PUBLIC RIGHTS-OF-WAY - IN PUBLIC RIGHTS-OF-WAY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

### CONCRETE PADS

THE CONTRACTOR SHALL INSTALL REINFORCED CONCRETE PADS AS NEEDED FOR TRASH ENCLOSURES AND UTILITY SUPPORT, I.E. GENERATOR ENCLOSURE, TRANSFORMER SWITCH, ELECTRICAL BOX, ETC. AS DIRECTED BY THE AUTHORITIES HAVING JURISDICTION. REFER TO THE APPROPRIATE DRAWINGS FOR DETAILED INFORMATION. CONCRETE, REINFORCING, AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE SECTION OF THESE SPECIFICATIONS TITLED "SITE CONCRETE."

### XII.SITE CONCRETE

### A. <u>SCOPE</u>

WORK UNDER THIS SECTION SHALL APPLY TO ITEMS OF CAST-IN-PLACE CONCRETE TO BE INSTALLED UNDER THE SITE WORK AND SHALL, UNLESS INDICATED OTHERWISE, INCLUDE, BUT NOT BE LIMITED TO, UTILITY STRUCTURES, FOOTINGS, FOUNDATIONS, ENCASEMENTS, THRUST AND ANCHOR BLOCKS, PADS, SIDEWALKS AND CURBS. IF ANY REQUIREMENTS SPECIFIED HEREIN FOR CONCRETE CONSTRUCTION CONFLICTS WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION SHALL APPLY.

ALL SECTIONS OF THIS SPECIFICATION BELOW, SHALL HAVE METHODS AND MATERIALS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE OR GEOTECHNICAL ENGINEER, HEREIN REFERRED TO AS THE 'AUTHORITY'.

ALL WORK SHALL BE AS APPROVED, AND PERFORMED TO THE SATISFACTION OF THE OWNER, OWNER'S FIELD REPRESENTATIVE, GEOTECHNICAL ENGINEER, OR THE AUTHORITY HAVING JURISDICTION.

### B. <u>INSTALLATION</u>

SITE CONCRETE SHALL BE CLASS "A" CONCRETE HAVING A TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF 4,000 PSI. WHERE CONCRETE SURFACES ARE EXPOSED AND VISIBLE IN THE FINISHED WORK, SUCH AS IN THE CONSTRUCTION OF CURBS AND SIDEWALKS THE CEMENT USED SHALL BE OF THE SAME BRAND AND FROM A SINGLE SOURCE, SO THAT THE ITEM OF CONSTRUCTION WILL BE UNIFORM IN COLOR.

FORMS - SHALL BE ACCEPTABLE STEEL OR LUMBER, STRAIGHT AND FREE FROM WARP OR OTHER IRREGULARITIES THAT WILL ADVERSELY AFFECT THE INSTALLATION. FORMS SHALL BE SET TO THE PROPER SHAPE, LINES AND DIMENSIONS AS SHOWN ON THE DRAWINGS AND SHALL BE SUFFICIENTLY TIGHT, BRACED AND SECURED IN PLACE SO THAT THERE WILL BE NO LEAKAGE OF MORTAR OR DISPLACEMENT OF FORMS DURING PLACING OF THE CONCRETE. PRIOR TO PLACING THE CONCRETE, THE CONTACT SURFACES OF THE FORMS SHALL BE GIVEN A LIGHT COATING OF OIL THAT WILL NOT DISCOLOR THE CONCRETE.

FORMS SHALL REMAIN IN PLACE UNTIL CONCRETE HAS HARDENED AND ACQUIRED SUFFICIENT STRENGTH TO SAFELY SUPPORT DEAD AND LIVE LOADS. FORM REMOVAL SHALL BE CARRIED OUT IN SUCH A MANNER TO ENSURE COMPLETE SAFETY AND INTEGRITY OF THE STRUCTURE.

REINFORCEMENT - SHALL BE ACCURATELY CUT, PLACED AND RIGIDLY HELD IN POSITION BY MEANS OF BAR SUPPORTS. SPACERS, TIES OR OTHER ACCEPTABLE MEANS IN SUCH MANNER THAT THE REINFORCING WILL NOT DISPLACE WHEN THE CONCRETE IS POURED. WHEN REINFORCING BARS MUST BE SPLICED, THERE SHALL BE SUFFICIENT LAP TO DEVELOP THE STRENGTH OF THE BAR BY BOND.

CONCRETE PROTECTION FOR REINFORCEMENT - THE STEEL REINFORCEMENT SHALL BE PROTECTED BY THE THICKNESS OF CONCRETE AS INDICATED ON THE DETAILS OF THE DRAWINGS. WHERE NOT OTHERWISE SPECIFIED OR DIRECTED, THE THICKNESS OF

CONCRETE OVER THE REINFORCEMENT (CLEAR DIMENSIONS) SHALL BE AS FOLLOWS:

(a) FOR CONCRETE DEPOSITED AGAINST GROUND WITHOUT THE USE OF FORMS -NOT LESS THAN THREE (3) INCHES.

(b) FOR CONCRETE EXPOSED TO THE WEATHER OR EXPOSED TO THE GROUND BUT PLACED IN FORMS - NOT LESS THAN TWO (2) INCHES.

(c)FOR CONCRETE PLACED IN SLABS AND WALLS NOT EXPOSED TO THE GROUND OR TO THE WEATHER – NOT LESS THAN ONE AND ONE HALF (1-1/2) INCHES.

(d) IN ALL CASES, THE THICKNESS OF CONCRETE OVER REINFORCEMENT SHALL BE AT LEAST EQUAL TO THE DIAMETER OF THE REINFORCING BARS.

KEYWAYS AND JOINTS — SHALL BE PROVIDED WHERE AND AS SHOWN IN DETAIL ON THE DRAWINGS. KEYWAYS AND JOINTS NOT INDICATED ON THE DRAWINGS SHALL BE AS APPROVED BY THE AUTHORITY.

PLACEMENT - UNLESS SPECIFIED OTHERWISE, CONCRETE THREE (3) OR MORE INCHES THICK SHALL BE PLACED AND CONSOLIDATED WITH MECHANICAL VIBRATORS USED IN THE CONCRETE BY SKILLED WORKMAN, PROPERLY SUPERVISED. VIBRATORS SHALL NOT BE MOVED LATERALLY OR USED TO TRANSPORT CONCRETE. VIBRATORS SHALL BE USED TO MERGE SUCCESSIVE LAYERS AND PREVENT COLD JOINTS. CONCRETE SHALL BE CONSOLIDATED TO MAXIMUM DENSITY, FREE OF HONEYCOMBING AND TRAPPED AIR. HAND SPADING SHALL BE USED IN CORNERS AND ANGLES OF FORMS WHILE CONCRETE IS PLASTIC. DURING PLACEMENT OPERATIONS, CONCRETE SHALL BE THOROUGHLY CONSOLIDATED AND WORKED WELL AROUND AND INTO THOROUGH CONTACT WITH THE STEEL BEING CAREFUL NOT TO DISTURB THE LOCATION OF THE REINFORCING. OVER-WORKING AND OVER-VIBRATION WHICH MAY CAUSE

WHEN CONCRETE IS PLACED ON THE GROUND SURFACE, THE SUBGRADE SHALL BE MOISTENED PRIOR TO PLACING THE CONCRETE, EXCEPT DURING COLD WEATHER PERIODS WHEN FREEZING IS LIKELY TO OCCUR. CONCRETE SHALL BE PLACED IN THE FORM AS NEAR TO ITS FINAL POSITION AS PRACTICABLE. CONCRETE SHALL BE PLACED IN LAYERS TO PREVENT HONEYCOMBING. PROPER CHUTES, TROUGHS AND OTHER APPROVED DEVICES SHALL BE USED TO MINIMIZE FREE FALL OF CONCRETE AND TO CONVEY CONCRETE TO THE PROPER LOCATIONS. IN NO CASE SHALL CONCRETE BE DEPOSITED FROM A HEIGHT THAT WILL SEPARATE THE AGGREGATES. CONCRETE SHALL BE DEPOSITED WITHIN THIRTY (30) MINUTES AFTER MIXING, AS NEARLY AS PRACTICABLE, IN ITS FINAL POSITION TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING.

SEGREGATION SHALL BE AVOIDED.

COLD WEATHER REQUIREMENTS — ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING THE CONCRETE MATERIALS AND PROTECTING THE CONCRETE DURING FREEZING AND NEAR-FREEZING WEATHER. NO FROZEN MATERIALS OR MATERIALS CONTAINING ICE SHALL BE USED.

ALL CONCRETE MATERIALS AND ALL REINFORCEMENT, FORMS, FILLERS, AND GROUND IN WHICH THE CONCRETE IS TO COME IN CONTACT, SHALL BE FREE FROM FROST.

WHENEVER THE TEMPERATURE OF THE SURROUNDING AIR IS BELOW 40 DEGREES F. ALL CONCRETE PLACED IN THE FORMS SHALL HAVE A TEMPERATURE BETWEEN 70 DEGREES F. AND 80 DEGREES F., AND ADEQUATE MEANS SHALL BE PROVIDED FOR MAINTAINING A TEMPERATURE OF NOT LESS THAN 70 DEGREES F. FOR THREE (3) DAYS OR 50 DEGREES F. FOR FIVE (5) DAYS EXCEPT WHEN HIGH EARLY STRENGTH CONCRETE IS AUTHORIZED FOR USE, IN WHICH CASE, THE TEMPERATURE SHALL BE MAINTAINED AT NOT LESS THAN 70 DEGREES F. FOR TWO (2) DAYS OR 50 DEGREES F. FOR THREE (3) DAYS OR FOR AS MUCH MORE TIME AS IS NECESSARY TO INSURE PROPER CURING OF THE CONCRETE. THE HOUSING, COVERING OR OTHER PROTECTION USED IN CONNECTION WITH CURING SHALL REMAIN IN PLACE AND INTACT AT LEAST 24 HOURS AFTER THE ARTIFICIAL HEATING IS DISCONTINUED. NO DEPENDENCE SHALL BE PLACED ON SALT OR OTHER CHEMICALS FOR THE PREVENTION OF FREEZING.

FINISHING - AS SOON AS THE FACE FORMS ARE REMOVED. ALL FINS AND OTHER PROJECTIONS SHALL BE REMOVED CAREFULLY. AND OFFSETS LEVELED AND RUBBED WITH CARBORUNDUM WHERE NECESSARY. POINTING AND FILLING VOIDS SHALL BE DONE ONLY UNDER THE DIRECTION OF THE AUTHORITY. FINISHED CONCRETE SHALL BE DONE BY EXPERIENCED CONCRETE FINISHERS, AND SURFACES SHALL BE CLEAN, SMOOTH, FREE OF HONEYCOMBING, SPAULING, RAGGED EDGES AND LAITANCE.

CURING — CONCRETE SHALL BE PROTECTED FROM THE SUN AND KEPT MOIST FOR AT LEAST SEVEN (7) DAYS. DURING THIS PERIOD, CONCRETE SHALL BE MAINTAINED ABOVE 70 DEGREES F. FOR AT LEAST THREE (3) DAYS OR ABOVE 50 DEGREES F. FOR AT LEAST FIVE (5) DAYS. EXPOSED CONCRETE SHALL BE KEPT THOROUGHLY WETTED DURING THE FIRST WEEK, AND COVERED WITH POLYETHYLENE OR HEAVY PAPER. LIQUID MEMBRANE CURING MEETING THE REQUIREMENTS OF AASHTO DESIGNATION M-148 MAY BE USED UPON APPROVAL OF THE AUTHORITY.

PROTECTION - EVERY PRECAUTION SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT FINISHED SURFACES FROM STAINS. ABRASIONS. OR DAMAGE OF ANY KIND. ADEQUATE PROTECTION SHALL BE PROVIDED AGAINST INJURIOUS ACTION BY SUN. WIND OR FREEZING TEMPERATURES. FRESH CONCRETE SHALL BE THOROUGHLY PROTECTED FROM DAMAGE DUE TO HEAVY RAIN, FLOWING WATER, FREEZING TEMPERATURES AND MECHANICAL INJURY.

### C. <u>DEFECTIVE CONCRETE</u>

CONCRETE WORK THAT IS NOT FORMED AS INDICATED OR IS NOT TRUE TO ALIGNMENT, OR IS NOT PLUMB OR LEVEL, OR IS NOT TRUE TO GRADES OR LEVELS, IS FROZEN, OR HAS VOIDS OR ROCK POCKETS, OR HAS SAW DUST, WOOD OR DEBRIS EMBEDDED IN IT, OR DOES NOT FULLY CONFORM TO THE CONTRACT DOCUMENTS, SHALL BE CONSIDERED AS DEFECTIVE AND SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER WITH WORK THAT CONFORMS TO THE CONTRACT DOCUMENTS.

### D. <u>CONCRETE COMPOSITION</u>

CLASS "A" CONCRETE SHALL BE AIR-ENTRAINED, READY-MIXED CONCRETE, 4,000 PSI TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH AND SHALL CONFORM TO AASHTO DESIGNATION M-85.

(a) CEMENT — SHALL BE PORTLAND CEMENT, TYPE I OR II, CONFORMING TO AASHTO DESIGNATION M-85. CEMENT SHALL BE BY AN AMERICAN MANUFACTURER.

(b) FINE AGGREGATE (SAND) — SHALL CONFORM TO AASHTO M—6 HAVING CLEAR. HARD, DURABLE, UNCOATED GRAINS, FREE FROM DELETERIOUS SUBSTANCES AND SHALL RANGE IN SIZE FROM FINE TO COARSE WITHIN THE FOLLOWING PERCENTAGES BY WEIGHT:

PASSING 3/8" SIEVE	100%
PASSING NO. 4 SIEVE	95 - 100%
PASSING NO. 16 SIEVE	45 - 85%
PASSING NO. 50 SIEVE	10 - 30%
PASSING NO. 100 SIEVE	2 - 10%

(c)COARSE AGGREGATE - SHALL CONFORM TO AASHTO M-80 AND SHALL BE FREE OF DELETERIOUS MATTER OR COATINGS. GRADATION MUST BE WITHIN THE FOLLOWING PERCENTAGES BY WEIGHT

> PASSING 1-1/2" SIEVE 100% PASSING 1" SIEVE 95 - 100% PASSING 1/2" SIEVE 25 - 60% PASSING NO. 4 SIEVE 0 - 10%

(d) WATER - SHALL BE CLEAN AND FRESH, FREE FROM SALT, GREASE, ACIDS, ALKALIS, ORGANIC MATERIALS, OR OTHER DELETERIOUS MATERIALS. WHEN POSSIBLE, WATER SHALL BE FROM A MUNICIPAL SYSTEM.

(e)REINFORCEMENT - SHALL BE NEW DEFORMED BILLET STEEL BARS FREE OF LOOSE RUST, CONFORMING TO ASTM A-615, GRADE 60, WITH MINIMUM YIELD OF 60,000 PSI. WIRE FABRIC SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT" ASTM A-185.

(f) THERE SHALL BE NO LESS THAN SIX (6) SACKS OF CEMENT PER CUBIC YARD. THE CONCRETE SHALL CONTAIN NO MORE THAN SIX (6) GALLONS OF WATER PER SACK OF CEMENT, AND SHALL PRODUCE A SLUMP OF NOT MORE THAN FOUR (4) INCHES. AIR CONTENT SHALL BE 7% (+1%).

(q) THE USE OF ACCELERATORS SHALL NOT BE USED UNLESS PRIOR APPROVAL IS RECEIVED FROM THE AUTHORITY.

## XIII.PAVEMENT STRIPING, MARKINGS & SIGNS

## A. <u>SCOPE</u>

THE CONTRACTOR SHALL PROVIDE ALL LABOR, PLANT, MATERIAL, AND EQUIPMENT NECESSARY AND REQUIRED TO INSTALL PAVEMENT STRIPING, MARKINGS AND SIGNS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, CLEANING OF PAVEMENT, LAYOUT AND PROTECTION OF STRIPING AND

ALL SECTIONS OF THIS SPECIFICATION BELOW, SHALL HAVE METHODS AND MATERIALS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE OR GEOTECHNICAL ENGINEER, HEREIN REFERRED TO AS THE 'AUTHORITY'.

ALL WORK SHALL BE AS APPROVED, AND PERFORMED TO THE SATISFACTION OF THE OWNER, OWNER'S FIELD REPRESENTATIVE, GEOTECHNICAL ENGINEER, OR THE AUTHORITY HAVING JURISDICTION.

# B. PAVEMENT STRIPING AND MARKINGS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING TEMPORARY STRIPING AND MARKINGS AND ALL TRACKING MARKS, SPILLED PAINT OR PAINT APPLIED IN UNAUTHORIZED AREAS. THE CONTRACTOR SHALL CLEAN THE PAVEMENT OF DUST, DIRT, OLD PAVEMENT STRIPING AND MARKINGS. CONCRETE CURING COMPOUNDS AND OTHER FOREIGN MATERIAL WHICH MAY BE DETRIMENTAL TO THE ADHESION OF THE PAINT FILM.

THE PAINT SHALL BE APPLIED ONLY ON THOROUGHLY DRY PAVEMENT SURFACES WHEN THE ATMOSPHERIC TEMPERATURE IS AT OR ABOVE 40 DEGREES F. AND WHEN THE WEATHER CONDITIONS ARE FAVORABLE. AFTER STRIPING AND OR MARKINGS HAVE BEEN INSTALLED, THEY SHALL BE PROTECTED TO PREVENT TRACKING AND MARRING OF THE STRIPING AND MARKINGS.

PAINTED PAVEMENT STRIPING AND MARKINGS SHALL, UNLESS OTHERWISE NOTED HEREIN. BE APPLIED WITH ATOMIZING SPRAY TYPE STRIPING MACHINES. THE EQUIPMENT SHALL BE COMPATIBLE WITH AND SUITABLE FOR THE APPLICATION OF THE TYPE OF PAINT BEING USED. APPLIED MARKINGS SHALL HAVE CLEAN-CUT

EDGES, TRUE AND SMOOTH ALIGNMENT, AND UNIFORM FILM THICKNESS OF 15 +1 MILS. PAINT SHALL BE SHERWIN-WILLIAMS PRO-PARK WATERBORNE TRAFFIC MARKING PAINT OR EQUAL AS APPROVED BY THE AUTHORITY. APPROVED EQUAL SHALL BE BASED ON NYSDOT TECHNICAL SERVICES APPROVED LIST OF PAVEMENT MARKING MATERIALS, TRAFFIC PAINT (727-09) (WATERBORNE).

THE CONTRACTOR MAY APPLY WHITE AND YELLOW PAINT, UTILIZING ROLLERS AND/OR BRUSHES FOR MARKING GORE AREAS, TURN ARROWS, LETTERS, STOP BARS, SHORT TEMPORARY DETOURS OR OTHER SUCH AREAS. NORMAL SPREADING RATES FOR PAVEMENT MARKING PAINTS SHALL BE FROM 100 TO 115 SQUARE FEET PER GALLON SO AS TO OBTAIN A WET FILM THICKNESS OF 15 +1 MILS.

### C. STRIPING SCHEDULE

UNLESS OTHERWISE SPECIFIED OR APPROVED BY THE AUTHORITY, THE CONTRACTOR SHALL PROVIDE STRIPING AND MARKING AS FOLLOWS:

CHROME YELLOW STOP LINES 1. SOLID DOUBLE LINES 2. SOLID EDGE LINES 2. SOLID SINGLE LINES PEDESTRIAN CROSSWALKS 3. FIRE LANES WORDS AND ARROWS 4. PROHIBITED PARKING AREAS SOLID LANE LINES 5. HATCHED CENTER ISLANDS 6. BROKEN LANE LINES IN PARKING AREAS 6. PROHIBITED DRIVING AREAS 7. PARKING STALLS (EXCEPT 7. HATCHED ISLANDS IN PARKING AREAS ACCESSIBLE STALLS) 8. HATCHED ISLANDS IN PARKING AREAS 1. ACCESSIBLE PARKING STALLS

2. ACCESSIBLE SYMBOLS

SIGNS - SHALL BE AS INDICATED IN THE SIGN TABLE ON THE DRAWINGS AND SHALL BE FABRICATED IN ACCORDANCE WITH THE DETAILS OF THE DRAWINGS AND AS SPECIFIED HEREIN. FABRICATION OF METAL PARTS SHALL BE ACCOMPLISHED IN UNIFORM AND WORKMANLIKE MANNER. ALL FABRICATION, INCLUDING SHEARING, CUTTING, AND PUNCHING OF HOLES SHALL BE COMPLETED PRIOR TO METAL DEGREASING AND APPLICATION OF REFLECTIVE SHEETING. METAL PANELS SHALL BE CUT TO SIZE AND SHAPE AND SHALL BE FREE OF BUCKLES, WARP, DENTS, COCKLES, BURRS, AND DEFECTS RESULTING FROM FABRICATION. THE SURFACE OF ALL SIGN PANELS SHALL BE FLAT. ALL HOLES SHALL BE 3/8" DIAMETER DRILLED OR PUNCHED, AND ALL HOLE LOCATIONS SHALL BE CENTERED AND SHALL NOT CRUSH, CHIP, BURN OR OTHERWISE MAR THE SIGN FACE.

SIGNS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE DEPARTMENT OF TRANSPORTATION.

STEEL CHANNEL POSTS - STEEL CHANNEL POSTS SHALL BE SET VERTICAL AND PLUMB IN THE LOCATIONS SHOWN AND/OR ORDERED BY THE AUTHORITY. POSTS SHALL BE DRIVEN A MINIMUM OF THREE (3) FEET INTO FIRM GROUND AND/OR INSTALLED IN CONCRETE-FILLED STEEL PIPE PROTECTION POSTS WHERE SO SPECIFIED ON THE DRAWINGS. SIGNS SHALL BE SECURELY FASTENED TO THE POSTS AT THE CORRECT HEIGHT BY MEANS OF NON-CORROSIVE HARDWARE.

POSTS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR COLD ROLLED CARBON SHEET STEEL, COMMERCIAL QUALITY ASTM A-366. POSTS SHALL BE MINIMUM 11 GAUGE STEEL WEIGHING NO LESS THAN THREE (3) LBS./FT. WITH 3/8" HOLES ON ONE (1) INCH CENTERS TO RECEIVE SIGN FACES. POSTS SHALL BE GALVANIZED FOR THE FULL LENGTH BY THE HOT DIP METHOD AND SHALL HAVE A CONTINUOUS COATING OF PURE ZINC OF A UNIFORM THICKNESS. ALL HOLES IN THE STEEL POSTS SHALL BE PIERCED BEFORE GALVANIZING.

## XIV.MISCELLANEOUS CONSTRUCTION

## A. <u>SCOPE</u>

THE CONTRACTOR SHALL PROVIDE ALL LABOR, PLANT, MATERIAL, AND EQUIPMENT NECESSARY AND REQUIRED TO FURNISH AND INSTALL MISCELLANEOUS ITEMS OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WORK SHALL

INCLUDE, BUT NOT BE LIMITED TO: (a) RIP-RAP APRONS AND/OR ENERGY DISSIPATORS

(b) OVERFLOW SPILLWAY (c)CHAIN LINK FENCE (VINYL COATED) (d) CHAIN LINK HINGED GATES (VINYL COATED)

(e)CORRUGATED STEEL GUIDE RAIL (f) CONCRETE HEADWALL

(q) STEEL PIPE PROTECTION POSTS (h) TRASH ENCLOSURE WITH CONCRETE PAD

ALL SECTIONS OF THIS SPECIFICATION BELOW, SHALL HAVE METHODS AND MATERIALS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE OR GEOTECHNICAL ENGINEER, HEREIN REFERRED TO AS THE 'AUTHORITY'.

ALL WORK SHALL BE AS APPROVED, AND PERFORMED TO THE SATISFACTION OF THE OWNER, OWNER'S FIELD REPRESENTATIVE, GEOTECHNICAL ENGINEER, OR THE AUTHORITY HAVING JURISDICTION.

## RIP-RAP APRONS AND/OR ENERGY DISSIPATORS

THE CONTRACTOR SHALL FURNISH AND INSTALL RIP-RAP APRONS AND/OR ENERGY DISSIPATORS WHERE AND AS SHOWN ON THE DRAWINGS AND/OR AS DIRECTED BY THE AUTHORITY.

CONSTRUCTION DETAILS - THE GROUND SURFACE ON WHICH THE RIP-RAP IS TO BE PLACED SHALL BE DRESSED AND GRADED TO A SMOOTH SURFACE. ALL SOFT AND SPONGY MATERIALS SHALL BE REMOVED TO THE DEPTHS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE AUTHORITY AND REPLACED WITH APPROVED MATERIAL. RIP-RAP APRONS AND/OR ENERGY DISSIPATORS SHALL BE PLACED ON A BEDDING OF COMPACTED SAND OR GRAVEL AS MAY BE SHOWN IN DETAIL ON THE DRAWINGS. FILLED AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THESE SPECIFICATIONS. THE STONES SHALL BE PLACED ON THE BEDDING MATERIAL SO THAT THE DIMENSION APPROXIMATELY EQUAL TO THE LAYER THICKNESS IS PERPENDICULAR TO THE GROUND SURFACE AND THE WEIGHT OF THE STONE IS CARRIED BY THE UNDERLYING MATERIAL. THE RIP-RAP SHALL BE PROPERLY ALIGNED AND PLACED SO AS TO ELIMINATE VOID SPACES BETWEEN THE ADJACENT STONES.

MATERIALS - THE STONES FOR THE RIP-RAP SHALL BE HARD AND ANGULAR IN SHAPE, RESISTANT TO WEATHERING AND REASONABLY FREE FROM SOIL, SHALE, AND ORGANIC MATERIALS. UNLESS DIRECTED OTHERWISE, FIFTY (50) PERCENT OF THE MATERIAL USED SHALL WEIGH MORE THAN 200 LBS.; THE REMAINDER OF THE STONE SHALL WEIGH FROM 50 LBS. TO 200 LBS. EACH. THE TYPE AND GRADATION OF THE MATERIALS FURNISHED FOR USE IN RIP-RAP APRONS AND/OR ENERGY DISSIPATORS SHALL BE APPROVED BY THE AUTHORITY.

## C. <u>OVERFLOW SPILLWAY</u>

THE CONTRACTOR SHALL FURNISH AND INSTALL AN OVERFLOW SPILLWAY WHERE AND AS SHOWN ON THE DRAWINGS AND/OR AS DIRECTED BY THE AUTHORITY.

CONSTRUCTION DETAILS - THE GROUND SURFACE ON WHICH THE SPILLWAY IS TO BE PLACED SHALL BE STRIPPED OF TOPSOIL, BRUSH, ETC., DRESSED AND GRADED TO A SMOOTH SURFACE. ALL SOFT AND SPONGY MATERIALS SHALL BE REMOVED AS DIRECTED AND REPLACED WITH APPROVED MATERIAL. THE SPILLWAY SHALL BE CONSTRUCTED AS DETAILED ON THE PLANS WITH APPROVED COMPACTED EMBANKMENT FILL, PERMANENT TURF REINFORCEMENT MAT, FILTER FABRIC, RIP-RAP SLOPE PAVING ON SLOPE, AND A BROAD-CRESTED WEIR/EMERGENCY SPILLWAY AS

FILL CONSTRUCTION SHALL BE DONE UNDER THE INSPECTION OF A QUALIFIED SOILS ENGINEER. IN-PLACE FIELD DENSITY TESTS MUST BE DONE ON EACH LIFT TO ENSURE SPECIFICATIONS OF THE SOILS ENGINEER ARE BEING MET.

### D. <u>CHAIN LINK FENCE (VINYL COATED)</u>

THE CONTRACTOR SHALL FURNISH AND INSTALL VINYL COATED CHAIN LINK FENCE OF THE HEIGHT INDICATED AND WHERE SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE AUTHORITY.

PRIOR TO INSTALLATION OF THE FENCE, THE CONTRACTOR SHALL CHECK THE FENCE LAYOUT WITH THE AUTHORITY WHO MUST APPROVE THE LAYOUT BEFORE ANY OF THE WORK IS DONE.

CONSTRUCTION DETAILS - ALL POSTS SHALL BE SET VERTICAL AND PLUMB IN CONCRETE FOUNDATIONS OF THE DEPTH AND DIAMETER SHOWN IN DETAIL ON THE DRAWINGS. POSTS SHALL BE SET TO THE REQUIRED GRADE AND ALIGNMENT AND SHALL BE EQUALLY SPACED ALONG EACH SIDE. POST SPACING SHALL BE NOT GREATER THAN EIGHT (8) FEET.

FABRIC SHALL BE SECURELY FASTENED TO POSTS, RAILS, BRACES AND TENSION WIRE (OR BOTTOM RAIL WHEN SPECIFIED) BY APPROVED METHOD. THE FABRIC SHALL BE SECURED TO ALL END, CORNER AND GATE POSTS WITH STRETCHER BARS FASTENED TO THE POSTS AND STRETCHER BANDS SPACED AT A MAXIMUM OF 14 INCHES IN A MANNER PERMITTING ADJUSTMENT OF FABRIC TENSION. FABRIC SHALL BE CONTINUOUS ALONG EACH STRETCH OF FENCE. BOTTOM OF FABRIC SHALL BE INSTALLED WITH A MAXIMUM OF ONE AND ONE-HALF (1-1/2) INCH CLEARANCE FROM GROUND SURFACE.

ALL TOP RAILS SHALL PASS THROUGH THE BASE OF THE POST CAPS AND SHALL FORM A CONTINUOUS BRACE FROM END TO END OF EACH STRETCH OF FENCE. TOP RAIL LENGTHS SHALL BE JOINED WITH SLEEVE COUPLINGS WITH EXPANSION SLEEVES PROVIDED AT 100 FOOT INTERVALS. TOP RAILS SHALL BE SECURELY FASTENED TO END POSTS BY APPROVED RAIL END CONNECTORS. HORIZONTAL BRACES SHALL BE PROVIDED AT END AND CORNER PANELS BETWEEN LINE POST AND EACH ADJACENT END, CORNER, AND GATE POST MIDWAY BETWEEN THE TOP RAIL AND GROUND AS SHOWN IN DETAIL ON THE DRAWINGS. DIAGONAL TRUSS ROD WITH TURN BUCKLE SHALL ALSO BE PROVIDED AT THESE LOCATIONS.

**ARCHITECT** 

di Domenico + Partners LLP



Landscape Architecture Planning

3743 Crescent Street, 3rd Floor Long Island City, New York 11101 Tel 212-337-0400 Fax 212-337-3567

## CIVIL PLANNING ENGINEER



JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC 120 Bedford Road Armonk, New York 10504 Tel 914-273-5225 Fax 914-273-2102

MEP ENGINEER



BURNS ENGINEERING, PC. 1261 Broadway, Suite 708 New York, New York 10001 Tel 212-962-3503

STRUCTURAL ENGINEER



1385 Broadway, 20th FL New York, New York 10018 Tel 212-687-8282



# MANHATTAN BEER DISTRIBUTORS 20 DUNNIGAN DRIVE SUFFERN, NEW YORK

DESCRIPTION DATE 1 ISSUED FOR DOB SUBMISSION 09.10.21 2 ISSUED FOR BID 10.15.21 /3\REVISED BID/PERMIT SET 02.25.22 4 REVISED/ISSUED FOR CONSTRUCTION 10.19.22

JPM/JAR CHECKED BY APPROVED BY

DATE: SCALE:

DRAWING TITLE

ISSUE:

DRAWN BY:

# CIVIL **SPECIFICATIONS**

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2 DWG NUMBER

09.10.2021

N.T.S

SCR: EXISTING SCR