FOR INFORMATIONAL USE ONLY - DO NOT USE FOR BIDDING PURPOSES

Item No.	Engineers Estimate	Unit	Item Description			
1X	38	SY	Clearing and Grubbing	For:	Contingent	
2	105	CY	Unclassified Excavation	For:	Contingent	
3	38	CY	Trench, Culvert and Bridge Excavation	For:	Contingent	
4A	75	SY	Cement Concrete Breaking (Pavement)	For:	Contingent	
4B	20	CY	Cement Concrete Breaking (Structures)	For:	Contingent	
5C	110	CY	Selected Fill	For:	Contingent	
7	75	SY	Preparing Fine Grade	For:	Contingent	
12A-4	50	LF	Reinforced Concrete Pipe, Class IV	For:	Contingent	
12DIP-12	50	LF	Ductile Iron Culvert Pipe-12 Inch Diameter	For:	Contingent	
12DIP-14	50	LF	Ductile Iron Culvert Pipe-14 Inch Diameter	For:	Contingent	
12H	4700	LF	Cleaning Existing Drainage System	For:		
12H-X	300	EA	Cleaning Existing Catch Basin	For:		

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Item No.	Engineers Estimate	Unit	Item Description			
13A	10	CY	Catch Basins	For:	Contingent	
13B	10	CY	Manholes	For:	Contingent	
14	5	EA	Connections to Existing Drainage Facilities	For:	Contingent	
15	12	EA	Altering Catch Basins	For:		
15X	20	EA	Rehabilitation of Catch Basin	For:		
16X	30	EA	Altering Brick Manholes	For:		
17A	10	CY	Class A Concrete For Structures	For:	Contingent	
24	20	CY	Cement Concrete Pavement	For:	Contingent	
24V	25	CY	Concrete Valley Gutter	For:	Contingent	
26	3000	LF	Concrete Curb	For:		
26CG	600	LF	Monolithic Concrete Curb and Gutter	For:		
27	3800	SF	Cement Concrete Sidewalk	For:		

Item No.	Engineers Estimate	Unit	Item Description			
27DW	360	SF	Dectectable Warning Surface	For:		
28	1800	SF	Cement Concrete Driveways and Driveway Aprons	For:		
29	1100	SF	Driveway Restoration	For:		
30	1500	SY	Metal Reinforcement For Concrete Pavement	For:	Contingent	
31	375	LF	Transverse Joint Supports	For:	Contingent	
32A	190	EA	Longitudinal Joint Ties (Pavement)	For:	Contingent	
32X	190	EA	Joint Ties (Grout Type)	For:	Contingent	
32X-1	850	EA	Load Transfer Device For Cement Concrete Pavement Repairs	For:	Contingent	
33	900	LB	Bar Reinforcement for Structures	For:	Contingent	
34	27000	LB	Miscellaneous Metals	For:		
35	40	LF	Resetting Guide Railing	For:	Contingent	
36CX	160	TON	Asphalt Concrete Truing and Leveling Course TYPE 1A (For Cracks in Asphalt Pavement)	For:		

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Item No.	Engineers Estimate	Unit	Item Description			
36DRAR	27800	TON	Rut Avoidance Asphalt Concrete TYPE 1A (Top RA Resurfacing)	For:		
42-1	20	LF	Concrete Median Barrier	For:	Contingent	
42-2	2	EA	Concrete Median Barrier End Section	For:	Contingent	
42-3	20	LF	Half Section Concrete Barrier	For:	Contingent	
42-4	2	EA	Half Section Concrete Barrier End Section	For:	Contingent	
58A	85	LF	Saw Cutting Existing Non-Roadway Asphalt	For:	Contingent	
58RPC	2250	LF	Saw Cutting Existing Roadway Pavement & Concrete	For:	Contingent	
102D	300	DAY	Flashing Arrow Board	For:		
102PVMS	300	DAY	Portable Variable Message Sign	For:		
102X	100	DAY	Work Zone Traffic Control (Day)	For:		
102Y	30	DAY	Work Zone Traffic Control (Night)	For:		
111	1850	SY	Removal and Replacement of Pavements	For:		

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Item No.	Engineers Estimate	Unit	Item Description			
112	85	EA	Adjusting Manholes	For:		
114	210	EA	Adjustment of Water Valve Box Elevation	For:		
115	4900	LF	Butt Joints	For:		
116A	285000	SY	Profiling and Removal of Asphalt Pavement	For:		
116C	85	SY	Profiling and Removal of Concrete Pavement	For:	Contingent	
121	85	CY	Dry Bound Base Course	For:	Contingent	
122	2	EA	Test Holes	For:	Contingent	
129	20	CY	Cement Concrete For Pavement Repairs	For:	Contingent	
132	100	EA	Plowable Raised Reflectorized Pavement Markers	For:		
133A	375	LF	Cleaning and Resealing of Longitudinal Joints in Portland Cement Concrete Pavement	For:	Contingent	
133B	85	LF	Sealing of Transverse Joints In Cement Concrete Pavement	For:	Contingent	
133XF	7600	LF	Clean and Fill Joints and Cracks	For:		

Item No.	Engineers Estimate	Unit	Item Description			
136S	20	DAY	Survey Stakeout (PER DAY)	For:		
137	174000	LF	Remove Existing Traffic Markings	For:	Contingent	
138	560	SY	Asphalt Joint Repairs	For:	Contingent	
141B	190	EA	Silt Protection for Surface Inlet Drainage Structures	For:		
141C	190	EA	Silt Protection for Curb Inlet Drainage Structures	For:		
150	20	LF	Box Beam Guide Railing	For:	Contingent	
152	2	EA	Box Beam Guide Rail End Assembly	For:	Contingent	
199*	1	LS	Interim Payments (Force)	For: Two hundred thousand dollars and zero cents	$200,000.00	
199A*	1	LS	Asphalt Price Adjustment (Force)	For: Ten thousand dollars and zero cents	$10,000.00	
200	80	LF	Heavy Post, Plastic and Synthetic Blocked Out Galvanized Corrugated Steel Beam Guide Railing	For:	Contingent	
202	2	EA	Anchorage Units for Heavy Post Blocked Out Corrugated Beam Guide Railing for Driveways	For:	Contingent	
203	2	EA	Anchorage Units for Heavy Post Blocked Out Corrugated Beam Guide Railing for Highways	For:	Contingent	

Item No.	Engineers Estimate	Unit	Item Description			
216	80	LF	Removal of Existing Guide Rail	For:	Contingent	
368	880	SY	Topsoil and Grass Seed	For:		
372A	5	EA	TREE REMOVAL -A- (<6" Caliper)	For:	Contingent	
372B	5	EA	TREE REMOVAL -B- (6" - <12" Caliper)	For:	Contingent	
372C	5	EA	TREE REMOVAL -C- (12" - <24" Caliper)	For:	Contingent	
372D	5	EA	TREE REMOVAL -D- (24" - <36" Caliper)	For:	Contingent	
372E	2	EA	TREE REMOVAL -E- (36" - <48" Caliper)	For:	Contingent	
373A	5	EA	STUMP REMOVAL -A- (4" - <6" Diameter)	For:	Contingent	
373B	5	EA	STUMP REMOVAL -B- (6" - <12" Diameter)	For:	Contingent	
373C	5	EA	STUMP REMOVAL -C- (12" - <24" Diameter)	For:	Contingent	
373D	5	EA	STUMP REMOVAL -D- (24" - <36" Diameter)	For:	Contingent	
373E	2	EA	STUMP REMOVAL -E- (36" - <48" Diameter)	For:	Contingent	

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Item No.	Engineers Estimate	Unit	Item Description			
374A	5	EA	STUMP GRINDING -A- (4" - <6" Diameter)	For:	Contingent	
374B	5	EA	STUMP GRINDING -B- (6" - <12" Diameter)	For:	Contingent	
374C	5	EA	STUMP GRINDING -C- (12" <24" Diameter)	For:	Contingent	
374D	2	EA	STUMP GRINDING -D- (24" <36" Diameter)	For:	Contingent	
419S-075	80	LF	Furnish and Install 3/4" Dia. Steel Conduit	For:	Contingent	
420R	5	EA	Regrade a Pullbox Frame and Cover	For:	Contingent	
422L	16200	LF	Furnish and Install Loop Wire	For:		
422LS	5400	LF	Furnish and Install Loop Saw Cut	For:		
422SHE	5	EA	Adjust Traffic Magnetic Vehicle Detector	For:	Contingent	
619.0901	174000	LF	Temporary Pavement Markings, Stripes, Traffic Paint	For:		
680.54	550	LF	Inductance Loop Installation	For:		
680.72	1650	LF	Inductance Loop Wire	For:		

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Item No.	Engineers Estimate	Unit	Item Description			
685.072001NA	121000	LF	Highly Reflectorized White Epoxy Pavement Stripes – 20 mils (Triple Drop)	For:		
685.072002NA	115	EA	Highly Reflectorized White Epoxy Pavement Letters – 20 mils (Triple Drop)	For:		
685.072003NA	210	EA	Highly Reflectorized White Epoxy Pavement Symbols – 20 mils (Triple Drop)	For:		
685.072004NA	21000	LF	Highly Reflectorized White Epoxy Cross Hatching -20 mils (Triple Drop)	For:		
685.072005NA	43000	LF	Highly Reflectorized White Epoxy Pavement Stripes (Special Markings) 20 mils (Triple Drop)	For:		
685.072006NA	98000	LF	Highly Reflectorized Yellow Epoxy Pavement Stripes – 20 mils (Triple Drop)	For:		
685.072007NA	7700	LF	Highly Reflectorized Yellow Epoxy Pavement Stripes (Cross Hatching) 20 mils (Triple Drop)	For:		
744*	1	LS	Force Account Work	For: One hundred thousand dollars and zero cents	$100,000.00	
762	80	LB	Integral Color Pigment for Cement Concrete	For:	Contingent	
763	80	SF	Imprinting on Concrete Pavement or Sidewalk	For:	Contingent	

*Force Bid

Nassau County Priority Resurfacing – Phase 19
Nassau County, New York

CONTRACT NO. H61587-PR19

GENERAL NOTES

All work included in this contract shall be in accordance with the following Nassau County Standard Specifications and Drawings, if they apply, or modified and amended in the Contract Specifications and Drawings.

a) County of Nassau, Department of Public Works, 2009 Standard Specifications for Civil Engineering and Site Development Construction, or latest edition.

b) County of Nassau, Department of Public Works, Traffic Engineering, Traffic Signal Specifications and Standard Drawings, November 1998 and Addenda, or latest edition.

c) County of Nassau, Department of Public Works, Latest Standard Specifications and Detailsfor the Construction of Sanitary Sewers 2003 or latest edition.

d) New York State Department of Transportation Standard Specifications 2008 and Addenda or latest edition.

1. Scope of Work – It is proposed to mill and resurface the project roadways as follows:

a) Davison Avenue from Oceanside Rd to Brower Ave,
b) Denton Avenue from Main St to Atlantic Ave,
c) Jerusalem Avenue from North Jerusalem Ave/MSP Bridge to Merrick Ave,
d) Jerusalem Avenue from Merrick Ave to Bellmore Ave,
e) Long Beach Road from Mott St to Atlantic Ave,
f) Marcus Avenue from Hillside Ave (NY25B) to Jericho Tpk (NY25),
g) North Central Avenue from West Merrick Rd to Hendrickson Ave,
h) North Jerusalem Road from Jerusalem Rd to Merrick Ave,
i) Ocean Avenue from Lakeview Ave to Hempstead Ave,
j) Old County Road from Herricks Rd to Franklin Ave,
k) Peninsula Boulevard from Rockaway Tpke to Church Ave,
l) Rockaway Turnpike from West Broadway to Queens border/75 ft n.o. East Ave,
m) South Central Avenue from Sunrise Hwy (NY27) to West Merrick Rd.

2. Work Order - The Contractor shall start the work within two weeks at a selected location upon receipt of a work order issued by the Commissioner, together with a site plan or sketch showing the proposed work to be done. The Contractor shall notify the County 48 hours prior to the start ofany work order.

3. The Contractor shall maintain and protect traffic within the limits of and for the duration of the contract (work order) in accordance with the plans and specifications and as directed.

4. **NOTE: If ROW at any intersection is not shown in the Construction Plans to mill and repave,paving limits will be the flow line or determined by the Engineer in Charge. Also, the Engineer in charge will determine if a topographic survey must be performed to establish a proper flowline.**

5. **NOTE: <u>Compliance with Law.</u>**

<u>Prohibition of Gifts</u>. In accordance with County Executive Order 2-2018, the Contractor shall not

offer, give, or agree to give anything of value to any County employee, agent, consultant, construction manager, or other person or firm representing the County (a"County Representative"), including members of a County Representative's immediate family, in connection with the performance by such County Representative of duties involving transactions with the Contractor on behalf of the County, whether such duties arerelated to this Agreement or any other County contract or matter. As used herein, "anythingof value" shall include, but not be limited to, meals, holiday gifts, holiday baskets, gift cards,tickets to golf outings, tickets to sporting events, currency of any kind, or any other gifts, gratuities, favorable opportunities or preferences. For purposes of this subsection, an immediate family member shall include a spouse, child, parent, or sibling. The Contractor shall include the provisions of this subsection in each subcontract entered into under this Agreement.

Disclosure of Conflicts of Interest. In accordance with County Executive Order 2-2018, the Contractor has disclosed as part of its response to the County's Business History Form, or other disclosure form(s), any and all instances where the Contractor employs any spouse, child, or parent of a County employee of the agency or department that contracted or procured the goods and/or services described under this Agreement. The Contractor shall have a continuing obligation, as circumstances arise, to update this disclosure throughout theterm of this Agreement.

6. **Work Hours**

Special Condition: Unless otherwise specified in other sections of this Contract, the Contractor maynot close an active travel lane during peak travel times. Any requests to close the lanes between 6:30 AM and 9:00 AM and/or between 4:00 PM and 6:30 PM must have written approval 72 working hours in advance. If approval is obtained and excessive congestion results, the approval will be withdrawn by verbal notice from a County Representative and no claim for additional compensation will be considered valid.

Unless otherwise specified by the Engineer, the Contractor is directed, due to excessive congestion, to perform all work at night between the hours of 9:00 PM to 5:00 AM on specified roadways, which includes but is not limited to:

a) Long Beach Road from Mott St to Atlantic Ave,
b) Marcus Avenue from Hillside Ave (NY25B) to Jericho Tpk (NY25),
c) North Central Avenue from West Merrick Rd to Hendrickson Ave,
d) Ocean Avenue from Lakeview Ave to Hempstead Ave,
e) Old County Road from Herricks Rd to Franklin Ave,
f) Peninsula Boulevard from Rockaway Tpke to Church Ave,
g) Rockaway Turnpike from West Broadway to Queens border/75 ft n.o. East Ave,
h) South Central Avenue from Sunrise Hwy (NY27) to West Merrick Rd.

If the contractor does not adhere to the specified time limit on each roadway, a $ 5,000.00 per daypenalty for each infraction shall be deducted from Item 102X - Work Zone Traffic Control Day, 102Y - Work Zone Traffic Control Night. Nassau County DPW shall utilize the information contained on/in the Inspector Daily Work Reports to determine when an infraction has occurred.

Work is not permitted on all Nassau County holidays unless prior County Approval is obtained. This includes, but is not limited to Memorial Day, Independence Day, Labor Day, Columbus Day,Election Day, Veterans Day, from 12:00 on the Wednesday before Thanksgiving Day through thefollowing Sunday, Christmas Eve, Christmas Day, New Year's Eve, New Year's Day, and variousJewish Holidays including, but not limited to Rosh Hashanah, Sukkot, Shemini Atzeret, Simchat Torah, Yom Kippur, Chanukah.

During nighttime operations, the Contractor shall supply portable lights on his equipment and to light up the work area. There will be no additional payment for the increase in cost to supply lightsand/or nighttime wage differential.

The Contractor, at his option and at no additional cost may install the pavement markings during night-time hours with prior approval by the Engineer. County pavement marking inspection staff will be provided 3 working days to inspect and approve the pavement marking layouts before the permanent installation occurs.

7. The contractor will be required to adjust traffic pullboxes and/or municipality-owned electric pull boxes under Item 420R, “Regrade Pull Box Frame & Cover”. Manholes, 30” diameter and larger Nassau County Sanitary Sewer Manholes will be paid under Item 16X, “Adjusting Manholes”.

   No inserts are to be used. Castings must be physically raised, except Adjustable Frame type. Wheredrainage and sanitary manholes are of the adjustable frame type, a maximum of two (2) one-inch adjustment rings will be allowed to bring casting to finished grade.

   All non-adjustable Nassau County drainage manhole frames and castings raised under Item 16X - Altering Brick Manholes, shall be replaced with new adjustable two-part manhole frames and castings including new cover. No adjustment rings shall be allowed in these castings. They shouldbe raised to the proposed roadway grade. No payment will be made for manholes that are not set toproper grade. Payment for these new frames, covers, and castings shall be made under Item 34 - Miscellaneous Metals. If debris is found by the Contractor's carelessness in raising the drainage manholes, it must be cleaned out immediately. For the safety of public, the Contractor shall ramp around all the manhole castings and valves with temporary asphalt after milling or raising the castings. If the Contractor fails to ramp the castings and valves, there shall be no payment for that day/night.

8. It is also intended to replace traffic loops that are destroyed by the Asphalt Removal and/or Pavement Removal under Items 422L “Furnish & Install Loop Wires” and 422LS “Furnish & Install Loop Saw Cut”. The work to be done under these items shall be in accordance with the Nassau County Traffic Signal Specifications, Standard Drawing and Addenda notes and/or as ordered by the Engineer. The Contractor must coordinate all work with the New York State Department of Transportation’s Traffic Section (where appropriate) and Nassau County’s Engineering Unit’s Signal Management Section at 516-572-0465, extension 20958.

   Any existing traffic signal post, pole, mast arm shaft, or strain pole affected by the installation of handicap ramps or changes in grade must be height adjusted to bring the base plate to match new grades, including removing the pole/post and adjusting the anchor nuts, and reinstallation of the pole and equipment. Existing raincap is to be removed and new one installed as per the Nassau County traffic signal foundation item specifications.

   All signal head heights must be checked before any pole height is adjusted so that they continue to meet signal head height requirements. All traffic signal pushbuttons need to be adjusted in height to be ADA compliant, if affected by the ramp installation which includes changes in grade from existing and meet the Nassau County traffic signal specifications.

   If any existing Nassau County owned streetlight poles are affected by the installation of handicap ramps or changes in grade the contractor must notify Nassau County Traffic SignalManagement prior to the start of any work.

   The Contractor must notify Michael Kurpisz of the Nassau County Traffic Signal Management Section before any work begin by calling 516-572-0465, ext. 20958 and by email mkurpisz@nassaucountyny.gov A Nassau County inspector must be present during this work.

9. The Contractor will be responsible, at all times, for the safety of the general public, and for the protection of persons who may for any reason enter within the limits of his work.

10. The Contractor shall employ flagmen when deemed necessary by the Engineer and shall erect proper warning signs and necessary barricades to protect the general public and to warn them of changes caused by the progression of his contract. The contractor is responsible for work zone safety as per OSHA requirements.

11. Prior to the start of work, the Contractor shall notify the local police, fire department, school district,utilities and all municipalities within the proximity of the work order limits or if they may be impacted by the work in anyway, as to the conditions prevailing on the construction site.

12. The Contractor must, at all times, provide a safe and uninterrupted two-way traffic over the roads under construction, unless a detour plan is provided and approved by the County.

13. Lighted Barricades, Flashing Warning Lights and Signs:

    a) Must be serviced a minimum of twice each week.
    b) Must be checked and maintained by the Contractor each day, including weekends andholidays.
    c) Must be secured or weighted in such a manner as to prevent them from blowing over underwindy conditions.
    d) Must be in accordance with the latest Manual of Uniform Traffic Control Devices.

14. No direct payment shall be made for the above items of work, but the cost shall be included in the price bid for Item 102X, Work Zone Traffic Control Day & Item 102Y, Work Zone Traffic Control Night.

15. Conformance to the following notes with respect to the American with Disabilities Act Curb Rampsis required:

    - All curb ramps installed shall be in compliance with the ADA, PROWAG, and NCDPW standards.
    - Contractor shall verify the placement of all new ramp configurations prior to installation. Contractor must give 48 hours (2 business days) notification for NCDPWapproval.
    - A NCDPW inspector must be present during the installation of any curb ramp.
    - It is recommended that a smart level tool (or equivalent) is used to check the slopes on allform work prior to the placement of concrete.
    - NCDPW Civil Engineering Design Unit must be notified in writing of all work done to curb ramps to update the transition plan inventory.

    NOTE: The contractor will be required to maintain safe pathways for pedestrians during the entire time the contract is in effect, including all periods of work shutdown. This may involve mowing of grass, removal of snow and ice, and any other interruptions interfering with theirsafe travel through the construction zone. Failure of the contractor to ensure safe pedestrian passage as determined by County staff, or from pedestrian complaints in the work zone will result in a fine of $ 500.00 a day. This fine will be deducted from any funds owed the contractor.

16. The Contractor must submit to the Engineer a schedule of work order locations at which he will beworking and a tentative schedule of dates that he intends to be at said locations. All work will be done during a normal eight (8) hour day, Monday through Friday. If the Contractor chooses to work beyond the normal work hours, the Contractor will be responsible for reimbursing the County for the additional cost, including benefits costs of any County employees and/or County representatives working for the County that work these overtime hours.

    Note: If work is done under a County declared emergency condition, this provision will not apply.

17. The Contractor will not be allowed to commence more than three (3) work orders at any one time.If the County issues a written declaration of an emergency a fourth work order may be started priorto one of the three in progress work orders being 100% complete. However, at no time will more than four Work Orders be in progress.

18. Payment for the work performed under each Work Order, shall be made upon the completion and acceptance by the County. However, final payment will not be made until all punch list work is completed to the satisfaction of the Engineer.

19. All weather and temperature requirements specified by the Manufacturers for materials used mustbe adhered to.

20. Where there are fire hydrants situated along a section of roadway where markers are to be installed,blue double-faced markers shall be installed in line with the hydrant (as required).

21. **Pavement Restoration**

a) Stone Base Pavement

(1) Longitudinal Openings
   (a) The pavement over the trench shall be cut back a minimum of 6" on both sides of the trench to insure an even edge.
   (b) If the remaining longitudinal strip is less than 3 feet on one side, the total width of the cutback, trench and side strip must be replaced.

(2) Transverse Openings
   (a) The Pavement over the trench shall be cut back a minimum of 6 inches on both sides of the trench to insure an even edge.
   (b) Asphalt plant mix, dense base or concrete, shall be used for the replacement of the stone base pavement removed.

b) Concrete Base and Finished Concrete Pavement

(1) Longitudinal Openings
   (a) The entire panel width must be removed and replaced. Ends of panel to be saw cutif not at a transverse joint.
   (b) In no case shall any portion of the existing panel that is less than 6 feet from a transverse joint be left in place.
   (c) When concrete base panels with macadam overlays are to be removed, the Black Top shall be cut back a minimum of 6 inches onto the adjacent panels to provide asmooth vertical edge on the Black Top.

(2) Transverse Openings
   (a) Transverse openings shall be saw cut 90 degrees to the longitudinal joints.
   (b) Pavement replacement to be a minimum of 2 feet on both sides of the trench, anda total minimum of 6 feet wide.
   (c) In no case shall any portion of the existing panel that is less than 6 feet in length from a transverse joint be left in place.
   (d) Where openings are skewed across the pavement the concrete replacement must be carried straight across each panel and not staggered. No portion of the existingpanel that is less than 6 feet from a transverse joint should be left in place.

22. The contractor shall ensure that the “Longitudinal Joints” in the top course correspond with the edges of the proposed traffic lanes or are located under the pavement markings. Longitudinal jointsin the travel lanes wheel path shall be avoided. The crown of the roadway will *not be relocated forany reason.* Joint arrangements will require approval by the Engineer. The contractor must submita detailed mat layout three (3) working days prior to any paving operations.

23. Item 36CX in this contract shall be used to fill all joints and cracks greater than one-inch (1”) in the existing

pavement as outlined in Nassau County Standard Specifications Item 133XF.

24. Truing and Leveling will only be used when shown on the plans or as directed by the Engineer. Ifthis Item is in the plans or directed to be installed separately other than the top course installation payment will be made under Item 36DRAR.

25. **Cleaning Drainage System**

The Contractor shall clean all drainage systems within the project limits as determined by Engineer, including but not limited to pipes, manholes, catch basins, inlets. Work shall be paid for as per specifications for Item 12H and Item 12H-X.

26. All work performed under this contract shall be in compliance with **Appendix EE**, "Equal Employment Opportunities for Minorities and Women". As part of the "Detailed MBE/WBE Utilization Plan" the contractor shall provide documentation that a good faith effort was made to meet the intended goals. Also, all work performed under this contract shall include an SDVOB goalof 6% or Good Faith Effort.

27. **Procedure to Ensure Worker Safety**

Work Zone safety was addressed in the contract documents. In addition, the County and contractorwill discuss Work Zone safety issues at the pre-construction meeting. The contractor shall providea safety plan (including subcontractors). The County Project Manager/Consultant R.E will ensure that the contractor has on site at all times at least one person skilled in safety and health proceduresfamiliar with State and Federal safety and health regulations, whose responsibility it will be to monitor methods and procedures. NCDPW will review and approve prime contractor's Health & Safety plan as per NYSDOT Specification 107-05.

It is the Contractor's responsibility to only have on site for the particular contract those workers who successfully completed the OSHA 10-hour construction safety course, and to have each of theworker's certificates of completion with the project records, available for review by NCDPW.

The Health & Safety Plan must be approved by NCDPW prior to the start of contract work.

The Prime contractor will keep NCDPW informed as to their safety meeting schedule. Include withthe schedule (whether it is monthly or weekly etc.) any meeting minutes, as well as sign-in sheets as part of the project file/records.

28. **Maintenance of Traffic**

a) Maintenance and protection of traffic will be paid on a per day/night. No work shallcommence until all appropriate traffic devices have been placed and functioning.

b) If in the judgment of the Engineer, traffic is not properly and adequately maintained, no paymentwill be made to the contractor for those days/nights. The price bidshall include the cost of furnishing all labor, materials, tools, and equipment necessary to satisfactorily complete the required to safely maintain traffic.

29. **Utilities**

a) The Contractor is directed to notify all utilities well in advance of beginning work, to allow themto mark-out their facilities.

b) The Contractor is directed to notify all privately-owned utilities well in advance of beginning work, to allow them time to adjust their manholes and other castings.

c) The Contractor will see to it that utility valves and manholes are readily accessible at all times. The Contractor will not store materials over them and should it become necessary to cover the valves and manholes with soil, will devise a method for finding them quickly and assist the UtilityCompany to uncover them. Further, all utilities will be uncovered during non-working hours.

d) Prior to the award of contract, the Contractor will be required to submit a list, certified by National Grid, of his key personnel who have taken the National Grid Safety Course along with a statementthat sufficiently trained personnel will be available on the job site at all times.

e) Mechanical excavation will not be permitted within two feet (2') on either side of any utility or house service so marked by the utility company. Hand digging will be required to expose the utility pipe. All provisions of 16 NYCRR Part 753 shall apply.

f) Prior to backfilling, a National Grid representative will inspect all gas facilities and any damaged pipe will be repaired by the utility company. The Contractor's attention is called to existing PSE&G overhead lines. The Contractor is warned to keep all equipment and personnel a minimum of ten feet (10') from any conductor. The Contractor shall fully cooperate with PSE&Gand comply with its requirements for safe operations.

g) The Contractor's attention is called to the fact that there are utilities, both publicly and privatelyowned, that are within the contract area. The owners of privately-owned utilities may be relocating parts of their existing plants to conform to the new lines and grades of this project. TheContractor shall cooperate with the various agencies carrying out the work, which must be coordinated with the work of this contract.

h) Existing structures, utilities and facilities, either shown or not shown on the plans, above or below the ground, may not have been located accurately. The Contractor shall determine the locations and elevations of pertinent structures, utilities and facilities, before new installations are started so that there will be no interference with the progression of the work. Any conflict between existing structures, utilities and facilities and the new items of work shall be ascertained by the Contractor prior to commencing any work under the respective items and called to the attention of the Engineer. It is the responsibility of the contractor to protect and maintain utilities or utility structures while working "in proximity". No additional payment will be made for this purpose.

i) Grades and locations of new installations may be changed by the Engineer, if possible, to preventconflict with existing installations. Therefore, the Contractor shall locate all existing installationsaccurately, both as to line and grade before new items of work are started.

j) If the above procedure is not followed by the Contractor and new work has to be removed and replaced, or there is a delay, all the cost will be borne by the Contractor and the County will only pay for the amount of the items in place complete at the completion of the work.

k) The Contractor shall exercise extreme care in the performance of any operation, in the vicinity of the existing or relocated cable pipelines. No such operations shall take place without proper personnel of PSE&G on hand. All excavation in the immediate vicinity of these lines shall be done by hand, with such application as to ensure that the pipe shall not be punctured or the coatingdisrupted. In the event that any length of cable pipeline is exposed, it shall be supported and protected to the satisfaction of PSE&G inspection personnel. No blind sheeting shall be driven in the proximity of the existing electric cable pipes before first exposing these cable pipes by hand.

l) The Contractor should inspect the utility companies' plans to ascertain the location of the underground work and locations of crossings of sewer and drainage work. The Contractor shall coordinate his work with the work being done by the utility companies. It is anticipated that job meetings will be held at various times to aid in coordination of the work.

30. Protection of Facilities - The Contractor shall protect all new work done under this contract from possible injury for the duration of the Contract. He shall be responsible for the repair or replacement, to the satisfaction of the Engineer, of any material, structure, or property on or adjacent to the site and damaged by him or his employees through the construction and demolitionoperations up to the time of acceptance by the County.

31. Drainage Installations - The Contractor shall plan his work and progress, so that at all times eitherthe new or the existing drainage facilities will function to carry off liquids so that no damage or inconvenience will

result.

32. **Clean-Up**

a) Prior to final acceptance of the work under this Contract, the Contractor shall clean the pipe, manholes and catch basins where construction was undertaken, of accumulated dirt, sand or other materials which have washed into them. No direct payment shall be made for the aforementionedwork; but shall be included in the prices bid for the various items of the Contract.

b) The Contractor will be required to restore to original condition all areas, outside the work limits,that are disturbed by him during the life of this contract. No separate payment will be made for any of this clean-up and restoration work, but the cost thereof shall be included in the unit prices bid for various items.

33. **Subletting**

The attention of all bidders is directed to the provisions of Article 20, Sublet or Assign, relative tothe percentage of work that may be assigned or sublet, which provisions will be enforced by the County in the manner it deems advisable.

34. **Job Site Safety**

Precaution shall be exercised by the Contractor at all times for the protection of all personnel. Thesafety provisions of applicable laws shall be observed, but job site safety is the sole responsibilityof the Contractor and his subcontractors and cannot be assumed by the County or its agents.

35. **Rubbish and Debris**

The Contractor shall legally dispose of all unsuitable material, rubbish and debris at some separate location, not in the vicinity of the site.

36. **Concrete Breaking**

The Contractor is cautioned that the use of a ball operated from a crane or other equipment will not be permitted under any circumstances for the breaking up of any concrete or other demolitionwork. Any machine or method used must meet the approval of the Engineer.

37. **Sales Tax Exemptions**

Nassau County is exempt from the payment of New York State Sales Tax and Compensating UseTaxes under Section 1116 of Article 28 of the Tax Law of the State of New York and is exempt from the payment of Nassau County Sales and Uses taxes under Section 7, Ordinance 404-C- 1968, enacted pursuant to Section 1210 of Article 29 of the Tax Law of the State of New York.
However, it is not to be construed by bidders as relieving them from any obligation to pay salestax on applicable items pursuant to the terms of the present sales tax laws.

38. **Cold Patch**

Payment for cold patch material used in this contract is included in the cost of the Item 102X or 102Y; no additional payment shall be paid for this material.

39. **Requirements of Other Municipal Departments**

The Contractor shall give all necessary notices, obtain all permits and pay all fees in connection with the work under this contract. He shall comply with all laws, ordinances, rules and regulationsof Nassau County and Municipal Departments having jurisdiction over work of this character.
These shall take precedence over any requirements of these Specifications where and if a conflictoccurs.

This, however shall not be interpreted as permitting the use of materials and equipment inferior to those specified.

40. The Contractor shall notify the Nassau County Dept. of Public Works at (516) 571-9600 prior to the removal and relocation of bus shelters and/or benches. Shelters shall be taken out of service forthe shortest amount of time possible. The Contractor is directed to relocate bus shelters and/or benches in kind, the cost of this removal and reinstallation shall be included in the cost of applicable unit price bids. The seven-inch (7") thick concrete slab for shelters, is to be paid for under Items 28 and 30. The planning Commission reserves the right to have its vendor relocate their advertising bus shelters and/or benches.

41. **Private Facilities in Public Rights-of-Way (ROW)**

a) The Contractor shall be aware that sprinkler heads, private lamp and sign posts, signs, electric signs, electric lines, water service, oil inlets, oil lines, horticultural planting, landscaping, etc. were owned privately, but exist in the public ROW. The Contractor may be required to remove these appurtenances as ordered by the Engineer.

b) Payment for this work will be included in the price bid for various items in the Contract.

42. **Special OSHA Notes**

a) Safety Provisions in the Specifications are primarily to protect County Property and the public against unsafe acts of the Contractor. The Occupational Safety and Health Act of 1970 (OSHA) requires that "Each Employer" (1) shall furnish to each of his employee's employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees; (2) shall comply with the occupational safety and health standards promulgated under this Act."

The regulations in the act may be more stringent than are required by the Plans and/or Specifications. The Contractor however must conform to the OSHA Regulations and such conformance shall not be reason to demand additional payment or claim extra work.

b) Sheeting shall conform strictly to the Requirements of the OSHA Regulations forConstruction Subpart P, Excavation, Trenching and Shoring:

1926.650	General protection requirements;
1926.651	Specific excavation requirements;
1926.652	Specific trenching requirements;
1926.653	Definitions applicable to this subpart.

43. The Contractor shall notify the Nassau County Police Department, local Fire Department and Metropolitan Suburban Bus Authority in writing as to the conditions prevailing on the constructionsite and detours in use. Duplicate copies of such notices shall be filed with the Engineer.

44. The Contractor shall obtain the necessary permit from the water district to allow rollers to be filledwith water from fire hydrants. Intakes shall be fitted with either an "Airgap" or "Double Check Valve Assembly" to prevent water from the roller from entering the public water system.

45. The Contractor shall be required to hand out notices to the local homeowners and businesses affected by the asphalt milling and asphalt paving operations, twenty-four (24) hours prior to starting work. A sample letter is attached at the end of these General notes.

The Contractor must set up portable variable message sign boards three days prior to the start of asphalt milling and asphalt paving operations giving the dates when work is going to start and workhours, at the limits of the job site. Payment will be made under Item Number 102PVMS, "PortableVariable Message

Sign."

The Contractor shall notify the local police department, fire department/district, school district, utilities and all municipalities within the proximity of the work limits or if they may be impacted by the work in any way, prior to the start of the work, as to the conditions prevailing on the construction site.

46. All areas of pavement excavated under Items 111 and 138 shall be completely filled in at the end of the work day. All lanes of traffic shall be opened at the end of each work day.

47. The Contractor shall replace wire sensors where encountered under various traffic items (Item 422L, 422LS & 422SHE).

The Contractor shall be required to place all the traffic signals to "re-call" position immediately before milling or paving within the project limits, if the operation is going to affect the traffic signals.

48. **Schedule**: The Contractor shall provide a detailed written schedule of operations for when work will be started and completed for each Work Order to be resurfaced within the Contract one week after the Notice to Proceed is issued. Typical information to be provided includes, but is not limitedto:
a) Removal and replacement of deteriorated pavement and joint;
b) Asphalt removal;
c) Asphalt placement;
d) Miscellaneous items, cleaning catch basins, remove and replace guiderail;
e) Traffic pavement markings;
f) Punch list

No claims will be processed until the County has this updated information on a bi-weeklybasis until the project has been completed.

49. Test Cylinders - The Contractor will provide a place for concrete test cylinders close enough to thework so that the cylinders share the same curing conditions. The Contractor will protect these cylinders for the three days they will be left on the job site.

50. **Construction in the Metropolitan Transportation Rights of Way**

No work shall be performed within the Rights of Way of any MTA/LIRR facilities. The Contractor is to inform the County of all concerns prior to the start of construction on roadways that intersect the MTA/LIRR facilities both at-grade or grade separated crossings.

51. **Construction in the City of New York Rights of Way**

a) Permits - Shall be obtained by the Contractor from the City of New York for all work within Cityrights-of-way. He shall pay for all costs of obtaining such permits including costs of City inspection.

b) General - Acceptance of all work within City rights of way shall be subject to the inspection and approval of the Transportation Administration Administrator, Office of Construction Coordination, 40 Worth Street, New York, N.Y. 10013.

c) Payment - No separate or additional payment will be made for conforming to the various requirements of the City of New York Transportation Administration but the cost thereof will bedeemed included in the appropriate Contract Items without regard to differences in materials, thickness and types of pavements and methods of construction, temporary construction or maintenance of traffic.

52. The contractor when submitting shop drawings for approval must specify the work order number and location that said shop drawings will be used.

53. Erosion and Sediment Control: The contractor shall assume responsibility for the temporary control of soil and water pollution that could potentially result from construction activities and shallbe in accordance with Federal, State and Local regulations, as well as the Contract specifications and directions of the County representatives. In essence all necessary precautions shall be taken toprevent contamination of waters and surrounding areas by slit, sediments, fuels, solvents, lubricants, epoxy coating, wet concrete, concrete leachate, washings from concrete equipment or any other pollutant associated with drilling and constructions procedures. Specific reference is made to the New York State Department of Environmental Conservations' "Guidelines for UrbanErosion and Sediment Control", along with any subsequent updates. Associated costs for erosion and sediment control, inspection and maintenance of the same as mentioned above, including any permits required, shall be included in the unit prices for individual items.

54. When ordered, all concrete supplied for Items 26, 27 and 28 will include an admixture such as willassure compressive strength cores of 2500 PSI in 48 hours. The admixture will be added to the concrete at a rate recommended by the supplier. The cost of the admixture will be included under Items 26, 27 & 28.

55. The contractor shall have a full time Supervisor, fluent in English on the project at all times.

56. No permanent asphalt top course will be allowed to be placed after December 1st (unless approvedby the Commissioner and as long as other conditions are met per specification).

57. All layout of temporary pavement markings must be completed immediately after paving and prior to opening the newly paved surface to traffic. The cost of all layout of traffic pavement markings shall be included in the various items of the Contract.

58. The contractor must contact the Resident Engineer or Harold Lutz of the Nassau County Traffic Engineering by calling (516) 571-9453, within 48 to 72 hours prior to final pavement marking placement. On all roadways resurfaced under this contract, highly reflectorized epoxy pavement markings shall be placed as follows:

    New PCC Surfaces: Do not apply permanent epoxy pavement markings on new PCC surfaces until at least 30 days after placement, or such time as determined by the Engineer, to allow adequate cure of the PCC.

    New Asphalt Surfaces: Do not apply permanent epoxy pavement markings on new asphalt pavement surfaces until at least 14 days after placement.

    A $1,000.00 per day penalty will be deducted from the various asphalt items after 3 business days from the date when the permanent pavement markings are allowed to be placed until the permanent pavement markings are placed.

59. The contractor must notify the Resident Engineer and Jeff Lindgren of the Nassau County Traffic Management Section prior to any lane closures by calling (516) 571-6998, by email jlindgren@nassaucountyny.gov, or TrafficHelp@nassaucountyny.gov; two (2) of the three (3) forms of contact must be used to ensure contact has been made.

    The contractor must submit any lane closure to Nassau County Traffic Management website: https://apps.nassaucountyny.gov/trafficmanagement/closureform.php

60. Any existing traffic signal post, pole, mast arm shaft, or strain pole affected by the installation of handicap ramps or change in grade must be height adjusted to bring the base plate to match new grades, including removing the pole/post and adjusting the anchor nuts, and reinstallation of the pole and equipment. Existing raincap is to be removed and new one installed as per Nassau County traffic signal foundation item specifications. All signal head heights must be checked before any pole height is adjusted so that they continue to meet signal head height requirements.

    All traffic signal pushbuttons need to be adjusted in height to be ADA compliant, if affected by the ramp

installation which includes changes in grade from existing and meet the Nassau County traffic signal specifications.

All traffic signals shall be placed on recall mode prior to any milling or asphalt paving.

The contractor must notify the Resident Engineer and Michael Kurpisz of the Nassau County Traffic Signal Management Section by calling (516) 572-0465, ext. 20958 or by email mkurpisz@nassaucountyny.gov prior to any work involving alteration of traffic signal equipment orinfrastructure including placing traffic signals within the work area on recall if required and returnthem to the existing operation once all work is completed. A Nassau County Traffic inspector mustbe present upon the completion of this work.

61. The contractor must notify the Resident Engineer or Nassau County Project Manager and coordinate with Nassau County Traffic Signal Management Section all required traffic loop installations.

62. The contractor is to notify all privately owned utilities at least 5 business days before starting workto permit the utility time to adjust their facilities.

63. The contractor will also be required to adjust all municipality owned drains, sewers, and/or water -manholes, surface inlets, and/or meter pits, under Item 16X-Adjusting Manholes, and Water Valvesunder Item 114 - Adjustment of Water Valve Box Elevations.

The contractor must notify all water districts and/or municipality owned water companies of any water valves that cannot be opened so that they can be adjusted, prior to resurfacing the roadways. Any that the County receives for manholes and/or water valves not raised will be referred to the contractor to rectify at no cost to the County of Nassau.

If any water valve and/or gas valve box tops are milled off, complete replacement of the valve boxtop section will be required at no cost to the County of Nassau.

64. Under Item 116A a depth of1" – 2" is required. Any depth greater than 2" and/or as ordered by the Engineer shall be prorated for payment. On a completely milled roadway, temporary 4" wide traffic lines shall be painted directly after the milling has been completed. The cost shall be included in Item 102X or 102Y.

65. Survey Stakeout - Survey work shall be paid for under Survey Stakeout (Item 136S) only when done with prior written approval of the project manager. When the work is completed in less than an 8 hour shift the payment will be prorated for the actual time required. Survey work done to determine the contractors' payment will not be paid for under this item.

66. **Sanitary Sewer Notes**

a. The Contractor shall notify the Water/Wastewater Engineering a minimum of two (2) working days prior to work involving any sanitary sewer facilities. Notification is to be made by calling (516) 571-6841

b. All work shall be in accordance with NCDPW Standard Specifications and Details for the Construction of Sanitary Sewers, latest edition 2003. All work must be performed in the presenceof a Nassau County inspector.

c. All sanitary sewer house connections and laterals shall be located prior to any excavationby Contractor.

d. The Horizontal/Vertical separation of sewer and drainage pipe or water main/services shall meet or exceed the requirements outlined in the RECOMMENDED STANDARDSFOR SEWAGE WORKS (Ten States Standards), latest edition.

e. Where sanitary or house connection sewers cross over a drainage trench area, the sewer shall be replaced with Ductile Iron extending a minimum of five feet (5') each side of crossing to undisturbed soil. The same replacement shall apply for sewers under a drainagetrench area within twelve-inch (12") clearance, bottom of drain to top of sewer.

f. All pipes, manholes and appurtenances shall have the County approval stamp thereon or written certification acceptable to the County, before the material can be installed.

g. Where it is necessary to raise sanitary sewer manhole castings to grade for repaving, fixedframe castings must be raised either by adjusting the height of the brick masonry or usingan approved insert (metal inserts are not permitted). Adjustable frame type manholes maybe raised by adding up to a maximum of two, one-inch (1") adjustment rings to achieve final grade.

h. All non-adjustable sewer manhole castings will be replaced with new adjustable manhole castingsunder Item 34-Miscellaneous Metals and installed under Item 16X. The cost of painting them with two coats of asphaltum paint shall be included in the various items of the contract.

Proper adjustment of sanitary sewer manholes to finished grade will be required on all Nassau County owned facilities. The contractor shall notify Water/Wastewater Engineering of Nassau County, two (2) working days prior to work involving our sanitary sewer facilities. Notification is to be made by calling (516) 571-7502 or (516) 571-7505.

No inserts are to be used. Manholes must be physically raised, except Adjustable Frame type (seebelow).

Where sanitary sewer manholes are of the adjustable frame type, a maximum of two (2) one-inch adjustment rings will be allowed to bring casting to finished grade. No payment will be made for manholes that are not set to proper grade.

Prior to final acceptance of the project, the contractor shall make a final inspection with the County representative of all sanitary sewer manholes to make sure there is no debris inside themanholes that would cause a blockage. If any debris is found, it must be cleaned out immediately.Also, if a blockage is caused by the contractor's carelessness in raising the manhole, he will be responsible for any cost incurred for cleaning the blockage and any legal suits that are brought against the County of Nassau for damage caused by this blockage.

i. The contractor shall comply with all OSHA requirements for entry into a confined space whenever it is necessary for a contractor's employee to enter a Nassau County sanitary sewer manhole. The minimum requirements the contractor must comply with are:

a. Contractor issued ENTRY PERMIT.
b. Confined space entry monitor to test for toxic, explosive and oxygen deficient atmosphere.
c. Confined space rescue and retrieval equipment.

The contractor will not be permitted to work in a Nassau County sanitary sewer manhole unless he complies with *all* applicable OSHA requirements.

67. At all times during the life of this contract, the Contractor shall maintain safe vehicular traffic andaccess to adjacent private properties located throughout the entire length of the contract.

68. All concrete required for this Contract shall be air entrained. Except as otherwise specified, all cement used on this project shall be Type 2A (air entraining) or Type 2 with an approved air entraining agent added to the mix to produce air entranced concrete. Air entraining admixtures shallconform to the requirements of

Volume One, Part Two, Section B, material M21, Admixtures of the 2009 Nassau County Standard Specifications.

69. The Contractor will provide a place for concrete test cylinders in proximity to the work so that the cylinders share the same curing conditions as the newly placed concrete. The Contractor will protectthese cylinders for the three days they will be left on the job site.

70. Nassau County Drainage Manholes

All Nassau County drainage manhole frames and castings raised under Item 16X, shall be replaced with new adjustable two part manhole frame and casting including new cover. No adjustment rings will be allowed in these castings. They must be raised to the proposed roadway grade. Payment for these new frames, covers, and castings shall be made under Item 34 - Miscellaneous Metals. No payment will be made for manholes that are not set to proper grade. If any debris is found by the contractor's carelessness in raising the drainage manholes it must be cleaned out immediately.

71. The contractor will be required to remove all existing plowable markers prior to the paving operation. Payment for the removal of existing plowable markers will be included in the cost of the various bid items. The voids left from the removal of the plowable markers will immediately be filled with Asphalt Cement, Type lA, which will be paid for under Item 36DRAR. Plowable markers will be replaced as ordered by the Engineer.

Where there are fire hydrants situated along a section of roadway where markers are to be installed, blue double-faced markers shall be installed in line with the hydrant (as required).

72. The contractor will be required to remove the following traffic markings just prior to the paving operations: *crosswalks, arrows, and stop lines.* Payment for removing these traffic markings will be included in the cost under Item 36DRAR. Non paving areas (side streets)traffic pavement markings shall be removed under Item 137.

73. When the final yield factor is not within the tolerances specified of the County worksheets for Item36DRAR, plus the leveling used in Item 36DRAR, maximum payment of asphalt in those items shall be shown below:

Percent over Engineer's Estimate:	*Maximum Payment*
5 to 10 Percent	95 percent of the total asphalt material delivered to the project
Greater than 10 to 20 Percent	90 percent of the total asphalt material delivered to the project
Greater than 20 Percent	85 percent of the total asphalt material delivered to the project

74. GA-GC -Asphalt Quality Control at Asphalt Plants – if ten (10) Nassau County DPW Lab samples fail due to low AC content and/or 15 gradation samples fail, the approved job mix formula, one (1) percent for each infraction of asphalt concrete produced from that plant will be deducted from the total for Item 36DRAR - Rut Avoidance Asphalt Type lA.

75. The Contractor is responsible to coordinate efforts with NC Permit Dept. and Utilities to resolve pending 239F applications within construction site. Any restoration performed must conform to NCDPW Standard Specifications. NCDPW Permits Department contact information: (516) 571- 6840 / 6841.

76. The Contractor is required to coordinate his work with Public Agencies and Private Utility companies to avoid conflicts and to arrange for castings and appurtenances which are to be adjustedby others in advance of performing any final pavement overlay work. The contractor is required toobtain approval for limits of proposed pavement milling and overlay work, sidewalk ramp type and layout of proposed pavement

markings from a County representative prior to performing any proposed work.

77. **Supplies**

a) As per Item 1M - Mobilization: All the provisions of the Item 1M shall apply with the following modifications: Contractor shall provide one (1) cell phone under this item, so that County's Engineer may maintain contact with inspection forces. It must be a smart phone (type to be approved by the Engineer) with a minimum 256 GB storage capacity along with a mobile chargerand a hard-protective cover. No work may begin until the phone is provided, and service is activated. The smart phone service shall be maintained for the duration of the contract. The phoneshall be replaced at no additional cost to the County if damaged or lost, otherwise cease the operation. No separate cost for mobilization and demobilization will be paid. Cost shall be included in applicable unit price bids.

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Nassau County Priority Resurfacing – Phase 19

Nassau County, New York

CONTRACT NO. H61587-PR19

SPECIAL CONDITIONS

1. Referring to Notice of Award, Agreement section, Page 238, Article XXVII, 'Contractor's Maintenance/Guarantee' – the provision shall apply except "one (1) year from the date of final acceptance of the Contract." should read "one (1) year from the date of final acceptance of each Work Order."

2. Variation from Normal Bidding Procedure

   a) The contract shall terminate upon reaching the time limit of 180 calendar days, unless an extension of time is granted at the discretion of the Commissioner. The County may grant an extension of time to permit the Contractor to complete open or incomplete Work Orders.

   b) As per the Agreement, Article III "Special Conditions", the Commissioner reserves the right to make additions, deductions or changes in writing as he/she deems necessary, at the prices named in the proposal for this work.

   c) The quantities given are based on average weighted units with the exceptions of those items which are on a lump sum basis. All bid prices are to be based upon these average weighted units. The sum total of all the unit prices will determine the low bid; and the subsequent award of this contract.

   d) All Force Bids are fixed cost items and therefore the Contractor must bid the price as stated for all force bid items. If any price other than fixed price is used, The County shall have the right to revise the fixed cost and revise the bid amount accordingly.

   e) The Bidder shall be aware that the limited scope of work on previous Priority Resurfacing projects may not be the same for this project. Typical roadway work such as ADA ramps, curbs, sidewalk, etc will be performed at select locations under this project. The applicable pay items shall be bid accordingly.

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Nassau County Priority Resurfacing – Phase 19
Nassau County, New York

CONTRACT NO. H61587-PR19

SPECIAL PROVISIONS

1. An approved set of plans will be provided to the contractor for each work order showing the limits and scope of work. Work order will note time of completion. Extension of time will only be granted for each work order if requested with proper reason acceptable to the Commissioner.

2. The contractor is alerted that several work orders may be issued at the same time and work shall be performed concurrently.

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Addenda Notes and Modification to the Nassau County Specifications

NOTE: Where a standard Nassau County item has been modified for use under this agreement for payment purposes all the provisions of the standard item will apply unless indicated otherwise herein.

ITEM 1X - CLEARING AND GRUBBING

Please refer to Item No. 1 of the Nassau County Standard Specifications (2009)

(except for C and D).

C. Method of Measurement.

The quantity to be paid for under this item will be the number of square yards of clearing and grubbing provided in accordance with the Plans and Specifications as determined by the Engineer.

D. Basis of Payment.

The price bid per square yard for this item shall include the cost of furnishing all labor, material and equipment necessary to complete the work satisfactorily.

ITEM 12H-X – CLEANING EXISTING DRAINAGE SYSTEM CATCH BASIN

All the provisions of Item 12H, "Cleaning Existing Drainage System" shall apply with the following modifications and/or additions:

1. Description

Under this Item the Contractor shall clean existing catch basins and surface inlets where shown on the Plans and/or as directed by the Engineer.

2. Construction Details

The existing catch basins and/or surface inlets shall be cleaned by removing all debris to the bottom of the basin. Special care shall be taken not to undermine the walls of the structures.

The removal of asphalt pavement from the asphalt removal and asphalt paving operations shall not be included in this Item. The Contractor will be required to remove this asphalt debris at his own expense.

3. Method of Measurement

The quantity to be paid for will be the number of each catch basin and surface inlet cleaned in accordance with the Plans and Specifications.

No payment will be made for asphalt material that went into the basins from the asphalt removal and/or asphalt pavement operation and this material must be removed at the Contractor's own expense.

4. Basis of Payment

The unit price bid for this item shall include the cost of furnishing all labor.

ITEM 16X - ALTERING BRICK MANHOLES

All the provisions of Item 16A, 16B & 16C of the County of Nassau Department of Public Works 2009 Standard Specifications and Detail Sheets for Civil Engineering and Site Development Construction, as currently revised, shall apply with the following modifications and/or additions:

The contractor will adjust municipality owned electric pull boxes and manholes under Item 16X-Adjusting Manholes.

A. Description

a. A 7' x 7' square area shall be saw cut full depth in the existing pavement around each manhole casting that is to be adjusted, thus allowing approximately two feet of space for the use of a plate tamper on the new base asphalt. In the event a transverse or longitudinal joint in the concrete pavement is encountered, a minimum of six feet of pavement must remain, otherwise the Item 111 limit will be the joint.

b. All loose brick and mortar under the casting must be removed and replaced before any new material is used.

c. Final adjustment will be made with use of metal or solid plastic shims and quick set mortar.

d. Surface inlets that cannot be adjusted with inserts will be done as indicated above.

B. Method of Measurement

The number of manholes to be paid for under this item will be the number altered in accordance with the Plans and Structure Sheet, as specified herein and ordered by the Engineer

C. Basis of Payment

The unit price bid shall include the cost of all labor, material and equipment necessary to complete the work except new head-frame castings, metal covers and all other metals furnished and installed as ordered by the Engineer will be paid for under Item 34 – Miscellaneous Metal

ITEM 36CX – ASPHALT CONCRETE TRUING AND LEVELING COURSE TYPE 1A (FOR CRACKS IN ASPHALT PAVEMENT)

All provisions of Item 36C, "Asphalt Concrete Truing and Leveling Course Type 1A" shall apply with the following modifications and/or additions:

A. Description

This item will be utilized to fill all joints and cracks greater than one-inch (1") in the existing pavement, as outlined in Item 107, Cleaning, Filling & Sealing Existing Joints & Cracks in Asphalt Pavement.

ITEM 102X – WORK ZONE TRAFFIC CONTROL (Day)

ITEM 102Y – WORK ZONE TRAFFIC CONTROL (Night)

A. Description

The Standard Specifications for Item 102 shall apply with the following modifications:

During night time operations, the contractor shall supply portable lights, on the road and equipment in order to satisfactorily light up the work area A.O.B.E.

B. Method of Measurement and Basis of Payment

Measurement and payment under this item will be made on a per day/night Basis.

ITEM 133XF – CLEAN AND FILL JOINTS AND CRACKS

All the provisions of Item 133, "Clean and Fill Joints and Cracks" of the NCDPW2009 Standard Specifications and as amended shall apply with the following modifications:

1. Description

Under this Item the Contractor shall clean, seal and fill all joints and cracks ¼" to 1" wide in the existing pavement prior to resurfacing as shown on the Plans and/or as directed by the Engineer.

2. Materials

a. The materials shall conform to the requirements listed below and shall be mixed to a mortar consistency, Mortar Sand – M3A. CATONIC ASPHALT EMULSION Tests on Emulsion.

	Min.	Max.
Viscosity, Saybolt Furol, 77F (25C), Sec	20	100
Viscosity, Saybolt Furol, 122F (50C), Sec	-	-
Storage Stability Test, 1 Day (Difference in percent Residue)	-	1
Stone Coating Test	-	-
Particle Charge Test	Positive Note 1	
Sieve Test, percent	-	0.10
Cement Mixing Test (percent)	-	2.0
Residue by Distillation, percent	57	-
Oil Distillate, Volume Total Emulsion, percent	-	-

b. Tests on Residue from Distillation Test

	Min.	Max.
Penetration, 77F (25C), 100g, 5 sec	40	90

c. Tests on Asphalt Base for Emulsion

	Min.	Max.
Penetration, 77F (25C), 100g, 5 sec	60	100
Solubility in trichloroethylene, percent	99.0	-
Dutility, 77F (25C) 5 cm/min, cm	50	-
Flash Point, degrees F	435	-
Flash Point, degrees C	225	-

d. Suggested Temperature Range

	Min.	Max.
Mixing, degrees F	75	150
Mixing, degrees C	24	66
Spraying, degrees F	75	150
Spraying, degrees C	24	66

e. Note: If the Particle Charge Test result is inconclusive, material having a maximum pH value of 6.7 will be acceptable.

3. Construction Details

All unsealed and inadequately sealed joints and cracks, as determined by the Engineer, shall be subjected to a compressed air stream of at least 80 psig measured at the source. Joints and cracks in the pavement as designed by the Engineer, shall be cleaned of all dirt and loose material holding the cleaning jet 1-inch (1") above the pavement surface. Old joint and crack sealer remaining after such cleaning operation need not be removed. The cracks shall be kept clean until the sealing, filling and paving operations are completed.

Joints and cracks in the existing pavement from one-quarter-inch (1/4") to one-inch (1") wide shall be sealed with a bituminous material meeting the above requirements. This work shall be completed at least 24 hours but not more than two weeks in advance of the paving operations.

4. Method of Measurement

This work will be measured by the number of **linear feet** of joints sealed.

5. Basis of Payment

The amount bid for this Item shall include the cost of furnishing all labor, materials, tools, equipment and incidentals necessary to satisfactorily complete the required work. **Asphalt used to fill cracks and/or joints greater than one-inch (1") shall be paid under Item 36CX, "Asphalt Concrete Type 1A Truing and Leveling."**

ITEM 136S - SURVEY STAKEOUT (PER DAY)

A. Description.

1. Under this Item the Contractor shall do all necessary surveying required to construct all elements of the Project as shown on the Plans and Specifications and as ordered by the Engineer. This shall include, but shall not be limited to, stakeout, layout and elevations for the highway, structures and forms as shown and required, consistent with the current practices of the County and shall be performed by competently qualified personnel acceptable to the Commissioner of Public Works.

B. Materials.

1. All instruments, equipment, stakes and any other material necessary to perform the work satisfactorily, shall be provided by the Contractor. All stakes used shall be of a type approved by the Engineer. It shall be the Contractor's responsibility to maintain these stakes in their proper position and location at all times.

C. Construction Details.

1. The Contractor shall trim trees, brush and other interfering objects, not inconsistent with the Plans, from survey lines in advance of all survey work to permit accurate and unimpeded work by the Contractor's stakeout survey crews and the County's cross-section survey crews.
2. The exact position of all work shall be established from control points, baseline transit points or other points of similar nature which are shown on the Plans and/or modified by the Engineer. Any error, apparent discrepancy or absence in or of data shown or required for accurately accomplishing the stakeout survey shall be referred to the Engineer for interpretation or furnishing when such is observed or required.
3. The Contractor shall place two offset stakes or references at each centerline or theoretical grade line control point (PC, PT, and/or Angle Point), henceforth called centerline, and at such intermediate locations as the Engineer may direct. From computations and measurements made by the Contractor, these stakes shall be clearly and legibly marked with the correct centerline station and offset distance so as to permit the establishment of the exact centerline location during construction. If markings become faded or blurred for any reason, the markings shall be restored by the Contractor and at the request of the Engineer.
4. The Contractor shall locate and place all cut, fill, slope, fine grade or other stakes and points, as the Engineer may direct for the proper progress of the work. All control points shall be properly guarded and flagged for easy identification.
5. Drainage structures shall be staked out by the Contractor at the locations and elevations shown on the Plans or specified by the Engineer. All required Rights-of-Way and easement limits shall be established, staked and referenced by the Contractor concurrent with the construction stakeout survey. Rights-of-Way and easement limits shall be staked by or under the direction of a Licensed Land Surveyor or exempt Professional Engineer approved by the Commissioner of Public Works. The Contractor shall supply proof to the Engineer that such work is being performed by or supervised by a Licensed Land Surveyor or exempt Professional Engineer.

6. The Contractor shall be responsible for the accuracy of the work of this Item and shall maintain all reference points, stakes, etc. throughout the life of the contract. Damaged or destroyed points, bench marks or stakes, or any reference points made inaccessible by the progress of the construction shall be replaced or transferred by the Contractor. Any of the above points that may be destroyed or damaged shall be transferred by the Contractor before such damage or destruction occurs. All control points shall be referenced by ties to acceptable objects and recorded. Any alterations or revisions in the ties shall be so noted and the information furnished to the Engineer immediately. All stakeout survey work shall be referenced to the centerline shown on the Plans.
7. All computations necessary to establish the exact position of the work from control points, shall be made and preserved by the Contractor. All computations, survey notes and other records necessary to accomplish the work shall be neatly made. Such computations, survey notes and other records shall be made available to the Engineer upon request and shall become the property of the County and delivered to the Engineer not later than the date of acceptance of the contract.
8. The Engineer may check all or any portion of the stakeout survey work or notes made by the Contractor. Any necessary correction to the work shall be made immediately by the Contractor at no cost to the County. Such checking by the Engineer shall not relieve the Contractor of any responsibilities for the accuracy or completeness of his work.
9. The Contractor will not be permitted to take preconstruction and/or final cross-sections to be used for payment purposes.
10. During the progress of the construction work, the Contractor will be required to furnish all of the surveying and stakeout incidental to the proper location by line and grade for each phase of the work. For paving and any other operation requiring extreme accuracy, the Contractor will re-stake with pins or other acceptable hubs located directly adjacent to the work at a spacing directed by the Engineer. Fills required to pave intermediate courses of asphalt shall be painted on the existing pavement, all dimensions referring to finished grade.
11. Any existing stakes, iron pins, survey monuments or other markers defining current or existing property lines that may be disturbed during construction shall be properly tied into fixed reference points before being disturbed and accurately reset in their proper position upon completion of the work.
12. Upon the completion of construction, after all possibility of disturbance is past, the Contractor shall reestablish, layout and retie the centerline control points with a minimum of four ties per control point, as permanently as possible with drill holes and wings in concrete curbs and sidewalks and PK nails in asphalt pavement to the satisfaction of the Engineer. The contractor shall supply a drawing of each of the above noted control points, including, but not limited to: Station, type of point (PK nail, drill hole excreta), coordinates in the same system used by the County on the project plans, and 4 ties, with the distance measured and recorded to 0.01, to the described tie points. Survey notes signed and stamped by a New York State Licensed Land Surveyor showing the station and description of the control points, and the location and description of the ties shall be furnished to the Engineer, in a drawing size to be agreed to before final submittal.

D. Method of Measurement and Basis of Payment.

1. The price bid for this item will be made on a daily (8hrs/day) basis and shall include the cost of furnishing all labor, equipment, instruments, materials and other incidentals necessary to satisfactorily complete the required project including, but not limited to, surveying, stakeout and retie of the control points. Daily unit price rate shall be prorated for less than 8 hrs of survey work in a day, as determined by the Engineer.

ITEM 150 - BOX BEAM GUIDE RAILING
ITEM 151 - BOX BEAM MEDIAN BARRIER

A. Description.

1. Under this item, the Contractor shall furnish and install galvanized steel box beam guide railing and median barrier in accordance with the plans, specifications and as ordered by the Engineer.

B. Materials.

1. **Rails.**
   a. Rails shall be cold-formed welded and seamless structural tubing. Posts shall be American Standard Beam Section. The posts, splice tongues and plates shall conform to ASTM A36, Structural Steel. The rails shall conform to ASTM A500, Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes, Grade B, except as modified below.
   b. All rail shall be tested in accordance with ASTM E436 ¬ Standard Method for Drop-weight tear tests of Ferritic steels; except as modified below.
   c. The tests shall be done after all galvanizing and associated operations have been performed on the rail. The testing shall be conducted at a temperature of -18 Degrees C. without removing the galvanizing, on 2" X 9" specimens supported to achieve a 7" span.
   d. The percent shear area will be determined by testing nine (9) specimens, three (3) from each of three (3) sides not containing a weld. The shear areas of the three specimens from the side with the lowest average shear area shall be disregarded and the final average based on the remaining six specimens. If the average percent shear area falls below 50, the material represented by these tests shall be rejected.
   e. To facilitate acceptance and rejection of material the manufacturer of the structural shape shall, before galvanizing, identify the product with the steel heat number, or some number which is traceable to the heat number, and his own unique identification code. The identification method shall be such that it can be read after the structural shape is galvanized. The identification information shall be placed on the structural shape at intervals not to exceed four feet.
   f. No mill transverse welds will be permitted on the rail sections. Longitudinal welds shall be made by the resistance, gas shielded arc, submerged arc or plasma arc welded process; shall be sound, free from defects, and shall not be repaired. The welded joint, in cold-formed welded rail, shall have a minimum tensile strength specified for the railing when tested according to the tensile strap test of test of ASTM Method E8. Fabrication welding shall comply with the requirements set forth under "welding" in the N.Y.S. Steel Construction Manual.
   g. Rails shall be galvanized in accordance with 719-01 of the N.Y.S. Specifications Type I, Galvanized Coatings and Repair Methods. Slots and round holes may be Subsequently drilled, punched, burned, or cut and re-galvanized according to the paragraph below on "Re-galvanizing Iron and Steel Using a Flame Sprayed Coating System". This repair procedure shall also apply to curved rail sections and splice plates as required.
   h. Re-galvanizing Iron and Steel Using a Flame Sprayed Coated System
      1) Those areas to be sand blasted shall be blasted with silica sand or crushed garnet of such gradation that sand shall be mesh size 20 to 40 with a minimum of 40%

retained on a 30 mesh screen (U.S. Standard Sieve series). Pressure of not less than 75 psi shall be maintained at the blast generator.

2) A sample steel plate shall be blasted until the surface cannot be further cleaned or roughened. This plate shall be used for visual comparison and any areas that do not meet this standard as to roughness or cleanliness shall be re-blasted.
3) The wire used in spraying shall be 15 gauge 1/8" or 3/16" diameter, zinc 99.0% purity. Air pressure at the Air Control Unit shall be 60 psi and there shall be no more than 35 feet of 3/8" I.D. hose between the Air Control Unit and the gun.
4) The metal coating shall be applied at a minimum thickness of .0045". At least one coating shall be applied within 4 hours of blasting and the surface must be completely coated within 8 hours of blasting.
5) The specified thickness of coating shall be applied in multiple layers and in no case shall less than two passes be made over every part of the surface.

2. **Posts.**
   a. The posts, splice tongues, plates and all hardware shall be fabricated and ready for assembly before galvanizing. The posts, splice tongues and plates shall be galvanized in accordance with 719-01, of the N.Y.S. Specifications, Type I, Galvanized Coatings and Repair Methods. Hardware shall be galvanized in accordance with 719-01 of the N.Y.S. Specifications Type II, Galvanized Coatings and Repair Methods.

3. **Bolts.**
   a. Bolts and nuts shall conform to ANSI B 18.2.1 and B 18.2.2, and washers shall conform to ANSI B 18.22.1.

C. Construction Details.

1. Posts and rails shall be erected in the position and manner indicated on the plans as ordered by the Engineer.

   a. Rail sections shall be at least 18'-0" in length, and rail splices shall be a minimum of 18" from the centerline of any beam slot.
   b. Necessary precautions shall be taken by the Contractor that all utilities and structures are safeguarded against damage. Damage incurred shall be satisfactorily repaired by the Contractor at no expense to the County.
   c. Box-beam barrier shall be continuous at all entrance walks. Where a post location fails within the limits of a concrete walk, the concrete shall be neatly removed as directed by the Engineer and legally disposed of. The area shall then be restored to conform to the adjoining area.
   d. Unpaved Shoulders - Posts shall be driven in all cases where driving is feasible. The driving shall be accomplished with approved methods and equipment that will leave the posts in their final position, free of any distortion, burring or any other damage.

D. Method of Measurement.

1. The quantity of guide railing or median barrier measured for payment will be the number linear feet measured along the axis of the railing and between its extreme outer limits as shown on the plans and/or Standard Sheets or as directed by the Engineer. If shop curved guide railing or median barrier is specifically called for in the Contract Plans and Proposal, the quantity of guide railing or median barrier shall be the number of linear feet measured

along the axis of the curved railing between the point of beginning of curvature and the point of ending of curvature as defined by the Engineer. If the railing is anchored to a structure instead of an anchorage unit or end assembly unit, the railing will be measured up to the structure.

a. Where curved guide railing or median barrier is specifically called for on the Contract Plans or ordered in writing by the Engineer and no provision for such curved beam railing is included in the contract proposal, the quantity of railing measured for payment will be as described above plus an additional allowance of 33 1/3% of the curved lengths at a factor of 1.0 measured along the horizontal centerline of the beam. Curved beam guide railing or median barrier is defined as that which will require shop working to attain the required curvature and not that curvature which may be attained by springing or bending in the field.

E. Basis of Payment.

1. The unit price bid per linear foot for the above work shall include the cost of all labor, equipment and material necessary to complete the work, including all costs necessary to attain the required curvature
2. Payment for guide rail and median barrier shall include the unit price bid and the measured quantity multiplied by the payment factor for the various typical post spacing listed in Table I.
3. When posts are driven through Asphalt Concrete or Bituminous treated material, any repairs to damaged paved or treated areas shall be at the Contractor's expense.
4. Progress payments will be made when the metal railing and/or metal barrier is erected in the position and manner indicated on the Standard Sheets and in a manner approved by the Engineer, exclusive of bituminous repair and final alignment. Payment will be made, at the unit price bid, for 90% of the quantity erected. The balance of the quantity erected will be paid for upon proper repair to the bituminous surfaces and alignment of the metal railing and/or metal barrier to the specified tolerances.

ITEM 152 - BOX BEAM GUIDE RAIL END ASSEMBLY
ITEM 153 - BOX BEAM MEDIAN BARRIER END ASSEMBLY-TYPE A OR B

A. Description.

Under this item, the Contractor shall furnish and place galvanized steel box beam guide rail and median barrier end assemblies in accordance with the Plans, Specifications, the Standard Sheet and as ordered by the Engineer.

B. Materials.

All material shall conform to the material requirements of Item 150 and shall consist of the box beam, accessory hardware, complete deadman in place, the necessary excavation and backfill, all as detailed on the Plans and/or Standard Sheet.

C. Construction Details.

End assemblies shall be installed as shown on the Plans and/or the Standard Sheet and as ordered by the Engineer.

D. Method of Measurement.

The quantity of end assembly units to be paid for will be the actual number of units installed in accordance with the Plans, Standard Sheets and/or as directed by the Engineer.

E. Basis of Payment.

The unit price bid for each end assembly unit shall include the cost of furnishing all labor, materials and equipment necessary to complete the work including the necessary concrete, excavation and backfill.

ITEM 200 - HEAVY POST, PLASTIC AND SYNTHETIC BLOCKED OUT GALVANIZED CORRUGATED STEEL BEAM GUIDE RAILING

A. Description.

1. Under this Item the Contract shall furnish and install heavy steel post, plastic and synthetic blocked out galvanized steel beam guide railing as shown on the Plans in accordance with the Specifications and/or ordered by the Engineer.

B. Construction Details.

1. General. Posts and railing shall be erected in the position and manner indicated on the Plans and Standard Sheets and in a manner approved by the Engineer.
2. Posts shall be driven unless otherwise specified by the Engineer. The driving shall be accomplished with approved equipment and methods that will leave the posts in their final position, free of any distortion, burring or other damage.
3. When posts are driven through asphalt concrete or a bituminous treated material, the Contractor shall take care to prevent damage to the paved or treated areas. Large holes and voids caused by driving the posts shall be filled and compacted with a bituminous treated material or asphalt concrete similar to that damaged. The small area adjacent to the post disturbed during installation or where gaps exist at the post after pavement repairs shall be sealed with a bituminous material approved by the Engineer, at no cost to the County.

C. Materials.

1. Beams, Posts, Sections and Accessory Hardware.
   a. Beams and terminal sections shall be fabricated as shown on the plans. When beams and terminal sections are galvanized by the hot-dip method in accordance with ASTM A123, they shall be blanked to the proper shape, fabricated and ready for assembly before galvanizing. No punching, drilling, cutting or welding will be permitted after galvanizing. Bolt holes in the beam at the post bolt and elsewhere as necessary shall be enlarged or slotted to permit expansion and contraction and to facilitate erection. The beams shall be straight unless otherwise required by the plans or specifications and of uniform section. The edges shall be rolled to eliminate sharp edges.
   b. Beams and terminal sections shall be made from 12 gauge or heavier sheet. Beams, terminal sections, SL and SH posts shall be rolled from new billet open hearth, electric furnace or basic oxygen steel. All connections or splices shall be made with flat, round-headed galvanized bolts and galvanized nuts conforming to ASTM Designation A307 and as shown on the plans.
   c. Strength. The minimum yield point and elongation of steel used in the manufacture of beam and terminal sections shall be 50,000 psi and 12% in 2” gage length respectively.
   d. Galvanizing.
   e. Beams and terminal sections shall be galvanized in accordance with ASTM A 123. Bolts, nuts and washers shall be galvanized in accordance with ASTM A 153.
      1) As an alternative to ASTM123 galvanizing beam guide rail and terminal sections may be galvanized by a process or system of continuous galvanizing substantially in

conformance with ASTM A525 except the minimum check limits for the weight of coating as determined by the triple post and single spot tests shall be 4.0 and 3.0 ounces per square foot respectively (total amount both sides of sheet).

2) All the requirements for beam and terminal sections as stated herein shall apply to this continuous galvanizing method except sampling, shop inspection and test procedures shall be as directed by the Laboratory.

2. The posts shall be as detailed on the Standard Structure Sheet for guide railing.
   a. SL Posts shall conform to ASTM A 245, Grade C.
   b. SH Posts shall conform to ASTM A36.
   c. WF and I Beam Posts shall conform to ASTM A36
   d. The above posts shall be galvanized in accordance with ASTM A 123.
   e. No posts shall be installed without the prior approval of the Chief Engineer.
3. Hardware. All post connection bolts shall be in conformance with ASTM A 307 and details shown on the plans and shall be galvanized in accordance with ASTM A 153.
4. Plastic and Synthetic Block-Outs. The plastic and synthetic material block-outs are used to provide a uniform offset distance from the corrugated beam rail to the heavy post. The block-out shall have the same general dimensions as detailed in the Department Standard Sheets. The block-out shall not contain excessive voids that would compromise its physical strength. The material shall be designated for outdoor exposure and shall include chemical additives to resist UV degradation. If the product contains recycled materials, they shall be environmentally friendly and non-hazardous. Blocks shall contain no materials that will negatively affect their field performance, such as materials that absorb moisture.
5. Certification. When shop inspection is not provided, each shipment of guide rail to a project site shall be accompanied by a certificate of chemical analysis and physical tests for the heat of base metal used in fabricating beams, SL and SH posts and terminal sections as well as a certificate of compliance with the galvanizing requirements of this specification.

D. Method of Measurement.

1. The quantity of heavy steel post, plastic and synthetic blocked out galvanized steel beam guide railing to be paid for under this Item shall be the number of linear feet center to center of end posts furnished and installed in accordance with these specifications, the plans and the orders of the Engineer.
2. An allowance of 4 linear feet will be paid for each end terminal section.
3. Where curved beam type guide railing is specifically called for on the plans or ordered in writing by the Engineer and no special item for such curved beam type guide railing is included in the contract proposal, the quantity of guide railing to be paid for will be as described above plus an additional allowance of 33-1/3% of the curved lengths measured along the horizontal center line of "valley" of the beam. Curved Beam Type Guide Railing is defined as that which will require shop working to attain the required curvature. Railing curved by springing in the field is not to be considered as Curved Beam Type Guide Railing.

E. Basis of Payment.

1. The unit price bid per linear foot shall include the cost of all labor, equipment and material necessary to satisfactorily complete the work, including all costs to attain the required curvature. Payment for guide rail shall include the unit price bid and the measured quantity multiplied by the payment factor for various typical post spacing and lengths listed below.

PAYMENT FACTORS FOR POST SPACING

Post Spacing	Post Length	Payment Factor
6'-3"	5'-6"	1.0
6'-3"	7'-0"	1.3
3'-1 1/2"	5'-6"	1.8
3'-1 1/2"	7'-0"	2.3
1'-6"	7'-0"	3.3

ITEM 202 - ANCHORAGE UNITS FOR HEAVY POST BLOCKED OUT CORRUGATED BEAM GUIDE RAILING FOR DRIVEWAYS
ITEM 203 - ANCHORAGE UNITS FOR HEAVY POST BLOCKED OUT CORRUGATED BEAM GUIDE RAILING FOR HIGHWAYS

A. Description.

Under this item the Contractor shall furnish and install anchorage units for heavy post blocked out corrugated beam guide railing in accordance with the Plans, Specifications and as ordered by the Engineer.

B. Materials.

The materials shall conform to the material requirements of Item 35BO, Heavy Post, Plastic and Synthetic Block-Out Galvanized Corrugated Steel Beam Guide Railing, M6 Structural Steel, M17 Bar Reinforcement for Cement Concrete. Concrete shall meet the requirements of Class A Concrete for structures. All steel shall be galvanized in accordance with ASTM A 123.

C. Construction Details.

1. WF Beam Posts shall be driven, unless otherwise specified by the Engineer, by approved methods and equipment that will leave the posts in their final position, free of any distortion, burring or other damage.
2. When posts for guide railing are to be driven through asphalt or adjacent to a stabilized shoulder course, extreme care shall be taken to prevent damage to the paved or shoulder course. Large holes and voids caused by driving the posts shall be filled and compacted with a bituminous treated material or asphalt concrete similar to that damaged. The small area adjacent to the post disturbed during installation or where gaps exist at the post after pavement repairs shall be sealed with a bituminous material approved by the Engineer, at no cost to the County.

D. Method of Measurement.

1. Anchorage units will be measured by the actual number of anchorage units installed in accordance with the Plans, Specifications or as directed by the Engineer

E. Basis of Payment.

1. The unit price bid for each anchorage unit shall include the cost of furnishing all labor, materials, equipment and incidentals as necessary to satisfactorily complete the work.

ITEM 216 - REMOVAL OF EXISTING GUIDE RAIL

A. Description.

1. Under this item the Contractor shall remove existing guide rail where and as shown on the plans and/or as ordered by the Engineer.

B. Removal Details.

1. The Contractor shall remove the existing guide rail, posts, bolts, nuts, washers, and concrete footings, etc., and deliver to a designated County maintenance garage or dispose of as ordered by the Engineer.

C. Method of Measurement.

1. The quantity to be paid for under this item will be the number of linear feet measured prior to the removal of the existing guide rail.

D. Basis of Payment.

1. The price bid per linear foot of removal shall include the cost of all labor, equipment, tools, storage delivery and/or disposal of the guide railing including the filling in of any voids.

ITEM 685.0720XXNA – HIGHLY REFLECTORIZED EPOXY PAVEMENT MARKINGS, 20 MILS (TRIPLE DROP)

DESCRIPTION:

Under this work the contractor shall furnish and apply highly reflectorized epoxy pavement markings in accordance with these specifications, the Contract Documents, the MUTCD with the NYS Supplement, or as ordered by the Engineer.

Items for Special Markings include stop bars and crosswalks.
Yield line symbols are isosceles triangles with height equaling 1.5 times the base dimension:

- A small yield line symbol shall have a base dimension of one foot.
- A large yield line symbol shall have a base dimension of two feet.
- Yield line symbols are to be installed with the Apex of the triangle oriented towards oncoming traffic.

The epoxy marking material shall be hot-applied by spray methods onto bituminous and portland cement concrete pavement surfaces at the thickness and width shown on the Contract Documents. The triple drop system shall consist of a combination of highly reflective composite optics, defined as a structural center core surrounded by high index microcrystalline ceramic beads, wet/night visibility beads, and standard glass beads. The cured epoxy marking shall be an adherent, highly reflectorized stripe that will provide wet night retro-reflectivity.

MATERIALS REQUIREMENTS:

White and Yellow Epoxy Reflectorized Pavement Markings	727-03
Glass Beads for Pavement Markings	727-05

Microcrystalline Ceramic Beads. The Microcrystalline Ceramic Beads must meet the following requirements:

- Composed of highly reflective particles having a structural center core surrounded by high refractive index microcrystalline ceramic beads and designed to be applied to epoxy pavement marking paint.
- Refractive index of 2.30 minimum when tested using the liquid oil immersion method.
- Either white or yellow tinted as required.
- Appearance in Table 1, below or approved equal.

TABLE 1

Product Name	Manufacturer Location
3M Series 70E-White 3M Series 71E-Yellow	3M Traffic Control Materials Division Brownwood, TX

Packaging and Shipment. Shipped and packaged in accordance with commercially accepted standards. Clearly display the name of the product, the name and address of the manufacturer, the quantity of material, the date of manufacture, and the date of expiration or the shelf life, on each container or on the shipping invoice.

ITEM 685.0720XXNA – HIGHLY REFLECTORIZED EPOXY PAVEMENT MARKINGS, 20 MILS (TRIPLE DROP)

Basis of Approval. Approvals will be based upon independent lab analysis and field testing in accordance to this specification and Department directives. The Contractor shall submit independent lab analysis to Director of Materials and arrange for field testing through the General Engineering Section of the Materials Bureau. If the product passes the requirements of this specification, it will be added to the Department's Approved List.

Basis of Acceptance. Epoxy Paint and Glass Beads for Pavement markings will be accepted on the basis of the appearance of the product on the Department's Approved List. Wet-Night Reflective Elements will be accepted based on manufacturer's certification that the product meets the requirements of this specification.

EPOXY PAINT APPLICATION EQUIPMENT

In general, a mobile applicator shall be a truck mounted, self-contained pavement marking machine, specifically designed to apply epoxy resin materials and reflective glass spheres in continuous line patterns. The applicating equipment shall be maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc. In addition, the truck mounted unit shall be provided with accessories to allow for the marking of cross hatching and other special patterns as directed by the Engineer.

At any time throughout the duration of the project, the Contractor shall provide free access to his epoxy applicating equipment for inspection by the Engineer or his authorized representative.

The Engineer may approve the use of a portable applicator in lieu of mobile truck mounted accessories for use in applying special markings only, provided such equipment can demonstrate satisfactory application of reflectorized epoxy markings in accordance with these specifications.

Mobile applicating equipment shall be capable of installing up to 19 miles of epoxy reflectorized pavement markings in an eight hour day and shall include the following features:

1. Individual tanks for the storage of Part A and Part B of the epoxy resin.

2. Individual tanks for the storage of Standard Glass beads, Wet-Night Visibility Spheres, and Microcrystalline Ceramic Beads. Each tank shall have a minimum capacity of 3000 lbs.

3. Heating equipment of sufficient capacity to maintain the individual epoxy resin components at the manufacturer's recommended temperature for spray application.

4. Individual dispensers for the simultaneous application of Standard Glass Beads, Wet-Night Visibility Spheres, and Microcrystalline Ceramic Beads.

5. Metering devices or pressure gauges on the proportioning pumps, positioned to be readily visible to the Engineer.

6. All necessary spray equipment, mixers, compressors, and other appurtenances for

the placement of epoxy reflectorized pavement markings in a simultaneous sequence of operations as described in the Construction Details of this specification.

CONSTRUCTION DETAILS

General

Before any pavement marking work is begun, contractor shall submit a schedule of operations for the approval of the Engineer.

At least five (5) days prior to the start or work, the Contractor shall provide the Engineer with the manufacturer's written instructions for:

- Applying epoxy paint with Microcrystalline Ceramic Beads including but not be limited to, material mixing ratios and application temperatures

The Contractor shall provide and retain an on site manufacturer's representative to provide guidance regarding construction methods, and oversight of Microcrystalline Ceramic Beads application. The services of the manufacturer's representative shall be retained by the Contractor until the release by the Engineer.

When pavement markings operations are carried out under traffic, the Contractor shall provide all necessary flags, markers, signs, etc. in accordance with the MUTCD to maintain and protect traffic, and to protect marking operations and the markings until thoroughly set as per manufacturer's procedures.

Epoxy Paint Application

Pavement markings shall be applied in the general direction of traffic. Applications against the direction of traffic flow shall not be allowed.

Atmospheric Conditions. Epoxy pavement markings shall only be applied during conditions of dry weather and on thoroughly dry pavement surfaces. At the time of installation, the pavement surface temperature shall be a minimum of 50^{o}F and the ambient temperature shall be a minimum of 50^{o}F and rising. The Engineer shall be the sole determiner as to when atmospheric conditions and pavement surface conditions are such to produce satisfactory results.

Surface Preparation. The Contractor shall clean all surfaces by air blasting to remove all loose residues. Include power brooming or manual brooming, if necessary, to remove all loose residue. Make sure all pavement surfaces are free of oil, dirt, dust, grease, salt, and similar foreign materials at the time of application. The cost of cleaning these contaminants shall be included in the bid price of this item. If water blasting is used, allow the surface to thoroughly dry to the satisfaction of the Engineer, before application of any epoxy paint.

Application of Epoxy Reflectorized Pavement Markings

ITEM 685.0720XXNA – HIGHLY REFLECTORIZED EPOXY PAVEMENT MARKINGS, 20 MILS (TRIPLE DROP)

Epoxy reflectorized pavement markings shall be applied at the width, thickness, and pattern designated in the Contract Documents.

New PCC Surfaces: Do not apply permanent epoxy pavement markings on new PCC surfaces until at least 30 days after placement, or such time as determined by the Engineer, to allow adequate cure of the PCC.

New Asphalt Surfaces: Do not apply permanent epoxy pavement markings on new asphalt pavement surfaces until at least 14 days after placement.

Marking operations shall not begin until applicable surface preparation work is completed and approved by the Engineer, and the atmospheric conditions are acceptable to the Engineer.

Pavement markings shall be applied by the following simultaneous operation:

1. The pavement surface is air-blasted to remove dirt and residues.

2. The epoxy resin, mixed and heated in accordance with the manufacturer's recommendations, is uniformly hot-sprayed onto the pavement surface at the minimum specified thickness. Epoxy paint shall be applied at the wet film thickness specified in the contract documents.

3. Standard Glass Beads, Wet-Night Visibility Spheres, and Microcrystalline Ceramic Beads are injected into or dropped onto the liquid epoxy marking. The first drop shall be Microcrystalline Ceramic Beads at a rate per manufacturer's recommendation; the second drop shall be Wet-Night Visibility Spheres at a rate of 5 pounds per gallon; and the third drop shall be Standard Glass Beads at a rate of 8 pounds per gallon.

4. The Contractor shall be responsible for removing, to the satisfaction of the Engineer, all tracking marks, spilled epoxy, and epoxy markings applied in unauthorized areas**.**

Defective Epoxy Pavement Markings

Repair defective markings, as determined by the Engineer and at no additional cost to the County, as follows:

1. Repair Method for insufficient film thickness; insufficient line width; and inadequate Standard Glass Bead, Wet-Night Visibility Sphere, and Microcrystalline Ceramic Bead coverage and/or retention:

   Prepare the surface of the defective epoxy marking by grinding or blast cleaning. No other cleaning methods will be allowed. Surface preparation shall be performed to the extent that a substantial amount of the reflective glass spheres are removed and a roughened epoxy marking surface remains as determined by the Engineer.

   Remove loose particles and foreign debris by brooming or blasting with compressed air

just prior to reapplication of markings in accordance with this specification.

2. Repair Method for uncured or discolored epoxy and/or insufficient bond to pavement surface or existing durable marking:

   Uncured epoxy shall be defined as applied material that fails to cure (dry) in accordance with the requirements of §727-03 Epoxy Paint or applied material that fails to cure (dry) within a reasonable time period under actual field conditions, as defined by the Engineer.

   Discoloration shall be defined as localized areas or patches of brown, grayish or black colored epoxy marking material. These areas often occur in a cyclic pattern and often are not visible until several days or weeks after markings are applied.

   The defective epoxy marking shall be completely removed and cleaned to the underlying pavement surface in accordance with the requirements of Section 635 - Cleaning and Preparation of Pavement Surfaces, at the Contractor's expense.

   The extent of removal shall be the defective area plus any adjacent epoxy pavement marking material extending one meter in any direction.

   After surface preparation work is complete, repair shall be made by reapplying epoxy over the cleaned pavement surface in accordance with the requirements of this specification.

   Other defects not noted above, but determined by the Engineer to need repair, shall be repaired or replaced as directed by and to the satisfaction of the Engineer. All work in conjunction with the repair or replacement of defective epoxy reflectorized pavement markings shall be performed by the Contractor at no additional cost to the County.

METHOD OF MEASUREMENT

Pavement striping (regular lines, cross hatching and special markings) will be measured in feet along the centerline of the pavement stripe and will be based on a 4 inch wide stripe. Measurement for striping with a width greater than the basic 4 inches, as shown on the plans or directed by the Engineer, will be made by the following method:

$$\frac{\text{Plan Width of Striping (inches)}}{\text{Feet}} \times 4 \text{ inches}$$

This includes stripes 6 inches and wider, such as hatch lines, crosswalk bars and stop bars.

Letters and symbols will be measured by each unit applied. A unit will consist of one letter or one symbol. Example: “SCHOOL” would be paid as six units. Double and triple headed arrows will be measured as a single unit, but the “X” in railroad grade crossing markings (M.U.T.C.D. figure 8B-7) will be measured by linear feet of 4-inch stripe.

BASIS OF PAYMENT

ITEM 685.0720XXNA – HIGHLY REFLECTORIZED EPOXY PAVEMENT MARKINGS, 20 MILS (TRIPLE DROP)

The unit bid price, shall include all labor, materials, and equipment to complete the work including the cost of cleaning and waste disposal associated with the preparation, installation and application of epoxy paint with standard glass beads and Microcrystalline Ceramic Beads. The cost for maintaining and protecting traffic during the marking operations shall be included in the price bid.

No payment will be made for the repair or replacement of defective epoxy reflectorized pavement markings.

PAY ITEM NO.	***DESCRIPTION***	***PAY UNIT***
685.072001NA	Highly Reflectorized White Epoxy Pavement Stripes – 20 mils (Triple Drop)	Foot
685.072002NA	Highly Reflectorized White Epoxy Pavement Letters – 20 mils (Triple Drop)	Each
685.072003NA	Highly Reflectorized White Epoxy Pavement Symbols – 20 mils (Triple Drop)	Each
685.072004NA	Highly Reflectorized White Epoxy Cross Hatching -20 mils (Triple Drop)	Foot
685.072005NA	Highly Reflectorized White Epoxy Pavement Stripes (Special Markings) 20 mils (Triple Drop)	Foot
685.072006NA	Highly Reflectorized Yellow Epoxy Pavement Stripes – 20 mils (Triple Drop)	Foot
685.072007NA	Highly Reflectorized Yellow Epoxy Pavement Stripes (Cross Hatching) 20 mils (Triple Drop)	Foot
685.072008NA	Highly Reflectorized White Epoxy Pavement Yield Line Symbols - Small - 20 mils (Triple Drop)	Each
685.072009NA	Highly Reflectorized White Epoxy Pavement Yield Line Symbols - Large - 20 mils (Triple Drop)	Each

ITEM 744 - FORCE ACCOUNT WORK

A. Description.

1. The amount estimated for the work under this Item is approximate and may be less or greater than the amount of the force account work indicated on the bid sheets. The amount will be based on the Force Account Work actually performed during the term of the contract with prior written approval of the Commissioner.

2. The use of this Item will require prior authorization of the County for each individual Force Account Work to be performed under this contract.

B. Materials and Construction Details.

1. Materials incorporated into the force account work shall be approved by the Engineer prior to installation. When no applicable contract unit prices exist, material costs shall be reimbursed based upon acceptable receipts and/or invoices plus markup, as per the requirement of contract documents, and as approved by the Commissioner of Public Works.

C. Method of Measurement.

1. All Force Account work performed under this Item shall be either:

a. agreed upon unit price with backup

b. agreed upon lump sum cost with detailed backup

c. not to exceed agreed prices with detailed backup (final cost may be lower but will never exceed the agreed price)

d. on a Time and Material basis plus applicable overhead and profit as stipulated within the Contract Documents and will be inspected and measured by the Engineer on a daily basis and signed off by the Contractor.

D. Basis of Payment.

1. Under this Item, all provisions as incorporated in the Contract concerning payment for extra or additional work are applicable. Total payment for this Item is subject to the requirements and conditions of this contract.

2. The amount to be paid for each type of Force Account Work per work order shall be based (see Method of Measurement, Section C.1.) upon the actual work satisfactorily completed and/or materials/machines furnished and approved in accordance with the requirements of the Contract documents.

ITEM 762 - INTEGRAL COLOR PIGMENT FOR CEMENT CONCRETE

A. Description.

1. Under this item, the contractor shall furnish and mix color pigment into cement concrete at locations shown on the plans, or as directed by the Engineer.

B. Materials.

1. The pigment shall conform to "Integral Colors" as supplied by "Stampcrete International Ltd.", of Centereach, N.Y., or approved equal. The color to be used shall be as indicated on the plans or as directed by the Engineer.

C. Construction Details.

1. The pigment shall be added to, and thoroughly mixed into, the cement concrete prior to placement, to insure a consistent color throughout the concrete. Pigment shall be added at the rate of 12 pounds per cubic yard of concrete, or in accordance with the manufacturer's instructions, or as directed by the Engineer.

D. Method of Measurement.

1. The quantity to be paid under this item will be the number of pounds of pigment added to the cement concrete mix.

E. Basis of Payment.

1. The unit price bid shall include the cost of all labor, materials, and equipment necessary to complete the work, including cleaning residue of color pigment from the concrete truck. Imprinting and cement concrete will be paid for under their respective items.

ITEM 763 - IMPRINTING ON CONCRETE PAVEMENT OR SIDEWALK

A. Description.

1. Under this item the contractor shall modify the surface of newly placed cement concrete pavement or sidewalk to create a pattern as specified in the plans and/or as directed by the Engineer.

B. Construction Details.

1. Cement concrete pavement or sidewalk shall be placed at locations and dimensions shown on the plans and/or as directed by the Engineer, in accordance with Items No. 24, 27, 30, 32A, 32X and 7 as described in the Standard Specifications. At the appropriate time in the concrete curing process (as detailed in the specific treatment directions) the concrete surface shall be imprinted, stamped, or rolled such that the specified pattern is obtained. The contractor shall submit the recommended method of operation, containing dimensions of forms and/or rollers, timing of installation, and any other pertinent information to the Engineer for approval. Immediately after the surface finishing has been completed, the Impervious Membrane Method of curing shall be implemented, as detailed in the latest edition of the New York State Department of Transportation Standard Specifications.
2. Suppliers and/or Installers - Possible technology to complete this work is available from, but not limited to:
    a. Bomanite Corporation, P.O. Box 599, Madera, California 93639
    b. Quick Imprint Systems, P.O. Box 7, Goodman, Mo., 64850
    c. Stampcrete International Ltd., Centereach, N.Y., 11720

C. Method of Measurement.

1. The quantity to be paid under this item will be the number of square feet of imprinting on cement concrete pavement or sidewalk, in accordance with the plans and specifications, or as directed by the Engineer.

D. Basis of Payment.

1. The unit price bid per square foot for this item shall include the cost of furnishing all labor, materials, equipment and incidentals necessary to complete the imprint work to the satisfaction of the Engineer. Cement concrete pavement or sidewalk will be for paid under their respective items.

SECTION 013560
SAFE AND HEALTHFUL WORKING CONDITIONS

PART 1 GENERAL

1.1 SUMMARY

A. This section describes the requirements for safe and healthful working conditions as an integral part of the project construction.

1.2 DEFINITION

A. Safety staff shall mean the safety professional and his/her safety representative(s) or the safety person.

1.3 GENERAL REQUIREMENTS

A. In prosecuting the work of this Contract, the Contractor shall provide working conditions on each operation that shall be as safe and healthful as the nature of that operation permits. The various operations connected with the work shall be so conducted that they will not be unsafe or injurious to health; and the Contractor shall comply with all regulations and published recommendations of the New York State Department of Labor and all provisions, regulations and recommendations issued pursuant to the Federal Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, as amended, and with laws, rules, and regulations of other authorities having jurisdiction, with regard to all matters relating to safe and healthful working conditions.

1. Compliance with governmental requirements is mandated by law and considered only a minimum level of safety performance.

2. All work shall also be performed in accordance with safe work practice, and contractor's Health and Safety Plan, as approved by the Construction Manager in writing.

B. The Contractor shall be responsible for the safety of the Contractor's employees, the public, and all other persons at or about the site of the work. The Contractor shall be solely responsible for the adequacy and safety of all construction methods, materials, equipment, and the safe prosecution of the work.

C. The Contractor shall employ a properly qualified safety professional familiar with all work under this contract whose duties shall be to initiate, review, and cause implementation of measures for the protection of health and prevention of accidents.

D. The safety staff shall be provided with an appropriate office on the job site to maintain and keep available safety records, up-to-date copies of all pertinent safety rules, regulations and governing legislation, material safety data sheets, and the site safety plan including information concerning foreseeable emergency conditions, location of emergency and telephone contacts for supportive actions.

E. The Contractor shall stop work whenever a work procedure or a condition at a work site is deemed unsafe by the safety staff.

1.5 SUBMITTALS

A. The Contractor shall submit a Health and Safety Plan (HASP), prepared prior to the start of any construction for acceptance by the CM, in writing.

1. The HASP shall be available to workers on site and be submitted to the Engineer and Owner at least two (2) weeks before the beginning of any field work.

2. Copies of the plan shall be provided to the Contractors' insurers and their risk managers, if any, by the Contractor.

B. Within thirty (30) days of receiving a "Notice to Proceed", the Contractor shall submit the name of a safety professional, employed by the Contractor, responsible for project safety management, and of the safety representative(s) who will work under his/her direction.

C. Documentation and/or personal references confirming the qualifications may also be required.

1. The persons proposed as a safety person, safety professional, or safety representative(s), may be rejected by the Engineer for failure to have adequate qualifications or other cause.

D. In addition, the Contractor shall submit the names, addresses, and telephone numbers of three (3) supervisory personnel who may be contacted in the event of an emergency occurring during non-working hours.

1.6 QUALIFICATIONS

A. Safety Professional:

1. Certification by the Board of Certified Safety Professional as a Certified Safety Professional.

2. Minimum of five (5) years of professional safety management experience in the types of construction and conditions expected to be encountered on the site.

B. Safety Person:

1. Qualifications of the safety person must include a minimum of five (5) years of relevant construction experience, two (2) years of which are related to safety management.

C. The Safety staff shall be completely experienced with OSHA requirements and knowledgeable of all applicable health and safety requirements of all governing laws, rules and regulations as well as of good safety practice. The safety staff shall not include the project manager, engineer, or superintendent, or anyone else working on the project. The safety staff shall have no other duties except those directly related to safety.

PART 2 PRODUCTS

2.1 HEALTH AND SAFETY PLAN

A. The Contractor shall commit to writing a specific site Health and Safety Plan before the start of any construction for acceptance by the Construction Manager.

2.2 ACCIDENT REPORTS

A. The Contractor shall promptly (within the hour of the incident) report to the Construction Manger all accidents involving injury to personnel or damage to equipment and structures, investigate these accidents and prepare a preliminary report and submit within twenty-four (24) hours of the accident. The Contractor must submit a final accident report to the Construction Manager as follows:

1. The summary report, due by the tenth (10^{th}) day of the incident, shall include descriptions of corrective actions to reduce the probability of similar accidents.

2. In addition, the Contractor shall furnish to the Engineer, a copy of all accident and health or safety hazard reports received from OSHA or any other government agency, within one (1) day of receipt, and attach the final plan.

B. In addition to the reports which the Contractor is required to file under the provisions of the Workman's Compensation Law, he/she shall submit to the Engineer on or before the tenth (10^{th}) day of each month, a report giving the total force employed on his/her Contract in man-days during the previous calendar month, the number and character of all accidents resulting in loss of time or considered reportable by OSHA, and any other information on classification of employees, injuries received on the work, and disabilities arising therefrom, that may be required by the Engineer.

1. The submittal shall also contain an audit report for the prior month, including the safety training conducted, the above equipment logs, records of the condition of the work areas, safety and health records, OSHA and ANSI Z16.1 incidence rates for frequency and severity of recordable accidents, and an evaluation of the effectiveness of the HASP with any changes necessary.

2. The safety professional or safety person and the Contractor shall sign this audit report. The Engineer will review these reports for Contractor's compliance with the safety provisions of the Contract.

2.3 SAFETY AND RESCUE EQUIPMENT

A. The Contractor shall have proper safety and rescue equipment, adequately maintained and readily available, for any foreseeable contingency. This equipment shall include such applicable items as: proper fire extinguishers, first aid supplies, safety ropes and harness, stretchers, water safety devices, oxygen breathing apparatus, resuscitators, gas detectors, oxygen deficiency indicators, combustible gas detectors, etc.

B. This equipment shall be kept in a protected area and checked at scheduled intervals. A log shall be maintained indicating who checked the equipment, when it was checked, and that it was acceptable. This equipment log shall be updated monthly and be submitted with the monthly report. Equipment that requires calibration shall have copies of dated calibration certificates on site.

C. Substitute safety and rescue equipment must be provided while primary equipment is being serviced or calibrated.

2.4 PROTECTIVE EQUIPMENT

A. All personnel employed by the Contractor or his subcontractors or any visitors whenever entering the job site shall be required to wear appropriate personal protection equipment required for that area. The Contractor shall provide all necessary personal protective equipment as requested by the Engineer for his/her designated representatives.

PART 3 EXECUTION

3.1 SAFETY STAFF DUTIES

A. The safety professional shall visit and audit all work areas as frequently as necessary (a minimum of once a week) and shall be available for consultation whenever necessary. The safety staff shall have full authority to implement and enforce the Health and Safety Plan to take immediate action to correct unsafe, hazardous, or unhealthful conditions.

B. A member of the safety staff must be at the job site full time (a minimum of eight (8) hours per working day) whenever work is in progress. When multiple shift work is in progress, more than one (1) safety representative may be required. The safety staff shall as a minimum:

1. Schedule safety training programs as required by law, the safety plan, and good safety practice. An outline of materials to be covered shall be provided with the safety plan. All employees shall be instructed on the recognition of hazards, observance of precautions, of the contents of the safety plan and the use of protective and emergency equipment.

2. Determine that operators of specific equipment are qualified by training and/or experience before they are allowed to operate such equipment.

3. Develop and implement emergency response procedures. Post the name, address, and hours of the nearest medical doctor; name and address of nearby clinics and hospitals, and the telephone numbers of the appropriate ambulance service, fire, and the police department.

4. Post all appropriate notices regarding safety and health regulations at locations which afford maximum exposure to all personnel at the job site.

5. Post appropriate instructions and warning signs in regard to all hazardous areas or conditions which cannot be eliminated. Identification of these areas shall be based on experience, on site surveillance, and severity of hazard. Such signs shall not be used in place of appropriate workplace controls. In order to alert the workers “Safety First” signs should be posted, as ordered by the Engineer at no extra cost.

6. Ascertain by personal inspection that all safety rules and regulations are enforced. Make inspections at least once a shift to ensure that all machines, tools, and equipment are in a safe operating condition, and that all work areas are free of hazards. Take necessary and timely corrective actions to eliminate all unsafe acts and/or conditions, and submit to the

Engineer each day, a copy of his/her findings on the inspection check list report forms established in the safety plan.

7. Submit to the Engineer, copies of all safety inspection reports and citations from regulating agencies and insurance companies within one (1) work day of receipt of such reports.

8. Provide safety training and orientation to authorized visitors to ensure their safety while occupying the job site.

9. Perform all related tasks necessary to achieve the highest degree of safety that the nature of the work permits.

3.2 MEASUREMENT OF PAYMENT

A. No separate payment for the article "Safe and Healthful Working Conditions" will be made. The costs of same will be included in the various bid items.

END OF SECTION 013560

(On Construction firms letterhead)

Date Issued: _____

Dear Resident:

We are sorry to inconvenience you, but in order to proceed with construction for _____ we must close and/or limit your access to your driveway. As work progresses, you will be notified on a daily basis when and how your particular residence will be affected. We assure you that every effort will be made to minimize the impact to you relative to this construction.

Our current schedule calls for the project related work to be performed in your area during the week of _____. A copy of this letter with specific dates and time for this work will be delivered at least twenty-four (24) hours in advance in order that you will have sufficient opportunity to plan for accessibility to your vehicles.

If additional information is necessary, you may contact any of the representatives listed below.

Thank you for your patience.

Contractor	_____	Phone:	_____
Inspector	_____	Phone:	_____
Project Manager	_____	Phone:	_____

_____

(On Construction firms letterhead)

Date Issued: _____

CONSTRUCTION NOTIFICATION
24 HOUR NOTICE

Date & Type of Construction: _____
How will residence be affected: _____
Approximate time of Construction: _____

Driveway access (will) (will not) be permitted.