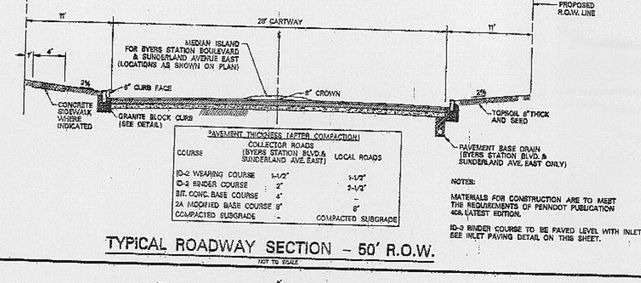
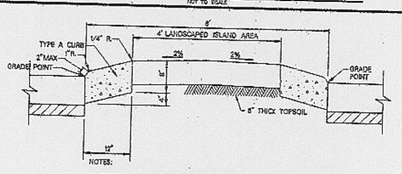
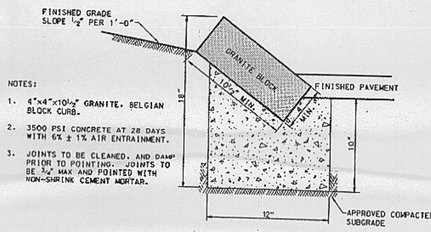


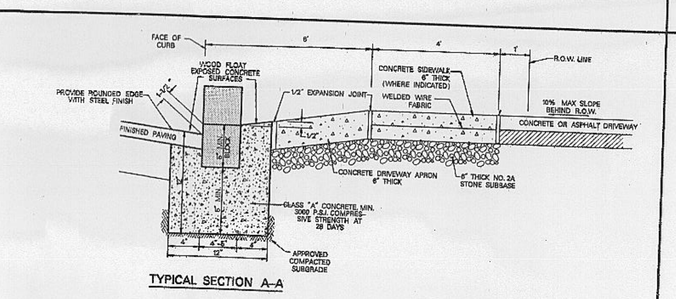
TYPICAL ROADWAY SECTION - 50' R.O.W.
NOT TO SCALE



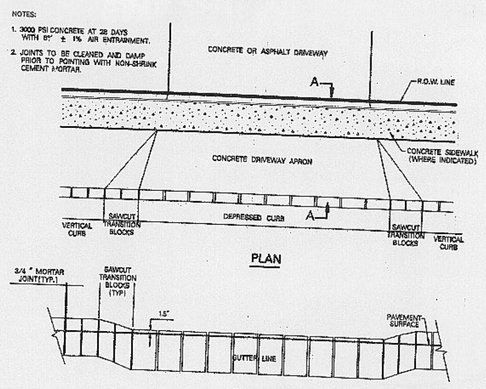
MOUNTABLE CURB FOR ISLAND MEDIAN
BYERS STATION BLVD. & SUNDERLAND AVE. EAST
NOT TO SCALE



MOUNTABLE GRANITE BLOCK CURB

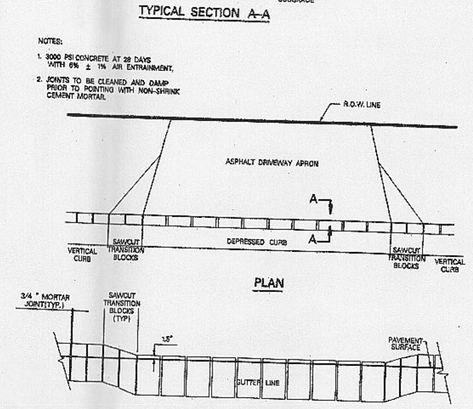


TYPICAL SECTION A-A

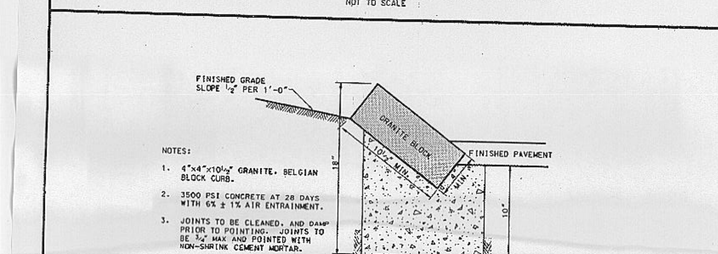


CONCRETE DRIVEWAY DETAIL
NOT TO SCALE
TO BE USED IN LOCATIONS WITH CONCRETE DRIVEWAYS AND IN LOCATIONS WITH SIDEWALK (CONCRETE OR ASPHALT DRIVEWAYS)

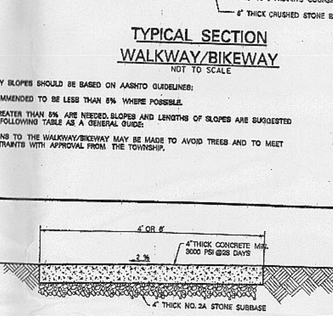
TYPICAL SECTION A-A



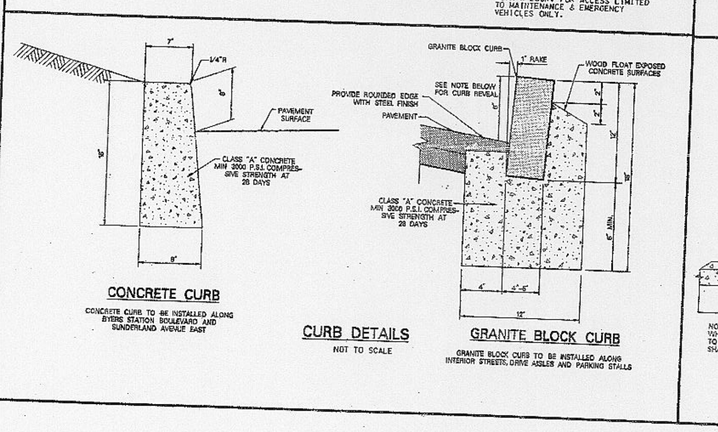
ALTERNATE ASPHALT DRIVEWAY DETAIL
NOT TO SCALE
TO BE USED IN LOCATIONS WITH ASPHALT DRIVEWAYS & WITHOUT SIDEWALK



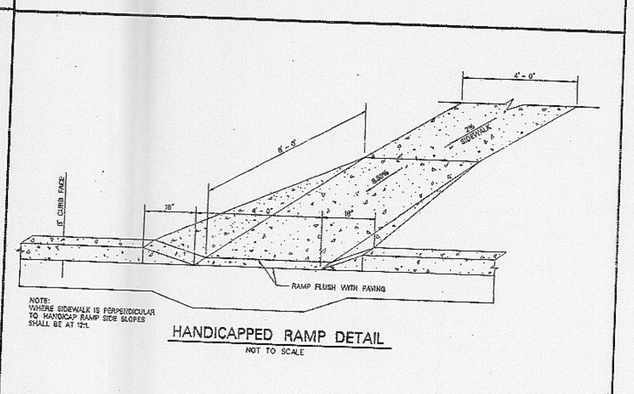
TYPICAL SECTION PUMP STATION/EMERGENCY ACCESS DRIVE
NOT TO SCALE
NOTE: BARRIER GATE IS TO BE INSTALLED WITH A LOCK. (FOR ACCESS LIMITED TO MAINTENANCE & EMERGENCY VEHICLES ONLY.)



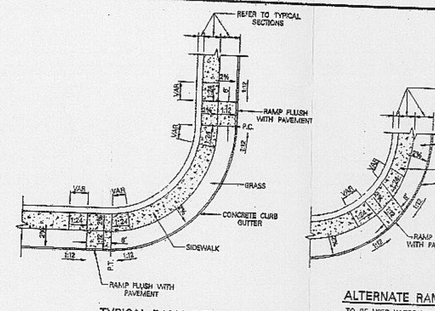
TYPICAL GALVANIZED PIPE BOLLARD
NOT TO SCALE



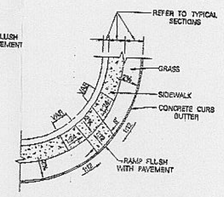
CONCRETE CURB
CONCRETE CURB TO BE INSTALLED ALONG BYERS STATION BOULEVARD AND SUNDERLAND AVENUE EAST
NOT TO SCALE
GRANITE BLOCK CURB TO BE INSTALLED ALONG INTERIOR STREETS, DRIVE AISLES AND PARKING STALLS



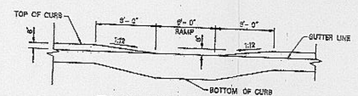
HANDICAPPED RAMP DETAIL
NOT TO SCALE



TYPICAL RAMP DETAIL

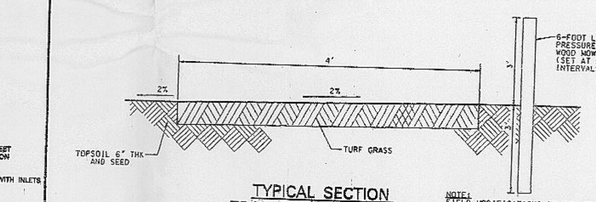


ALTERNATE RAMP DETAIL
TO BE USED WHERE DRAINAGE STRUCTURES OR OTHER SIGNIFICANT STRUCTURES OCCUR AT THE P.C. OR P.T.

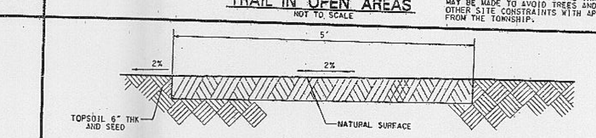


TYPICAL CURB ELEVATION AT RAMP

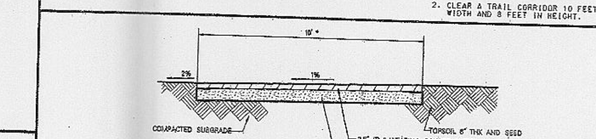
CURB RAMPS FOR THE PHYSICALLY HANDICAPPED
NOT TO SCALE



TYPICAL SECTION
TRAIL IN OPEN AREAS
NOT TO SCALE
NOTE:
1. FIELD MODIFICATIONS TO THE TRAILS MAY BE MADE TO AVOID TREES AND TO MEET OTHER SITE CONSTRAINTS WITH APPROVAL FROM THE TOWNSHIP.



TYPICAL SECTION
TRAIL IN WOODED AREAS
NOT TO SCALE
NOTES:
1. FIELD MODIFICATIONS TO THE TRAILS MAY BE MADE TO AVOID TREES AND TO MEET OTHER SITE CONSTRAINTS WITH APPROVAL FROM THE TOWNSHIP.
2. CLEAR A TRAIL CORRIDOR 10 FEET IN WIDTH AND 8 FEET IN HEIGHT.

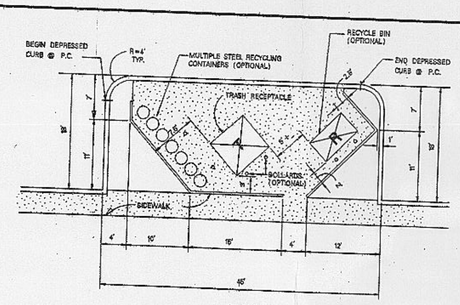


TYPICAL SECTION
WALKWAY/BIKEWAY
NOT TO SCALE
WALKWAY/BIKEWAY SLOPES SHOULD BE BASED ON AASHTO GUIDELINES:
SLOPES ARE RECOMMENDED TO BE LESS THAN 5% WHERE POSSIBLE.
WHERE SLOPES GREATER THAN 5% ARE NEEDED, SLOPES AND LENGTHS OF SLOPES ARE SUGGESTED TO FOLLOW THE FOLLOWING TABLE AS A GENERAL GUIDE:
FIELD MODIFICATIONS TO THE WALKWAY/BIKEWAY MAY BE MADE TO AVOID TREES AND TO MEET OTHER SITE CONSTRAINTS WITH APPROVAL FROM THE TOWNSHIP.

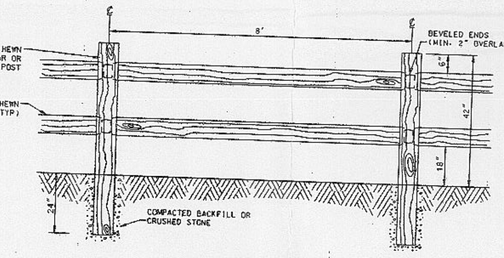
SLOPE	LENGTH OF SLOPE (FT)
5-6	800
7	400
8	200
9	200
10	100
11+	50

* 4' WIDTH FOR PAVED TRAIL FROM KINDERLAY COURT TO PICKERING SPRINGS FARM DEVELOPMENT

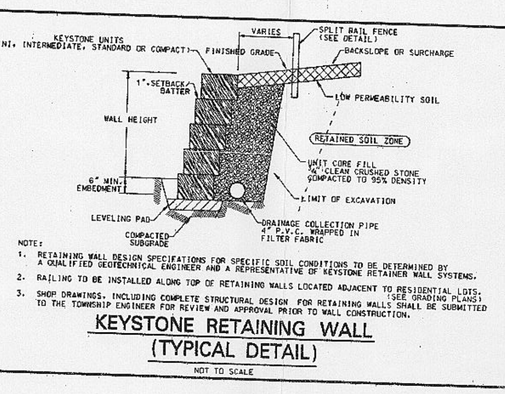
CONCRETE SIDEWALK DETAIL
NOTE:
SIDEWALKS SHALL BE CONSTRUCTED 6" THICK WITH WELDED WIRE FABRIC REINFORCEMENT ACROSS DRIVEWAY APRONS.



PLAN
TRASH ENCLOSURE DETAIL
NOT TO SCALE

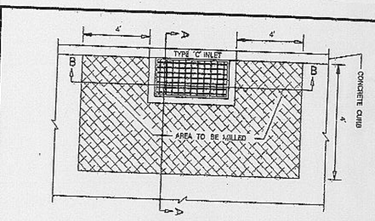


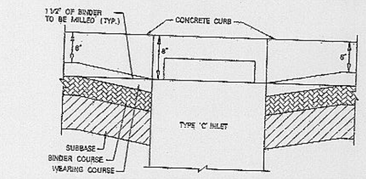
SPLIT RAIL FENCE
N.T.S.



NOTE:
1. RETAINING WALL DESIGN SPECIFICATIONS FOR SPECIFIC SOIL CONDITIONS TO BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER AND A REPRESENTATIVE OF KEYSTONE RETAINER WALL SYSTEMS.
2. RAILING TO BE INSTALLED ALONG TOP OF RETAINING WALLS LOCATED ADJACENT TO RESIDENTIAL LOTS.
3. SHOP DRAWINGS, INCLUDING COMPLETE STRUCTURAL DESIGN FOR RETAINING WALLS (SEE GRADING PLANS) TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL PRIOR TO WALL CONSTRUCTION.

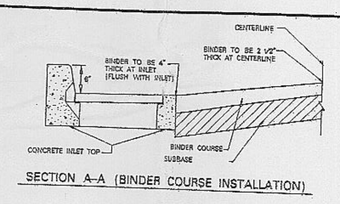
KEYSTONE RETAINING WALL
(TYPICAL DETAIL)
NOT TO SCALE



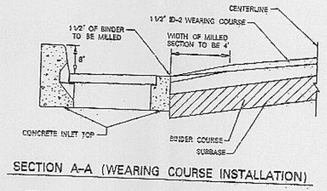


SECTION B-B (WEARING COURSE INSTALLATION)

INLET PAVING DETAIL
NOT TO SCALE

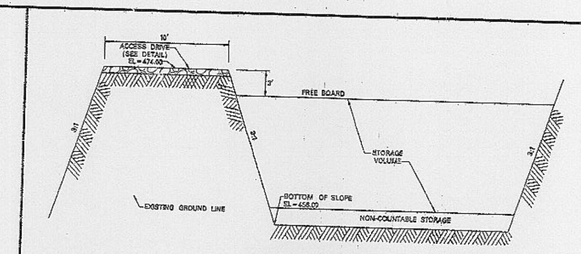


SECTION A-A (BINDER COURSE INSTALLATION)

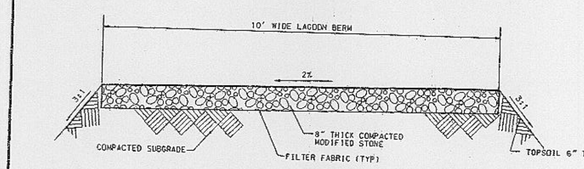


SECTION A-A (WEARING COURSE INSTALLATION)

NOTES:
1. ALL CONSTRUCTION PRACTICES AND MATERIALS TO MEET PENNDOT PUB. 408 SPECIFICATIONS, LATEST EDITION UNLESS OTHERWISE NOTED.
2. IMMEDIATELY FOLLOWING THE INSTALLATION OF THE STONE BASE COURSE THE BINDER COURSE IS TO BE APPLIED SO THAT IT IS FLUSH WITH THE CONCRETE INLET TOP.
3. PRIOR TO THE INSTALLATION OF THE WEARING COURSE THE BINDER COURSE (AROUND THE INLET, SEE ABOVE) IS TO BE MILLED SO AS TO ALLOW THE WEARING COURSE TO BE FLUSH WITH THE CONCRETE INLET TOP.
4. FOR PAVING SPECIFICATIONS, SEE "TYPICAL SECTION - ASPHALT PAVEMENT" DETAIL.

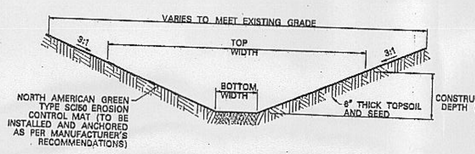


TYPICAL SECTION
STORAGE LAGOON
NOT TO SCALE



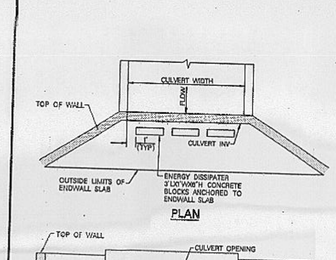
TYPICAL SECTION - LAGOON ACCESS DRIVE
NOT TO SCALE

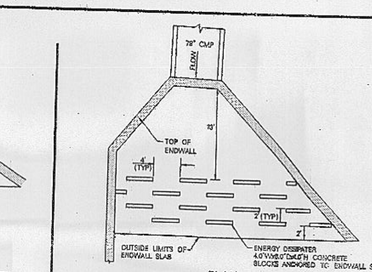
SWALE NO.	BOTTOM WIDTH (FT)	DEPTH (FT)
222A	4.0	0.88
262	4.0	0.66
270	4.0	0.66
U1	2.0	1.1
U41	4.0	1.4
4U	4.0	3.0



NOTE:
FOR SLOPES ABOVE 10%, USE NORTH AMERICAN GREEN, VMAX3, SC150 EROSION CONTROL MAT OR APPROVED EQUAL.

TYPICAL SECTION
DRAINAGE SWALE
NOT TO SCALE





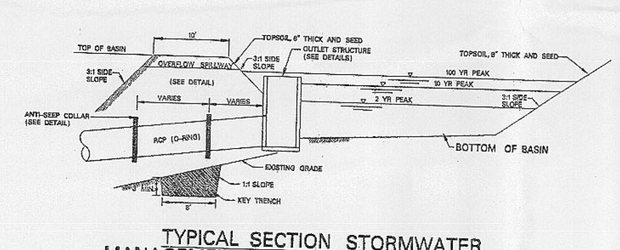
NOTES:
1. SEE GRADING AND UTILITY PLANS FOR CONSTRUCTION SPECIFICATIONS.
2. STRUCTURAL DESIGN OF THE ENDWALLS AND ENERGY DISSIPATERS IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. SHOP DRAWINGS AND DESIGN CALCULATIONS, SIGNED AND SEALED BY A PENNSYLVANIA LICENSED PROFESSIONAL ENGINEER, ARE TO BE SUBMITTED TO THE TOWNSHIP BY THE CONTRACTOR AND APPROVED PRIOR TO MANUFACTURING.

BOX CULVERT

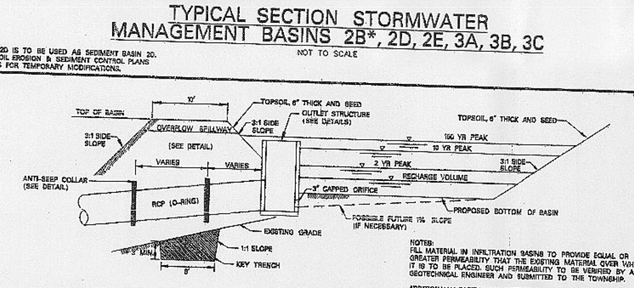
NOTES:
1. SEE GRADING AND UTILITY PLANS FOR CONSTRUCTION SPECIFICATIONS.
2. STRUCTURAL DESIGN OF THE ENDWALLS AND ENERGY DISSIPATERS IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. SHOP DRAWINGS AND DESIGN CALCULATIONS, SIGNED AND SEALED BY A PENNSYLVANIA LICENSED PROFESSIONAL ENGINEER, ARE TO BE SUBMITTED TO THE TOWNSHIP BY THE CONTRACTOR AND APPROVED PRIOR TO INSTALLATION.

78 INCH CMP CULVERT

TYPICAL SECTION - CULVERT ENDWALL
NOT TO SCALE

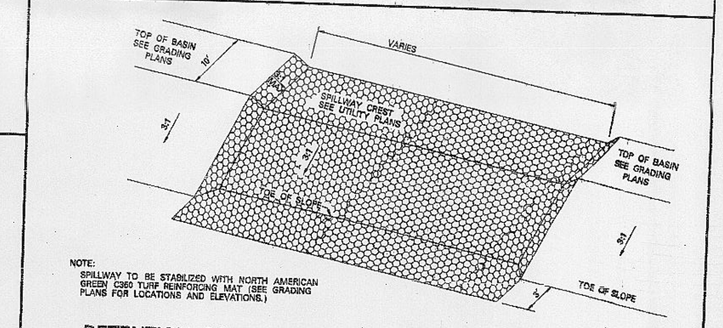


TYPICAL SECTION STORMWATER
MANAGEMENT BASINS 2B*, 2D, 2E, 3A, 3B, 3C
NOT TO SCALE
* SW BASIN 2D IS TO BE USED AS SEDIMENT BASIN 2D. REFER TO SOIL EROSION & SEDIMENT CONTROL PLANS AND DETAILS FOR TEMPORARY MODIFICATIONS.



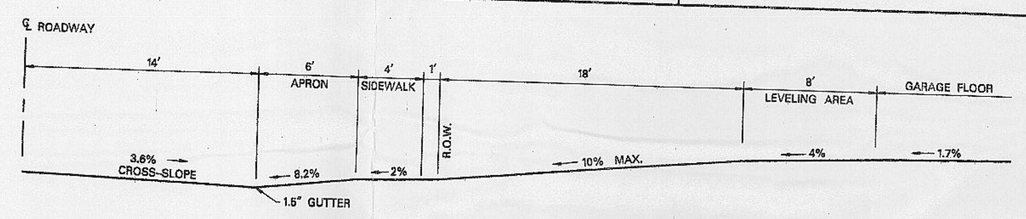
NOTES:
FILL MATERIAL IN INFILTRATION BASINS TO PROVIDE EQUAL OR GREATER PERMEABILITY THAN THE EXISTING MATERIAL OVER WHICH IT IS TO BE PLACED. PERMEABILITY TESTS TO BE PERFORMED BY A GEOTECHNICAL ENGINEER AND SUBMITTED TO THE TOWNSHIP.
ADDITIONALLY, EARTHWORK OPERATIONS IN THE INFILTRATION BASINS TO BE PERFORMED WITH MEANS AND METHODS NECESSARY TO LIMIT COMPACTION OF EXISTING OR PROPOSED MATERIALS TO ACCEPTABLE LEVELS.

TYPICAL SECTION STORMWATER MANAGEMENT BASINS
W/INFILTRATION (1C, 1D, 1E, 2C, 4A, 4B)
NOT TO SCALE

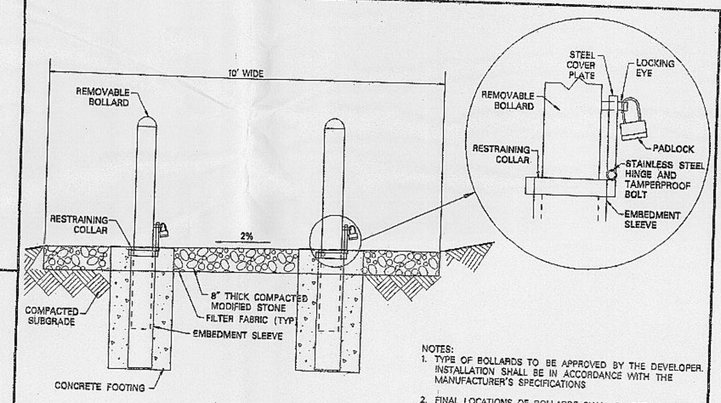


NOTE:
SPILLWAY TO BE STABILIZED WITH NORTH AMERICAN GREEN C350 TURF REINFORCING MAT (SEE GRADING PLANS FOR LOCATIONS AND ELEVATIONS.)

DETENTION BASIN OVERFLOW SPILLWAY DETAIL
NOT TO SCALE

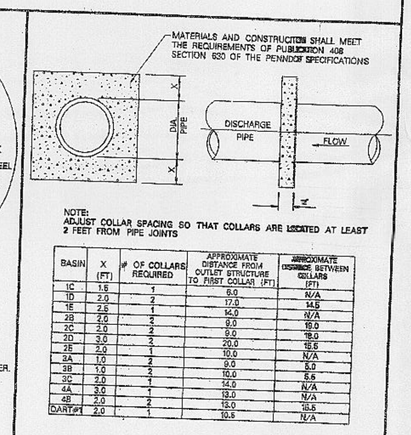


TYPICAL FRONT ENTRY DRIVEWAY PROFILE
SCALE: 1" = 5'



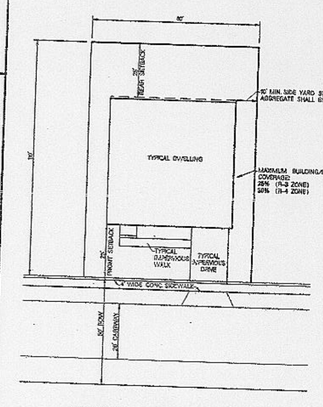
NOTES:
1. TYPE OF BOLLARDS TO BE APPROVED BY THE DEVELOPER. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS
2. FINAL LOCATIONS OF BOLLARDS SHALL BE DETERMINED BY THE MUNICIPAL UTILITY AUTHORITY.

TYPICAL SECTION - ACCESS DRIVE TO SPRAY AREAS
NOT TO SCALE

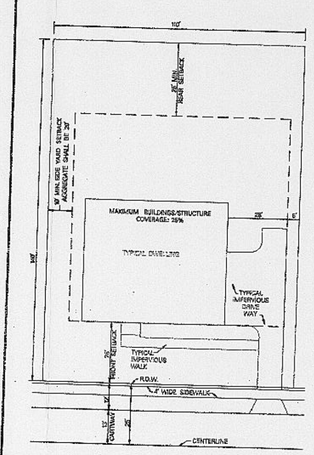


BASIN	X (FT)	# OF COLLARS REQUIRED	APPROXIMATE DISTANCE FROM OUTLET STRUCTURE TO FIRST COLLAR (FT)	APPROXIMATE DISTANCE BETWEEN COLLARS (FT)
1C	1.5	1	6.0	N/A
1D	2.0	2	17.0	16.0
1E	2.5	1	10.0	N/A
2D	2.0	2	8.0	10.0
2C	3.0	2	9.0	18.0
2D	3.0	2	9.0	18.0
2E	3.0	2	20.0	18.0
3A	1.0	1	10.0	N/A
3B	2.0	2	9.0	8.0
3C	2.0	1	15.0	N/A
4A	2.0	1	14.0	N/A
4B	3.0	2	13.0	N/A
SWA1A	2.0	1	13.0	N/A
SWA2	2.0	1	10.0	N/A

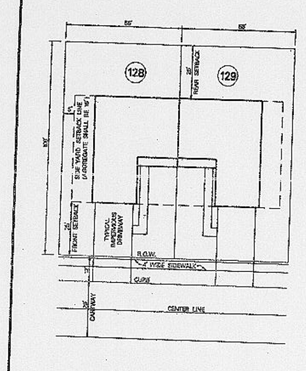
CONCRETE ANTI-SEEP COLLAR
NOT TO SCALE



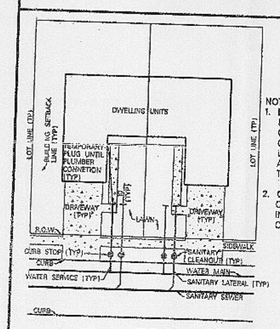
TYPICAL 8,800 S.F. LOT
SCALE: 1"=40'



TYPICAL 15,400 S.F. LOT
SCALE: 1"=40'



TYPICAL 5,500 S.F. LOT
SCALE: 1"=40'



NOTES:
1. LOCATION OF UTILITIES MAY CHANGE DEPENDING ON FINAL FINAL LOCATION OF SIDEWALKS, OTHER UTILITY CONNECTIONS, AND A.C. PADS. (REFER TO ARCHITECTURAL PLANS.)
2. CURB STOPS, BOXES, AND CLEANOUTS ARE TO BE INSTALLED 2' (TYP.) BEHIND CURB. (SEE DETAILS)

TYPICAL UTILITY CONNECTION
NOT TO SCALE

REVISION No.11: REVISED IN ACCORDANCE WITH THE REVIEW LETTERS FROM TOWNSHIP CONSULTANTS. (5/4/04)
REVISION No.10: ADDED DETAIL OF SPRAY AREA ACCESS DRIVE AS PER 1/20/04 URS REVIEW LETTER.
REVISION No.9: REVISED IN ACCORDANCE WITH 1/13/04 REVIEW COMMENTS FROM CHESTER CCD (1/16/04).
REVISION No.7: REVISED BYERS STATION BLVD. LAYOUT IN ACCORDANCE FROM TRAFFIC CONSULTANT, CHESTER COUNTY SCD & URS.
REVISION No.6: REVISED IN ACCORDANCE WITH THE REVIEW LETTERS FROM TOWNSHIP CONSULTANTS.
REVISION No.5: REVISED IN ACCORDANCE WITH REVIEW LETTERS FROM TOWNSHIP CONSULTANTS AND CHESTER COUNTY SCD.
REVISION No.4: REVISED LOCATIONS OF DETAILS ON SHEETS 53-54
REVISION No.3: REVISED FOR E&SPC/NPDES PERMIT RESUBMISSION.
REVISION No.2: REVISED IN ACCORDANCE WITH THE REVIEW LETTERS FROM TOWNSHIP CONSULTANTS.
REVISION No.1: REVISED IN ACCORDANCE WITH THE REVIEW LETTERS FROM TOWNSHIP CONSULTANTS.

DESIGNED: RTM	DRAWN: WAF	CHECKED: RTM
APPROVED:		REVISIONS

NO.	DATE
1	07/15/02
2	9/18/02
3	10/8/02
4	10/17/02
5	11/25/02
6	1/29/03
7	3/21/03
8	4/30/03
9	1/16/04
10	3/31/04

NEAL J. CAMPOS
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
No. 026851-E

CONSTRUCTION DETAILS
BYERS STATION
UPPER UWCHLAN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA

TAYLOR • WISEMAN & TAYLOR
CONSULTING ENGINEERS • SURVEYORS
PLANNERS • LANDSCAPE ARCHITECTS
602 BRANDYWINE PARKWAY, WEST CHESTER, PA. 19380
TELEPHONE NO. (610) 918-9200 FAX NO. (610) 918-1111

SCALE: AS NOTED	DATE: JANUARY 19, 2002	DRAWING NO. WC4-7639	SHEET: 53 OF 58

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