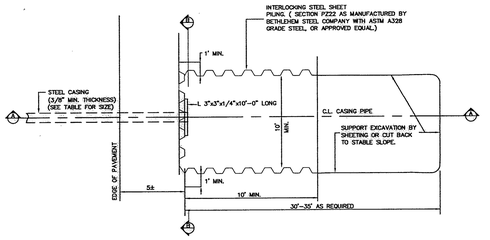
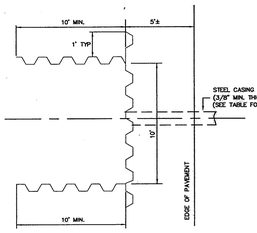


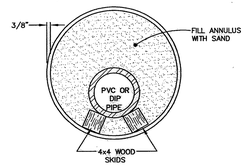
APPROACH PIT –PLAN

N.T.S.



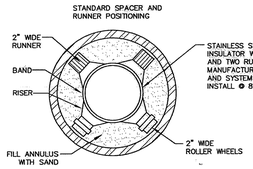
RECEIVING PIT –PLAN

N.T.S.



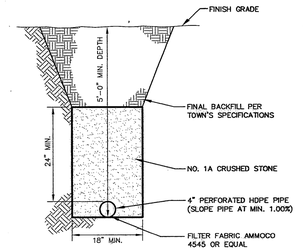
CASING PIPE WITH WOOD SKIDS DETAIL

N.T.S.



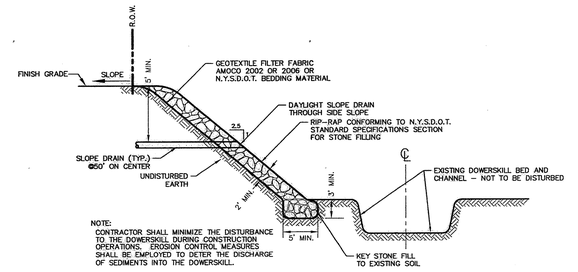
CASING PIPE WITH SPACER DETAIL (OPTIONAL)

N.T.S.



SLOPE DRAIN DETAIL

N.T.S.

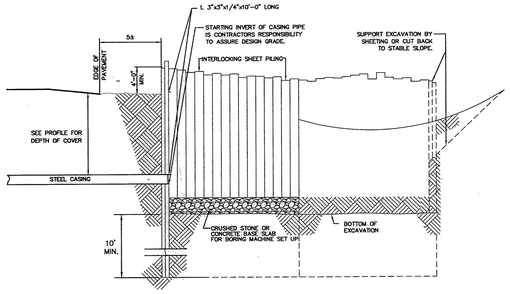


NOTE:
CONTRACTOR SHALL MINIMIZE THE DISTURBANCE TO THE DOWERSKILL DURING CONSTRUCTION OPERATIONS. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO DETER THE DISCHARGE OF SEDIMENTS INTO THE DOWERSKILL.

STONE FILL INSTALLATION DETAIL AT DOWERSKILL

N.T.S.

NOTE:
1. USE AT EMBANKMENT OF WALDEN FIELDS DRIVE TO TRANSITION TO DOWERS KILL. (WALDEN FIELDS DRIVE STA 9+85 TO STA 11+05 RIGHT SIDE)
2. SLOPE DRAINS SHALL BE INSTALLED AT ALL LOCATIONS OF EMBANKMENT EXCEEDING THREE FEET ALONG WALDEN FIELDS DRIVE. REFER TO GEOTECHNICAL RECOMMENDATIONS PREPARED BY VERNON HOFFMAN, P.E. ENTITLED "WALDENMAIER PLANNED RESIDENCE COMMUNITY, BETHLEHEM, NEW YORK, FILE NO. 6002", PREPARED BY VERNON C. HOFFMAN, P.E., DATED FEBRUARY 24, 2003.
3. INSTALLATION OF ROADWAY CONTROLLED FILL, SLOPE DRAINS AND RIP-RAP SLOPE PROTECTION SHALL BE REVIEWED BY AN EXPERIENCED SOILS ENGINEER TO ASSURE THAT THE DESIGN REQUIREMENTS ARE FULFILLED IN THE ACTUAL CONSTRUCTION.

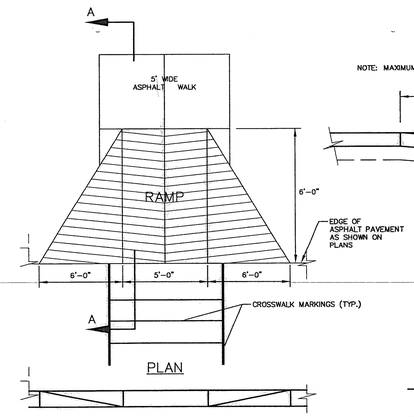


APPROACH PIT –SECTION A–A

N.T.S.

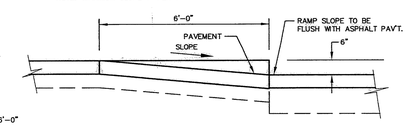
STEEL BORE NOTES

1. ANNULAR SPACE BETWEEN CASING AND PIPE SHALL BE FILLED WITH SAND.
2. CASING PIPE SHALL BE INSTALLED BY BORING AND JACKING WITHOUT DISTURBING THE SOIL OUTSIDE OF THE CASING PIPE.
3. BRICK AND MORTAR BOTH ENDS OF STEEL CASING, LEAVE 1" WEEP HOLES AT END OF CASING.
4. EXTEND SHEETING TO 4 FEET ABOVE EXISTING GROUND UNLESS BEHIND GUIDERAIL.
5. ALL PITS MUST BE ENCLOSED W/4' HIGH SAFETY FENCING AT THE END OF EACH WORKDAY.
6. THE CASING SHALL BE JACKED UNDER THE ROADWAY.
7. ALL STEEL CASINGS SHALL HAVE A MINIMUM YIELD STRENGTH OF 35,000 POUNDS PER SQUARE INCH AND MUST CONFORM TO A.S.T.M. SPECIFICATION A-139, GRADE B OR APPROVED EQUAL.
8. SECURE THE 4x4 WOOD SKIDS TO THE PVC PIPE WITH 1/2 INCH STEEL STRAPPING TO PREVENT LONGITUDINAL MOVEMENT.
9. UNLESS OTHERWISE ALLOWED BY THE DEPARTMENT OF TRANSPORTATION REPRESENTATIVES AT THE SITE, ALL JACKING OPERATIONS SHALL BE CONTINUOUS UNTIL THE CROSSING IS COMPLETED.
10. PRIOR TO STARTING WORK ON THE ACTUAL BORE UNDER ELSMERE AVENUE, IT WILL BE NECESSARY TO EXCAVATE SOIL TEST PITS ON BOTH SIDES OF THE ROAD TO VERIFY SOIL CONDITIONS & GROUND WATER IS OTHER ENCOUNTERED OR DETERMINED TO BE ABOVE THE CASING INVERT THE CONTRACTOR MUST SUBMIT DETAILS TO THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION FOR REVIEW AND CONCERN. PROVISION SHALL BE MADE TO DEWATER STABILIZE THE SITE OR PROVIDE SHORING AS NECESSARY. THE NYSDOT REPRESENTATIVE SHALL BE NOTIFIED OF THE DATE THESE TEST PITS WILL BE DUG.
11. THE CONTRACTOR HAS THE OPTION OF INSTALLING EITHER THE WOOD SKIDS OR STANDARD SPACERS.

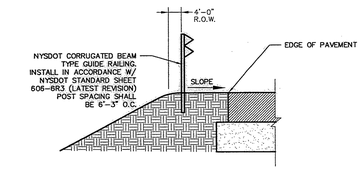


PLAN

ELEVATION



SECTION A–A



GUIDE RAIL DETAIL

N.T.S.

NOTE: INSTALL AT WALDEN FIELDS DRIVE FROM STA 8+75 TO STA 13+69 RIGHT SIDE ONLY.

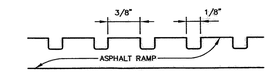
BORE DETAILS

N.T.S.

TEMPORARY INERTIAL BARRIER PLAN

N.T.S.

CASING SIZE TABLE	
ELSMERE AVE. AT DALTON & SEDGEWYCK INTERSECT	16" DIA. STEEL (SEWER) 30" DIA. STEEL (STORM)

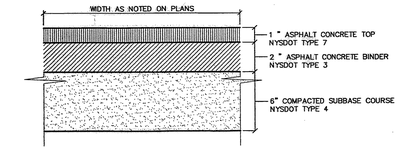


DETECTABLE WARNING SURFACE DETAIL

ADA COMPLIANT HANDICAP RAMP DETAIL

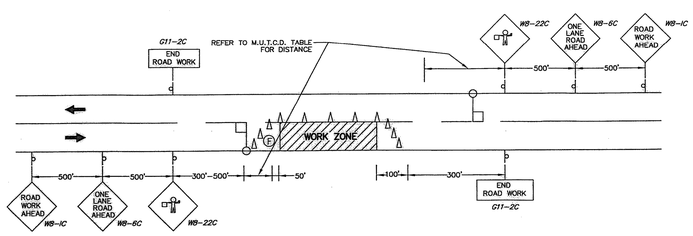
N.T.S.

NOTE: 1. SIDEWALK CONSTRUCTION SHALL CONFORM TO ALL ADA REGULATIONS
2. CROSSWALK MARKINGS SHALL CONFORM WITH NYSDOT STANDARD SHEET 608-3R3.



TYPICAL ASPHALT SIDEWALK SECTION

N.T.S.



MAINTENANCE & PROTECTION OF TRAFFIC SHORT DURATION

N.T.S.

INSTALLATION OF WATER MAIN CROSSINGS @ ELSMERE AVENUE

(TWO LOCATIONS)

OUTLINE SPECIFICATIONS FOR HIGH DENSITY POLYETHYLENE PIPE (HDPE)

A. ALL HDPE PIPING SHALL BE NEW, CLEAN, UNUSED, AND IN ACCORDANCE WITH THESE OUTLINE SPECIFICATIONS. PIPE DAMAGED DURING SHIPMENT OR IN THE FIELD SHALL NOT BE USED AND SHALL BE REPLACED BY THE CONTRACTOR.

B. ALL HDPE PIPING SHALL BE IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARD C906. PIPE SHALL BE STANDARD MATERIAL CODE PE 3408. OUTSIDE DIAMETER [STANDARD DUCTILE IRON PIPE SIZES (DIPS)] DIMENSION RATIO (DR), AND PRESSURE CLASS (PC) SHALL BE AS SHOWN BELOW:

NOMINAL HDPE SIZE	STD. O.D. (DIPS)	DR 11 PC 160 AVE. I.D.
8-INCH	9.05"	7.375"

C. PIPE SHALL BE MARKED PER AWWA C906 PLUS NSF-PW FOR POTABLE WATER.

D. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

E. HDPE PIPE SHALL BE JOINED IN THE FIELD BY THE THERMAL BUTT-FUSION METHOD IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

F. SUBMIT MANUFACTURER'S CATALOG CUTS, SPECIFICATIONS, AND RECOMMENDED INSTALLATION PROCEDURES FOR THE HDPE PIPE INCLUDING THE THERMAL BUTT-FUSION METHOD OF JOINING PIPES.

G. SUBMIT EVIDENCE THAT THE WORKERS WHO WILL BE JOINING THE HDPE PIPES HAVE HAD THE PROPER TRAINING AND ARE CURRENTLY QUALIFIED.

H. HDPE PIPE SHALL BE DRISCOPIPE PRISMA 4000 AS MANUFACTURED BY PHILLIPS PETROLEUM COMPANY OR APPROVED EQUAL.

OUTLINE SPECIFICATIONS FOR HORIZONTAL DIRECTIONAL DRILLING (HDD)

A. SUBMIT PROPOSED INSTALLATION METHOD AND PROCEDURE INCLUDING THE FOLLOWING: CONTRACTOR'S OR SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS, LIST OF SIMILAR PROJECTS COMPLETED WITHIN THE PAST FIVE YEARS, AREAS REQUIRED FOR OPEN TRENCHING AND DRILLING EQUIPMENT, TYPE OF DRILLING EQUIPMENT, TRACKING SYSTEM, DRILLING FLUID, BACKREAMING TECHNIQUE, PROPOSED METHOD FOR ABANDONING FAILED DRILLING ATTEMPTS (INCLUDING PRESSURE GROUTING OF ABANDONED TUNNELS), AND PLAN FOR PROTECTION OF VEHICLE TRAFFIC AND PEDESTRIANS.

B. ALL WORK MUST CONFORM TO THE REQUIREMENTS OF THE HIGHWAY WORK PERMITS ISSUED BY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION AND THE TOWN OF BETHLEHEM.

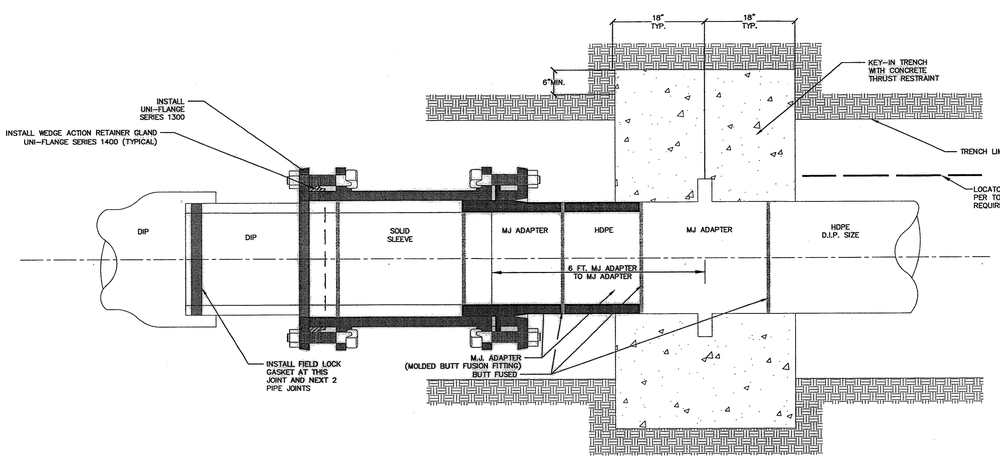
C. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER LINE AND GRADE. THE HDPE PIPE INSTALLATION METHOD SHALL INCLUDE DRILLING A PILOT BORING, THEN A BACKREAMER ASSEMBLY TO ALLOW THE HDPE PIPE TO BE PULLED INTO THE HOLE AS IT IS BEING ENLARGED BY THE BACKREAMER. NO SOIL OR DRILLING FLUID SHALL ENTER THE HDPE PIPE.

D. THE PILOT BORING AND BACKREAMING METHOD SHALL INCLUDE DRILLING FLUID THAT WILL ENSURE THAT THE PILOT BORE AND TUNNEL REMAIN OPEN DURING THE OPERATION.

E. ONCE THE PILOT BORING AND BACKREAMING OPERATION HAS BEGUN, IT SHALL CONTINUE ON A 24 HOUR BASIS WITHOUT STOPPING (EXCEPT FOR ADDING DRILL PIPE, BACKREAMER ASSEMBLY, ETC.) UNTIL THE HDPE PIPE HAS BEEN COMPLETELY INSTALLED.

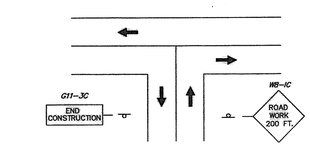
F. A BARE #2 COPPER TRACING WIRE SHALL BE INSTALLED WITH THE HDPE PIPE AND CONNECTED TO THE DUCTILE IRON PIPE OR FITTINGS FOR ELECTRICAL CONTINUITY.

G. THE HDPE PIPE SHALL BE EXTENDED ENOUGH TO ALLOW FOR STRETCH RECOVERY AND THERMAL CONTRACTION, BUT SHALL NOT BE CUT UNTIL IT IS IN THERMAL EQUILIBRIUM WITH THE ADJACENT SOIL.



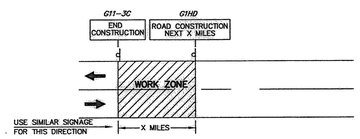
HDPE TO DIP TRANSITION DETAIL

N.T.S.



TYPICAL INTERSECTION SIGNING

N.T.S.



TRAFFIC MAINTAINED THROUGH PROJECT

N.T.S.

LEGEND:

- ROADWAY CENTERLINE
- EXISTING ROADWAY
- PROPOSED SIGN
- PROPOSED CONE
- PROPOSED FLAGGER
- PROPOSED FLAG TREE

SIGN SCHEDULE

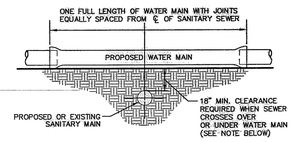
SIGN ID. SYMBOL	SIGN TEXT	SIGN SIZE	TEXT SIZE & COLOR	NO. REQ'D.	TYPE OF MOUNTING	MUTCD NO.
2	KEEP → RIGHT	24" x 30"	PER R4-5C	2	GROUND MOUNTED METAL POSTS	R4-5C
4	STOP	30" x 30"	PER R1-1C	5	GROUND MOUNTED METAL POSTS	R1-1C

SIGN NOTES:

1. SIGNS & PAVEMENT MARKINGS TO BE INSTALLED IN ACCORDANCE WITH THE "NEW YORK STATE DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
2. UNLESS OTHERWISE SHOWN, ALL TRAFFIC SIGNS, INFORMATIONAL SIGNS AND SUPPORTS SHALL BE IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 645 "GUIDE SIGNS, TRAFFIC SIGNS AND SPECIAL DEVICES." SIGN PANELS BE ALUMINUM. SUPPORT POLES SHALL BE GALVANIZED STEEL AND IN ACCORDANCE WITH NYSDOT STANDARD SHEET 645-7 & 645.801, LATEST VERSION. ALL SUPPORT POLES SHALL BE DRIVEN TO A DEPTH OF AT LEAST 3'-2" IN SOIL OR EMBEDDED 1'-0" INTO SOUND ROCK IF ENCOUNTERED ABOVE THIS DEPTH AND SHALL BE DESIGNED FOR LOCAL WIND LOADS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PROPOSED SIGNS AND THEIR INTENDED LOCATIONS TO THE ENGINEER.
3. SIGNS SHALL BE MOUNTED AT APPROXIMATELY RIGHT ANGLES TO THE DIRECTION OF TRAFFIC AND TURNED SLIGHTLY AWAY FROM THE ROADWAY TO AVOID MIRROR REFLECTION OF VEHICLE HEADLIGHTS.
4. EXACT SIGN LOCATION TO BE FIELD DETERMINED BY TOWN.

N.Y.S. D.O.T. REQUIREMENTS FOR UTILITY INSTALLATIONS WITHIN RIGHT-OF-WAY AND EASEMENTS:

1. H.D.P.E. SHALL BE COLOR CODED FOR THE SPECIFIC UTILITY.
2. ALL STRUCTURES, INCLUDING MANHOLES & CATCH BASINS, SHALL COMPLY WITH N.Y.S.D.O.T. SPECIFICATIONS AND BE N.Y.S.D.O.T. CERTIFIED.
3. THE CONTRACTOR WILL BE REQUIRED TO PERFORM TEST HOLE / PIT IN ORDER TO ESTABLISH SUBSURFACE CONDITIONS AT ALL BORE LOCATIONS.
4. TRACER WIRE WILL BE REQUIRED AT ALL HDPE INSTALLATIONS, TRACER WIRE SHALL BE STAINLESS STEEL MATERIAL.
5 IF LANE CLOSURES ARE REQUIRED, THE FOLLOWING LANE CLOSURE INSTRUCTIONS WILL BE APPLICABLE: (PEAK HOUR RESTRICTIONS)
N.Y.S. ROUTE 335 (ELSMERE AVENUE) : NO CLOSURES ALLOWED MONDAY THRU FRIDAY 7:00 A.M. TO 9:00 A.M. & 3:00 P.M. TO 6:00 P.M.; SATURDAY & SUNDAY NO RESTRICTIONS.
N.Y.S. ROUTE 910A (FEURA BUSH ROAD) : NO CLOSURES ALLOWED MONDAY THRU FRIDAY 7:00 A.M. TO 9:00 A.M. & 3:00 P.M. TO 7:00 P.M.; SATURDAY & SUNDAY NO RESTRICTIONS.



NOTES:

HORIZONTAL SEPARATION:

SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.

CROSSINGS:

SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER . THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE.

WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE CONTRACTOR SHALL CONSTRUCT EITHER OF THE FOLLOWING OPTIONS.

A. THE SEWER SHALL BE CONSTRUCTED OF MATERIALS EQUAL TO THE WATER PIPE, AND SHALL BE PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.

B. EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE DUCTILE IRON OF THE SAME CLASS AS THE WATER MAIN.

INCHES 0 1 2 — 1407 TOWN OF BETHLEHEM

TYPICAL WATER MAIN & SAN. SEWER CROSSING

N.T.S.

Rev no	Date	Description	By
F	06/06/03	REVISED PER TOWN COMMENTS	J.P.P.
E	04/25/03	REVISED PER TOWN COMMENTS & A.C.D.O.H. COMMENTS	B.M.D.
D	02/07/03	REVISED PER TOWN COMMENTS	D.E.O.
C	11/11/02	REVISED PER TOWN COMMENTS	M.R.T.
B	9/24/02	REVISED PER TOWN COMMENTS	D.E.O.
A	5/29/02	ISSUED FOR REVIEW	D.E.O.

REVISIONS

L. SIPPERLY & ASSOCIATES
ENGINEERS • SURVEYORS • LAND PLANNERS
696 TROY-SCHENECTADY ROAD, LATHAM, N.Y. 12110
PHONE: (518) 782-1800 FAX: (518) 782-1252

It is a violation of the education law of the state of New York for any person, unless he is acting under the direction of a Licensed Professional engineer, to alter this document in any way.

06-06-03
Date

STATE OF NEW YORK — NICHOLAS C. SIPPERLY — 074637 — LICENSED PROFESSIONAL ENGINEER

DESIGNED BY:
DRAWN BY: J.P.P./D.E.O.
CHECKED BY: N.C.
APPROVED BY: L.T.S.
SCALE: AS NOTED
DATE: MAY 10, 2002
ISSUED:

WALDENMAIER PLANNED RESIDENTIAL DEVELOPMENT

ELSMERE AVENUE & FEURA BUSH ROAD — TOWN OF BETHLEHEM
COUNTY OF ALBANY — STATE OF NEW YORK

MISCELLANEOUS DETAILS (1)

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SHEET NUMBER
9
9 OF 20

REV. NO.	DWG. NO.
F	G-02082A

Beth-det1.dwg 6-26-03 2:20:11 pm EST