Transportation
Land Development
Environmental
Services

VHB imagination | innovation | energy Creating results for our clients and benefits for our communities

Vanasse Hangen Brustlin, Inc.

September 12, 2013

Ref: 12293.00

Mr. Kevin Sweet
Town Administrator
Town of Maynard
195 Main Street
Maynard, MA 01754

Re: Town of Maynard – Nason/Summer Street Parking Garage

Dear Mr. Sweet:

As requested by the Town of Maynard, Vanasse Hangen Brustlin, Inc. (VHB) has conducted a visual inspection of the 2 level parking garage located at the intersection of Summer and Nason Streets in Maynard, MA. The following summarizes our findings, and recommendations.

Documents Reviewed, Existing Conditions, and Inspection:
VHB was provided a copy of the Structural Condition Assessment performed by Woodard & Curran dated May 30, 2008 (see appendix C) as well as the original parking deck Design Plans dated June 1983.

The parking garage was constructed in 1984 and consists of a ground level and an upper level. The garage measures approximately 61'-4" wide by 224'-4" long and consists of the following structural systems: reinforced concrete foundation walls, footings, columns, perimeter beams, and stairwell. The upper level deck is comprised of precast double tee beams. The lower level is at grade and consists of a bituminous pavement as the deck surface. The upper level is open to weather with no roof. There is no ramp that connects the two parking levels directly. Access to the upper level is from Nason Street, and access to the ground level is from Summer Street. There is a stairwell in the northwest corner providing pedestrian access between the two levels. The stairwell is partially enclosed with a roof.

The precast double tee's span approximately 60' and are approximately 9' wide. There is approximately 12,517 sf of upper deck surface. There are sealed joints between the double tees and the double tee connections are spaced every 4' along their length. There are a total of 10 scuppers in the upper level which connect to drain pipes that run into the ground at the lower level. The perimeter of the garage is open between columns at the lower level and there is a parapet wall surrounding the upper level. The upper level parapet wall consists of precast concrete panels. The exterior of the upper level parapet has an architectural concrete finish, and the interior is plain finished concrete.

VHB Structural Engineers visited the site on August 15th 2013. During this visit we performed a visual inspection of the interior and exterior of the garage as well as conducted concrete sounding on the upper level deck.

Observations:
In general we verified the deficiencies outlined in the 2008 report prepared by Woodard & Curran and concur that the general condition of the structure is still fair with exceptions noted as follows. Item numbers below refer to the Structural Condition Assessment Summary Table in the Woodard & Curran report.

101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02471-9151
617.924.1770 ▪ FAX 617.924.2286
email: info@vhb.com
www.vhb.com

Significant deterioration was observed on the top surface of the flanges of the precast double tee beams which serve as the upper level deck (refer to item #2). During our site visit, we sounded the entire upper level deck to identify the limits of concrete deterioration in areas where concrete has already spalled, and also to identify areas that need repairs that might not be apparent on the deck surface. We estimate a total of 3,010 sf of deck surface that has spalled or unsound concrete, which is 24% of the total upper level deck area (see appendix A). The deterioration varies from minor areas of unsound concrete to severe spalls at the joints that present a tripping hazard to pedestrians and debris hazard to cars in the lower level. Exposed wire mesh was noted in some of the larger spalled areas. Repairs to these spalled and hollow areas should be performed immediately to prevent further deterioration, protect property, and safeguard pedestrians.

Recommendations:

It is our opinion that the following should be repaired within the next year to prevent irreparable damage to some of the severely deteriorated double tee beams and concrete columns. We have estimated the construction cost will be approximately $296,000 to complete the following repairs (see appendix B). The above estimate does not include any required Engineering Fees.

- Areas of unsound and spalled concrete identified above and also in the 2008 report prepared by Woodard & Curran should be repaired. These include repairs to the precast double tee beams (items 2 &3), the concrete columns in the lower level (items 5 & 8)
- Repair spalled and unsound concrete at the top of the retaining wall under the expansion joint at the upper level entrance.
- Repair the impact damage to the web of the precast double tee beam between column lines 6 & 7.
- Repair unsound concrete in underside of beam along column line 8.
- In addition to the corrosion inhibiting compound recommend by Woodard & Curran, we recommend installing sacrificial anodes in concrete repairs greater than 1½" in depth.
- The scuppers should be cleaned, resealed, (item 7) and the drain pipes in the lower level should be repaired and flushed of all debris. Missing grate covers should be replaced.
- The double tee connections should be repaired (Item 1).
- The joint sealant in between the precast double tee beams should be replaced (item 1).
- The expansion joint at the upper level entrance should be replaced.
- Broken or damaged Wheel Stops should be repaired or replaced.

The following should be completed as funds become available. We have estimated the construction cost will be approximately $192,000 to complete the following repairs (see appendix B). The above estimate does not include any required Engineering Fees.

- Seal the upper level parapet wall (item 6)
- Seal the lower level columns under the scuppers that have been repaired as outlined above.
- Install a waterproofing membrane to the entire upper level deck (item 4)
    - It should be noted that while not essential, this item will significantly increase the service life of the garage. If the membrane is installed at a later date and not in conjunction with the repairs outlined above, it is likely that more concrete repairs will be required prior to membrane installation.
- Repair stairwell nosings, handrails, and sealant (items 9, 10, & 11).
- Repair minor spalls to the upper level columns.

Conclusions:

In general the overall condition of the garage remains fair however; there are some areas in the upper level deck with sever deterioration. In our opinion, this deterioration does not significantly affect the structural adequacy of the garage, and the upper level does not need to be closed to traffic. Repairs to the upper level deck should be made within the next year to prevent further, potentially irreparable damage to the double tee beams. Prompt repairs will also prevent damage to property in the lower level from falling debris, and will safeguard pedestrians from the existing hazardous walking surfaces.

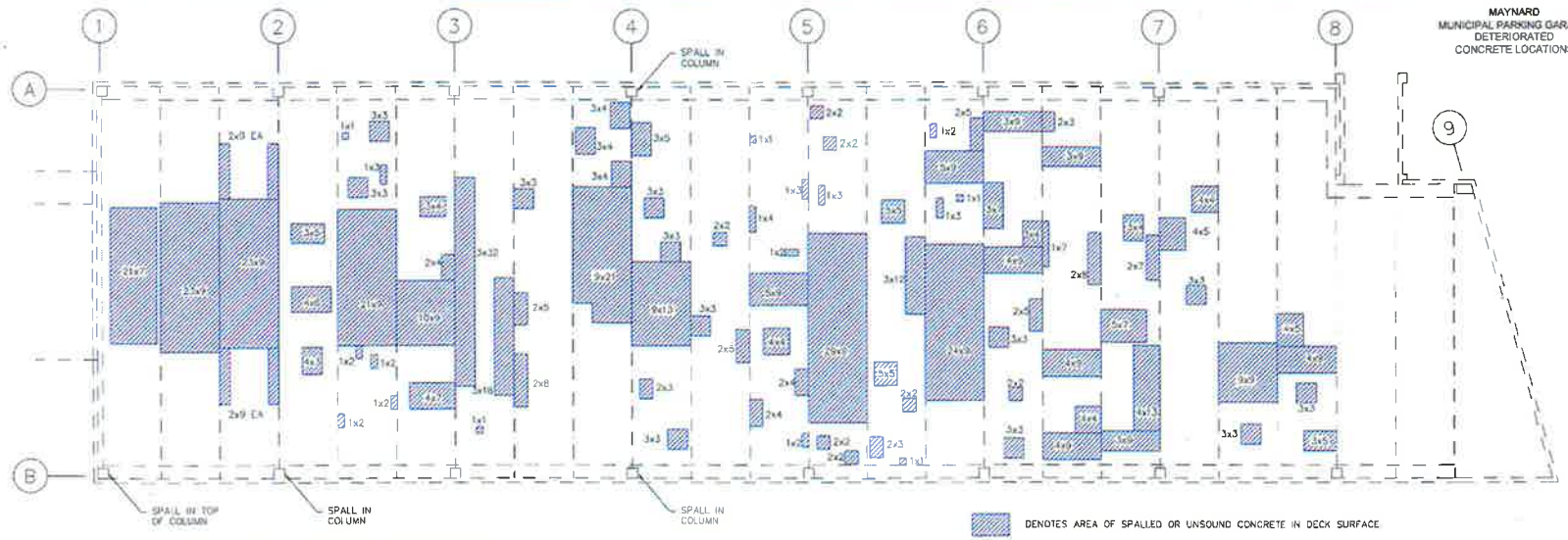
Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Shawn R. Demeule, P.E.
Structural Engineer

APPENDIX A

MAYNARD
MUNICIPAL PARKING GARAGE
DETERIORATED
CONCRETE LOCATIONS

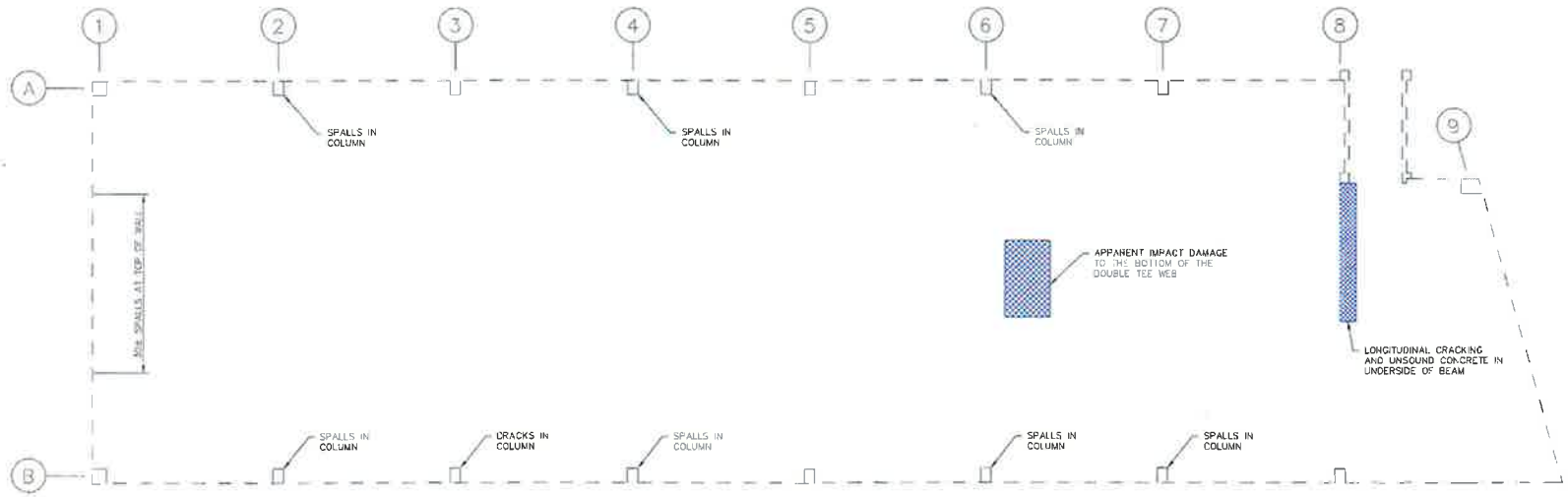


NOTE: LOCATIONS AND DIMENSIONS OF SPALLED OR UNSOUND CONCRETE SHOWN ARE APPROXIMATE. DIMENSIONS ARE IN FEET.

UPPER LEVEL PLAN

DENOTES AREA OF SPALLED OR UNSOUND CONCRETE IN DECK SURFACE

DENOTES AREA OF SPALLED OR DAMAGED CONCRETE IN UNDERSIDE OF DOUBLE TEE BEAMS.



GROUND LEVEL PLAN

APPENDIX B

Transportation
Land Development
Environmental
Services

Computations

Vanasse Hangen Brustlin, Inc.

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/3/2013
Checked By	AMS	Date	9/12/13
Title	Summary		

Item	Quantity	Units	Unit Cost	Cost
Scuppers	5	EA	$ 1,070	$ 5,350
Deck Repairs	3100	SF	$ 65	$ 201,500
Concrete Repairs	300	SF	$ 50	$ 15,000
Expansion Joints	24	LF	$ 570	$ 13,680
Precast Double T Joints	1250	LF	$ 11	$ 13,750
Cast Iron Drain Pipe	40	LF	$ 67	$ 2,680
Wheel Stop	10	EA	$ 141	$ 1,410
Mobilization	1	LS	$ 10,000	$ 10,000

Subtotal = $ 263,370

10% Construction Contingency = $ 26,337

Total = $ 289,707

Say $ 290,000

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/3/2013
Checked By	AMJ	Date	9/12/13
Title	Scupper Repairs Estimate		

Upper Level

North Side		2
South Side		3
	Total	5 ea

From 2012 RS Means, use $625 with 40% added for a galvanized drain.

Drain =	$875 ea
Location Factor for Boston =	117.5 %
Inflation for 2013 =	104 %
Adjusted Cost =	$1,070 ea
Total =	**$5,350.00**

22 14 26 – Facility Storm Drains

22 14 26.13 Roof Drains	Crew	Daily Output	Labor-Hours	Unit	2012 Bare Costs Material	Labor	Equipment	Total	Incl O&P
ROOF DRAINS									
Cornice, C.I., 45° or 90° outlet									
3" and 4" pipe size	Q-1	12	1.333	Ea.	360	65.50		425.50	495
For galvanized body, add					64.50			64.50	71
For polished bronze dome, add					50			50	55
Roof, flat metal deck, C.I. body, 12" C.I. dome									
3" pipe size	Q-1	14	1.143	Ea.	330	56		386	450
6" pipe size	"	10	1.600	"	540	78.50		618.50	710
Main, all aluminum, 12" low profile dome									
2", 3" and 4" pipe size	Q-1	14	1.143	Ea.	370	56		426	495

22 14 26.16 Facility Area Drains

FACILITY AREA DRAINS									
Scupper floor, oblique strainer, C.I.									
6" x 7" top, 2", 3" and 4" pipe size	Q-1	16	1	Ea.	240	49		289	340
8" x 12" top, 5" and 6" pipe size	"	14	1.143		490	56		546	625
For galvanized body, add					40%				
For polished bronze strainer, add					85%				

22 14 26.19 Facility Trench Drains

FACILITY TRENCH DRAINS									
Trench, floor, hvy duty, modular, C.I., 12" x 12" top									
2", 3", 4", 5", & 6" pipe size	Q-1	8	2	Ea.	760	98.50		858.50	990
For unit with polished bronze top	"	8	2	"	1,125	98.50		1,223.50	1,400
Trench, floor, for cement concrete encasement									
Not including trenching or concrete									
Polyester polymer concrete									
4" internal width, with grate									
Light duty steel grate	Q-1	120	.133	L.F.	32	6.55		38.55	45.50
Medium duty steel grate		115	.139		42.50	6.85		49.35	57
Heavy duty iron grate		110	.145		56.50	7.15		63.65	73.50
12" internal width, with grate									
Heavy duty galvanized grate	Q-1	80	.200	L.F.	154	9.85		163.85	185
Fiberglass									
8" internal width, with grate									
Medium duty galvanized grate	Q-1	115	.139	L.F.	96.50	6.85		103.35	116
Heavy duty iron grate	"	110	.145	"	120	7.15		127.15	143

22 14 29 – Sump Pumps

22 14 29.13 Wet-Pit-Mounted, Vertical Sump Pumps

WET-PIT-MOUNTED, VERTICAL SUMP PUMPS									
Molded PVC base, 21 GPM at 15' head, 1/3 HP	1 Plum	5	1.600	Ea.	128	87.50		215.50	272
Iron base, 21 GPM at 15' head, 1/3 HP		5	1.600		156	87.50		243.50	305
Solid brass, 21 GPM at 15' head, 1/3 HP		5	1.600		272	87.50		359.50	430

22 14 29.16 Submersible Sump Pumps

SUBMERSIBLE SUMP PUMPS									
Sump pump, automatic									
Plastic, 1-1/4" discharge, 1/4 HP	1 Plum	6	1.333	Ea.	126	73		199	249
1/3 HP		5	1.600		189	87.50		276.50	340
1/2 HP		5	1.600		207	87.50		294.50	360
1-1/2" discharge, 1/2 HP		4	2		256	109		365	445
Cast iron, 1-1/4" discharge, 1/4 HP		6	1.333		177	73		250	305
1/3 HP		6	1.333		209	73		282	340
1/2 HP		5	1.600		252	87.50		339.50	410

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	8/30/2013
Checked By	AMS	Date	8/12/13
Title	Concrete Deck Repairs Estimate		

Upper Level Deck Surface

	Spalled and Unsound Concrete Areas	
Between Columns 1&2	21'x7'	147.0 ft^2
	2(23'x9')	414.0 ft^2
	4(2'x9')	72.0 ft^2
Between Columns 2&3	3'x5'	15.0 ft^2
	4'x6'	24.0 ft^2
	2(4'x3')	24.0 ft^2
	1'x1'	1.0 ft^2
	2(3'x3')	18.0 ft^2
	1'x3'	3.0 ft^2
	21'x9'	189.0 ft^2
	4(1'x2')	8.0 ft^2
	2'x4'	8.0 ft^2
	10'x9'	90.0 ft^2
	4'x7'	28.0 ft^2
Between Columns 3&4	3'x32'	96.0 ft^2
	3'x18'	54.0 ft^2
	1'x1'	1.0 ft^2
	3'x3'	9.0 ft^2
	2'x5'	10.0 ft^2
	2'x8'	16.0 ft^2
	3(3'x4')	36.0 ft^2
	9'x21'	189.0 ft^2
Between Columns 4&5	3'x5'	15.0 ft^2
	4(3'x3')	36.0 ft^2
	9'x13'	117.0 ft^2
	2'x3'	6 ft^2
	2'x2'	4 ft^2
	2'x5'	10 ft^2
	1'x1'	1.0 ft^2
	1'x3'	3.0 ft^2
	1'x4'	4 ft^2
	2(1'x2')	4 ft^2
	5'x9'	45 ft^2
	4'x4'	16 ft^2
	2(2'x4')	16 ft^2
Between Columns 5&6	5(2'x2')	20 ft^2
	2(1'x3')	6.0 ft^2
	29'x9'	261 ft^2
	2(5'x5')	50 ft^2
	2'x3'	6 ft^2
	3'x12'	36 ft^2
	24'x9'	216 ft^2
	5'x9'	45 ft^2
	1'x2'	2 ft^2
	2'x5'	10 ft^2
Between Columns 6&7	3(3'x9')	81 ft^2
	3(4'x9')	108 ft^2
	3'x7'	21 ft^2

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	8/30/2013
Checked By	AMS	Date	9/12/13
Title	Concrete Deck Repairs Estimate		

	2(3'x4')	24 ft^2
	2'x5'	10 ft^2
	2(3'x3')	18 ft^2
	2'x2'	4 ft^2
	2'x3'	6 ft^2
	1'x7'	7 ft^2
	2'x8'	16 ft^2
	4'x4'	16 ft^2
	2'x7'	14 ft^2
	5'x7'	35 ft^2
	4'x13'	52 ft^2
Between Columns 7&8	4'x4'	16 ft^2
	3(3'x3')	27 ft^2
	2(4'x5')	40 ft^2
	9'x9'	81 ft^2
	4'x9'	36 ft^2
	3'x5'	15 ft^2
	Total	3008.0 ft^2

Upper Level Underside of Deck (Double Tee Beam Flanges and Webs)

	Spalled and Unsound Concrete Areas	
Between Columns 6&7	10'x1'	10.0 ft^2
Between Columns 8&9	20'x3'	60.0 ft^2
	Total	70.0 ft^2
	Grand Total	3078.0 ft^2
	Say	**3100.0 ft^2**

From bid price for Amesbury Parking Garage from CSI, use $65/$ft^2$.

Use	$65 /$ft^2$
Total =	**$201,500**

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	8/30/2013
Checked By	AMS	Date	9/12/13
Title	Concrete Repairs Estimate		

Upper Columns

	Spalled and Unsound Concrete Areas	
Columns 1B	2'x2'	4.0 ft^2
Columns 2B	2'x2'	4.0 ft^2
Columns 4A	2'x2'	4.0 ft^2
Columns 4B	2'x2'	4.0 ft^2
	Total	16.0 ft^2

Lower Columns

	Spalled and Unsound Concrete Areas	
Columns 2A	2'x11'	22.0 ft^2
Columns 2B	2'x11'	22.0 ft^2
Columns 3B	2'x11'	22.0 ft^2
Columns 4A	2'x11'	22.0 ft^2
Columns 4B	2'x11'	22.0 ft^2
Columns 6A	2'x11'	22.0 ft^2
Columns 6B	2'x11'	22.0 ft^2
Columns 7B	2'x11'	22.0 ft^2
	Total	176.0 ft^2

Wall along Column Line 1 Between A & B

	Spalled and Unsound Concrete Areas	
Columns 2A	2'x30'	60.0 ft^2
	Total	60.0 ft^2
	Grand Total	252.0 ft^2
	Say	**300.0 ft^2**

From bid price for Amesbury Parking Garage from CSI, use $48/sf (say $50/sf).

Use	$50 /$ft^2$
Total =	**$15,000**

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	8/30/2013
Checked By	AMS	Date	8/12/13
Title	Expansion Joint Estimate		

Expansion Joint at Upper Level Entrance

		Length	
24'-0" Exp. Joint	1	24 ft	Expansion Joint at upper level entrance.
	Total	24 ft	

From MassDOT Bridge Manual, used cost per foot for a strip seal joint. This may be conservative for the type of expansion joint that will be used at the garage, however it is likely that there will be some concrete repairs required with the joint replacement that will balance out the conservative nature of this estimate. Also, since we are using a 2008 number, adjust for inflation.

2008 Cost =	$460.37 /ft
Inflation (4% over 5 years) =	1.22 %
Adjusted Cost (rounded up) =	$570 /ft
Total =	**$13,680**

WEIGHTED AVERAGE UNIT PRICES TAKEN FROM 2006-2008 STATEWIDE WEIGHTED AVERAGE BID PRICES AND BRIDGE STRUCTURE LUMP SUM BREAKDOWNS

ITEM NO.		UNITS	TOTAL QUANTITY	NO PROJECTS	AVG. BID PRICE 2006	AVG. BID PRICE 2007+2008
960.534	STEEL 270 GRADE HPS50W PAINTED TRUSS BRIDGE	LB	0	0		$0.00
960.535	STEEL 270 GRADE HPS50W PAINTED BASCULE BRIDGE	LB	0	0		$0.00
960.701	STEEL 270 GRADE HPS50W AND 70W UNCOATED ROLLED BEAM BRIDGE	LB	0	0		$0.00
960.702	STEEL 270 GRADE HPS50W AND 70W UNCOATED PLATE GIRDER BRIDGE	LB	0	0		$0.00
960.703	STEEL 270 GRADE HPS50W AND 70W UNCOATED BOX GIRDER BRIDGE	LB	0	0		$0.00
960.704	STEEL 270 GRADE HPS50W AND 70W UNCOATED TRUSS BRIDGE	LB	0	0		$0.00
960.705	STEEL 270 GRADE HPS50W AND 70W UNCOATED BASCULE BRIDGE	LB	0	0		$0.00
960.711	STEEL 270 GRADE HPS50W AND 70W PAINTED ROLLED BEAM BRIDGE	LB	0	0		$0.00
960.712	STEEL 270 GRADE HPS50W AND 70W PAINTED PLATE GIRDER BRIDGE	LB	0	0		$0.00
960.713	STEEL 270 GRADE HPS50W AND 70W PAINTED BOX GIRDER BRIDGE	LB	0	0		$0.00
960.714	STEEL 270 GRADE HPS50W AND 70W PAINTED TRUSS BRIDGE	LB	0	0		$0.00
960.715	STEEL 270 GRADE HPS50W AND 70W PAINTED BASCULE BRIDGE	LB	0	0		$0.00
960.9	STUD SHEAR CONNECTORS	EA	85,132	13		$4.40
965.	MEMBRANE WATERPROOFING FOR BRIDGE DECKS	SY	143,881	53	$18.88	$21.81
965.1	MEMBRANE WATERPROOFING (RUBBERIZED ASPHALT)	SY	0	0		$0.00
965.2	MEMBRANE WATERPROOFING FOR BRIDGE DECKS - SPRAY APPLIED	SY	505	3	$94.46	
966.	WATERPROOFING PROTECTIVE COURSE	SY	1,887	15	$45.83	$77.49
967.	MEMBRANE WATERPROOFING	SY	3,132	5		$18.45
968.	SCUPPER	EA	28	2		$4,695.00
968.1	SCUPPER AND DOWNSPOUT	EA	0	0	$0.00	$0.00
970.	BITUMINOUS DAMP-PROOFING	SY	10,375	43	$8.95	$16.03
971.	ASPHALTIC BRIDGE JOINT SYSTEM	F	282	20	$104.13	$218.13
972.	STRIP SEAL BRIDGE JOINT SYSTEM	F	1,442	9		$460.37
973.	FINGER PLATE BRIDGE JOINT SYSTEM	F	202	2		$2,564.00
973.1	MODULAR BRIDGE JOINT SYSTEM	F	693	7		$1,300.59
975.1	METAL BRIDGE RAILING (3 RAIL), STEEL (TYPE S3-TL4)	F	9,168	9	$287.81	$314.32
975.3	PROTECTIVE SCREEN TYPE I	F	540	1		$125.00
975.4	PROTECTIVE SCREEN TYPE II	F	844	3	$247.41	
975.5	ALUMINUM HANDRAIL	F	141	1	$60.96	
975.6	PROTECTIVE SCREEN ELECTRIFICATION BARRIER	F	0	0		$0.00
976.	TEMPORARY CONCRETE BRIDGE BARRIER	F	1,660	4	$89.96	
977.	TEMPORARY CONCRETE BRIDGE BARRIER REMOVE AND RESET	F	591	1	$99.06	
983.	DUMPED RIPRAP	TON	5,907	5	$51.65	
983.1	RIPRAP	TON	712	4	$47.21	

*Items are non-standard

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/3/2013
Checked By	AMS	Date	9/12/13
Title	Precast Double T Joint Estimate		

Court Street

Upper Level Double Tee Joints

Assume all joints on upper level needs replacement.

		Total
56'-0" joints	20	1120 ft
41'-0" joints	3	123 ft
	Grand Total	1243 ft
	Say	1250 ft

61'-4" Out to Out -2'-8" Parapet PlusEdge Concrete Strip

From RS Means 2012:

Poured Polyurethane joint =	$7.10 /ft
1" Diameter Polyethylene backer rod =	$1.33 /ft
Location Factor for Boston =	117.5 %
Inflation for 2013 =	104 %
Total cost per ft =	$11 /ft
Total =	**$13,750**

03 15 Concrete Accessories

03 15 05 – Concrete Forming Accessories

			Crew	Daily Output	Labor-Hours	Unit	2012 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
03 15 05.12 Chamfer Strips											
5000	Wood, 1/2" wide		1 Carp	535	.015	L.F.	.16	.66		.82	1.19
5200	3/4" wide			525	.015		.24	.67		.91	1.29
5400	1" wide			515	.016		.42	.68		1.10	1.51
03 15 05.20 Dovetail Anchor System											
0010	**DOVETAIL ANCHOR SYSTEM**										
0500	Anchor slot, galv., filled, 24 ga.	G	1 Carp	425	.019	L.F.	.72	.83		1.55	2.07
0600	20 ga.	G		400	.020		1.57	.88		2.45	3.09
0625	12 ga.	G		400	.020		1.83	.88		2.71	3.37
0900	26 ga. stainless steel, foam filled	G		375	.021		1.15	.94		2.09	2.72
1200	Brick anchor, corr., galv., 3-1/2" long, 16 ga.	G	1 Bric	10.50	.762	C	28	33.50		61.50	81.50
1300	12 ga.	G		10.50	.762		39.50	33.50		73	94
1500	Flat, galv., 3-1/2" long, 16 ga.	G		10.50	.762		43.50	33.50		77	98.50
1600	12 ga.	G		10.50	.762		61	33.50		94.50	118
6000	Stone anchors, 3-1/2" long, galv., 1/8" x 1" wide	G		10.50	.762		94.50	33.50		128	155
6100	1/4" x 1" wide	G		10.50	.762		108	33.50		141.50	170
03 15 05.25 Expansion Joints											
0010	**EXPANSION JOINTS**										
0020	Keyed, cold, 24 ga., incl. stakes, 3-1/2" high	G	1 Carp	200	.040	L.F.	.96	1.76		2.72	3.77
0050	4-1/2" high	G		200	.040		1.13	1.76		2.89	3.95
0100	5-1/2" high	G		195	.041		1.25	1.81		3.06	4.16
0150	7-1/2" high	G		190	.042		1.47	1.86		3.33	4.48
0160	9-1/2" high	G		185	.043		1.67	1.91		3.58	4.77
0300	Poured asphalt, plain, 1/2" x 1"		1 Clab	450	.018		.65	.62		1.27	1.68
0350	1" x 2"			400	.020		2.60	.70		3.30	3.94
0500	Neoprene, liquid, cold applied, 1/2" x 1"			450	.018		3	.62		3.62	4.26
0550	1" x 2"			400	.020		12	.70		12.70	14.30
0700	Polyurethane, poured, 2 part, 1/2" x 1"			400	.020		1.33	.70		2.03	2.54
0750	1" x 2"			350	.023		5.30	.80		6.10	7.10
0900	Rubberized asphalt, hot or cold applied, 1/2" x 1"			450	.018		.36	.62		.98	1.36
0950	1" x 2"			400	.020		1.45	.70		2.15	2.68
1100	Hot applied, fuel resistant, 1/2" x 1"			450	.018		.54	.62		1.16	1.55
1150	1" x 2"			400	.020		2.18	.70		2.88	3.47
2000	Premolded, bituminous fiber, 1/2" x 6"		1 Carp	375	.021		.44	.94		1.38	1.93
2050	1" x 12"			300	.027		2.01	1.18		3.19	4.02
2140	Concrete expansion joint, recycled paper and fiber, 1/2" x 6"	G		390	.021		.39	.90		1.29	1.82
2150	1/2" x 12"	G		360	.022		.78	.98		1.76	2.37
2250	Cork with resin binder, 1/2" x 6"			375	.021		.83	.94		1.77	2.36
2300	1" x 12"			300	.027		2.32	1.18		3.50	4.36
2500	Neoprene sponge, closed cell, 1/2" x 6"			375	.021		1.93	.94		2.87	3.57
2550	1" x 12"			300	.027		7.25	1.18		8.43	9.80
2750	Polyethylene foam, 1/2" x 6"			375	.021		.62	.94		1.56	2.13
2800	1" x 12"			300	.027		1.99	1.18		3.17	4
3000	Polyethylene backer rod, 3/8" diameter			460	.017		.05	.77		.82	1.23
3050	3/4" diameter			460	.017		.07	.77		.84	1.26
3100	1" diameter			460	.017		.14	.77		.91	1.33
3500	Polyurethane foam, with polybutylene, 1/2" x 1/2"			475	.017		.95	.74		1.69	2.19
3550	1" x 1"			450	.018		2.40	.78		3.18	3.85
3750	Polyurethane foam, regular, closed cell, 1/2" x 6"			375	.021		.70	.94		1.64	2.22
3800	1" x 12"			300	.027		2.50	1.18		3.68	4.56
4000	Polyvinyl chloride foam, closed cell, 1/2" x 6"			375	.021		1.90	.94		2.84	3.54
4050	1" x 12"			300	.027		6.55	1.18		7.73	9
4250	Rubber, gray sponge, 1/2" x 6"			375	.021		1.60	.94		2.54	3.21

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabil	Project #	12283.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/3/2013
Checked By	AMS	Date	9/12/13
Title	Cast Iron Pipe Estimate		

South Side

	Diameter	Quantity	Height
Assume 3 need replacement.	6"Φ	3	11.0 ft
		Total =	33.0 ft
		Say =	40.0 ft

From 2012 Means:

Cost =	$55 /ft
Location Factor for Boston =	117.5 %
Inflation for 2013 =	104 %
Adjusted Cost =	$67 /ft
Total =	**$2,680**

	22 13 16.20 Pipe, Cast Iron	Crew	Daily Output	Labor-Hours	Unit	2012 Bare Costs Material	Labor	Equipment		Total Incl O&P
0010	**PIPE, CAST IRON**, Soil, on clevis hanger assemblies, 5' O.C.									
0020	Single hub, service wt., lead & oakum joints 10' O.C.									
2120	2" diameter	Q-1	63	.254	L.F.	8.50	12.50		21	28
2140	3" diameter		60	.267		11.95	13.10		25.05	33
2160	4" diameter		55	.291		15.45	14.30		29.75	38.50
2180	5" diameter	Q-2	76	.316		21	16.10		37.10	48
2200	6" diameter	"	73	.329		26.50	16.75		43.25	54.50
2220	8" diameter	Q-3	59	.542		41	28		69	87.50
2240	10" diameter		54	.593		66.50	31		97.50	120
2260	12" diameter		48	.667		94	34.50		128.50	156
2320	For service weight, double hub, add					10%				
2340	For extra heavy, single hub, add					48%	4%			
2360	For extra heavy, double hub, add					71%	4%			
2400	Lead for caulking, (1#/dia in)	Q-1	160	.100	Lb.	1.04	4.92		5.96	8.55
2420	Oakum for caulking, (1/8#/dia in)	"	40	.400	"	4.20	19.65		23.85	34
2960	To delete hangers, subtract									
2970	2" diam. to 4" diam.					16%	19%			
2980	5" diam. to 8" diam.					14%	14%			
2990	10" diam. to 15" diam.					13%	19%			
3000	Single hub, service wt., push-on gasket joints 10' O.C.									
3010	2" diameter	Q-1	66	.242	L.F.	9.35	11.90		21.25	28.50
3020	3" diameter		63	.254		13.05	12.50		25.55	33
3030	4" diameter		57	.281		16.85	13.80		30.65	39.50
3040	5" diameter	Q-2	79	.304		23.50	15.50		39	49
3050	6" diameter	"	75	.320		28.50	16.30		44.80	56
3060	8" diameter	Q-3	62	.516		46	27		73	91
3070	10" diameter		56	.571		75	29.50		104.50	128
3080	12" diameter		49	.653		105	34		139	166
3100	For service weight, double hub, add					65%				
3110	For extra heavy, single hub, add					48%	4%			
3120	For extra heavy, double hub, add					29%	4%			
3130	To delete hangers, subtract									
3140	2" diam. to 4" diam.					12%	21%			
3150	5" diam. to 8" diam.					10%	16%			
3160	10" diam. to 15" diam.					9%	21%			
4000	No hub, couplings 10' O.C.									
4100	1-1/2" diameter	Q-1	71	.225	L.F.	8.45	11.10		19.55	26
4120	2" diameter		67	.239		8.65	11.75		20.40	27.50
4140	3" diameter		64	.250		12.05	12.30		24.35	32
4160	4" diameter		58	.276		15.70	13.55		29.25	38
4180	5" diameter	Q-2	83	.289		21	14.75		35.75	45
4200	6" diameter	"	79	.304		27	15.50		42.50	53
4220	8" diameter	Q-3	69	.464		47.50	24		71.50	88.50
4240	10" diameter		61	.525		78.50	27.50		106	128
4244	12" diameter		58	.552		101	28.50		129.50	155
4248	15" diameter		52	.615		151	32		183	215
4280	To delete hangers, subtract									
4290	1-1/2" diam. to 6" diam.					22%	47%			
4300	8" diam. to 10" diam.					21%	44%			
4310	12" diam. to 15" diam.					19%	40%			

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/3/2013
Checked By	AMS	Date	7/12/13
Title	Wheel Stops Estimate		

Assume 10 wheel stops require replacement.

From 2012 Means:

Quantity =	10
Cost =	$115 ea
Location Factor for Boston =	117.5 %
Inflation for 2013 =	104 %
Adjusted Cost =	$141 /ft
Total =	**$1,410**

32 16 Curbs, Gutters, Sidewalks, and Driveways

32 16 13 – Curbs and Gutters

	32 16 13.43 Stone Curbs	Crew	Daily Output	Labor-Hours	Unit	2012 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
1100	6" x 18"	D-13	450	.107	L.F.	16.75	4.50	1	22.25	26.
1300	Radius curbing, 6" x 18", over 10' radius	B-29	260	.215	↓	20.50	8.20	3.25	31.95	38.
1400	Corners, 2' radius		80	.700	Ea.	69	26.50	10.55	106.05	128
1600	Edging, 4-1/2" x 12", straight		300	.187	L.F.	6.40	7.10	2.81	16.31	21
1800	Curb inlets, (guttermouth) straight		41	1.366	Ea.	153	52	20.50	225.50	270
2000	Indian granite (belgian block)									
2100	Jumbo, 10-1/2" x 7-1/2" x 4", grey	D-1	150	.107	L.F.	6.50	4.25		10.75	13
2150	Pink		150	.107		6.70	4.25		10.95	13
2200	Regular, 9" x 4-1/2" x 4-1/2", grey		160	.100		6.60	3.99		10.59	13
2250	Pink		160	.100		5.95	3.99		9.94	12
2300	Cubes, 4" x 4" x 4", grey		175	.091		3.83	3.64		7.47	9
2350	Pink		175	.091		3.23	3.64		6.87	9
2400	6" x 6" x 6", pink		155	.103		11.20	4.11		15.31	18
2500	Alternate pricing method for indian granite									
2550	Jumbo, 10-1/2" x 7-1/2" x 4" (30 lb), grey				Ton	370			370	405
2600	Pink					390			390	430
2650	Regular, 9" x 4-1/2" x 4-1/2" (20 lb), grey					465			465	510
2700	Pink					415			415	455
2750	Cubes, 4" x 4" x 4" (5 lb), grey					465			465	510
2800	Pink					415			415	455
2850	6" x 6" x 6" (25 lb), pink					435			435	480
2900	For pallets, add					20			20	22

32 17 Paving Specialties

32 17 13 – Parking Bumpers

	32 17 13.13 Metal Parking Bumpers									
0010	**METAL PARKING BUMPERS**									
0015	Bumper rails for garages, 12 Ga. rail, 6" wide, with steel									
0020	posts 12'-6" O.C., minimum	E-4	190	.168	L.F.	16.15	8.40	.64	25.19	3
0030	Average		165	.194		20	9.65	.74	30.39	4
0100	Maximum		140	.229		24	11.40	.87	36.27	4
0300	12" channel rail, minimum		160	.200		20	9.95	.76	30.71	4
0400	Maximum		120	.267		30.50	13.30	1.01	44.81	5
1300	Pipe bollards, conc filled/paint, 8' L x 4' D hole, 6" diam.	B-6	20	1.200	Ea.	705	46	16.70	767.70	86
1400	8" diam.		15	1.600		1,025	61.50	22.50	1,109	1,25
1500	12" diam.		12	2		1,150	76.50	28	1,254.50	1,42
1592	Bollards, steel, 3' H, retractable, incl hydraulic controls, min		4	6		44,000	230	83.50	44,313.50	48,80
1594	Max		2	12		46,000	460	167	46,627	51,50
2030	Folding with individual padlocks	B-2	50	.800		560	28.50		588.50	66
8000	Parking lot control, see Section 11 12 13.10									
8900	Security bollards, SS, lighted, hyd, incl. controls, group of 3	L-7	.06	509	Ea.	47,000	21,700		68,700	84,50
8910	Group of 5	"	.04	682	"	63,000	29,100		92,100	114,00

	32 17 13.16 Plastic Parking Bumpers									
0010	**PLASTIC PARKING BUMPERS**									
1200	Thermoplastic, 6" x 10" x 6'-0"	B-2	120	.333	Ea.	150	11.85		161.85	18

	32 17 13.19 Precast Concrete Parking Bumpers									
0010	**PRECAST CONCRETE PARKING BUMPERS**									
1000	Wheel stops, precast concrete incl. dowels, 6" x 10" x 6'-0"	B-2	120	.333	Ea.	59.50	11.85		71.35	8
1100	8" x 13" x 6'-0"	"	120	.333	"	87.50	11.85		99.35	115

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/3/2013
Checked By	AMS	Date	9/12/13
Title	Mobilization Estimate		

Use $10,000 as reasonable mobilization cost.

Quantity =	1
Cost =	$10,000 ea
Total =	**$10,000**

DIVISION		MAINE																	
		HOULTON			KITTERY			LEWISTON			MACHIAS			PORTLAND			ROCKLAND		
		047			039			042			046			040 - 041			048		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
015433	CONTRACTOR EQUIPMENT		100.4	100.4		100.4	100.4		100.4	100.4		100.4	100.4		100.4	100.4		100.4	100.4
0241, 31 - 34	SITE & INFRASTRUCTURE, DEMOLITION	90.8	100.0	97.2	84.7	100.2	95.4	87.5	97.9	94.7	90.1	100.0	97.0	85.0	97.9	93.9	86.0	100.1	95.7
0310	Concrete Forming & Accessories	96.7	99.4	99.0	90.7	100.7	99.4	98.3	91.0	91.9	94.3	99.5	98.8	97.2	91.0	91.8	95.2	99.7	99.1
0320	Concrete Reinforcing	84.3	101.0	92.7	82.9	101.0	92.0	103.6	101.1	102.3	84.3	101.0	92.7	103.6	101.1	102.3	84.3	101.1	92.8
0330	Cast-in-Place Concrete	83.5	60.1	74.3	83.5	62.8	75.4	85.2	104.4	92.8	83.5	60.2	74.4	105.7	104.4	105.2	85.3	61.3	75.8
03	CONCRETE	100.0	85.5	93.0	94.6	87.0	90.9	99.2	96.8	98.0	99.5	85.6	92.7	109.4	96.8	103.2	96.7	86.1	91.5
04	MASONRY	93.4	58.0	71.8	106.2	59.5	77.7	94.0	59.7	73.1	93.4	58.3	72.0	94.3	59.7	73.2	88.0	59.7	70.8
05	METALS	84.9	84.9	84.9	84.7	84.8	84.7	89.3	80.8	86.5	85.0	84.9	84.9	90.6	80.8	87.4	84.8	84.9	84.9
06	WOOD, PLASTICS & COMPOSITES	96.0	112.0	105.3	88.3	112.0	102.0	97.9	98.8	98.4	93.1	112.0	104.0	97.1	98.8	98.1	93.9	112.0	104.4
07	THERMAL & MOISTURE PROTECTION	101.6	63.6	86.1	101.1	66.3	86.9	101.3	65.7	86.8	101.5	63.6	86.1	104.6	65.7	88.8	101.3	64.5	86.3
08	OPENINGS	99.3	89.0	96.7	99.2	90.2	96.9	102.4	83.5	97.7	99.3	89.0	96.7	102.4	83.5	97.7	99.2	89.0	96.7
0920	Plaster & Gypsum Board	95.2	111.7	107.0	90.2	111.7	105.6	98.7	98.1	98.3	93.3	111.7	106.5	99.5	98.1	98.5	93.3	111.7	106.5
0950, 0980	Ceilings & Acoustic Treatment	92.7	111.7	105.3	92.7	111.7	105.3	102.0	98.1	99.4	92.7	111.7	105.3	99.3	98.1	98.5	92.7	111.7	105.3
0960	Flooring	93.5	54.2	82.0	90.6	60.4	81.7	95.1	64.4	86.1	92.6	54.2	81.3	94.5	64.4	85.6	92.9	54.2	81.5
0970, 0990	Wall Finishes & Painting/Coating	90.1	37.8	57.8	90.1	36.4	57.0	90.1	37.8	57.8	90.1	37.8	57.8	90.1	37.8	57.8	90.1	37.8	57.8
09	FINISHES	97.2	86.6	91.3	95.2	88.3	91.3	99.6	81.6	89.6	96.6	86.6	91.0	98.3	81.6	89.0	96.3	86.8	91.0
COVERS	DIVS. 10 - 14, 25, 28, 41, 43, 44, 46	100.0	92.9	98.6	100.0	95.2	99.1	100.0	106.1	101.2	100.0	93.0	98.6	100.0	106.1	101.2	100.0	93.2	98.7
21, 22, 23	FIRE SUPPRESSION, PLUMBING & HVAC	94.1	64.3	82.0	94.1	66.0	82.7	100.0	61.4	84.4	94.1	64.4	82.0	99.9	61.4	84.3	94.1	64.7	82.2
26, 27, 3370	ELECTRICAL, COMMUNICATIONS & UTIL.	102.3	80.1	90.9	98.0	80.1	88.8	102.3	80.1	90.9	102.3	80.1	90.9	103.9	80.1	91.6	102.2	80.1	90.8
MF2010	WEIGHTED AVERAGE	95.7	78.9	88.3	94.8	80.1	88.3	98.1	78.9	89.7	95.5	79.0	88.2	99.5	78.9	90.4	94.7	79.4	88.0

DIVISION		MAINE			MARYLAND														
		WATERVILLE			ANNAPOLIS			BALTIMORE			COLLEGE PARK			CUMBERLAND			EASTON		
		049			214			210 - 212			207 - 208			215			216		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
015433	CONTRACTOR EQUIPMENT		100.4	100.4		98.6	98.6		102.0	102.0		103.1	103.1		98.6	98.6		98.6	98.6
0241, 31 - 34	SITE & INFRASTRUCTURE, DEMOLITION	91.0	100.2	97.3	99.7	90.5	93.4	100.2	94.4	96.2	106.9	92.8	97.2	91.2	90.2	90.5	98.2	87.6	90.9
0310	Concrete Forming & Accessories	89.7	100.3	98.9	94.1	71.0	74.0	96.9	75.3	78.1	85.5	71.8	73.6	88.5	77.8	79.2	86.7	72.4	74.3
0320	Concrete Reinforcing	84.3	101.0	92.7	99.8	82.5	91.1	99.8	82.5	91.1	98.5	80.9	89.6	88.2	74.7	81.4	87.4	80.7	84.0
0330	Cast-in-Place Concrete	83.5	61.9	75.0	140.3	79.5	116.4	124.9	80.3	107.3	131.0	80.5	111.1	111.5	84.1	100.7	123.8	50.6	95.0
03	CONCRETE	100.8	86.6	93.8	120.9	77.2	99.6	113.4	79.4	96.8	115.7	77.8	97.2	101.2	80.3	91.0	110.1	67.4	89.3
04	MASONRY	103.1	60.0	76.8	101.1	75.8	85.7	102.2	75.8	86.1	115.1	70.5	87.9	100.2	78.5	86.9	114.3	45.4	72.3
05	METALS	84.9	85.0	84.9	94.9	94.7	94.9	96.1	95.3	95.8	83.9	96.9	88.2	92.5	91.3	92.1	92.8	88.8	91.4
06	WOOD, PLASTICS & COMPOSITES	87.3	112.0	101.6	90.0	70.8	78.9	92.8	76.5	83.4	87.6	71.1	78.1	83.3	76.3	79.2	81.3	79.5	80.2
07	THERMAL & MOISTURE PROTECTION	101.6	66.1	87.1	97.1	79.7	90.0	97.4	80.5	90.6	100.5	77.8	91.3	96.8	77.3	88.9	96.9	61.6	82.5
08	OPENINGS	99.3	90.9	97.2	93.9	78.5	90.0	96.1	81.6	92.4	97.2	75.0	91.6	95.1	77.5	90.7	93.1	73.4	88.2
0920	Plaster & Gypsum Board	90.2	111.7	105.6	98.3	70.3	78.3	99.9	76.0	82.9	99.7	70.3	78.7	94.5	75.9	81.2	94.0	79.2	83.4
0950, 0980	Ceilings & Acoustic Treatment	92.7	111.7	105.3	98.9	70.3	80.0	99.8	76.0	84.1	95.8	70.3	78.9	99.8	75.9	84.0	99.8	79.2	86.2
0960	Flooring	90.2	57.9	80.7	93.8	80.9	90.0	93.8	80.9	90.0	107.1	80.9	99.4	89.8	82.2	87.6	89.1	54.1	78.8
0970, 0990	Wall Finishes & Painting/Coating	90.1	36.4	57.0	96.8	83.5	88.6	96.8	83.5	88.6	121.0	78.7	94.9	96.8	77.3	84.8	96.8	78.7	85.6
09	FINISHES	95.8	87.6	91.2	96.0	73.2	83.3	96.6	76.6	85.4	101.4	73.5	85.8	94.1	78.3	85.3	94.3	71.3	81.4
COVERS	DIVS. 10 - 14, 25, 28, 41, 43, 44, 46	100.0	93.7	98.7	100.0	86.1	97.2	100.0	87.1	97.4	100.0	82.2	96.5	100.0	89.8	98.0	100.0	81.1	96.2
21, 22, 23	FIRE SUPPRESSION, PLUMBING & HVAC	94.1	65.4	82.4	99.9	83.7	93.3	99.9	83.8	93.4	94.3	86.1	91.0	93.9	72.0	85.0	93.9	69.5	84.0
26, 27, 3370	ELECTRICAL, COMMUNICATIONS & UTIL.	102.3	80.1	90.9	96.2	93.2	94.7	99.4	93.8	96.5	98.3	98.9	98.6	97.1	82.0	89.3	96.6	66.1	80.9
MF2010	WEIGHTED AVERAGE	96.1	79.8	88.9	100.2	83.2	92.7	100.2	84.7	93.3	98.5	84.2	92.2	95.8	80.2	89.0	97.5	70.3	85.5

DIVISION		MARYLAND															MASSACHUSETTS		
		ELKTON			HAGERSTOWN			SALISBURY			SILVER SPRING			WALDORF			BOSTON		
		219			217			218			209			206			020 - 022, 024		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
015433	CONTRACTOR EQUIPMENT		98.6	98.6		98.6	98.6		98.6	98.6		96.1	96.1		96.1	96.1		106.0	106.0
0241, 31 - 34	SITE & INFRASTRUCTURE, DEMOLITION	85.3	88.3	87.4	89.2	91.1	90.5	98.2	87.7	90.9	94.3	86.0	88.6	101.6	86.0	90.9	95.2	107.4	103.6
0310	Concrete Forming & Accessories	92.1	85.8	86.6	87.8	78.1	79.3	99.2	54.9	60.7	93.9	70.1	73.2	100.6	70.2	74.1	101.8	142.2	136.9
0320	Concrete Reinforcing	87.4	104.7	96.1	88.2	74.7	81.4	87.4	67.5	77.4	97.4	76.0	86.6	98.0	76.0	86.9	102.5	149.5	126.2
0330	Cast-in-Place Concrete	100.2	78.9	91.8	106.2	84.2	97.5	123.8	49.2	94.5	134.1	79.4	112.5	150.3	79.4	122.4	107.8	149.9	124.4
03	CONCRETE	92.9	87.6	90.3	97.1	80.5	89.0	110.9	56.8	84.5	114.3	75.6	95.5	126.1	75.7	101.5	113.4	145.1	128.9
04	MASONRY	100.1	62.3	77.0	106.0	78.5	89.2	114.1	50.0	75.0	114.2	68.7	86.4	97.9	68.7	80.1	112.0	162.5	142.8
05	METALS	92.8	101.2	95.6	92.7	91.5	92.3	92.8	83.9	89.9	87.9	93.3	89.7	87.9	93.4	89.7	101.2	129.1	110.4
06	WOOD, PLASTICS & COMPOSITES	87.5	92.3	90.3	82.4	76.4	78.9	96.6	58.5	74.6	93.8	70.4	80.3	101.0	70.4	83.3	101.1	141.6	124.5
07	THERMAL & MOISTURE PROTECTION	96.5	75.1	87.8	96.5	76.1	88.2	97.1	66.8	84.8	103.1	81.4	94.3	103.6	81.4	94.6	101.6	150.1	121.3
08	OPENINGS	93.1	84.4	90.9	93.1	76.3	88.9	93.4	64.7	86.2	90.3	74.6	86.4	91.1	74.6	87.0	98.5	143.3	109.8
0920	Plaster & Gypsum Board	96.7	92.4	93.7	94.0	76.0	81.2	102.7	57.5	70.4	105.4	70.3	80.3	109.0	70.3	81.4	101.7	142.2	130.7
0950, 0980	Ceilings & Acoustic Treatment	99.8	92.4	94.9	100.8	76.0	84.4	99.8	57.5	71.9	105.8	70.3	82.3	105.8	70.3	82.3	101.0	142.2	128.2
0960	Flooring	91.6	61.2	82.7	89.5	82.2	87.4	95.3	67.8	87.2	113.9	80.9	104.2	118.0	80.9	107.1	95.0	178.2	119.4
0970, 0990	Wall Finishes & Painting/Coating	96.8	78.7	85.6	96.8	78.7	85.6	96.8	78.7	85.6	128.5	78.7	97.8	128.5	78.7	97.8	92.8	153.8	130.4
09	FINISHES	94.5	81.1	87.0	94.0	78.5	85.3	97.1	59.2	76.0	101.6	71.7	84.9	103.6	72.3	86.1	99.4	150.6	128.0
COVERS	DIVS. 10 - 14, 25, 28, 41, 43, 44, 46	100.0	64.7	93.0	100.0	89.8	98.0	100.0	41.7	88.4	100.0	79.7	96.0	100.0	79.7	96.0	100.0	120.2	104.0
21, 22, 23	FIRE SUPPRESSION, PLUMBING & HVAC	93.9	83.3	89.6	99.9	84.4	93.6	93.9	64.3	81.9	94.3	84.8	90.4	94.3	84.8	90.4	100.1	128.6	111.6
26, 27, 3370	ELECTRICAL, COMMUNICATIONS & UTIL.	98.4	93.2	95.7	96.9	82.0	89.2	95.4	71.4	83.0	95.4	98.9	97.2	93.0	98.9	96.0	101.5	132.0	117.2
MF2010	WEIGHTED AVERAGE	94.7	84.3	90.1	96.8	82.9	90.7	97.9	65.3	83.5	97.7	82.3	90.9	98.5	82.4	91.4	102.2	136.8	117.5

Transportation
Land Development
Environmental
Services

Computations

Vanasse Hangen Brustlin, Inc.

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/3/2013
Checked By	AMS	Date	9/12/13
Title	Summary Supplemental		

Item	Quantity	Units	Unit Cost	Cost
Membrane Waterproofing	12600	SF	$ 12	$ 151,200
Concrete Sealant	3100	SF	$ 5	$ 15,500
Upper Column Concrete Repairs	16	SF	$ 50	$ 800
Stair Repairs	1	LS	$ 6,200	$ 6,200

Subtotal = $ 173,700

10% Construction Contingency = $ 17,370

Total = $ 191,070

Say $ 192,000

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/11/2013
Checked By	AMS	Date	9/12/13
Title	Membrane Waterproofing Estimate		

Deck Area From Conditions Assesment Letter

Total = 12517 ft^2

Say = 12600 ft^2

From MassDOT Construction Project Estimator for Item 965.2 Membrane Waterproofing For Bridge Decks - Spray Applied

Membrane = $12.00 ft^2

Total = $151,200

Massachusetts Department of Transportation - Highway Division

Construction Project Estimator

Weighted Bid Prices

965.2

Line Item Information

Item No:	**965.2**
Item Description:	**MEMBRANE WATERPROOFING FOR BRIDGE DECKS - SPRAY APPLIED**
Measurement System:	**English**
Unit:	**SF**
Unit price statistics computed for Period:	**9/2012 - 9/2013**

Unit price quantity breakouts

					Unit Price Statistics			
Min Quantity	Max Quantity	District	**No. of Projects**	**No. of Bids**	**Minimum**	**Maximum**	**Mean**	**Median**
2185.00 (SF)	**2399.38 (SF)**	All Districts	1	7	$6.75	$20.25	$12.86	$12.00
		4	1	7	$6.75	$20.25	$12.86	$12.00
3685.63 (SF)	**3900.00 (SF)**	All Districts	1	13	$4.00	$12.00	$7.98	$8.00
		1	1	13	$4.00	$12.00	$7.98	$8.00

965.2

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	10293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/11/2013
Checked By	AMS	Date	9/12/13
Title	Concrete Sealant		

	Quantity	Area/Element	Total Area
Stairs	20	6.6668 SF	133.34 SF
Landings	1	32 SF	32 SF
Parapet Wall	20	135 SF	2700 SF
Columns	8	26 SF	208 SF
		Total	3073.3 SF
		Say	3100 SF

From MassDOT Construction Project Estimator for Item 964.2 Epoxy Protective Coating

Membrane = $4.50 ft^2
Say = $5.00 ft^2

Total = $15,500

Massachusetts Department of Transportation - Highway Division

Construction Project Estimator

Highway Home MassDOT Home Mass.Gov Home State Agencies State Online Services

About | Projects | **Weighted Bid Prices** | Help | Logout | Email Helpdesk

Weighted Bid Prices

Criteria | **Chart** | Book

964.2

Line Item Information

Item No:	**964.2**
Item Description:	**EPOXY PROTECTIVE COATING**
Measurement System:	**English**
Unit:	**SF**
Unit price statistics computed for Period:	**9/2012 - 9/2013**

Unit price quantity breakouts

Min Quantity	Max Quantity	District	No. of Projects	No. of Bids	Unit Price Statistics Minimum	Maximum	Mean	Median
11049.00 (SF)	**28417.88 (SF)**	All Districts	1	4	$2.25	$6.75	$4.54	$4.50
		5	1	4	$2.25	$6.75	$4.54	$4.50
28417.88 (SF)	**45786.75 (SF)**	All Districts	1	3	$2.10	$6.30	$4.33	$4.20
		5	1	3	$2.10	$6.30	$4.33	$4.20
45786.75 (SF)	**63155.63 (SF)**	All Districts	1	3	$1.89	$5.66	$4.14	$3.77
		5	1	3	$1.89	$5.66	$4.14	$3.77
97893.38 (SF)	**115262.25 (SF)**	All Districts	1	2	$1.10	$3.30	$2.15	$2.15
		5	1	2	$1.10	$3.30	$2.15	$2.15

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/12/2013
Checked By	AMG	Date	9/12/13
Title	Upper Column Repairs Estimate		

Upper Columns

Spalled and Unsound Concrete Areas

Columns 1B	2'x2'	4.0 ft^2
Columns 2B	2'x2'	4.0 ft^2
Columns 4A	2'x2'	4.0 ft^2
Columns 4B	2'x2'	4.0 ft^2
	Total	16.0 ft^2

From bid price for Amesbury Parking Garage from CSI, use $48/sf (say $50/sf).

Use $50 /$ft^2$

Total = $800

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Computations

Project	Garage Rehabilitation	Project #	12293.00
Location	Maynard, MA	Sheet	
Calculated By	SRD	Date	9/12/2013
Checked By	AMS	Date	9/12/13
Title	Stair Repair Estimate		

Railing

Assume entire railing will require surface prep and repainting

Surface of Railing	0.3925 sf/ft
Number of rungs	4
length per rung	7 ft
number of railing panels	9
Number of posts	6
Height of Posts	3 ft
Total	105.975 sf

During a phone conversation with Chris Pocoli of the Aulson Company, use the upper limit of $18/sf for stair well painting because it is assumed that these areas will require more surface preperation and a more traditional paint system because of the sever deterioration.

Paint = $18.00 ft^2

Total = $1,907.55

Stair Treads

Put a fiberglass tread on each stair

Total Stair Treads 20

From Strongwell phone conversation, $225.84 for a 12' section. For orders of 12 or more, $160 each.
If treads are cut to length at the factory, $483 each (assuming 2 cuts producing 3-4' sections)

Cost to cut at factory =	$257
Say =	$260
Number of 12 sections required =	7
Say =	10
Total =	**$4,200**

Grand Total =	$6,107.55
Say =	$6,200.00

APPENDIX C

COMMITMENT & INTEGRITY
DRIVE RESULTS

980 Washington St. | Suite 325
Dedham, Massachusetts 02026
www.woodardcurran.com

T 800.446.5518
T 781.251.0200
F 781.251.0847

12293.00

March 18, 2009

WOODARD & CURRAN

Mr. John Curran, Town Administrator
Town Hall
195 Main Street
Maynard, MA 01754

Re: Town of Maynard – Structural Condition Assessment Nason/Summer Street Parking Garage

Dear Mr. Curran:

As you requested we reviewed our report entitled "Structural Condition Assessment of the Nason/Summer St Parking Garage" dated May 30, 2008 (Report) and identified the three most critical recommended repairs. These three repairs are summarized below and for ease of reference include the Item # from the original Report;

Item Number from Report	Recommended Repair
#3	Repair circular grout patch on precast double tee plank.
#7	Reseal and repair each deck floor drain to ensure that all storm water drainage flows into the drains and not through the concrete around them.
#8	Repair surfaces of concrete columns in lower level to remove and replace all unsound concrete.

To complete these three repairs it is recommended that a budget of $70,000 be provided. Budget is based on doing all three repairs concurrently and include engineering and contingencies.

Sincerely,

WOODARD & CURRAN INC.

Robert C. Chapell, P.E.
Senior Project Manager

RCC/bcc
212772

TOWN OF MAYNARD, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

STRUCTURAL CONDITION ASSESSMENT OF THE NASON / SUMMER ST PARKING GARAGE

May 30, 2008

PURPOSE

As requested by the Town of Maynard, Woodard & Curran conducted a structural condition assessment of the existing 2-level parking garage located at the intersection of Summer and Nason Streets in Maynard, MA. This report presents a summary of the general condition and structural integrity of the parking garage.

On April 11, 2008, James P. Sturgis, P.E., Senior Structural Engineer from Woodard & Curran, made a site visit and performed a structural condition assessment of the parking garage. A walk-through inspection of the interior and exterior of the structure was performed. At the time of the inspection, the garage was in service, so the presence of parked vehicles partially concealed portions of the garage decks. The assessment was limited to areas that were exposed to view and not concealed by finish construction at the time of the site visit. Existing drawings were not available from the Town, so this evaluation was based solely on visual inspection and did not include a review of the design drawings.

This report includes a description, location, observations, recommendations, and a "Level of Concern" (Low, Moderate, High) for each problem area identified during the visual inspection. This assessment was general in nature and did not include any detailed measurements, structural analysis, or calculations to confirm the structural adequacy, safety, or code compliance of this structure as a whole.

EXISTING CONDITIONS

The existing parking garage was built in 1984 and consists of a ground level and an upper level. The garage measures approximately 225 feet (ft) x 62 ft and consists of the following structural systems: reinforced concrete foundation walls, footings, columns, perimeter beams, and stairwell; precast double tees for the upper level deck surface. The lower level is at grade with bituminous pavement serving as the parking surface for vehicles. The upper level consists of a precast concrete plank deck and is open to weather with no roof enclosure. Grade changes along the length of the garage, which allows for direct vehicle access to each level from grade; there is no internal connection ramp to allow vehicles to drive between the two parking deck levels. Each level has a usable parking area of approximately 12,600 square feet (sf). There is a concrete stairwell in the northwest corner of the garage providing access between the two levels.

The precast double tees span approximately 60 ft, are approximately 9 ft in width, and have an estimated depth of approximately 30 inches (in). The planks measure approximately 3.5 inches in thickness along the joints. There are sealant joints between double tees with the intent of providing watertightness along joints. There are 10 deck drains in the upper level for stormwater, which connect to drain pipes that run into the ground at the lower level. The plank camber varies from plank to plank in order to create slope for drainage. The perimeter of the structure is open between columns and there is a continuous concrete knee wall surrounding the upper level parking area; the knee wall consists of precast concrete panels, which are connected to the concrete columns at each grid line. The exterior of the upper level concrete perimeter wall has an architectural concrete finish, with a variety of rustication line patterns and smooth or exposed-aggregate concrete finishes.

WOODARD &CURRAN

OBSERVATIONS

In general, the structural components of the parking garage are in fair condition for a structure of this age and currently the structural integrity of the garage appears to be intact. However, there are several areas that will require various degrees of maintenance, repair, and remediation in the very near future. Some of these repairs pertain more to architectural finish or weather envelope type issues, while others are more structural and urgent in nature.

Some of the more common deficiencies that were observed during the structural assessment include the following:

1. Joint sealant that is damaged or missing between precast double tees, resulting in direct leakage of storm water and road salt from parked vehicles through the upper level deck to the lower level;
2. Spalling concrete along upper level deck joints;
3. Lack of a waterproof membrane on the upper level concrete deck;
4. Surface cracking and hollow, delaminated areas on exposed (top) surfaces of precast double tee deck planks;
5. Broken welds at connectors between precast double tee deck planks;
6. Extensive "spider" cracking on the interior surface of the concrete knee wall at the upper level perimeter.
7. Floor drains on the upper deck are not properly sealed and are permitting stormwater to leak through the concrete around the drains;
8. Several concrete columns located adjacent to deck drains have major cracking, spalling, and delaminated concrete on the lower level;

The following Structural Condition Assessment Summary Table outlines a number of issues identified during the inspection. For the purpose of reference in this report, the north side of the garage shall be the side that is closest and parallel to Summer Street. In addition, a grid system has been established for reference (see attached Upper Level Deck Plan). For each issue identified, the table provides Descriptions, Locations, Observations, and Recommendations. In addition, a "Level of Concern" has been assigned (Low, Moderate, or High) to each item to assist in the prioritizing of repairs as defined below:

- Low: does not require immediate attention or affect structural integrity, but should be monitored on an annual basis and addressed in a timely manner, as appropriate;
- Moderate: should be addressed in the next 3 to 5 years, but should be monitored on an annual basis; failure to address this issue in a timely manner may cause this issue to accelerate into a more serious concern in the future.
- High: should be addressed in the next 1 to 2 years; failure to address this item in a timely manner will potentially result in serious problems relating to public safety, structural, or other concerns.

Structural Condition Assessment Summary Table

Item #	Description	Location	Observations	Recommendations	Level of Concern
1	Joints between precast double tee deck planks have concrete spalling, failed sealant, and broken weld connections.	Upper Deck running North-South (total of 28 joints)	Sealant joints are in various stages of failure, from sealant bond failure to the sealant being non-existent; stormwater currently leaks down through joints to parking area below; joint widths vary from 3/4" to 1 1/2"; various spalled areas along joints up to 5 per joint; several plank joint plate connections have failed welds;	Re-weld any broken welds at plank connections; patch any spalled areas with premium repair mortar; install new backer rod and sealant (B/R & S).	High
2	Precast double tee planks with cracked, hollow areas on top.	Upper Deck at random locations	Top surfaces of approximately 14 planks (23 planks total) have longitudinal cracking and hollow areas indicating the presence of delaminated concrete	Evaluate concrete surface repair with premium repair mortar and/or application of a corrosion inhibitor coating to neutralize any existing corrosion;	High
3	Precast double tee plank with circular grout patch	Upper Deck, first plank adjacent to ramp entrance	Top, center portion of plank has a circular 24" grout patch that is hollow and delaminated.	Chip and replace grout patch with new premium repair mortar with reinforcing.	High
4	Precast double tee planks	Upper Deck	Existing deck surface does not have a waterproof membrane to protect the concrete.	Install a traffic-rated, polyurethane waterproof membrane system over entire deck surface.	High
5	Upper concrete columns have spalled and delaminated concrete	Above upper level deck surface (total of 17)	Most are in good condition; 4 to 5 have minor spalling and hollow areas; nearly all columns have at least one failed grout patch at weld plate connections.	Remove unsound concrete; inspect weld plate connections; repair welds as needed; patch deteriorated areas with repair mortar.	High
6	Concrete knee wall has surface cracking.	Upper level at perimeter	Interior face of nearly all precast concrete wall panels have extensive surface cracking; wall appears to be sound with only hairline cracking and no spalling, but there are signs of moisture penetration; top horizontal surface of wall is pitted with mold.	To prevent future acceleration of wall deterioration, the top, exterior 6" band along top, and the entire interior faces of walls should be coated with a tinted sealer; a secondary benefit would be to improve aesthetics of these walls.	Moderate to High
7	Deck floor drains are leaking around their perimeter.	Upper level at alternate column locations (total of 10)	There is no sealant between drains and concrete, with gaps 1" or larger; two drains have missing grates and are plugged with debris; leakage around drains results in moisture damage to faces of concrete columns below.	Install new backer rod and sealant around all drains; inspect concrete for cracks around drains and inject urethane grout into any drains to prevent leakage through concrete around drains; grind, shape, or patch concrete with grout locally around drains to ensure proper pitch to drains; replace missing drain grates and remove debris.	**High**

WOODARD &CURRAN

Structural Condition Assessment Summary Table (continued)

Item #	Description	Location	Observations	Recommendations	Level of Concern
8	Lower concrete columns have major cracking and spalling.	Columns D-2, D-4, D-6, A-2 and A-6 on interior faces adjacent to drain pipes.	Cracking and hollow concrete was observed full-height in several areas; appears that deck drain leakage from above has caused constant moisture damage to these columns, resulting in delamination of the surface concrete, likely to a depth of at least a couple inches.	Structural integrity appears to be intact, but failure to repair these columns in the next year to two years may result in severe structural problems. Approximately 20 sf of each column should have all delaminated concrete chipped off down to sound concrete; install galv. steel mesh reinforcing; install premium repair mortar to restore concrete to original dimensions and geometry. Drain pipes will need to be temporarily removed to make concrete repairs.	**High**
9	Concrete stair landing needs joint sealant	Intermediate landing	Approximately 20 LF of 1" wide isolation joint is in poor condition and needs replacement.	Install backer rod and sealant in joint.	Moderate
10	Concrete stair handrails are corroded.	Intermediate landing	Galvanized steel handrail has corroded spots at apparent field weld splice locations.	Prep and spray galvanized repair paint on all rusted areas.	Moderate
11	Concrete stair embedded nosings are failing.	Top flight of stairs	Many steps have nosings that are loose, hollow, or have gaps at perimeters; one tread nosing is missing and that step is spalled and cracked. This step is a safety hazard in its current condition.	Chip and repair damaged step; install new embedded nosing; grind and seal around all other nosings to extend their design life and prevent premature failure.	Moderate to High

CONCLUSIONS

In general, the existing parking garage was found to be in fair structural condition; however, several areas will require various levels of maintenance and upgrade in the very near future to lengthen the design life and minimize the potential for structural problems. Based upon this visual inspection, there does not appear to be any immediate signs of structural weakness or concern. The structure appears to have performed well in the past and no obvious signs of past building overstress were identified. However, failure to address the items with a HIGH Level of Concern presented in the previous Summary Table, in the next 1 to 2 years could result in serious structural problems in the future due to further deterioration of the concrete columns and precast deck planks.

The Town should expect that in approximately 10 years additional maintenance and repair work will need to be done to re-inspect, repair, and/or maintain the improvements that will be done in this phase of repairs; this may also include replacement of some of the planks, as state above.

RECOMMENDATIONS

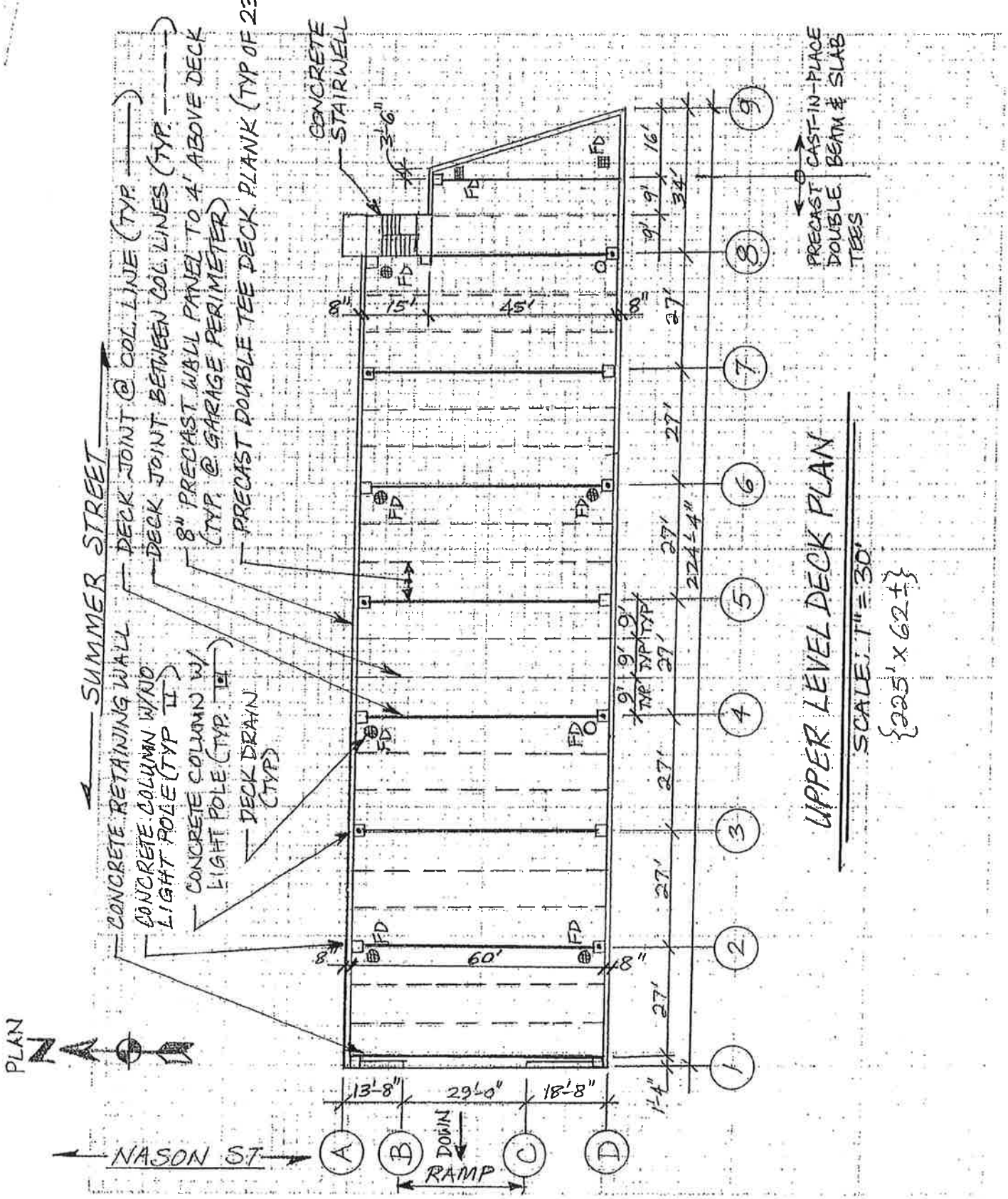
It is recommended that the Town repair those items that were listed as having a HIGH Level of Concern on the Summary Table. The repairs would include the following:

- Replace and reseal all joints between the precast double tees with new backer road and sealant; repair weld plate connections; repair any concrete spalling using a premium repair mortar;
- Apply a corrosion inhibiting compound followed by a waterproofing membrane to the entire surface of the upper level deck to deter the corrosion process, lengthen design life, and improve weather-tightness of deck; It should be noted that the recommended repair approach to the plank deck surfaces (corrosion inhibitor with a waterproof membrane) should have been done many years ago; making this repair now will certainly lengthen the design life of the planks, but complete replacement of at least some of the precast double tee planks will likely be necessary in the future (even after these repairs are implemented).
- Reseal and repair each deck floor drain to ensure that all stormwater drainage flows into the drains and not through the concrete around them;
- Repair surfaces of concrete columns in lower level to remove and replace all unsound concrete.
- In approximately 10 years re-inspect the garage to determine if additional maintenance and/or repair work are necessary.
- Consider installing parking meters for each space within the parking garage to provide for funding of continued garage maintenance and repairs.

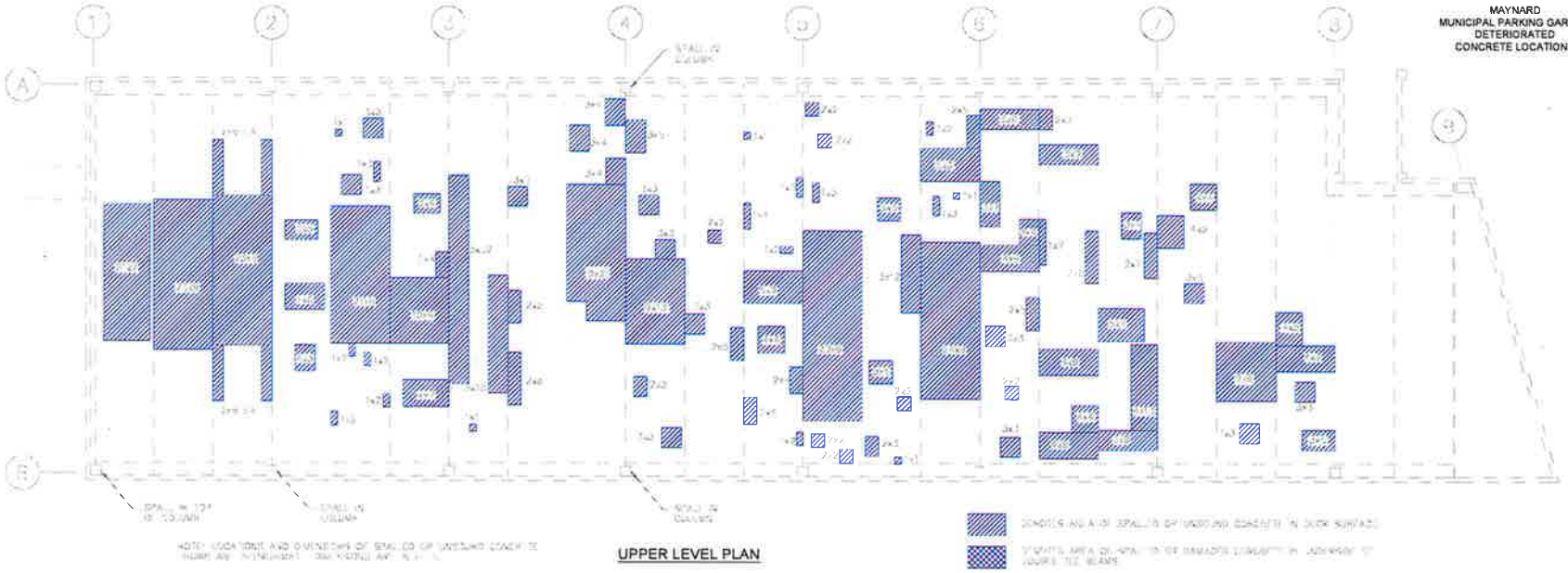
To complete the repairs listed above it is recommended that a budget of $400,000 be appropriated by the Town. The budget would cover the estimated cost of both engineering and construction.

WOODARD & CURRAN
41 HUTCHINS DRIVE
PORTLAND, MAINE 04102
TEL. (207) 774-2112
FAX (207) 774-6635

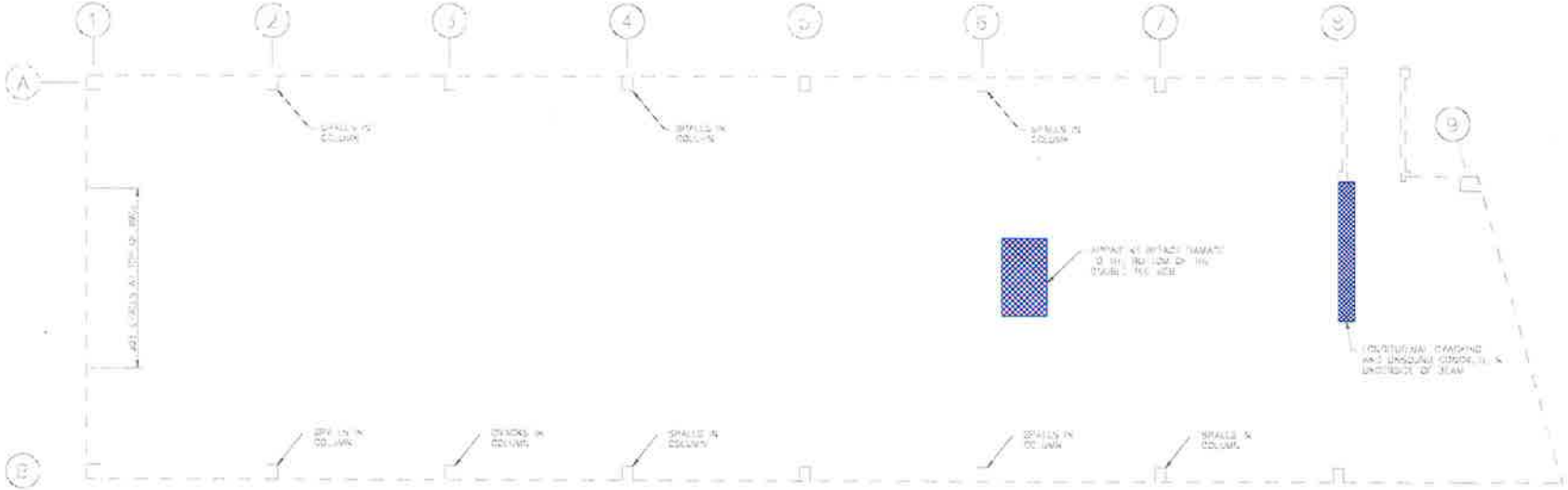
CLIENT TOWN OF YARMOUTH, MAINE
PROJECT PARKING GARAGE ASSESSMENT
DESIGNED BY JPS DATE 4.28.0
CHECKED BY _____ DATE _____
PROJECT NO. 212772.01 SHEET NO. _____ OF _____



MAYNARD
MUNICIPAL PARKING GARAGE
DETERIORATED
CONCRETE LOCATIONS



UPPER LEVEL PLAN



GROUND LEVEL PLAN

PARKING GARAGE CONCRETE REPAIRS.DWG Plotted on 12-Sep-2013 11:11 AM

Parking Garageand Surface Lot Inventory
Town of Maynard, MA
(see attached Parking Lot Graphic for Area Designations)

AREA DESIGNATIONS

Date	Inspector	Time of Day	1 # spaces up	1 # spaces down	2 # spaces up	3 # spaces down	4 # spaces	5 # spaces	6 # spaces	7 # spaces	8 # spaces	9 # spaces	10 # spaces	11 # spaces	12 # spaces	13 # spaces	14 # spaces		% used Parking
			20	21	23	18	11	14	13	11	9	12	5	11	6	17		191	
9/23/2013	J. Foster	1:30 PM	5	16	4	17	5	10	8	4	0	3	1	0	2	4		79	41.36126
9/24/2013	J. Foster	2:05 PM	4	19	3	16	6	8	10	3	2	2	0	4	2	3		82	42.93194
9/25/2013	S. Dickason	12:40 PM	7	18	8	16	4	6	7	4	2	9	5	6	6	15		113	59.1623
9/26/2013	J. Foster	12:55 PM	7	20	6	14	5	5	8	4	3	8	3	7	3	14		107	56.02094
9/27/2013	J. Foster	1:16 PM	3	15	5	16	2	12	13	2	1	5	3	4	3	10		94	49.21466
9/30/2013	S. Dickason	1:00 PM	3	15	4	15	5	7	4	7	2	6	3	5	3	10		89	46.59686
10/2/2013	S. Dickason	1:08 PM	8	19	4	17	7	7	11	6	1	2	2	3	2	14		103	53.9267
10/3/2013	S. Dickason	2:30 PM	4	13	3	12	5	4	2	2	0	2	2	2	1	7		59	30.89005
10/7/2013	S. Dickason	2:35 PM	4	17	5	13	5	2	4	3	4	3	0	0	0	6		66	34.55497
10/15/2013	S. Dickason	1:15 PM	6	20	9	15	8	5	6	3	2	2	2	4	1	8		91	47.64398
10/22/2013	S. Dickason	1:05 PM	6	12	6	16	4	8	4	4	2	6	2	1	4	3		78	40.8377
10/29/2013	S. Dickason	2:45 PM	6	18	6	13	5	6	4	3	1	2	2	5	0	8		79	41.36126
10/30/2013	S. Dickason	2:10 PM	6	16	7	11	3	7	4	5	0	0	3	2	1	4		69	36.12565

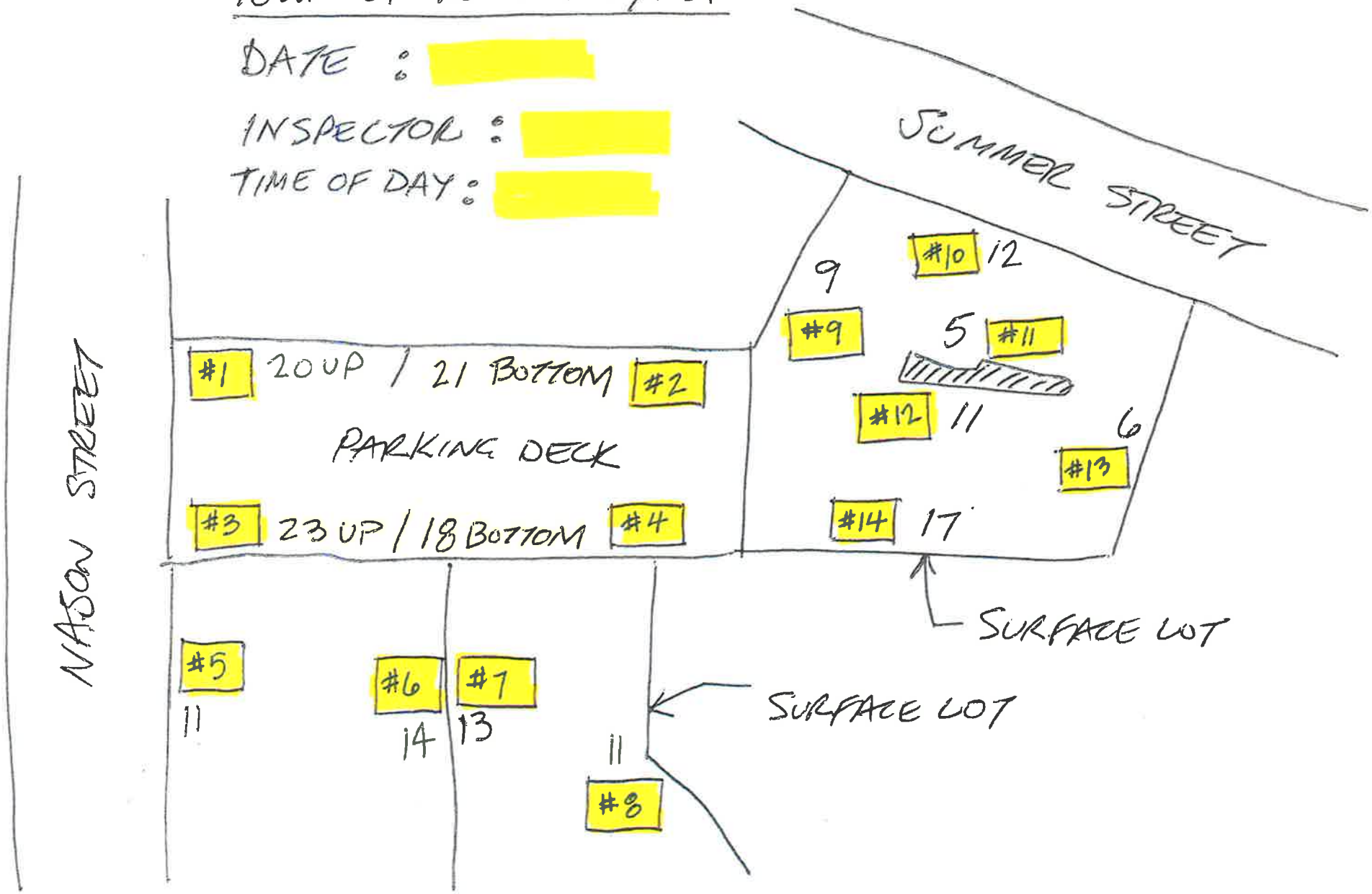
PARKING GARAGE & SURFACE LOT INVENTORY

TOWN OF MAYNARD, MA

DATE :

INSPECTOR :

TIME OF DAY :



(603) 635-2183 office

(603) 635-9024 fax

Jay-Mor Enterprises Inc.
505 Bridge Street
P.O. Box 195
Pelham, NH 03076-0195
jaymorent@comcast.net

Demolition Proposal

January 20, 2014

Mr. Gregg Lefter
Facilities Manager
Town of Maynard
195 Main Street
Maynard, MA 01754

Re: Nason/Summer Street Parking Garage

Dear Mr. Lefter:

In response to your request for a quote for the above named project, we have examined the scope of work and agree to provide all related material, manpower and equipment necessary for the completion of said project. Work will be performed under strict compliance with all state, federal, official agency and local regulations. All work will be performed to your complete satisfaction in a timely and workmanlike manner.

COMPLETION REQUIREMENTS:

Jay-Mor Enterprises, Inc. will provide the following.

- Perform all required operations according to schedule.
- Make proper notification to all state, federal and local authorities.

The Owner/GC will be responsible for the following:

- Water/Sewer Disconnection
- Assist in obtaining approval from abutters to access site.
- Licensed electrician if needed

PROJECT COSTS

- The project price is based on completion of work per schedule as required by owner or G/C.
- The project price reflects all insurance requirements.
- All salvage material will become the property of Jay-Mor Enterprises Inc.

This price includes:

- Demolition of the garage
- Temporary fencing around site
- Erosion control (silt soxx placed on the lower side of the parking lot to prevent run off)
- Disconnection of the utilities on site only except for Water/Sewer. If a private electrician is needed for any disconnects, it will be the responsibility of the owner.
- If vibration monitoring is needed, it will be an additional cost.
- Not responsible for any damage to asphalt but we will do our best to protect it.
- Not responsible for any hazardous/asbestos material.
- Backfill of footings
- Any sawcutting that is needed
- Obtain Demolition Permit
- Area will be broom swept and left in a safe and neat manner
- All debris will be brought to a legal recycling facility.
- All temporary fencing and erosion control will be removed at the end of the project.

The proposed price for the above demolition work is: $ 131,500.00

Payment terms: Must be agreed upon prior to start

Thank you for your request for quotation. In the event you have further questions or need additional information, feel free to contact me at this office.

Robert J. Morgan, Sr. Project Manager
Jay-Mor Enterprises, Inc.

This proposal is accepted by:

_____

07

ARTICLE 7: **MUNICIPAL GARAGE ENGINEERING ASSESSMENT**

To see if the Town will vote to raise and appropriate, transfer from available sums, or otherwise provide the sum of $5,000 to pay for an engineering assessment of the Town Municipal Parking Garage;

or to do or act thereon.

SPONSORED BY:	Board of Selectmen
APPROPRIATION:	$5,000.00
FINCOM RECOMMENDATION:	At Town Meeting

The following action was taken:

Voted: Yes 85, No 21 that the Town raise and appropriate from taxation the sum of $5,000.00 to pay for an engineering assessment of the Town Municipal Parking Garage.

The Finance Committee recommended.

This article was voted by a secret ballot as required by Town By-Law.

2010

FINCOM RECOMMENDATION: Recommends

The following action was taken:

Voted: Yes 102, No 7 to accept the article as printed in the warrant except the words "To do or act thereon."

The Finance Committee recommended.

This article was voted by a secret ballot as required by Town Bylaw.

ARTICLE 21: REPAIRS TO PARKING DECK

To see if the Town will appropriate $400,000 to pay costs of remodeling, reconstructing and making extraordinary repairs to the Town's Parking Deck, located at Nason and Summer Streets, and for the payment of all other costs incidental and related thereto; to determine whether this amount should be raised by taxation, transfer from available funds, borrowing or otherwise, or to take any other action relative thereto.

To do or act thereon.

SPONSERED BY: Board of Selectmen
APPROPRIATION: $400,000.
FINCOM RECOMMENDATION

The following action was taken:

Motion made and seconded to withdraw Article 21 and take no action thereon. Motion carried.

At 10:02 p.m. motion made and seconded to dissolve the Annual Town Meeting of 5/17/2010. Motion carried