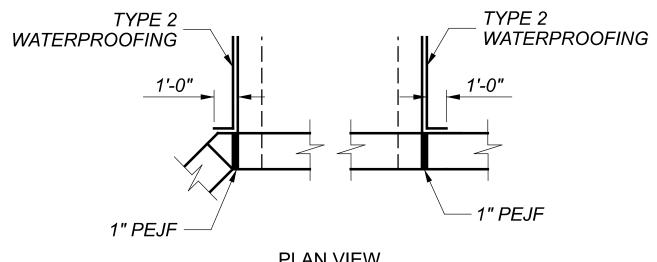
## (CULVERT OUTLET BEVEL SHOWN)

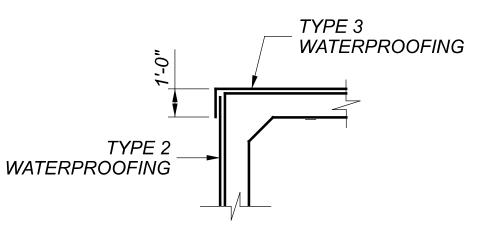


#### WATERPROOFING:

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

TYPE 3 WATERPROOFING, PER CMS 512.10 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.







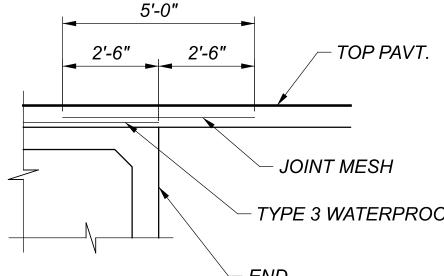
#### POROUS BACKFILL WITH GEOTEXTILE FABRIC:

2'-0" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN UP 6".

#### **ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE** AND/OR LONGITUDINAL JOINTS AND CRACKS

THIS ITEM SHALL BE USED TO REINFORCE TRANSVERSE JOINTS. PLACE REINFORCING MESH ON PROPOSED SURFACE AS SHOWN IN THE DETAIL BELOW, 5' WIDE, ALONG THE ENTIRE LENGTH OF THE CULVERT ON BOTH SIDES. APPLY TACK COAT BENEATH REINFORCING MESH PER MANUFACTURER'S SPECIFICATIONS.

REINFORCING MATERIAL SHALL BE GLASGRID CG200 OR EQUIVALENT AND SHALL BE PLACED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND THIS NOTE. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS.



() () 4 9  $\overline{}$ .03/LIC-MR49  $\overline{}$ 3  $\overline{}$ CR8

#### WATERPROOFING DETAILS

PLAN VIEW

SECTION VIEW

TYPE 3 WATERPROOFING

END OF CULVERT

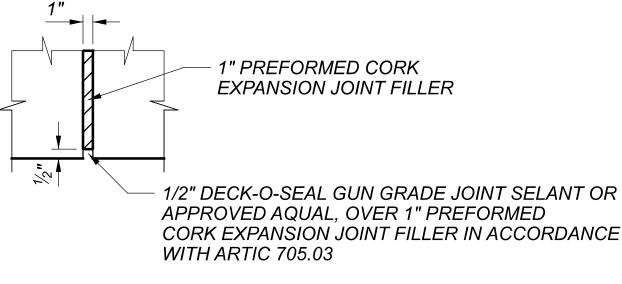
## ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS WORK CONSISTS OF SAW CUTTING AND REMOVAL OF PORTIONS OF THE EXISTING RETAINING WALLS AS NECESSARY TO CONSTRUCT THE PROPOSED STRUCTURE WINGWALLS. THE PROVISIONS OF 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING WALL REMOVAL TO PROTECT PORTIONS OF THE RETAINING WALLS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05. INCLUDE ANY TEMPORARY SHORING OR SUPPORTS NECESSARY TO MAINTAIN THE EXISTING WALLS DURING CONSTRUCTION WITH THIS ITEM FOR PAYMENT.

ALL EXISTING RETAINING WALLS INDICATED IN THE PLANS AS "DO NOT DISTURB" THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT

ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN:

1" PEJF PLACED AT THE INTERFACE OF THE PROPOSE WINGWALLS AND EXISTING RETAINING WALLS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS THAT ARE ABOVE GRADE WITH DECK-O-SEAL GUN GRADE JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.



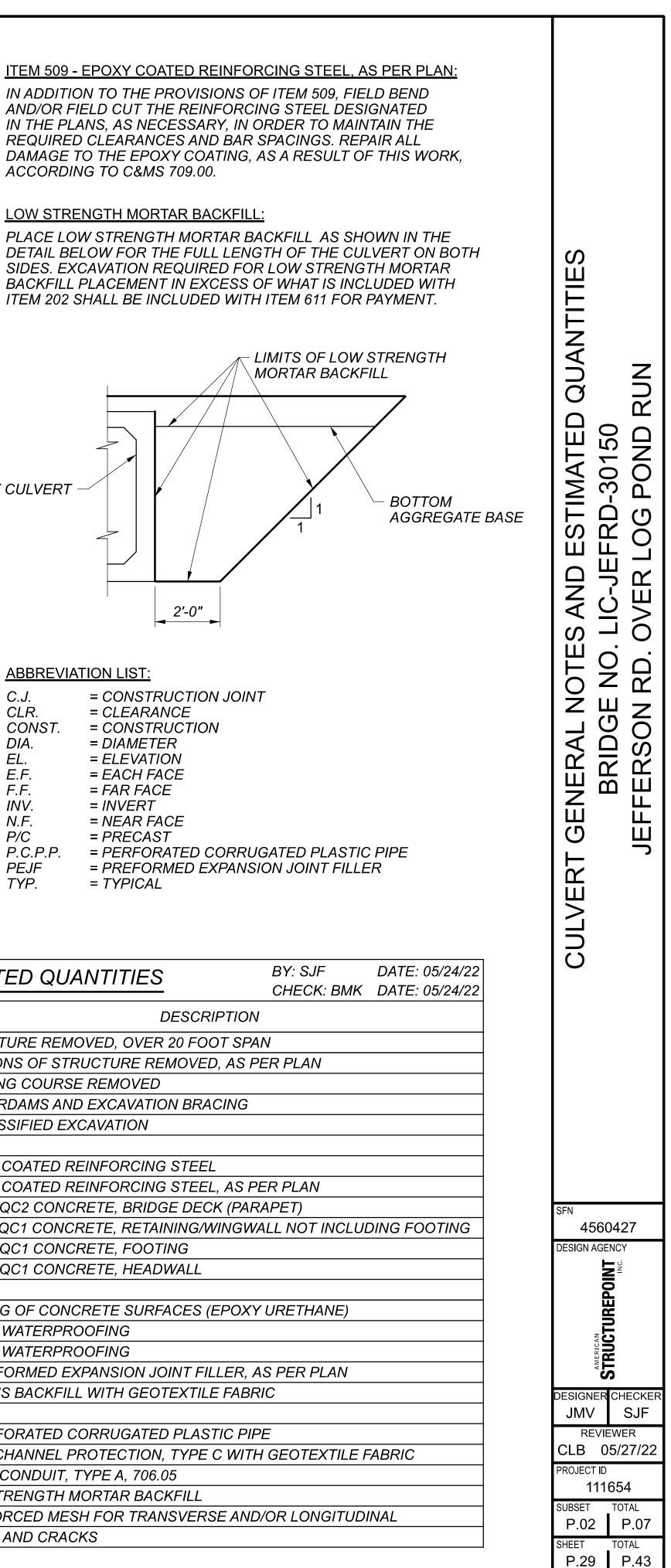
DECK-O-SEAL P.O. BOX 397 HAMPSHIRE. IL 60140 PHONE: 800-542-7665

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

			E	ESTIMATED
ITEM	ITEM EXT	TOTAL	UNIT	
202	11002	LS		STRUCTUR
202	11201	LS		PORTIONS
202	23500	66	SY	WEARING C
503	11100	LS		COFFERDA
503	21300	LS		UNCLASSIF
		$\sim$		
509	10000	6,755	LB	EPOXY COA
509	10001	- 157 -	LB	EPOXY COA
511	34448	ngi	CY	CLASS QC2
511	46010	12	СҮ	CLASS QC1
511	46510	<u>{</u> 41 }	CY	CLASS QC1
511	46610	4	CY	CLASS QC1
512	10100	119	SY	SEALING OF
512	33000	66	SY	TYPE 2 WAT
512	33010	107	SY	TYPE 3 WAT
516	13601	34	SF	1" PREFORM
518	21200	17	CY	POROUS BA
518	39800	38	FT	4" PERFORA
601	32204	38	CY	ROCK CHAN
611	96488	40	FT	20' X 5' CON
613	41200	119	CY	LOW STREM
SPECIAL	690E12050	42	SY	REINFORCE
				JOINTS AND

## C.J. CLR. DIA. EL. E.F. F.F. INV. N.F. P/C PEJF TYP.

BOX CULVERT

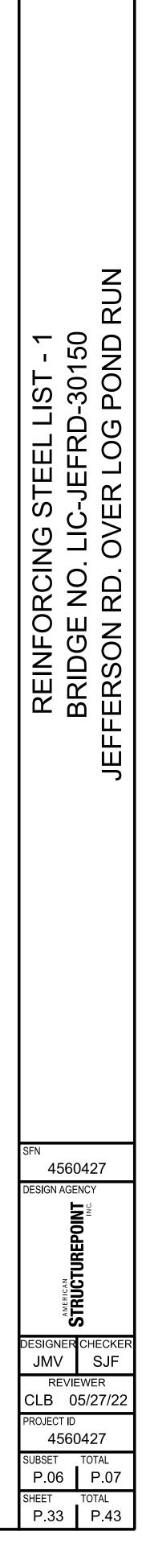


MARK	NUMBER			Щ.			DIN	<b>MENSIONS</b>	5		
	TOTAL	LENGTH	WEIGHT	ТҮРЕ	А	В	С	D	E	R	INC
	-		P	ARAF	PET/HEA	DWALL (	INLET)	I			
H401	12	5'-2"	41	3	1'-2"	1'-2"					
H501	4	21'-6"	90	STR							
H502	24	9'-1"	227	2	4'-4"	0'-8"	4'-4"				
H503	30	3'-6"	110	2	0'-10"	1'-2"	1'-9"				
H504	9	9'-7"	90	2	4'-4"	1'-2"	4'-4"				
H505	24	3'-5"	86	2	1'-6"	0'-8"	1'-6"				
H506	8	9'-9"	82	STR							
H507	9	3'-11"	37	2	1'-6"	1'-2"	1'-6"				
H508	8	11'-3"	94	STR							
		UB-TOTAL	857								

MARK	NUMBER			Щ			DIN	<b>IENSION</b>	S		
	TOTAL	LENGIH	WEIGHT	TYPE	Α	B	С	D	E	R	INC
					FOOTIN	G (INLET)					
F501	35	7'-9"	283	2	3'-6"	1'-0"	3'-6"				
F502	82	5'-9"	491	STR							
F503	3	21'-6"	67	STR							
F504	14	4'-3"	62	1	2'-2"	2'-3"					
F505	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~ <del>4'=7"~</del> ~	~~105~~	$\sim$	<b></b> 10"	3'-10"					
F506	16	7'-7"	127	STR	2						
·····	·····		·····	L	$\mathcal{I}$						
F601	4	11'-5"	69	STR							
F602	4	15'-5"	93	STR							
F603	4	8'-0"	48	STR							
F604	10	13'-3"	199	STR							
F605	10	27'-7"	414	STR							
F606	12	8'-3"	149	STR							
		UB-TOTAL	2107								

LIC-CR813-1.03/LIC-MR491-0.43 MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 4/18/2023 TIME: 3:05:54 PM USER: SFlannagan 0:\2020\00549\C. Design\111654\_Newark\400-Engineering\Structures\Sheets\111654\_SFN4560418\_F

	NUMBER		MEIOUT	Ъ			DII	MENSION	IS		
MARK	TOTAL	LENGTH	WEIGHT	TYPE	А	В	С	D	E	R	INC
				W	INGWAL	LS (INLE	<b>T</b> )			1	1
W501	8	7'-10"	65	STR							
	2 SR	5'-0"									1
W502	OF	ТО	92	STR							5½"
	7	7'-8"									
W503	8	7'-4"	31	STR							
W504	2	5'-0"	11	STR							
W505	2	1'-9"	4	STR							
W506	2	7'-2"	15	STR							
W507	8	11'-8"	170	STR							
	2 SR	6'-11"									
W508	OF	ТО	167	STR							7⁄8"
	11	7'-8"									
W509	2	11'-8"	24	19	10'-4"	1'-3 <sup>1</sup> ⁄2"	1½				
	S	UB-TOTAL	579								

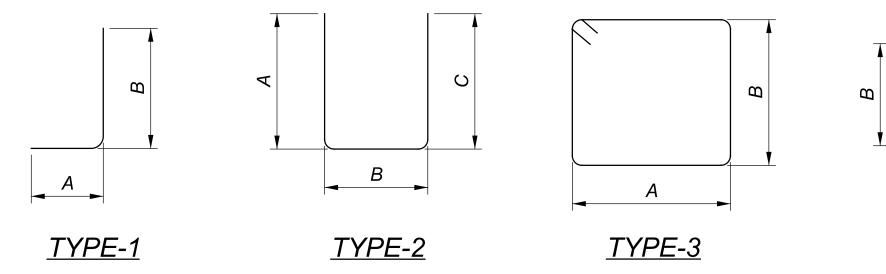


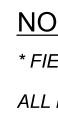
	NUMBER			Ш			DIM	ENSION	S		
MARK	TOTAL	LENGTH	WEIGHT	ТҮРЕ	A	B	C	D	E	R	INC
			PA	RAPE	ET/HEAD	WALL (C					
H401	12	5'-2"	41	3	1'-2"	1'-2"	h				
H501	4	21'-6"	90	STR							
H502	24	9'-1"	227	2	4'-4"	0'-8"	4'-4"				
H503	30	4'-0"	125	2	1'-1"	1'-2"	2'-0"				
H504	9	9'-7"	90	2	4'-4"	1'-2"	4'-4"				
H505	24	3'-5"	86	2	1'-6"	0'-8"	1'-6"				
H506	8	9'-9"	82	STR							
H507	9	3'-11"	37	2	1'-6"	1'-2"	1'-6"				
H508	8	11'-3"	94	STR							
	S	UB-TOTAL	872								

	NUMBER	MBER W						MENSION	IS		
MARK	TOTAL	LENGTH	WEIGHT	TYPE	A	В	С	D	E	R	INC
					A			D			
				F	OOTING	(OUTLE)	Γ)				
F501	35	7'-9"	283	2	3'-6"	1'-0"	3'-6"				
F502	96	5'-9"	576	STR							
F503	3	21'-6"	67	STR							
F504	15	4'-3"	66	1	2'-2"	2'-3"					
F505	20	4'-7"	96	1	10"	3'-10"					
F601	4	11'-9"	71	STR							
F602	4	21'-2"	127	STR							
F603	4	3'-7"	22	STR							
	2 SR	11'-3"									
F604	OF	ТО	202	STR							1'-1¼"
	5	15'-8"									
F605	10	28'-0"	421	STR							
	2 SR	2'-8"									
F606	OF	TO	88	STR							1'-7"
	5	9'-0"									
		JB-TOTAL	2019								

LIC-CR813-1.03/LIC-MR491-0.43 MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 4/18/2023 TIME: 3:03:28 PM USER: SFlannagan 0:\2020\00549\C. Design\111654\_Newark\400-Engineering\Structures\Sheets\111654\_SFN4560418\_RL00-

	NUMBER			E		
MARK	TOTAL	LENGTH	WEIGHT	ТҮРЕ	A	
					NGWALI	± .s
	2 SR	4'-10"				
W501	OF	TO	44	STR		+
0001	4	5'-8"				+
W502	8	3'-10"	32	STR		+
VV302	2 SR	6'-10"	52			+
W503	OF	TO	76	STR		+
	5	7'-11"	70			+
W504	2	8'-0"	17	STR		+
	2 SR	6'-6"				+
W505	OF	то	105	STR		+
11000	7	7'-11"	100			╈
	,	, ,,				╈
W506	2	12'-6"	26	STR		╈
W507	2	13'-2"	27	STR		+
W508	2	5'-9"	12	STR		+
W509	2	6'-5"	13	STR		+
W510	4	2'-9"	11	STR		╈
						+
W511	1	7'-9"	8	STR		+
W512	1	8'-5"	9	STR		╈
W513	1	2'-1"	2	STR		╈
W514	1	2'-7"	3	STR		╈
W515	1	12'-4"	13	STR		$\uparrow$
						$\uparrow$
W516	1	13'-0"	14	19	12'-4"	┢
W517	5	4'-6"	23	STR		┢
W518	5	5'-5"	28	STR		╈
W519	1	1'-5"	2	STR		┢
W520	1	2'-1"	2	STR		$\top$
						╈
W521	1	4'-4"	5	STR		$\uparrow$
W522	1	5'-5"	6	19	4'-11"	$\uparrow$
	S	UB-TOTAL	478			





THE MAR AND THE "R" II "STD BEN

						7
B	DIA C	NENSION D	S E	R	INC	-
		<i>D</i>			INC	
S (OUTL	= 1)					
					3 <sup>3</sup> ⁄ <sub>8</sub> "	
						-
					3¼"	-
					27⁄8"	IST - 2 -30150 POND RUN
						150 - 2 ND
						-30 PO
						BG I LL
						REINFORCING STEEL LI BRIDGE NO. LIC-JEFRD- ERSON RD. OVER LOG F
						REINFORCI BRIDGE NO
0'-8"	0'-2"					L L L L L L L L L L L L L L L L L L L
						SSC SSC
0'-8"	0'-2"					
				•		]
	С	Q		A	B	
-	0					SFN 4560427
<u>_7</u>	<u>YPE-10</u>		<u>7</u>	<u> YPE-1</u>	9	
DTES: ELD BENI	O OR CUT					AMERICAN
REINFOR	RCING STEE	EL SHALL E	BE EPOXY	COATED,	GRADE 60	DESIGNER CHECKER JMV SJF
RK COLUI	E NUMBER MN. THE FIF	RST DIGIT	WHERE TH	IREE DIGI	TS ARE US	ED, CLB 05/27/22
E BAR SIZ	ST TWO DI E NUMBER S INSIDE R	. FOR EXA	MPLE, P60	1 IS A NO.	6 BAR.	4560427
D" WRITT	EN IN PLACE END OF T	E OF A DIN				P.07 P.07
						SHEET TOTAL P.34 P.43