

SCHEDULE OF DRAWINGS

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- C3 SITE PLAN No. 41 Vista Boulevard
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- C8 SITE PLAN DETAILS
- C9 EROSION AND SEDIMENT CONTROL PLAN
- C10 EROSION AND SEDIMENT CONTROL DETAILS
- C11 PEDESTRIAN ACCESS PLAN

DRAWING LEGEND

- EXISTING CONTOURS
- EXISTING IMPROVEMENTS TO BE REMOVED
- PROPOSED CONTOURS
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKINGS
- HANDICAPPED PARKING
- PROPOSED CONCRETE WALK
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED HYDRANT & VALVE
- PROPOSED SANITARY SEWER (GRAVITY) PVC
- PROPOSED WATER MAIN HOPE & VALVE
- PROPOSED STORM SEWER
- PIPE MARKER
- POTENTIAL PARCEL LINE (REQUIRES SUBMISSION APPROVAL BY THE TOWN OF BETHLEHEM PLANNING BD.)
- PROPERTY LINE
- UTILITY EASEMENT
- BUILDING SET BACK LINE
- PROPOSED LIGHT POLE
- PROPOSED SHRUB OR TREE
- PROPOSED LIMITS OF DISTURBANCE
- EXISTING WETLAND TO BE PROTECTED
- BUILDINGS AND PARKING AS SHOWN ON THE CONCEPT PLAN FOR VISTA REVISED MASTER PLAN
- PROPOSED POROUS PAVEMENT
- PROPOSED STANDARD PAVEMENT

ZONING REQUIREMENTS TABLE

ZONE	MED (USE COMMERCIAL HAMLET)
LOT FRONTAGE & WIDTH	100'
SETBACKS	
FRONT	30'
SIDE	10'
REAR	40'
LOT SIZE	10,000 S.F.

IMPERVIOUS SURFACE AREA (SEC 128-37 C4)

DESCRIPTION	AREA (ACRES)
LOT SIZE	235.75
IMPERVIOUS SURFACE	13.0
% IMPERVIOUS FOR PHASE 1B	5.5%

PARKING SUMMARY TABLE

DESCRIPTION	AMOUNT
TOTAL PARKING REQUIRED	823
TOTAL PAVED PARKING	922
TOTAL BANKED PARKING	105
TOTAL PARKING PROVIDED	1027

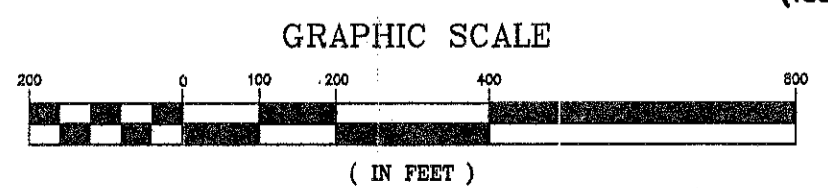
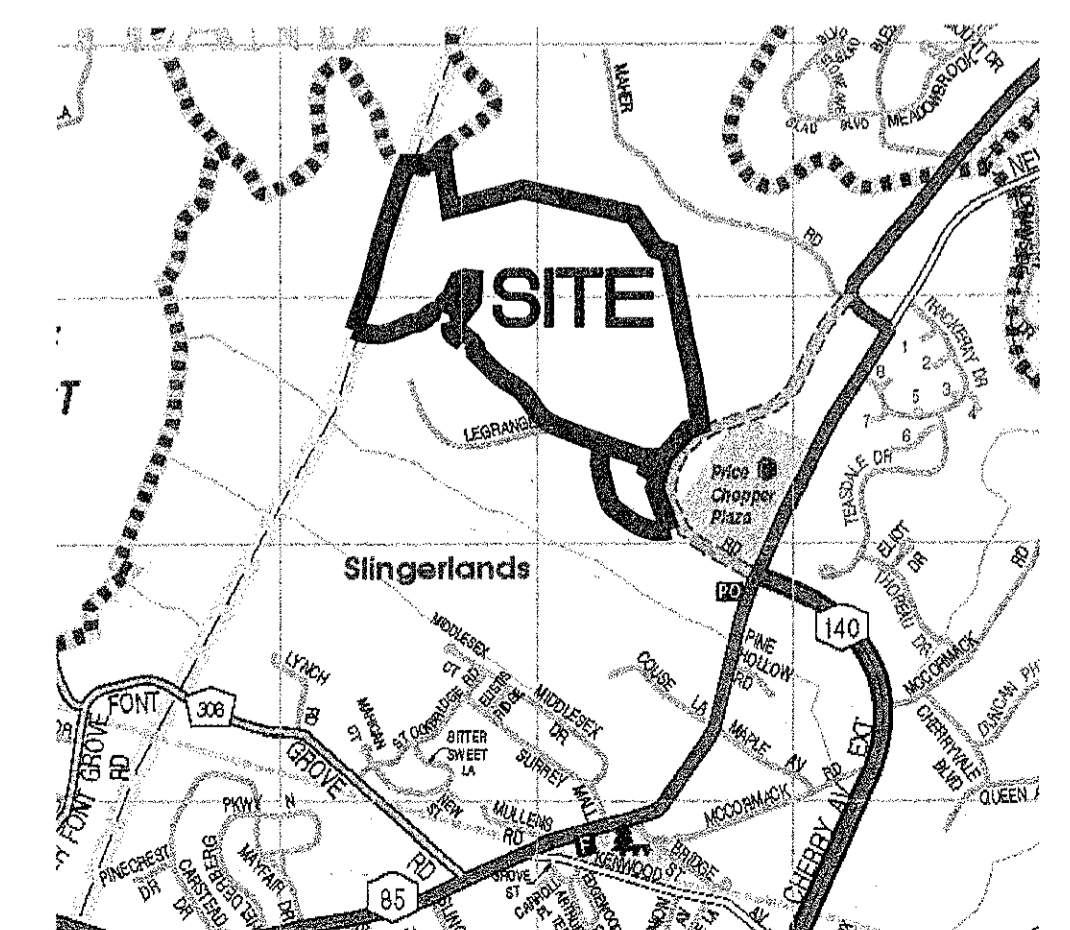


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REVISIONS

DATE	REMARKS
3/23/11	DETAILED PLANS
3/25/11	TOWN RESUBMISSION
8/15/11	SWPPP
9/12/11	PLANNING STAFF COMMENTS
10/5/11	B&L LETTER DATED 9/14/11
11/18/11	B&L LETTER EMAIL 11/18/11

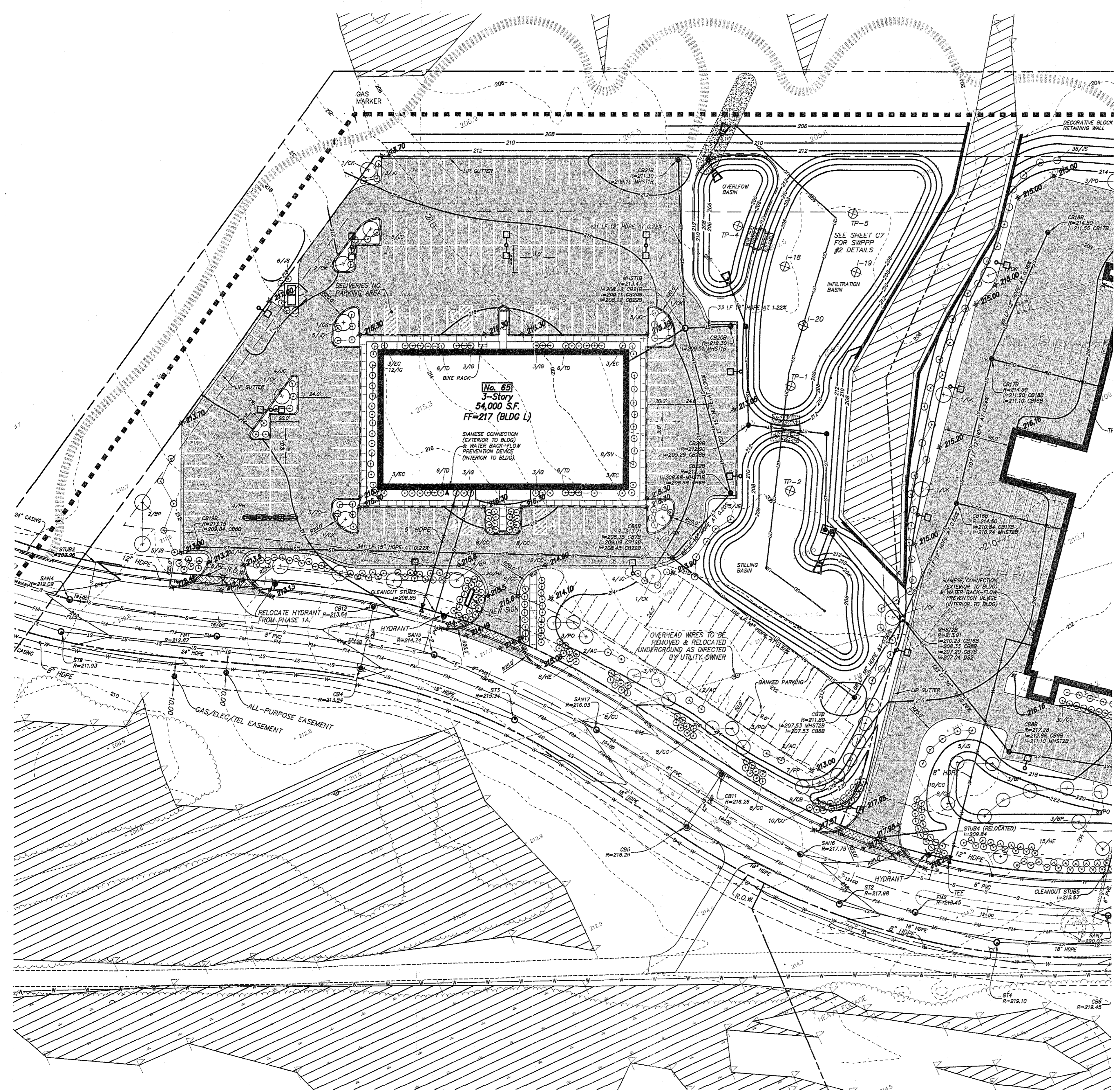


- GENERAL NOTES:**
- AREA OF DISTURBANCE = 15.74 ACRES
 - AREA OF WETLAND DISTURBANCE = 0.00 ACRES
 - AREA WITHIN THE BETHLEHEM CENTRAL SCHOOL DISTRICT
 - SITE LIES WITHIN SEWER DISTRICT EXTENSION 14 AREA 1
 - A WATER DISTRICT EXTENSION & DRAINAGE DISTRICT HAS GRANTED
 - ALL INFRASTRUCTURE WORK (OWNED AND MAINTAINED BY THE TOWN OF BETHLEHEM) SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN OF BETHLEHEM STANDARD DETAILS AND SPECIFICATIONS.
 - WETLAND DELINEATION WERE ESTABLISHED AS PER A JURISDICTIONAL DETERMINATION MADE 7/31/2008 UNDER NAN-2004-00878 WOE
 - DESIGN ENGINEERING SHALL PROVIDED GEOTECHNICAL SERVICES DURING CONSTRUCTION INCLUDING MONITORING, RECOMMENDATIONS AND IMPLEMENTATION. THE CONTRACTOR SHALL CONFORM TO ALL GEOTECHNICAL RECOMMENDATIONS THROUGHTOUT THE CONSTRUCTION OF THIS PROJECT.
 - ALL GRADING WORK SHALL CONFORM TO MINIMUM COMPACTION AS STATED BELOW:
 COMPACTION UNDER ROADWAYS & SIDEWALKS MATERIAL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS MEASURED BY AASHTO T-180. BUT ALL AREAS WHERE TEMPORARY OR PERMANENT PLANTING IS PROPOSED WILL BE DECOMPACTED USING DECOMPACTION OR DEEP RIPPING METHODS PRIOR TO PLANTING.
 - ALL BACK-FLOW PREVENTION DEVICES REQUIRED SHALL HAVE A METER COMPATIBLE WITH SENSU AUTOMATED METER READING (AMR)

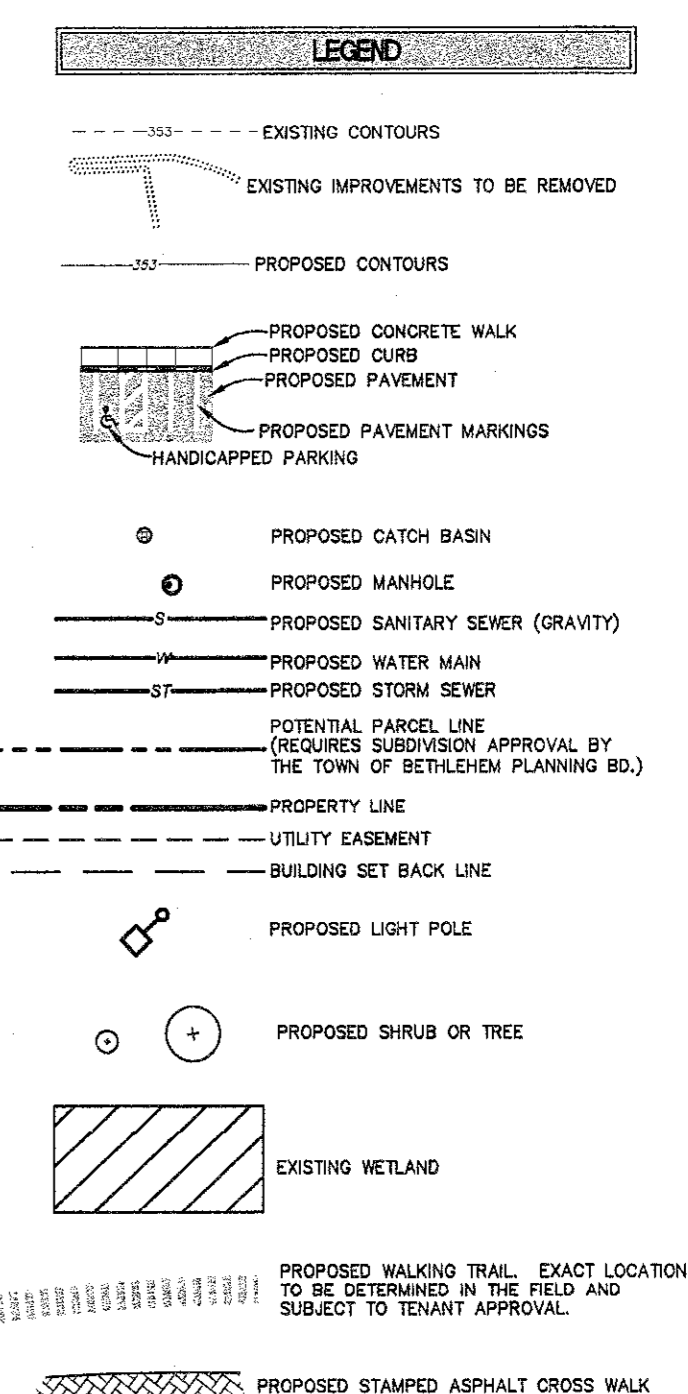
APPLICANT/OWNER
 VISTA DEVELOPMENT GROUP, LLC
 302 WASHINGTON AVENUE EXTENSION,
 ALBANY NY 12203

TOWN OF BETHLEHEM PLANNING BOARD APPROVAL
 PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK
 This Site Plan Approved.
 [Signature]
 Title
 Date December 22nd 2011
 SPA 179 + SPA 179A-1

INDEX SHEET PROPOSED DEVELOPMENT - PHASE 1B
 VISTA TECHNOLOGY CAMPUS
 TOWN OF BETHLEHEM
 ALBANY COUNTY, STATE OF NEW YORK
 SCALE: 1"=250'
 DATE: 1/23/11
 FILE: 100328
 01



SEE SHEET C3



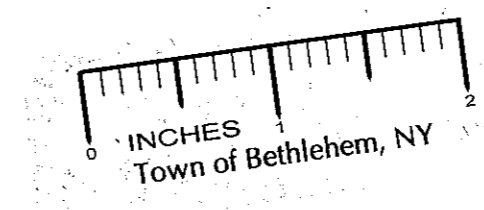
PARKING ANALYSIS TABLE

description	requirement	quantity	# required
office	1/300 sf	54,000 sf	180
total spaces required			180
paved spaces provided			181
banked spaces provided			43
total spaces provided			224

PLANT MATERIAL SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
SHRUBS				
AC	AMELANCHIER CANADENSIS	SHADBLow SERVICEBERRY	6'-7' HT. HEAVY	B & B
EC	EUONYMUS ALATUS 'COMPACTA'	COMPACT BURNING BUSH	2'-3' HT.	B & B
IG	ILEX GLABRA	INKBERRY	2 1/2' HT.	B & B
JC	JUNIPERUS CHINENSIS 'PFITZERIANA'	PFITZER JUNIPER	3' SPREAD	B & B
JS	JUNIPERUS CHINENSIS 'SPARTAN'	SPARTAN JUNIPER	5'-6' HT.	B & B
SV	SYRINGA VULGARIS	COMMON LILAC	3'-4' HT.	B & B
TD	TAXUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	24' HT.	B & B
YF	YUCCA FILAMENTOSA G 'GOLDEN SWORD'	YUCCA	18"-24" HT.	C.G.
TREES				
BP	BETULA PAPPYRIFERA	CANOE BIRCH	8'-10' HT.(HVV CLUMP)	B & B
CK	CORNUS KOUSA	KOUSA DOGWOOD	1 1/2"-2" CAL.	B & B
PO	PICEA OMORICA	SERBIAN SPRUCE	5'-6' HT.	B & B
PP	PICEA PUNGENS	COLORADO SPRUCE	4'-5' HT.	B & B
PERENNIALS				
CC	CHRYSANTHEMUM COCCINUM	PAINTED DAISY		C.G.
CB	CHRYSANTHEMUM SUPERBUM 'ALASKA'	SHASTA DAISY	1 GAL.	C.G.
HE	HERMEROCALLIS 'HYPERION'	DAY LILIES		-
GRASSES				
PH	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	#3 POT	-

SITE PLAN No. 65 Vista Boulevard (BUILDING L)



TOWN OF BETHLEHEM PLANNING BOARD APPROVAL

PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK

This Site Plan Approved.

George J. Finnan
 Title: Chairman

Date: December 20, 2011
 SPA 179 + SPA 179 A-1

HERSHBERG & HERSHBERG
 Consulting Engineers and Land Surveyors
 18 Locust Street
 Albany, New York 12203

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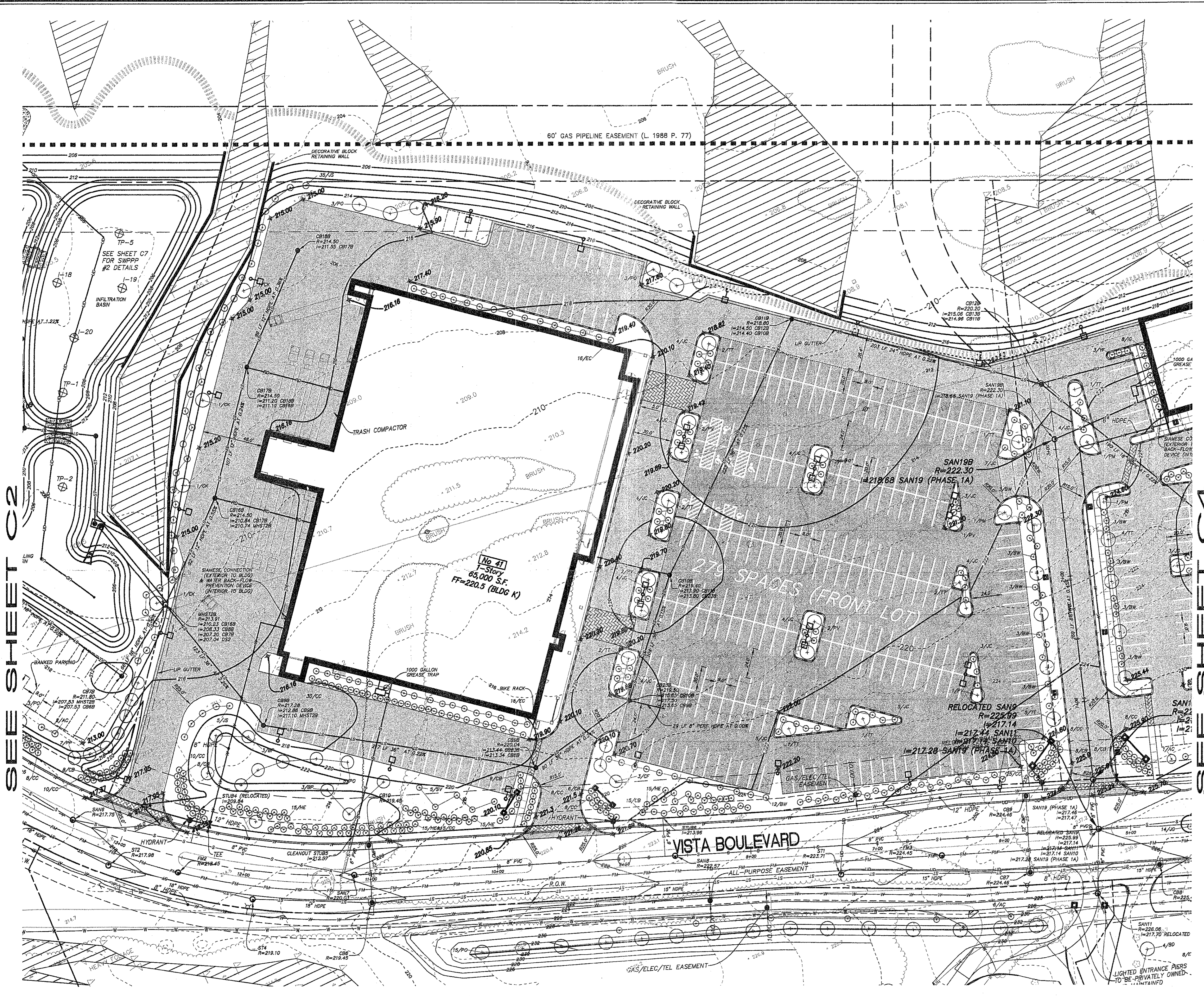
DATE	REMARKS
8/15/11	SWPPP
9/26/11	TOWN COMMENTS
9/6/11	PLANNING STAFF COMMENTS
10/5/11	E&L COMMENT LETTER 9/14/11
10/10/11	HYDRANT EAST OF WEST ENTRANCE
11/16/11	E&L LETTER EMAIL 11/16/11

REVISIONS

PROPOSED SITE PLAN - PHASE 1B
VISTA TECHNOLOGY CAMPUS
TOWN OF BETHLEHEM
ALBANY COUNTY, STATE OF NEW YORK

SCALE: 1"=40'
 DATE: 1/2/11
 FILE: 100328
 CTR: DRH
 B: WM

02



LEGEND

- - - - - EXISTING CONTOURS
- - - - - EXISTING IMPROVEMENTS TO BE REMOVED
- - - - - PROPOSED CONTOURS
- - - - - PROPOSED CONCRETE WALK
- - - - - PROPOSED CURB
- - - - - PROPOSED PAVEMENT
- - - - - PROPOSED PAVEMENT MARKINGS
- - - - - HANDICAPPED PARKING
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED SANITARY SEWER (GRAVITY)
- PROPOSED WATER MAIN
- PROPOSED STORM SEWER
- - - - - POTENTIAL PARCEL LINE (REQUIRES SUBDIVISION APPROVAL BY THE TOWN OF BETHELEM PLANNING BOARD)
- - - - - PROPERTY LINE
- - - - - UTILITY EASEMENT
- - - - - BUILDING SET BACK LINE
- - - - - PROPOSED DECORATIVE LIGHT POLE
- PROPOSED LIGHT POLE
- PROPOSED SHRUB OR TREE
- ▨ EXISTING WETLAND
- - - - - PROPOSED WALKING TRAIL EXACT LOCATION TO BE DETERMINED IN THE FIELD AND SUBJECT TO TENANT APPROVAL
- - - - - PROPOSED MASONRY PIER AND DECORATIVE METAL FENCE
- - - - - PROPOSED STAMPED ASPHALT CROSS WALK
- ▨ PROPOSED POROUS PAVEMENT
- ▨ PROPOSED STANDARD PAVEMENT

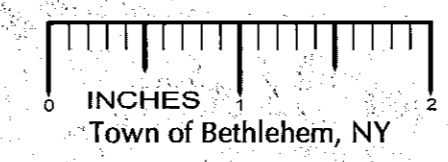
PARKING ANALYSIS TABLE BLDG K

description	requirement	quantity	# required
retail	1/250 sf	65,000 sf	260
total spaces required			260
paved spaces provided			334
banked spaces provided			6
total spaces provided			340

PLANT MATERIAL SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
SHRUBS				
AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	6'-7" HT. HEAVY	B & B
BW	BUXUS x 'WINTER GEM'	WINTER GEM BOXWOOD	18" HT.	C.G.
EC	EUCONYMUS ALATUS 'COMPACTA'	COMPACT BURNING BUSH	2'-3" HT.	B & B
JC	JUNIPERUS CHINENSIS 'PFITZERIANA'	PFITZER JUNIPER	3' SPREAD	B & B
SV	SYRINGA VULGARIS	COMMON LILAC	3'-4" HT.	B & B
TD	TAXUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	24" HT.	B & B
TREES				
BP	BETULA Papyrifera	CANOE BIRCH	8'-10" HT. (HYV CLUMP)	B & B
CF	CORNUS FLORIDA	WHITE FLOWERING DOGWOOD	2 1/2' CAL.	B & B
PO	PICEA OMORICA	SERBIAN SPRUCE	5'-6" HT.	B & B
PP	PICEA PUNGENS	COLORADO SPRUCE	4'-8" HT.	B & B
PV	PRUNUS VIRGINIANA	CANADIAN RED CHOKECHERRY	3'-3 1/2' CAL.	B & B
TT	TILIA TOMENTOSA 'STERLING SILVER'	SILVER LINDEN	3'-3 1/2' CAL.	NURSERY
PERENNIALS				
HE	HERMEROCALLIS 'HYPERION'	DAY LILIES		
CC	CHRYSANTHEMUM COCCINUM	PAINTED DAISY	1/2 GAL.	C.G.
CB	CHRYSANTHEMUM SUPERBUM 'ALASKA'	SHASTA DAISY	1 GAL.	C.G.

SITE PLAN No. 41 Vista Boulevard (BUILDING K)



TOWN OF BETHELEM PLANNING BOARD APPROVAL

PLANNING BOARD
 TOWN OF BETHELEM
 ALBANY COUNTY, NEW YORK

This Site Plan Approved

Anna J. Finner
 Title Chairman

Date December 22, 2011

SPA 179 + SPA 179 A-1

HERSHBERG & HERSHBERG
 Consulting Engineers and Land Surveyors
 18 Locust Street
 Albany, New York 12203

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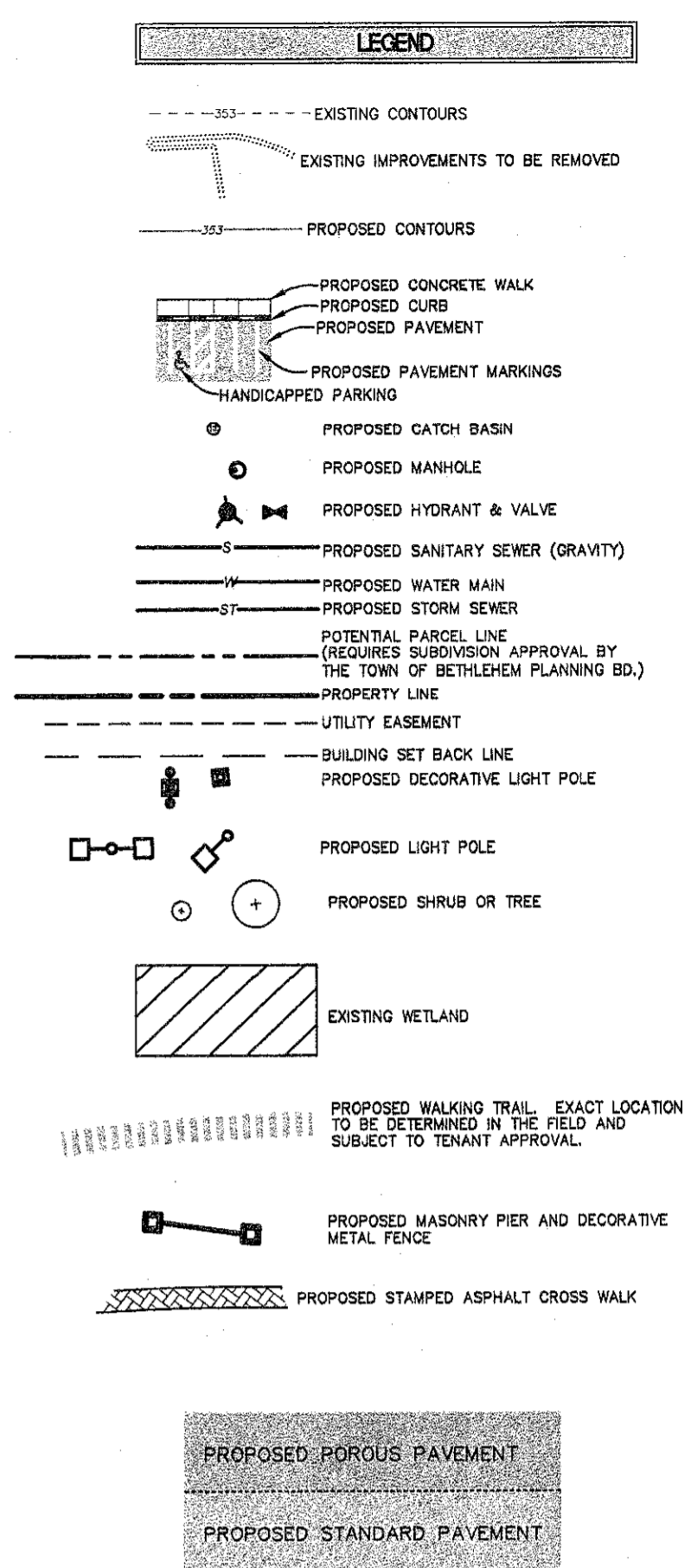
REVISIONS

DATE	REMARKS
8/15/11	SWPPP
8/28/11	TOWN COMMENTS
9/28/11	PLANNING STAFF COMMENTS
9/28/11	SPA 179 CONDITIONS
10/25/11	BEL COMMENT LETTER 9/14/11
11/16/11	BEL LETTER EMAIL 11/16/11

PROPOSED SITE PLAN - PHASE 1B
VISTA TECHNOLOGY CAMPUS
TOWN OF BETHELEM
ALBANY COUNTY, STATE OF NEW YORK

SCALE: 1"=40'
 DATE: 1/27/11
 FILE: 100328-phase1B.dwg

SEE SHEET C3

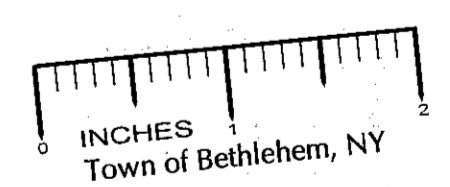


description	requirement	quantity	# required
office	1/200 sf	30,000 sf	150
bank	1/400 sf	2,500 sf	7
restaurant	1/75 sf	5,500 sf	74
total spaces required			231
paved spaces provided			233
banked spaces provided			44
total spaces provided			277

SEE SHEET C5

SITE PLAN No. 5, 15 and 11 Vista Boulevard (BUILDINGS H,I,J)

SYM	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
SHRUBS				
AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	6'-7' HT. HEAVY	B & B
BA	BERBERIS THUNBERGII 'ATROPURPUREA'	RED BARBERY	18"-24" HT.	C.G.
BW	BUXUS 'WINTER GEM'	WINTER GEM BOXWOOD	18" HT.	C.G.
EC	EUNONYMUS ALATUS 'COMPACTA'	COMPACT BURNING BUSH	2'-3' HT.	B & B
IG	ILEX GLABRA	INKBERRY	2 1/2' HT.	B & B
JC	JUNIPERUS CHINENSIS 'PFTZERIANA'	PFTZER JUNIPER	3' SPREAD	B & B
JG	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	18" HT.	B & B
PM	PRUNUS MUGHUS MUGO 'SLOWMOUND'	MUGHO PINE	5 GAL.	C.G.
SN	SPIRAEA NIPPONICA 'SNOWMOUND'	SNOWMOUND SPIREA	24"-30" HT.	C.G.
TD	TAKUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	24" HT.	B & B
YF	YUCCA FILAMENTOSA G. 'GOLDEN SWORD'	YUCCA	18"-24" HT.	C.G.
TREES				
CF	CORNUS FLORIDA	WHITE FLOWERING DOGWOOD	2 1/2" CAL.	B & B
GS	GLEDITSIA TRIACANTHOS INERMIS 'SUNBURST'	SUNBURST HONEY-LOCUST	2 1/2"-3" CAL.	B & B
PO	PICEA OMDRIKA	SERBIAN SPRUCE	EVEN COMBO OF 5'-6" HT. & 6'-8" HT	B & B
TT	TILIA TOMENTOSA 'STERLING SILVER'	SILVER LINDEN	3'-3 1/2" CAL.	NURSERY
PERENNIALS				
HE	HERMEROCALLIS 'HYPERION'	DAY LILLIES	-	-
CC	CHRYSANTHEMUM COCCINUM	PAINTED DAISY	-	C.G.
CB	CHRYSANTHEMUM SUPERBUM 'ALASKA'	SHASTA DAISY	1 GAL.	C.G.
GRASSES				
PH	PENNISETUM ALOPECUROIDES 'HADELN'	DWARF FOUNTAIN GRASS	#3 POT	-



TOWN OF BETHLEHEM PLANNING BOARD APPROVAL

PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK

This Site Plan Approved.

George J. ...
 Title Chairman

Date: December 22, 2011

SPA 179 + SPA 179 A-1

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DATE	REMARKS
8/15/11	SWPPP
8/28/11	TOWN COMMENTS
9/26/11	PLANNING STAFF COMMENTS
9/26/11	SPA 179 CONDITIONS
10/25/11	BBL COMMENT LETTER 9/14/11
11/16/11	BBL LETTER EMAIL 11/16/11

REVISIONS

PROPOSED SITE PLAN - PHASE 1B
VISTA TECHNOLOGY CAMPUS
TOWN OF BETHLEHEM
ALBANY COUNTY, STATE OF NEW YORK

SCALE: 1"=40'

FILE: 100328-phase1B.dwg

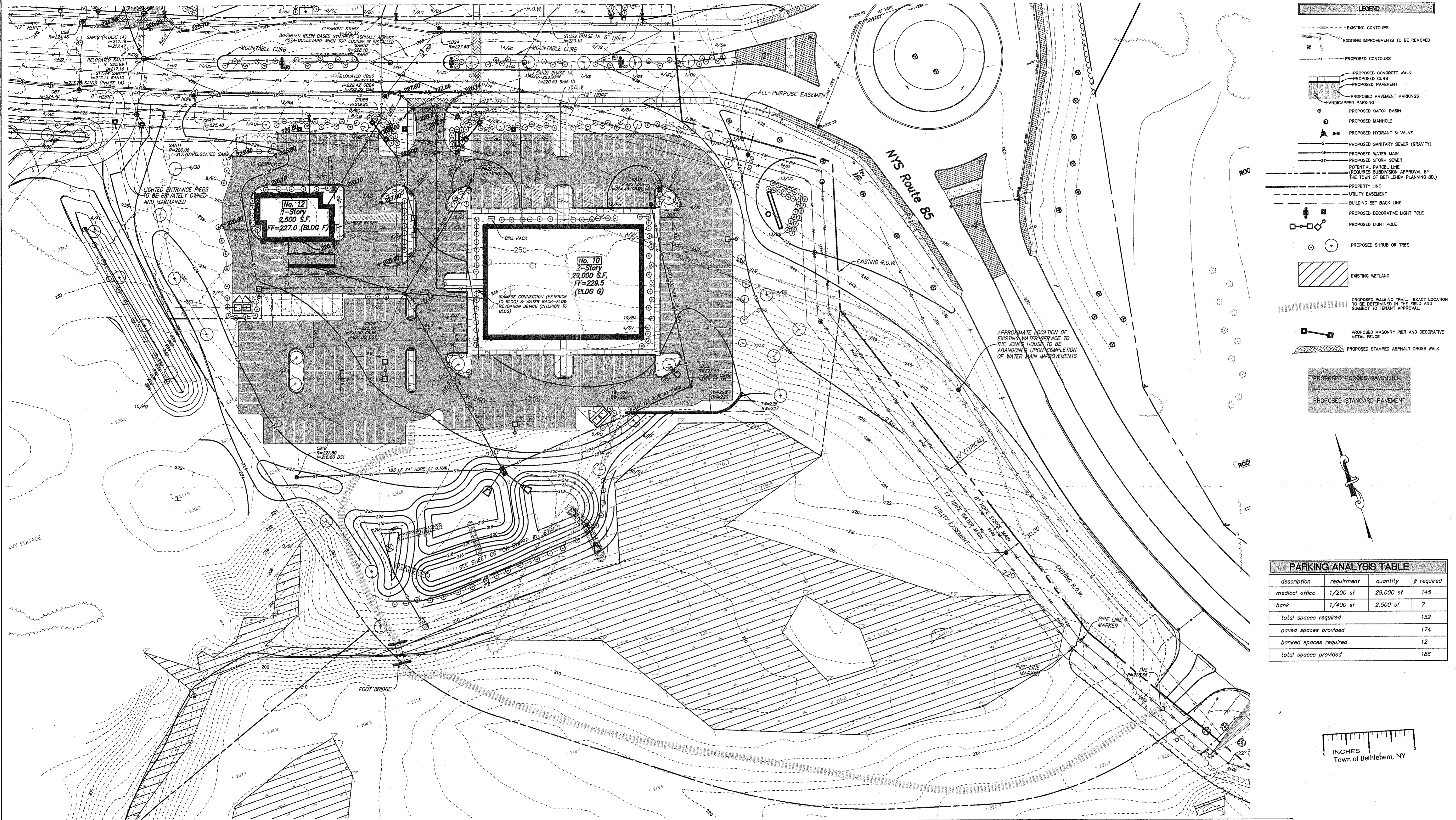
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CHK: DRH

BY: WM

04

SEE SHEET C4



LEGEND

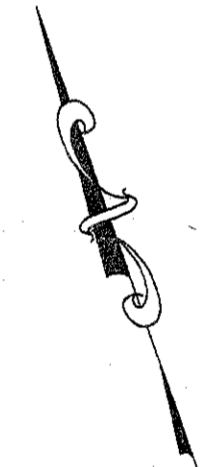
- - - - - EXISTING CONTOURS
- - - - - EXISTING IMPROVEMENTS TO BE REMOVED
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- - - - - PROPOSED LIGHT POLE
- - - - - PROPOSED SHRUB OR TREE
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- - - - - PROPOSED POROUS PAVEMENT
- - - - - PROPOSED STANDARD PAVEMENT

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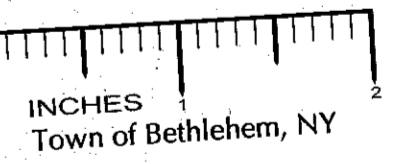


DATE	REMARKS
4/12/11	DECORATIVE LIGHT POLES
8/15/11	SWPPP & BLDG No. 10
8/26/11	TOWN COMMENTS
9/8/11	PLANNING STAFF COMMENTS
10/5/11	B&L COMMENT LETTER 9/15/11
11/18/11	B&L LETTER EMAIL 11/16/11



PARKING ANALYSIS TABLE

description	requirement	quantity	# required
medical office	1/200 sf	29,000 sf	145
bank	1/400 sf	2,500 sf	7
total spaces required			152
paved spaces provided			174
banked spaces required			12
total spaces provided			186



SITE PLAN No. 12 and 10 Vista Boulevard (BUILDINGS F,G)

PLANT MATERIAL SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
SHRUBS				
AC	AMELANCHIER CANADENSIS	SHADBLow SERVICEBERRY	6"-7" HT. HEAVY	B & B
BA	SIBYRIS THUNBERGII 'ATROPURPUREA'	RED BARBERRY	18"-24" HT.	C.G.
BW	BUXUS x 'WINTER GEM'	WINTER GEM BOXWOOD	18" HT.	C.G.
EC	EUONYMUS ALATUS 'COMPACTA'	COMPACT BURNING BUSH	2'-3' HT.	B & B
IC	ILEX GLABRA	INKBERRY	2 1/2' HT.	B & B
JC	JUNIPERUS CHINENSIS 'PFITZERIANA'	PFITZER JUNIPER	3' SPREAD	B & B
JG	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	18" HT.	C.G.
PM	PRUNUS MUGHUS 'MUGO' 'SLOWGROW'	MUGHO PINE	5 GAL.	C.G.
SV	SYRINGA VULGARIS	COMMON LILAC	3'-4' HT.	B & B
TD	TAXUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	24" HT.	B & B
YF	YUCCA FILAMENTOSA 'GOLDEN SWORD'	YUCCA	18"-24" HT.	C.G.
TREES				
CF	CORNUS FLORIDA	WHITE FLOWERING DOGWOOD	2 1/2" GAL.	B & B
BP	BETULA PapyRIFERA	CANOE BIRCH	8"-10" HT.(HYV CLUMP)	B & B
PO	PICEA OMORIKA	SERBIAN SPRUCE	5'-6" HT.	B & B
PERENNIALS				
CC	CHRYSANTHEMUM GOCINUM	PAINTED DAISY	1/2 GAL.	C.G.
CB	CHRYSANTHEMUM SUPERBUM 'ALASKA'	SHASTA DAISY	1 GAL.	C.G.
GRASSES				
PH	PENNISETUM ALOPECUROIDES 'HALEM'	DWARF FOUNTAIN GRASS	#3 POT	-

TOWN OF BETHELEM PLANNING BOARD APPROVAL

PLANNING BOARD
 TOWN OF BETHELEM
 ALBANY COUNTY, NEW YORK

This Site Plan Approved

George J. ...
 Title Chairman

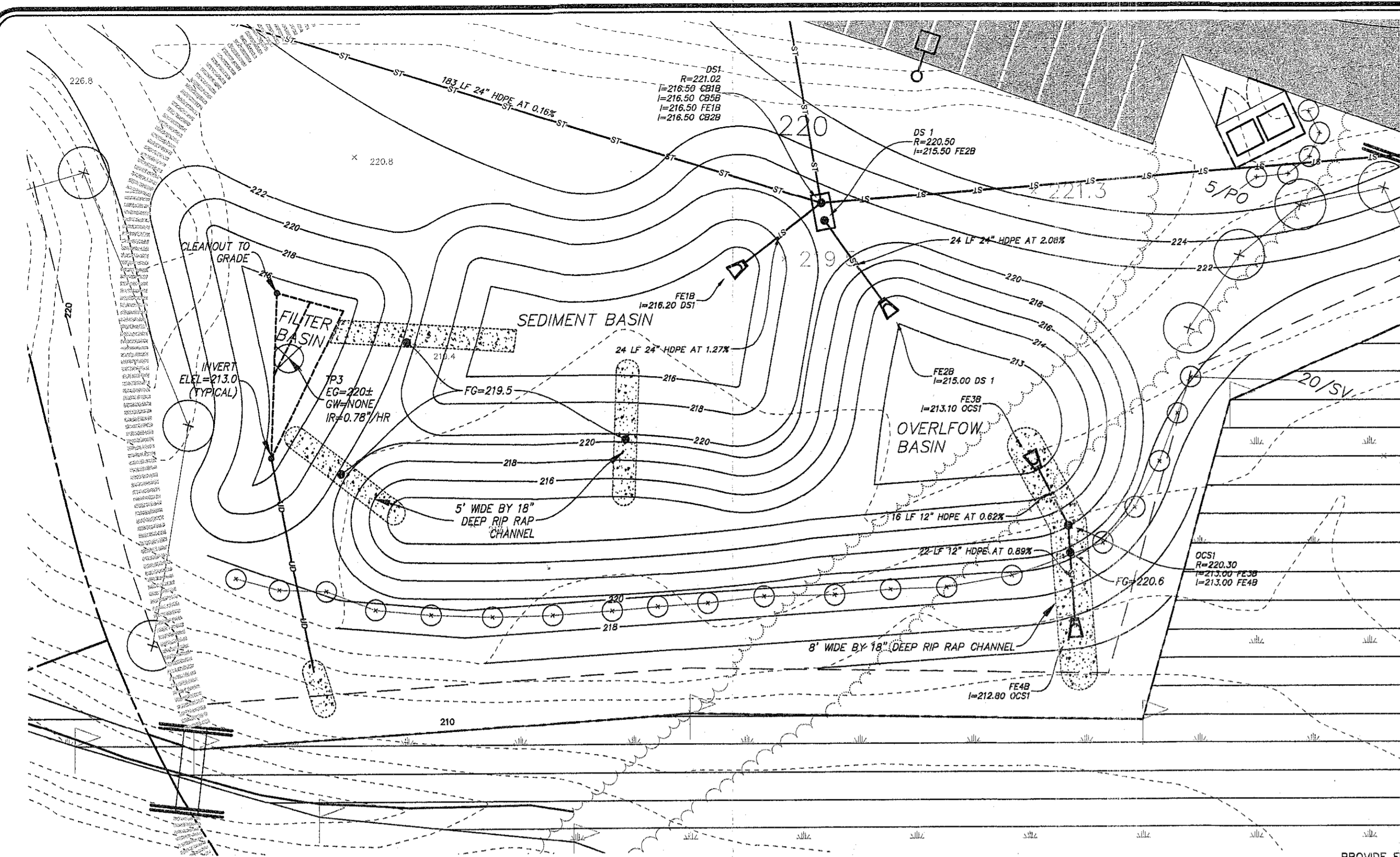
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SPA 179 + SPA 179 A-1

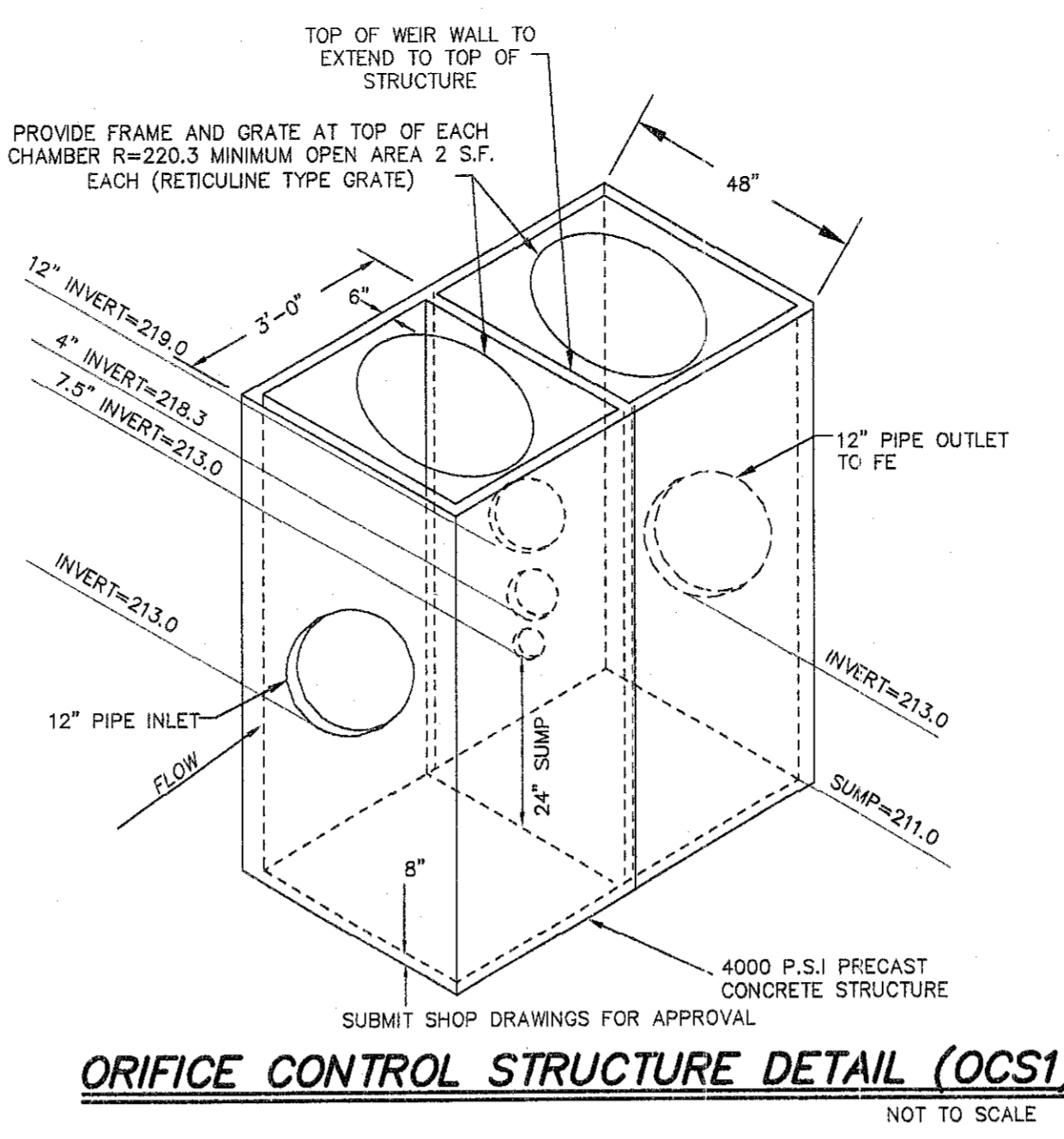
PROPOSED SITE PLAN - PHASE 1B
VISTA TECHNOLOGY CAMPUS
TOWN OF BETHELEM
ALBANY COUNTY, STATE OF NEW YORK

SCALE: 1" = 40'
 DATE: 1/2/11
 GPK: DRH
 BY: WA
 FILE: 100328

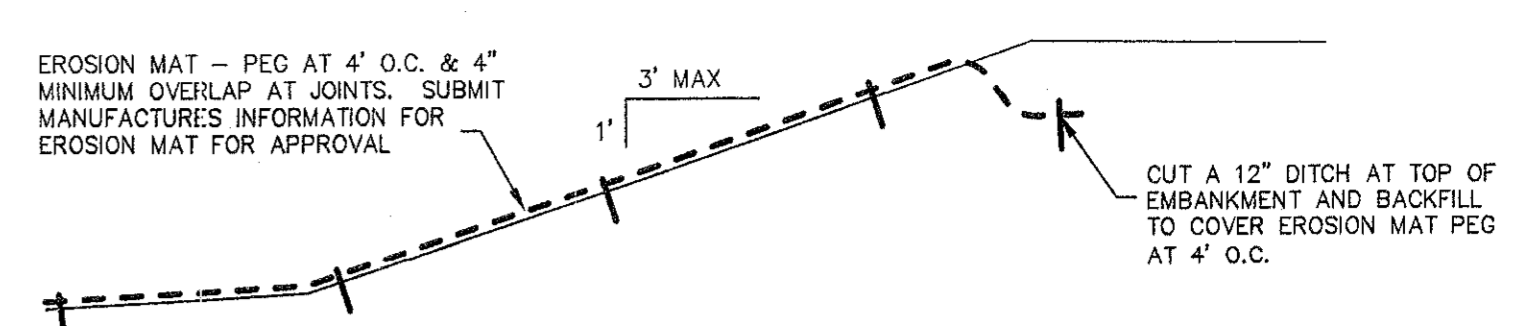
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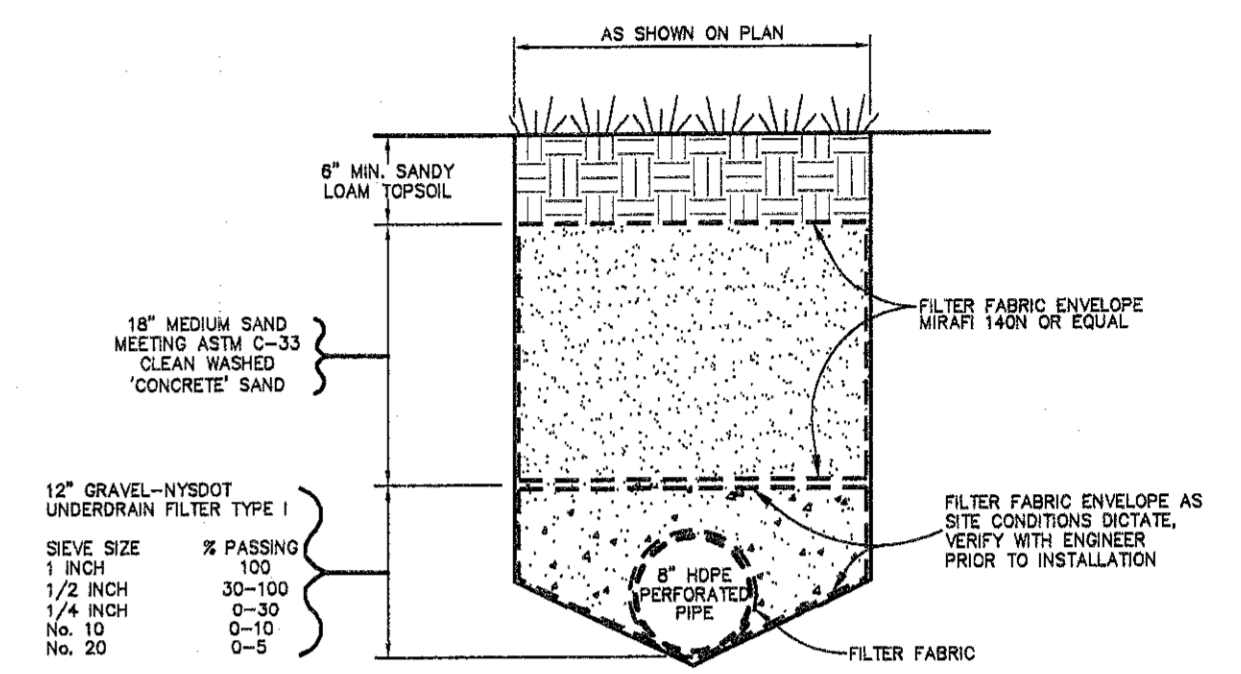
SWPPP BASIN #1 PLAN (PRIVATELY OWNED)
 SCALE: 1"=20'



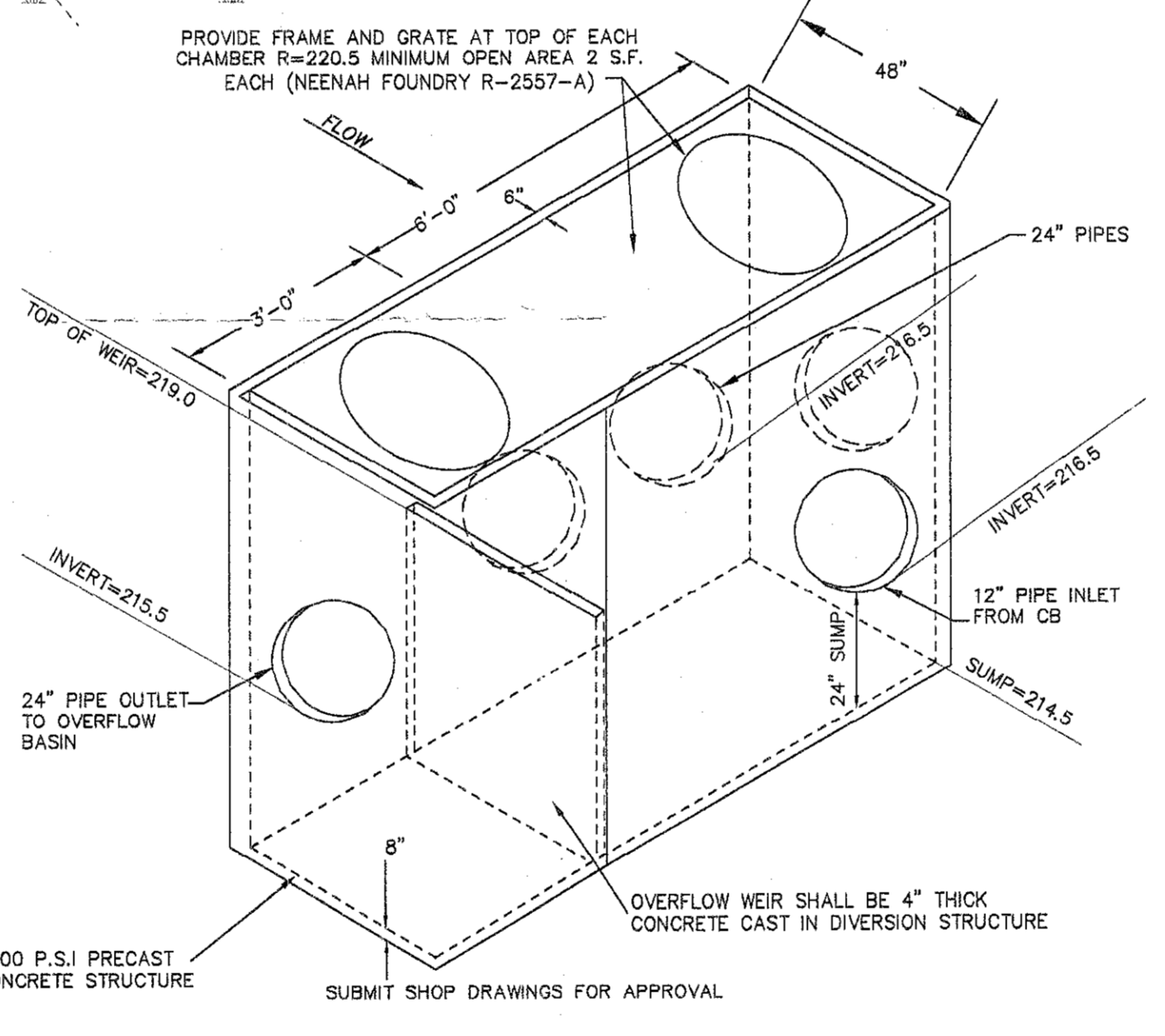
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 NOT TO SCALE



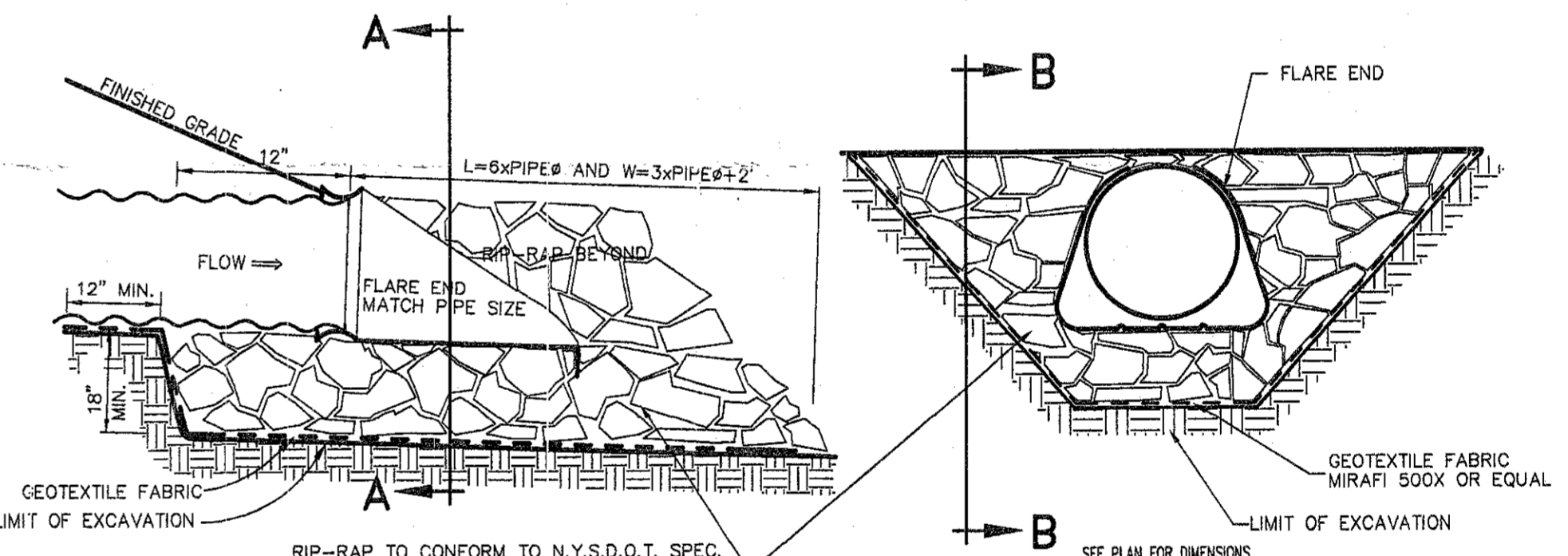
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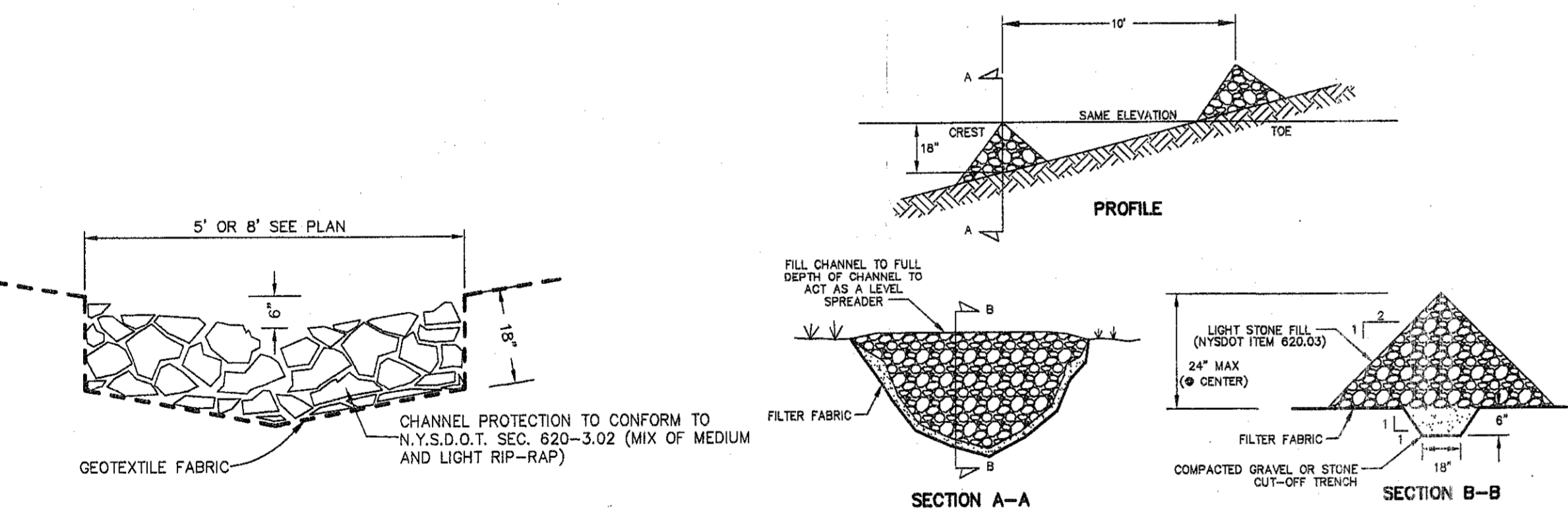
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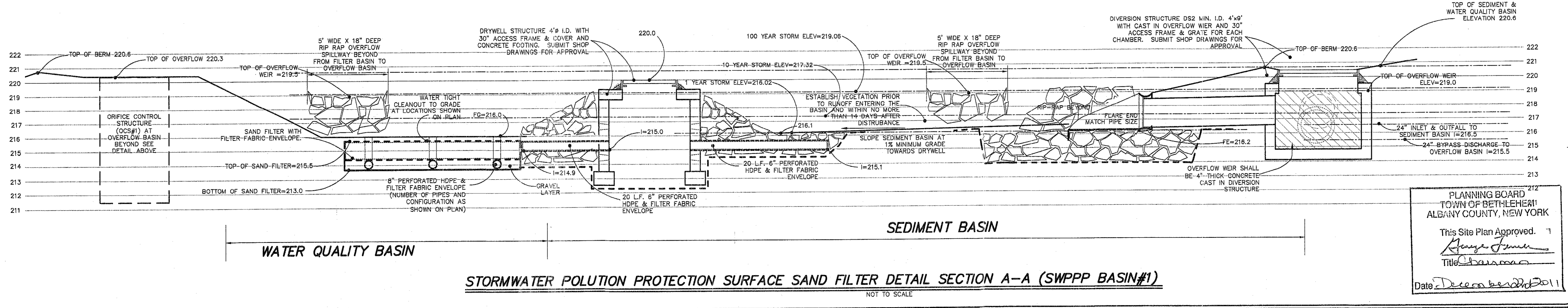


SECTION B-B
FLARE END SECTION DETAIL
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OVERFLOW CHANNEL DETAIL
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STONE CHECK DAM DETAIL
 NOT TO SCALE



SEDIMENT BASIN
WATER QUALITY BASIN
STORMWATER POLLUTION PROTECTION SURFACE SAND FILTER DETAIL SECTION A-A (SWPPP BASIN#1)
 NOT TO SCALE

PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK
 This Site Plan Approved.
 [Signature]
 Title Chairman
 Date: December 20, 2011

HERSHBERG & HERSHBERG
 Consulting Engineers and Land Surveyors
 18 Locust Street
 Albany, New York 12203

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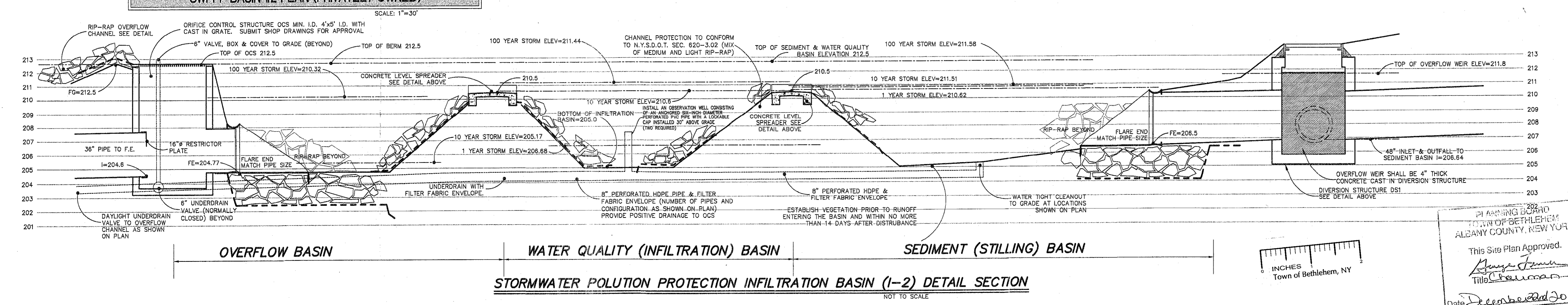
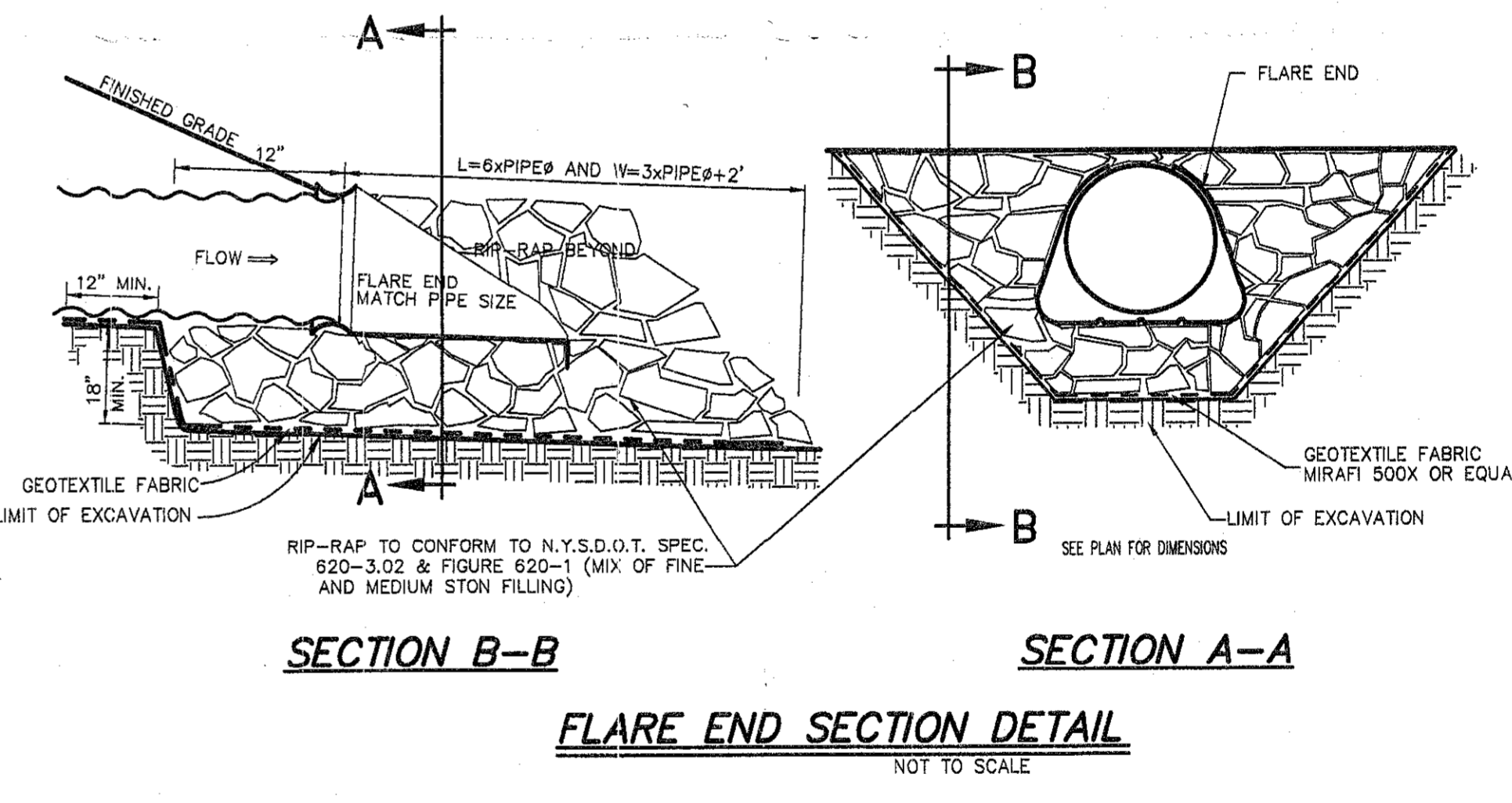
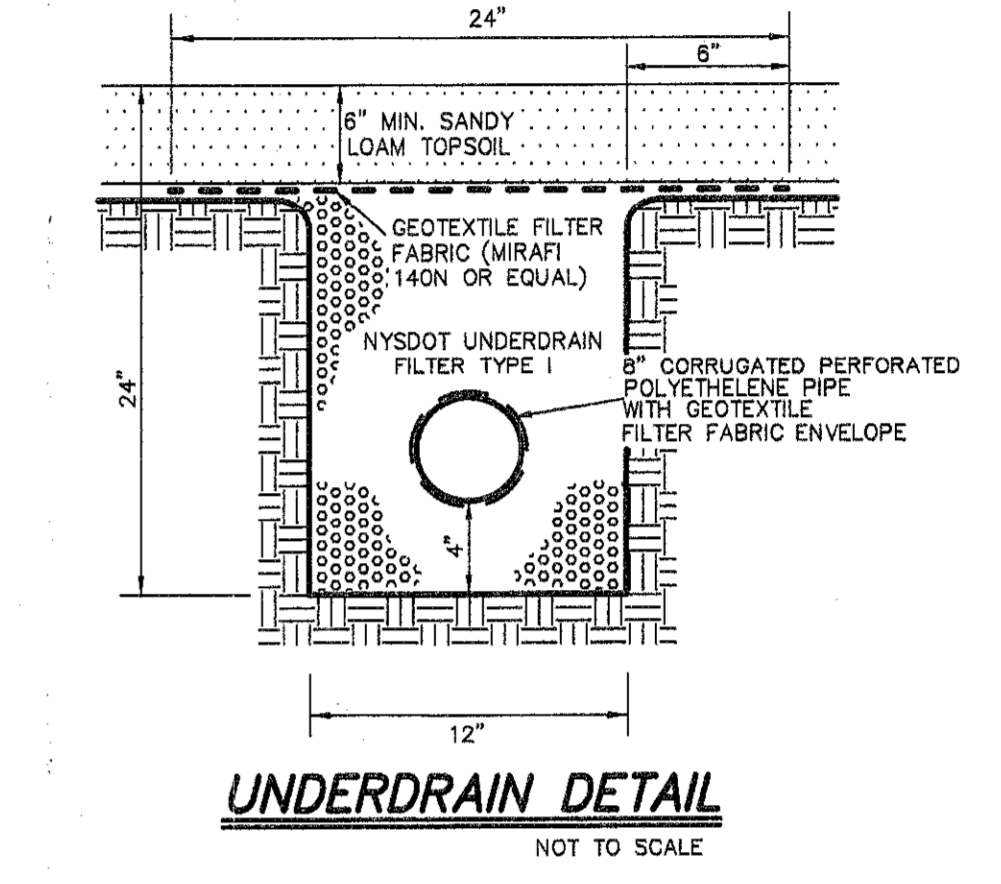
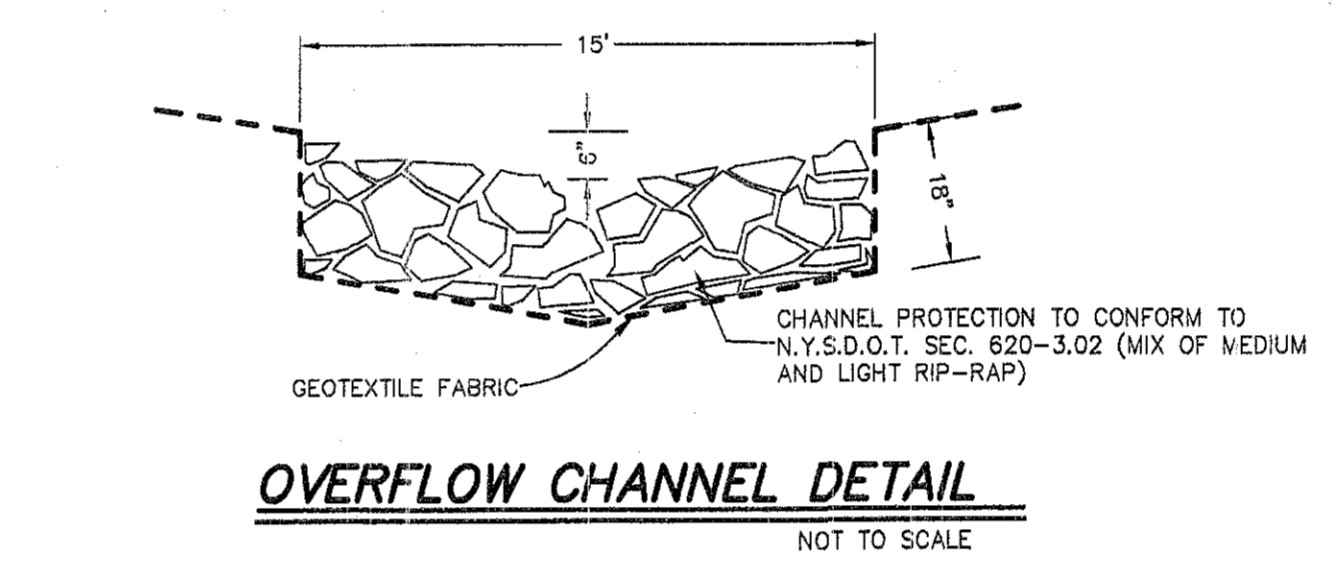
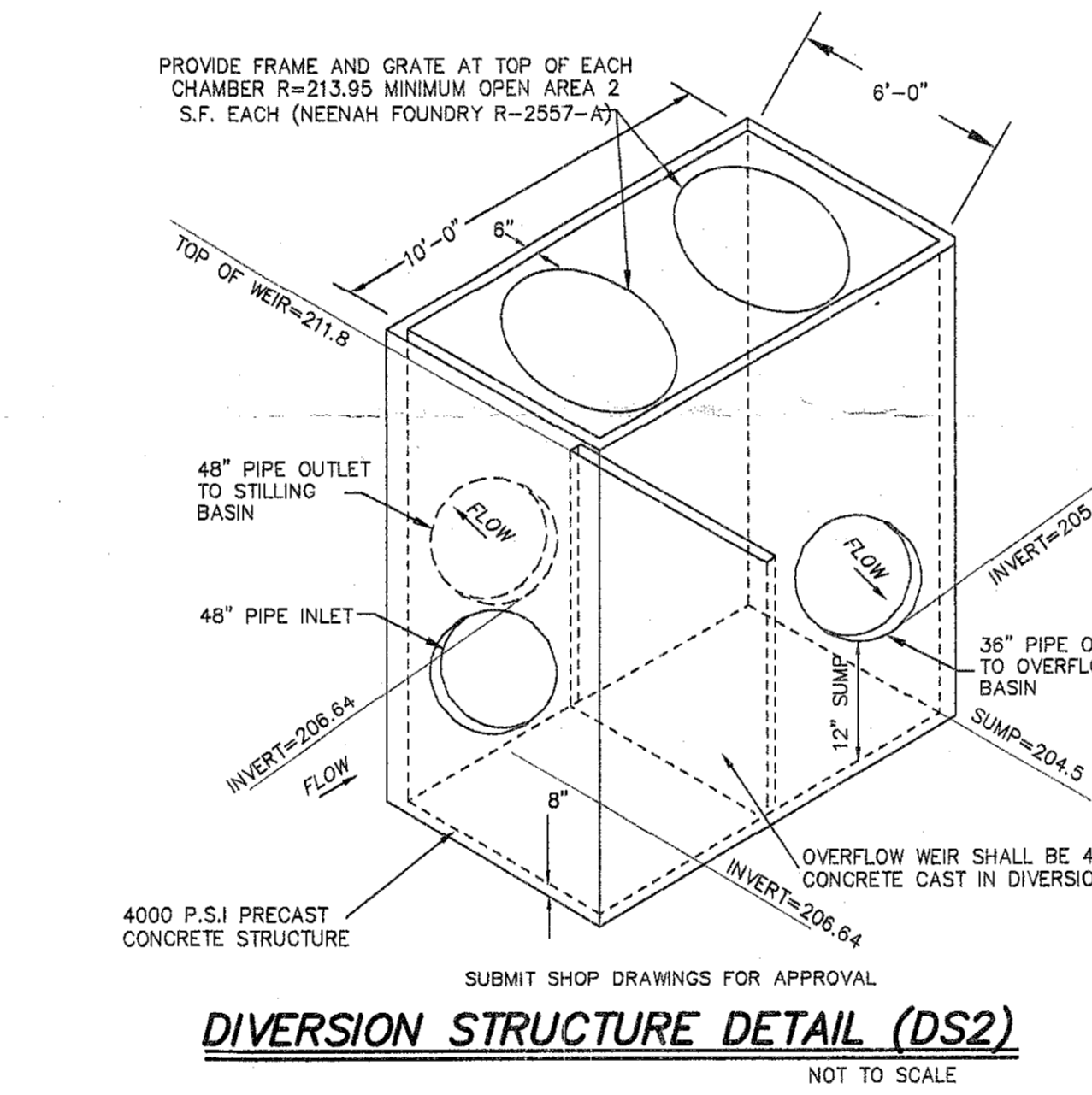
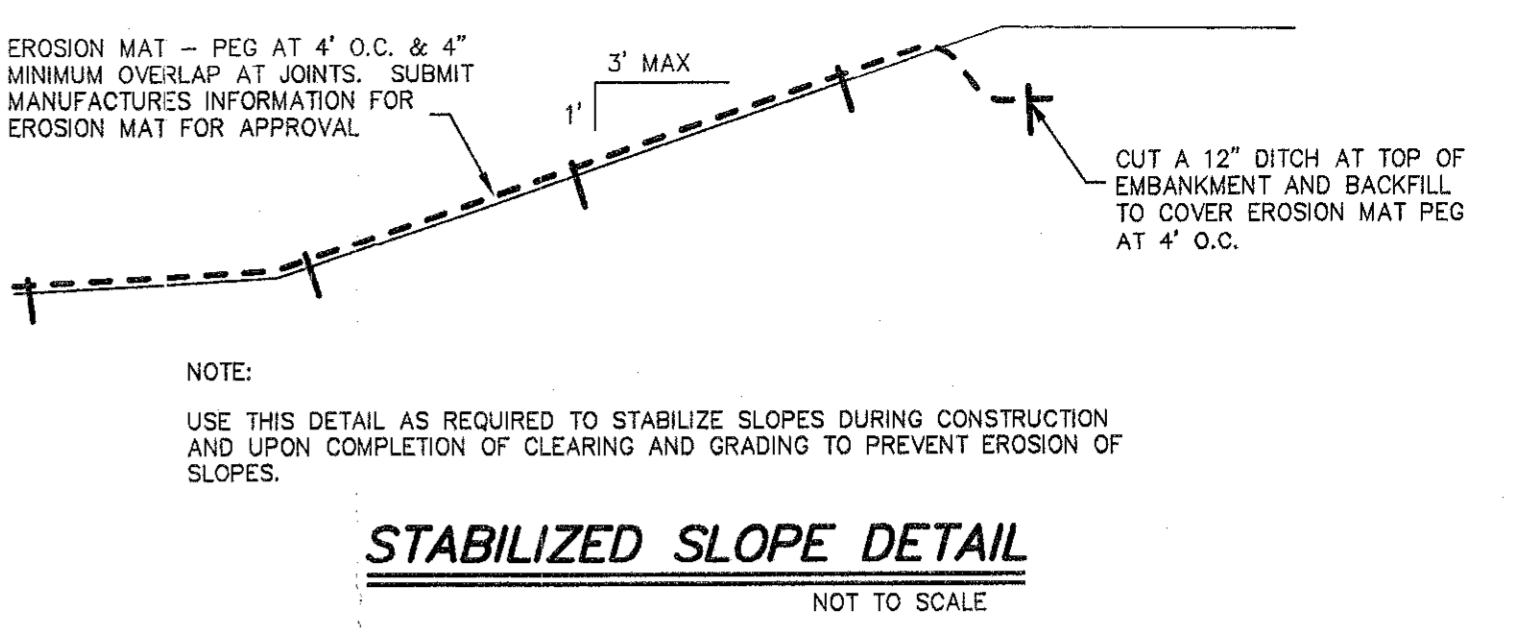
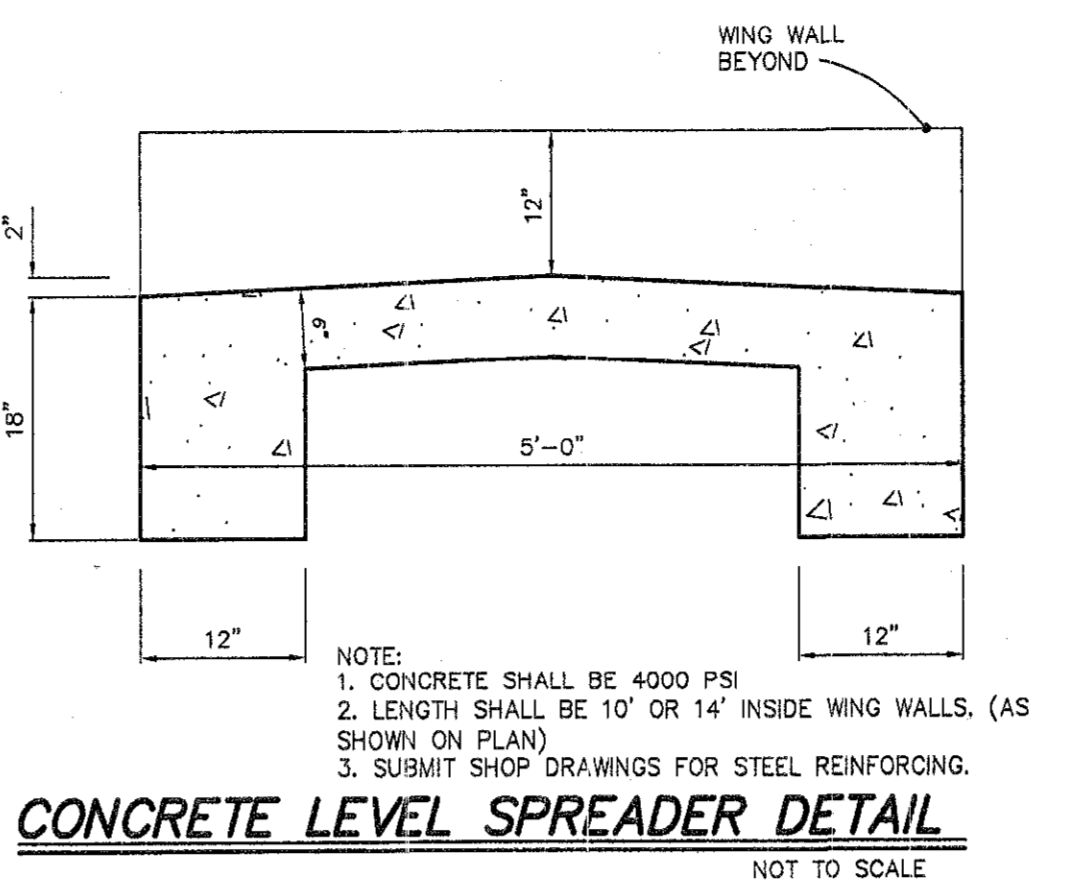
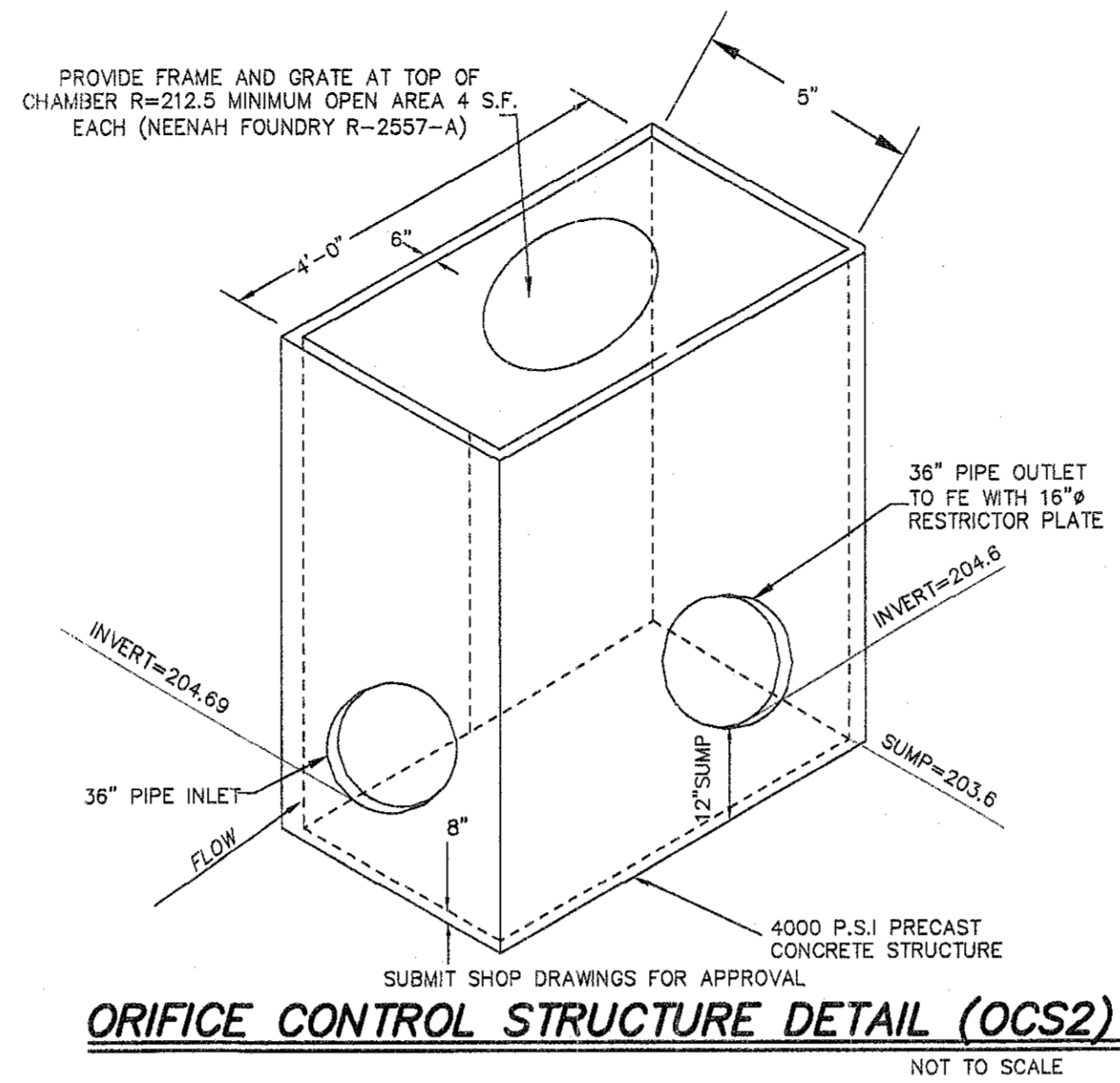
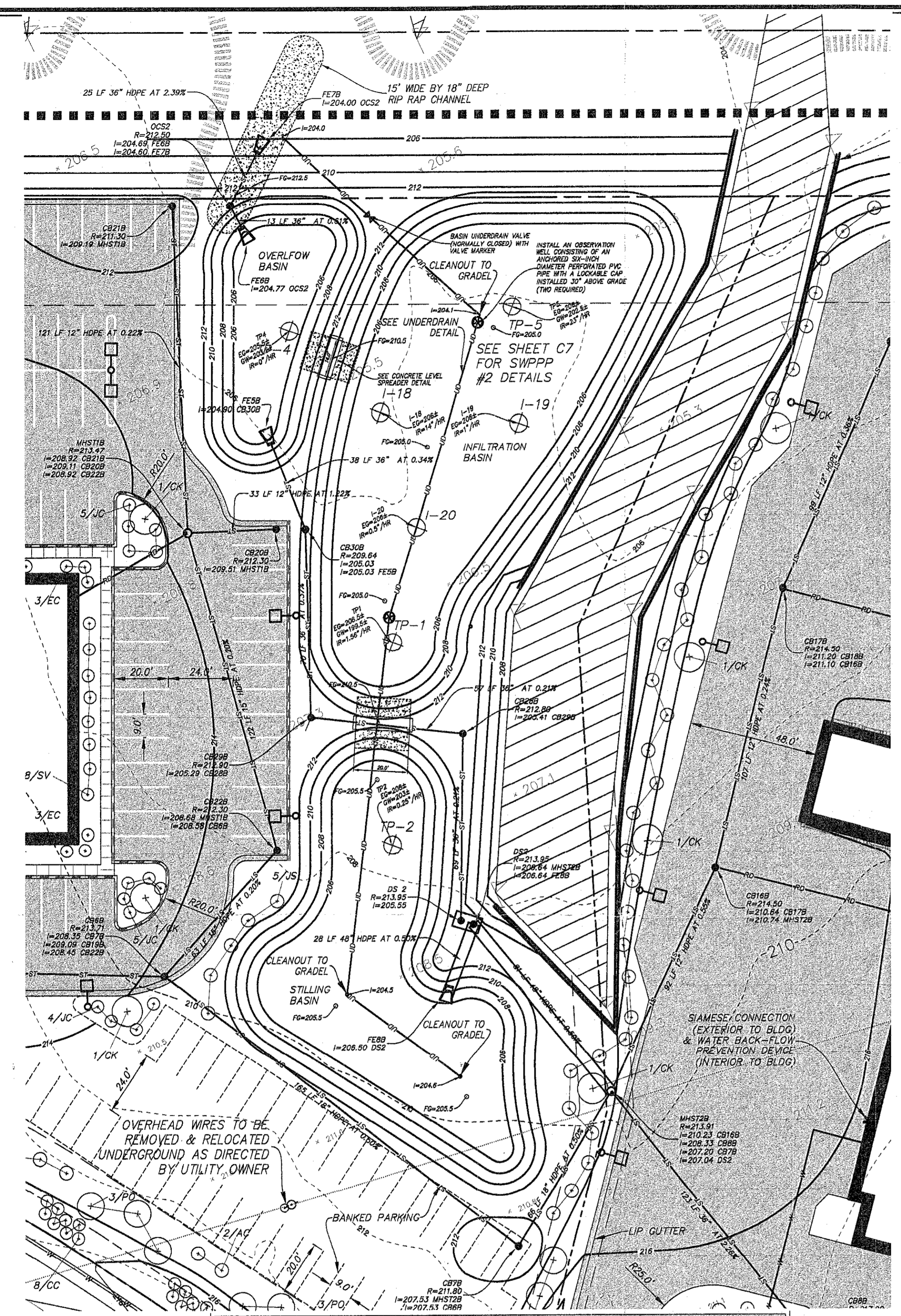
STATE OF NEW YORK
 ENGINEER'S SEAL
 44216

DATE	REMARKS
3/25/11	TOWN RESUBMISSION
9/15/11	SWPPP
10/5/11	BAL COMMENT LETTER 9/14/11
11/16/11	BAL LETTER EMAIL 11/16/11
11/16/11	BAL LETTER EMAIL 11/16/11

REVISIONS

SWPPP BASIN #1 PLAN AND DETAILS - PHASE 1B
 VISTA TECHNOLOGY CAMPUS
 TOWN OF BETHLEHEM
 ALBANY COUNTY, STATE OF NEW YORK

FILE: 100328
 SCALE: AS NOTED
 DATE: 3/23/11
 CHK: DRH
 TOWN: SPA179A1



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STATE OF NEW YORK
 ENGINEER & LAND SURVEYOR
 44223

DATE	REVISIONS
3/28/11	TOWN RESUBMISSION
8/15/11	SWPPP
10/5/11	BAL COMMENT LETTER 9/14/11
11/16/11	BAL LETTER EMAIL 11/16/11
11/16/11	BAL LETTER EMAIL 11/16/11

SWPPP BASIN #2 PLAN AND DETAILS - PHASE 1B
 VISTA TECHNOLOGY CAMPUS
 TOWN OF BETHLEHEM
 ALBANY COUNTY, STATE OF NEW YORK

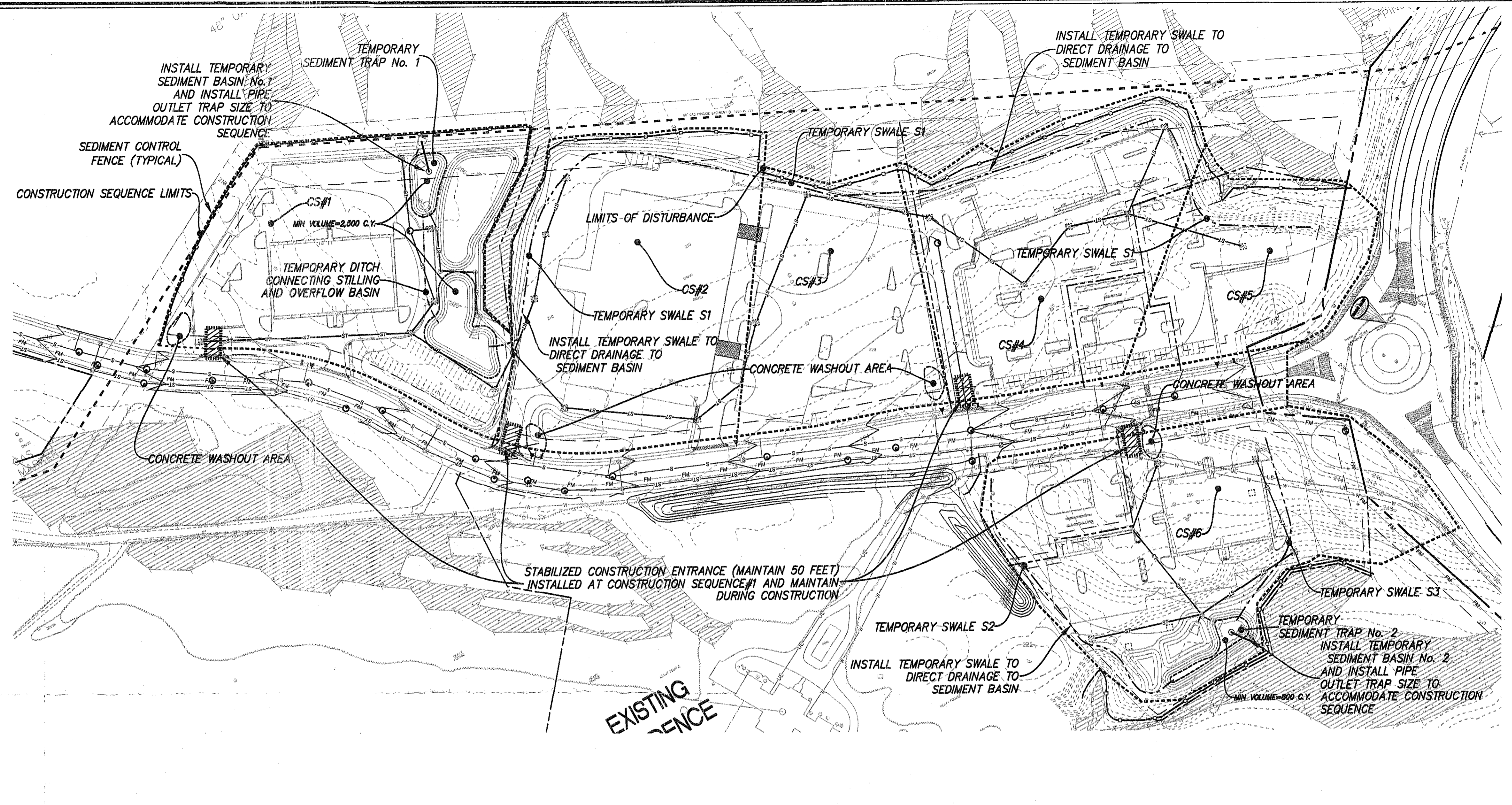
DATE: 3/23/11
 SCALE: AS NOTED
 FILE: 100328

PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK
 This Site Plan Approved
 Title: *James*
 Date: *December 20, 2011*

07

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE LATEST EDITION OF NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL." (aka: THE BLUE BOOK) EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES.
2. IT IS THE INTENT OF THESE PLANS AND NOTES TO BE USED AS A GUIDE BY THE CONTRACTOR TO ENSURE THAT NO ERODED MATERIAL MIGRATES FROM THE SITE OR ENTERS ANY WATER COURSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THIS GOAL IS MET, BY IMPLEMENTING THESE PLANS AND ANY ADDITIONAL MEASURES THAT MAY BE NECESSARY. FURTHER MEASURES MAY BE REQUIRED BY THE CITY, VILLAGE, OR TOWN ENGINEER. WHILE MANY OF THE EROSION CONTROL DETAILS CONTAINED WITHIN THESE PLANS ARE TAKEN DIRECTLY FROM THE BLUE BOOK, THE CONTRACTOR SHOULD CONSIDER ANY OF THE DETAILS CONTAINED IN SECTION 7A OF THE BLUE BOOK AS ACCEPTABLE PRACTICE IN THE APPROPRIATE APPLICATION.
3. THE DEVELOPER/CONTRACTOR OR HIS BUILDER SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT THROUGHOUT THE ENTIRE DEVELOPMENT PROCESS. TO ASSURE PROPER FUNCTION, SILTATION BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION AND REINFORCED, EXTENDED, REPAIRED, RE-SEEDED AND PROTECTED FROM FURTHER EROSION. ALL SEDIMENT ACCUMULATED SHALL BE REMOVED AND CONTAINED IN APPROPRIATE SPOIL AREAS. WATER SHALL BE APPLIED TO NEWLY SEEDDED AREAS AS NEEDED UNTIL GRASS COVER IS WELL ESTABLISHED. DURING THESE PERIODIC INSPECTIONS, THE FOLLOWING ITEMS SHOULD BE PAID PARTICULAR ATTENTION:
 - A. THE BASIN INLET LOCATIONS SHALL BE INSPECTED FOR SILT ACCUMULATION CAUSED BY THE LACK OF ESTABLISHED SURROUNDING VEGETATION.
 - B. CATCH BASINS SHALL BE CHECKED FOR SEDIMENT ACCUMULATION.
 - C. RIP-RAP OUTLET PROTECTION SHALL ALSO BE CHECKED FOR SEDIMENT ACCUMULATION. IF SIGNIFICANT AMOUNTS OF SEDIMENT ACCUMULATE, RIP-RAP SHALL BE REMOVED AND REPLACED.
 - D. HAY/STRAW BALES AND SILT FENCING SHALL BE INSPECTED REGULARLY FOR UNDERMINING AND DETERIORATION.
 - E. SEEDING/MULCHED AREAS SHALL BE INSPECTED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE REPAIRED AS NECESSARY.
4. EROSION CONTROL DEVICES SHALL NOT BE REMOVED UNTIL THE CITY, VILLAGE OR TOWN ENGINEER HAS APPROVED FINAL STABILIZATION.
5. HAY BALE CHECK DAMS AND SILT FENCE SHALL BE INSTALLED IN ACCORDANCE WITH PLAN AND DETAIL LOCATIONS AND AS DESCRIBED IN GP-0-10-001.
6. PRIOR TO CONSTRUCTION OF ANY PHASE, THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED.
7. CONSTRUCTION TRAFFIC SHALL NOT CROSS STREAMS OR DITCHES EXCEPT AT SUITABLE CROSSING FACILITIES. EQUIPMENT SHALL NOT OPERATE, UNNECESSARILY, ON ADJACENT ROADWAYS ROADWAY AREAS AS DIRECTED BY THE CITY, VILLAGE, OR TOWN ENGINEER.
8. EXISTING PAVEMENT AREAS SHALL BE CLEANED AT THE DIRECTION OF THE CITY, VILLAGE, OR TOWN ENGINEER.
9. WATER TRUCKS SHALL BE USED TO MINIMIZE DUST POLLUTION ON SITE, AND ON ADJACENT ROADWAYS ROADWAY AREAS AS DIRECTED BY THE CITY, VILLAGE, OR TOWN ENGINEER.
10. ANY WATER PUMPED AS A RESULT OF DEWATERING ACTIVITIES SHALL BE PUMPED INTO A DEWATERING PIT.
11. CONCRETE WASHOUT AREAS SHALL BE DESIGNATED BY THE DEVELOPER OR CONTRACTOR AND PROTECTED IN ACCORDANCE WITH GP-0-10-001.
12. ALL AREAS DISTURBED IN THE CONSTRUCTION PROCESS SHALL BE RE-SEED AS SOON AS PRACTICABLE. PARTICULAR CARE SHALL BE TAKEN TO RE-SEED DISTURBED SLOPES IN A TIMELY MANNER.
13. IT IS RECOMMENDED THAT ALL EROSION CONTROL DEVICES BE PLACED FOR THE ENTIRE PHASE AS SHOWN ON THE EROSION CONTROL PLAN. PLACEMENT MAY BE DONE, HOWEVER, TO SUIT CONSTRUCTION SEQUENCING AS APPROVED BY THE CITY, VILLAGE, OR TOWN ENGINEER.
14. STOCK PILES SHALL BE PROTECTED BY HAY BALE BERMS PER GP-0-10-001. THESE BERMS SHALL BE MAINTAINED IN GOOD CONDITION UNTIL SAID STOCK PILES ARE REMOVED AND STOCK PILING AREAS ARE PERMANENTLY STABILIZED.
15. STOCK PILES SHALL BE SEED UPON SUSPENSION OF WORK OR IF MATERIAL IS NOT TO BE USED WITHIN 14 DAYS, IN ACCORDANCE WITH GP-0-10-001.
16. IN NO CASE SHALL ERODIBLE MATERIALS BE STOCKPILED WITHIN 25 FEET OF ANY DITCH, STREAM OR OTHER SURFACE WATER BODY.
17. SILT FENCING SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETERS OF ALL SLOPES TO BE GRADED, PRIOR TO GRADING OPERATIONS.
18. SEDIMENT STILLING BASINS SHALL BE UTILIZED TO PREVENT OFF SITE EROSION.
19. THE STORMWATER DETENTION PONDS AND CUT-OFF SWALES SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF ADJACENT AREAS.
20. WHERE NECESSARY, TEMPORARY GRADING WILL BE REQUIRED TO ROUTE STORMWATER TO CUT OFF SWALES AND DETENTION PONDS.
21. PRIOR TO ANY CONSTRUCTION ALL FEDERAL JURISDICTIONAL WETLANDS SHALL BE FIELD LOCATED AND DELINEATED WITH SILT FENCING. THE SILT FENCE SHALL BE LOCATED BETWEEN THE BUFFER AND THE JOB SITE.
22. CLEARING OPERATIONS SHALL BE LIMITED TO ACTIVE WORK AREAS.
23. CARE SHALL BE TAKEN TO PRESERVE AS MUCH EXISTING VEGETATION AS POSSIBLE AND HEALTHY TREES OF DESIRABLE SPECIES SHALL BE PROTECTED.
24. RIP-RAP OUTLET PROTECTION: RIP-RAP SHALL BE PROVIDED AT CULVERT LOCATIONS AS INDICATED ON THESE DRAWINGS. THE RIP-RAP SHALL PROTECT SIDE SLOPES FROM EROSION, AND SHALL BE ESTABLISHED AS THE CULVERT IS INSTALLED.
25. STONE CHECK DAMS SHALL BE PROVIDED AT ALL STORMWATER OUTLETS UNTIL VEGETATION HAS BEEN STABILIZED.
26. STORM INLET PROTECTION: IMMEDIATELY FOLLOWING COMPLETION OF ANY AND ALL OF THE PROPOSED STORM DRAIN INLETS, STORM DRAIN INLET PROTECTION SHALL BE CONSTRUCTED. THIS PROTECTION SHALL FUNCTION TO PREVENT SEDIMENT ENTRANCE INTO THE STORM DRAINS. PROTECTION SHALL BE MAINTAINED IN GOOD CONDITION UNTIL THE DRAINAGE AREAS HAVE BEEN PERMANENTLY STABILIZED.
27. RECP (ROLLED EROSION CONTROL PRODUCT) SHALL BE JUTE OR EXCELISOR MATTING, PROVIDE 4" MIN TOPSOIL AND SEED WITH KENTUCKY BLUEGRASS, CREEPING RED FESCUE AND PERENNIAL RYEGRASS AT A RATE OF 25, 20 AND 10 LBS PER ACRE RESPECTIVELY.
28. EROSION AND SEDIMENT CONTROL MEASURES SHALL INCLUDE A SWPPP MONITORING PROFESSIONAL AS WELL AS COORDINATION WITH TOWN OF BETHLEHEM STORMWATER COORDINATOR IN ADDITION TO INSPECTION ROLES OF CONTRACTOR AND/OR BUILDER.



EROSION AND SEDIMENT CONTROL NOTES

1. THIS PROJECT IS AUTHORIZED UNDER NYSDEC PERMIT GP-0-10-001.
2. ANY CONTRACTOR INVOLVED IN EARTHWORK ACTIVITIES, INCLUDING BUT NOT LIMITED TO: CLEARING, GRADING AND TRENCHING, SHALL REVIEW ALL PERMIT CONDITIONS AND CERTIFY UNDERSTANDING OF THESE CONDITIONS, IN WRITING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT ALL EROSION CONTROLS DESCRIBED IN GP-0-10-001, AND IT IS NOT THE INTENT OF THESE DRAWINGS TO REPLACE OR DISSEMINATE THE PERMIT REQUIREMENTS. THE CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH THE PERMIT AT ALL TIMES.
3. AT NO TIME SHALL MORE THAN FIVE (5) ACRES REMAIN UNSTABILIZED. THE CONTRACTOR SHALL COORDINATE EARTHWORK ACTIVITIES AND IMPLEMENTATION OF SOIL STABILIZATION MEASURES TO ENSURE COMPLIANCE TO THIS PERMIT REQUIREMENT.
4. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION AND EQUIPMENT ENTRANCE WHENEVER PRACTICABLE.
5. DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF COMPLETION OR SUSPENSION OF GRADING OPERATIONS.
6. INSTALL TEMPORARY & PERMANENT SEEDING IN ACCORDANCE WITH THE NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL STANDARD AND SPECIFICATION FOR CRITICAL AREA SEEDING PAGE 3.3 AND FOR MULCHING PAGE 3.31.
7. INSTALL PERMANENT RIP-RAP AT ALL PIPE END SECTIONS AT TIME OF INSTALLATION OF PIPE.
8. IMPROVEMENTS SHOWN ARE FOR REFERENCE ONLY SEE OTHER SHEETS FOR SITE UTILITY AND GRADING.
9. PAVED AREAS ARE TO BE SWEEP DAILY TO REMOVE ANY SEDIMENT AND ALL NEWLY PAVED AREAS SHALL BE DIRECTED TO THE TEMPORARY OR FINAL SEDIMENT CONTROL BASINS.

TEMPORARY SWALE SUMMARY TABLE

SWALE	LENGTH	GRADE	TYPE*	DRAINAGE AREA
S1	1900'	1%	A, 1	13 ACRES
S2	525'	1%	A, 1	1.2 ACRES
S3	500'	0.5%	A, 1	3.2 ACRES

* ALL TEMPORARY SWALES SHALL RECEIVE RECP

CONSTRUCTION SEQUENCE SUMMARY TABLE

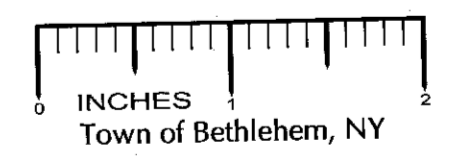
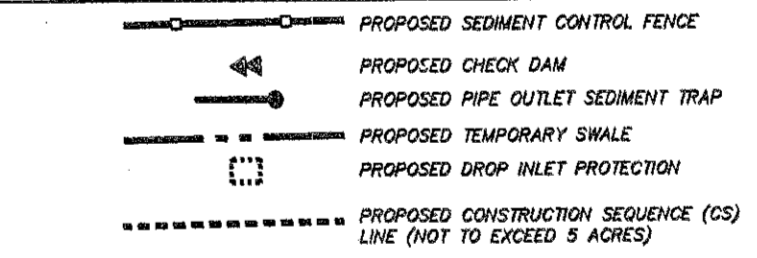
CS#	DISTURBED AREA
CS1	4.52 ACRES
CS2	4.5 ACRES
CS3	2.61 ACRES
CS4	3.92 ACRES
CS5	2.1 ACRES
CS6	4.93 ACRES

TEMPORARY SEDIMENT TRAP SUMMARY TABLE

DESCRIPTION	TRAP No.1	TRAP No.2
TYPE	17 ACRES	4.93 ACRES
DRAINAGE AREA	17 ACRES	4.93 ACRES
STORAGE REQ'D	2278 C.Y.	880 C.Y.
STORAGE PROVIDED*	2,500 C.Y.	800 C.Y.
PIPE OUTLET	24"	18"
DEPTH BELOW OUTLET	12"	12"
ENBANKMENT HT.	6"	6"
50% CLEANOUT ELEVATION	206.0	215
INVERT OUT ELEVATION	204.0	213
LENGTH x WIDTH x HT*	150'x90x5'	75'x58x5'

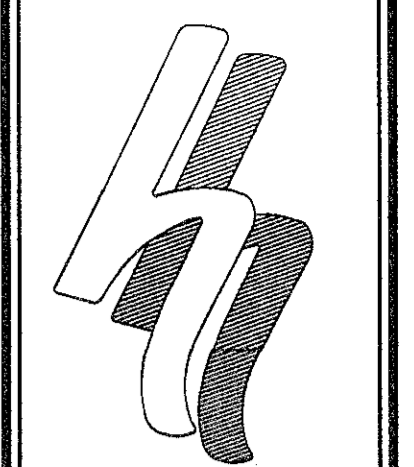
*STORAGE CAPACITY FROM THE TOP ELEVATION OF THE RISER PIPE OUTLET TO THE TRAP BOTTOM

EROSION AND SEDIMENT CONTROL LEGEND



PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK
 This Site Plan Approved.
 [Signature]
 Title: [Title]
 Date: December 20, 2011

SPA 179 + SPA 179 A1



HERSHBERG & HERSHBERG
 Consulting Engineers and Land Surveyors
 18 Locust Street
 Albany, New York 12203

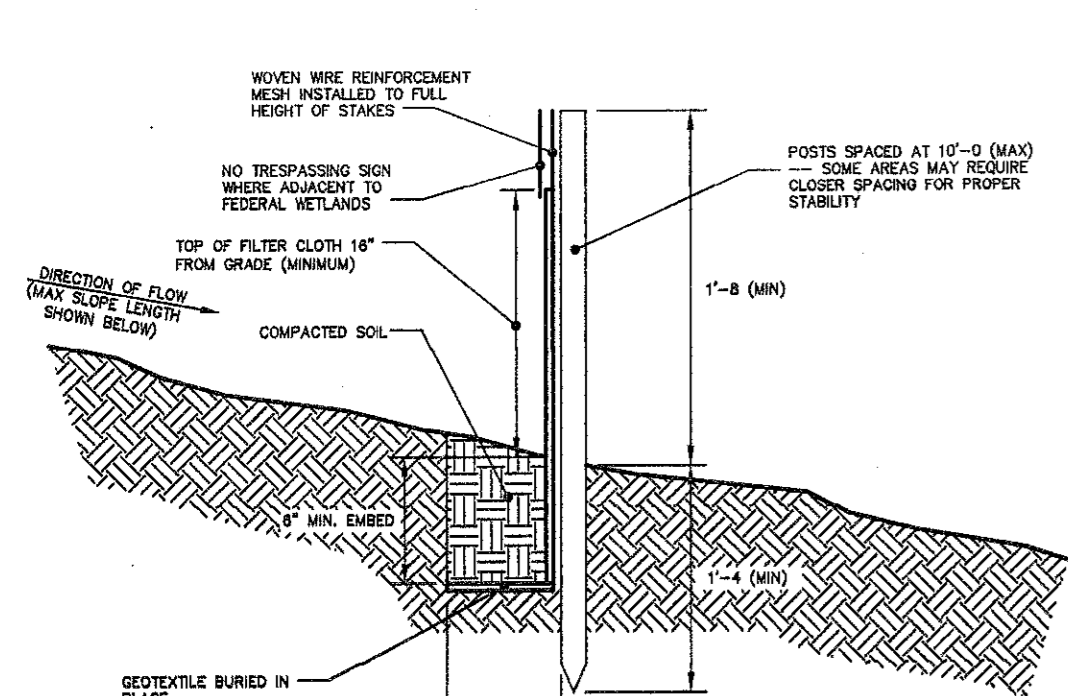
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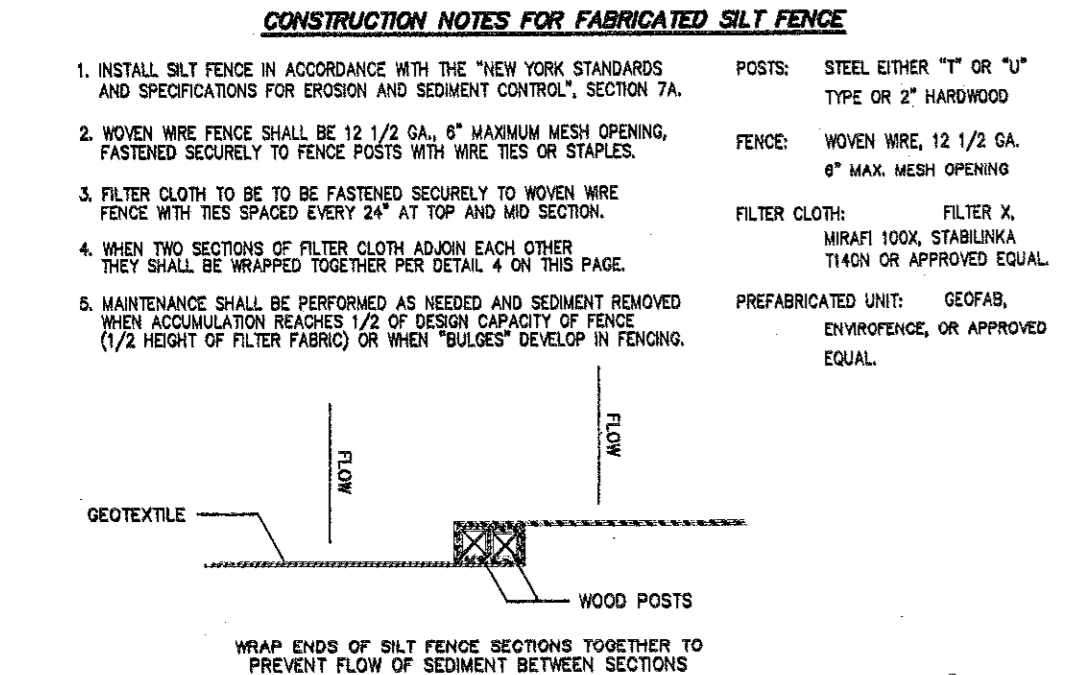
DATE	REMARKS
3/25/11	TOWN SUBMISSION
8/15/11	SWPPP
10/5/11	BAL COMMENT LETTER 9/14/11

PROPOSED EROSION & SEDIMENT CONTROL GENERAL PLAN - PHASE 1B
 VISTA TECHNOLOGY CAMPUS
 TOWN OF BETHLEHEM
 ALBANY COUNTY, STATE OF NEW YORK

SCALE: 1"=100'
 DATE: 3/23/11
 FILE: 100328



- ### CONSTRUCTION SPECIFICATIONS
- INSTALL CONSTRUCTION ENTRANCE IN ACCORDANCE WITH "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", SECTION 7A.
 - STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
 - THICKNESS - NOT LESS THAN (6) INCHES.
 - STABILIZATION FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE, IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL CONDUITS, SPILLS, DROPPED, WASHED OR TRACKED ON PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS ONTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



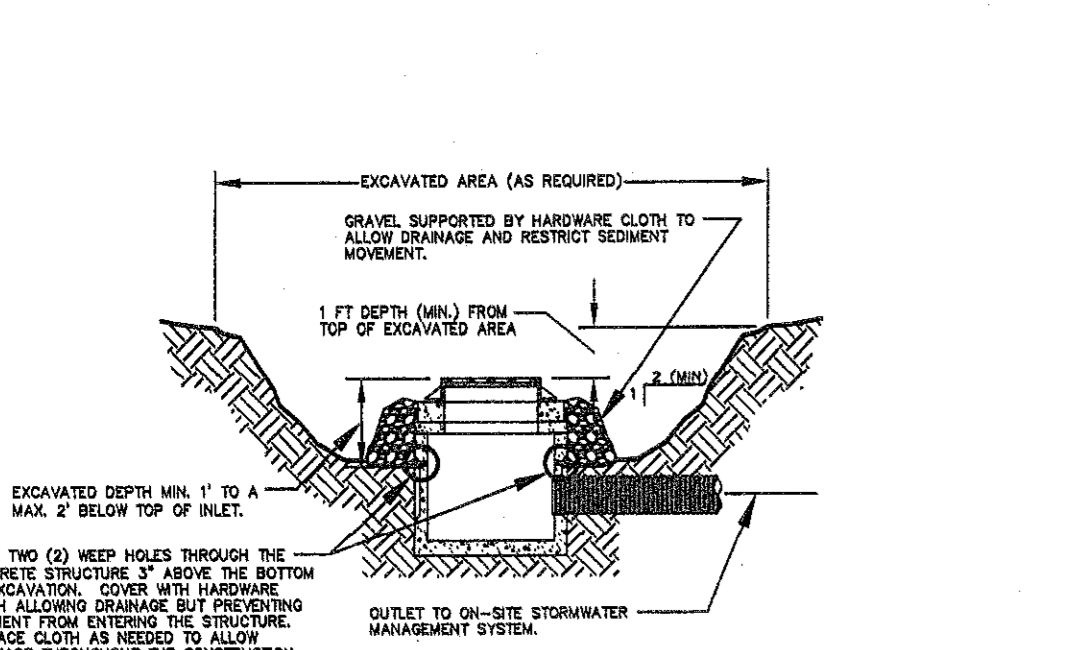
DESIGN CRITERIA

Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff. All silt fences shall be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized. Sensitive areas to be protected by silt fence may need to be reinforced by using heavy wire fencing for added support to prevent collapse. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. A detail of the silt fence shall be shown on the plan.

Property	Value	Test Method
Grab Tensile Strength (lbs)	200	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682
Mullen Burst Strength (lbs)	190	ASTM D3786
Puncture Strength (lbs)	40	ASTM D761 modifier
Opening Size	40-80	US Std Sieve
Aggregate Depth	6	CW-02216

SEDIMENT CONTROL FENCE INSTALLATION DETAIL

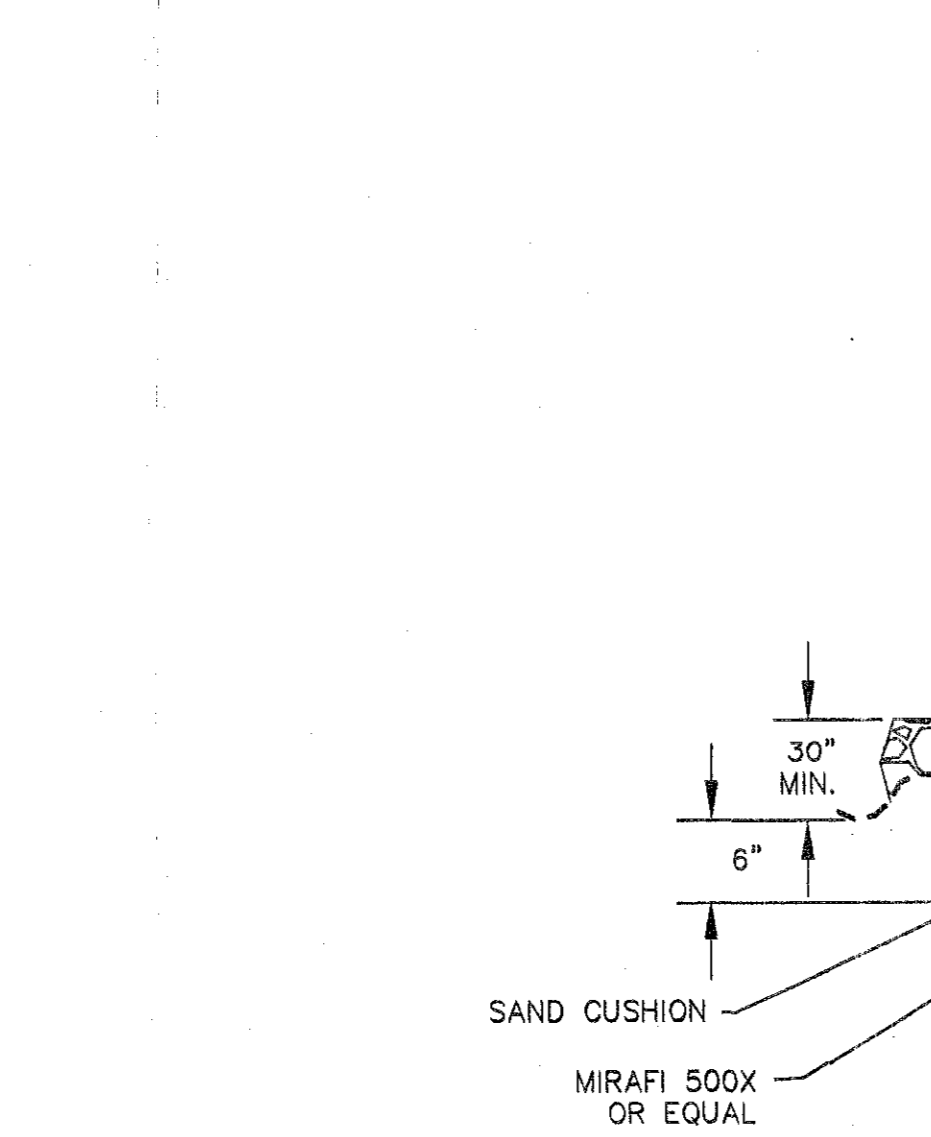
NOT TO SCALE



- ### EXCAVATED DROP INLET PROTECTION
- NOT TO SCALE
- INSTALL INLET PROTECTION IN ACCORDANCE WITH THE "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", SECTION 7A FOR ALL STRUCTURES THAT WILL BE COLLECTING RUNOFF DURING CONSTRUCTION.
 - CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
 - GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
 - KEEP HOLES SHALL BE PROTECTED BY 2" STONE OR GRAVEL.
 - UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL KEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.
 - THE MAXIMUM DRAINAGE AREA SHALL BE 1 ACRE.
 - THE STORAGE VOLUME OF THE EXCAVATED AREA SHALL BE 900 CUBIC FEET. EXAMPLES: A BASIN 22 FT WIDE BY 22 FT LONG BY 2 FT DEEP, OR A BASIN 30 FT WIDE BY 30 FT LONG BY 3 FT DEEP, OR A BASIN 13 FT WIDE BY 33 FT LONG BY 2 FT DEEP, ETC.
- Design Criteria**
- Drainage Area - The drainage area for storm drain inlets shall not exceed one acre. The crest elevations of these structures shall provide storage for these practices until positive storage flow.
- Type 1 - Excavated Drop Inlet Protection**
- Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool. Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is obtained. This material should be incorporated into the site in a stabilized manner.

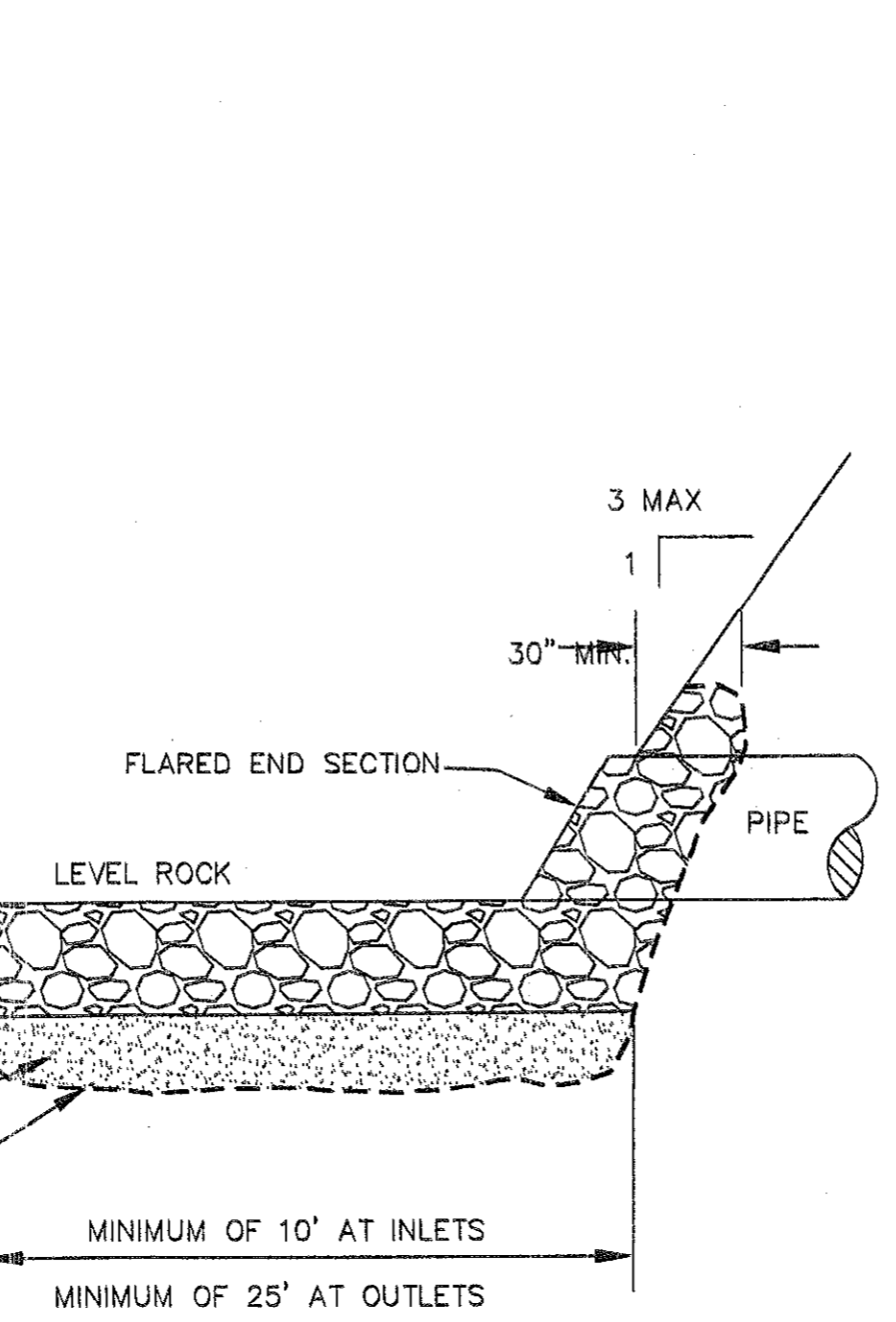
STABILIZED CONSTRUCTION ENTRANCE DETAIL

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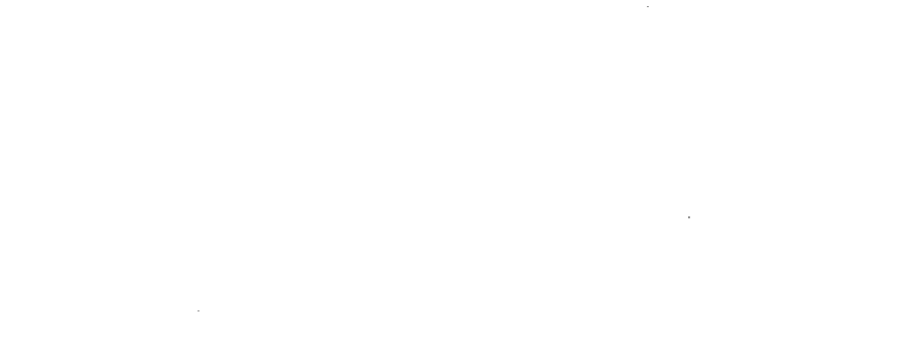
TEMPORARY SEDIMENT TRAP DETAIL

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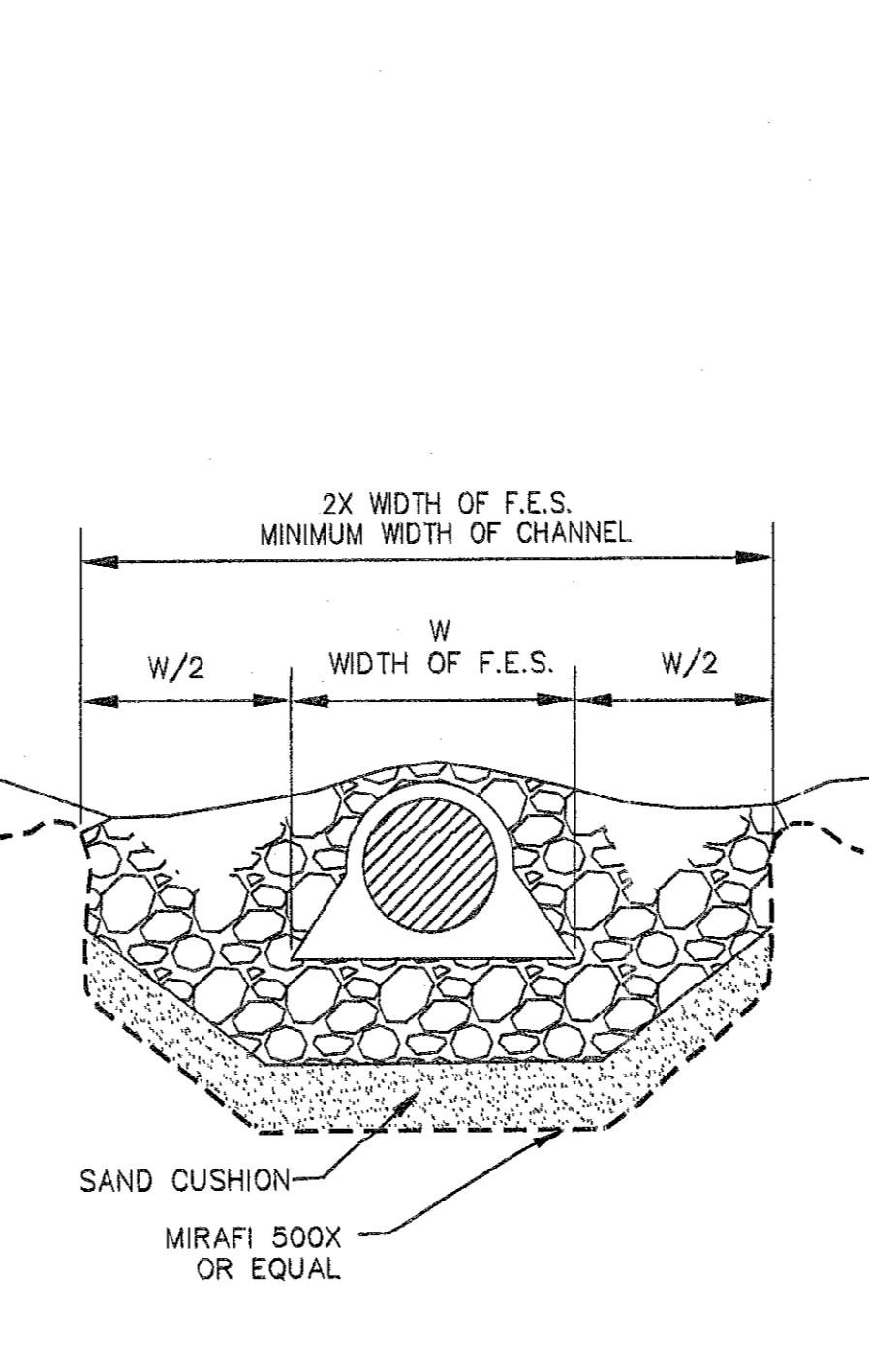
FLARE END SECTION AND RIP-RAP DETAIL

NOT TO SCALE



STONE CHECK DAM DETAIL

NOT TO SCALE



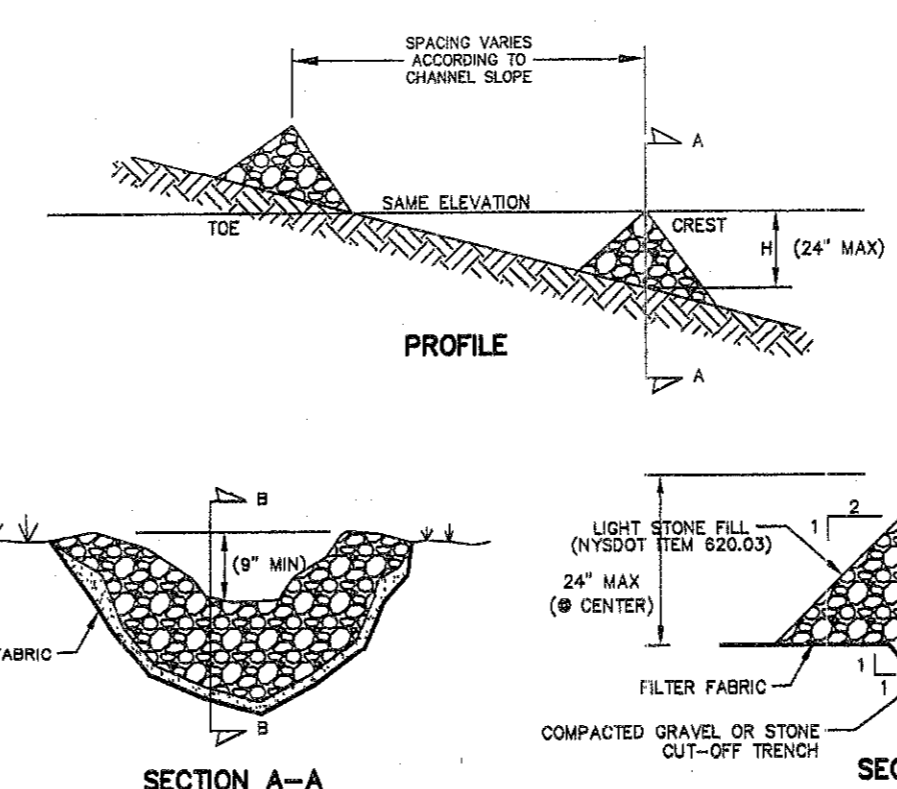
CONCRETE TRUCK WASHOUT SECTION

NOT TO SCALE



- ### DESIGN CRITERIA
- If any of the design criteria presented here cannot be met, see Standard and Specification for Sediment Basin on page SA-49.
- Drainage Area**
- The drainage area for sediment traps shall be in accordance with the specific type of sediment trap used (Type 1 through 5).
- Location**
- Sediment traps shall be located so that they can be installed prior to grading or filling in the drainage area they are to protect. Traps must not be located any closer than 20 feet from a proposed building foundation if the trap is to function during building construction. Locate traps to obtain maximum storage benefit from the terrain and for ease of cleanout and disposal of the trapped sediment.
- The volume of a sediment trap as measured at the elevation of the crest of the outlet shall be at least 3,500 cubic feet per acre of drainage area. The volume of a constructed trap shall be calculated using standard mathematical procedures. The volume of a natural sediment trap may be approximated by the equation: Volume (cu.ft.) = 0.4 x surface area (sq.ft.) x maximum depth (ft.).
- Trap Cleanout**
- Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to 1/2 of the design depth of the trap. Sediment removed from the trap shall be deposited in a protected area and in such a manner that it will not erode.
- Embankment**
- All embankments for sediment traps shall not exceed five (5) feet in height as measured at the low point of the original ground along the centerline of the embankment. Embankments shall have a minimum four (4) foot wide top and side slopes of 2:1 or flatter. The embankment shall be compacted by traversing with equipment while it is being constructed. The embankment shall be stabilized with seed and mulch as soon as it is completed.
- The elevation of the top of any dike directing water to any sediment trap will equal or exceed the maximum height of the outlet structure along the entire length of the trap.
- Excavation**
- All excavation operations shall be carried out in such a manner that erosion and water pollution shall be minimal. Excavated portions of sediment traps shall have 1:1 or flatter slopes.
- Outlet**
- The outlet shall be designed, constructed, and maintained in such a manner that sediment does not leave the trap and that erosion at or below the outlet does not occur.
- New York Standards and Specifications Page SA.36 August 2005 For Erosion and Sediment Control
- Sediment traps must outlet onto stabilized (preferable undisturbed) ground, into a watercourse, stabilized channel, or into a storm drain system. Distances between inlet and outlet should be maximized to the longest length practicable.

- ### DESIGN CRITERIA
- Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.
- Thickness: Not less than six (6) inches.
- Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.
- Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).
- Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.
- Criteria for Geotextile**
- The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, rot resistant, and conform to the fabric properties as shown:
- | Fabric Properties | Light Duty | Heavy Duty | Test Method |
|-----------------------------|------------|------------|--------------------|
| Grab Tensile Strength (lbs) | 200 | 220 | ASTM D1682 |
| Elongation at Failure (%) | 50 | 60 | ASTM D1682 |
| Mullen Burst Strength (lbs) | 190 | 430 | ASTM D3786 |
| Puncture Strength (lbs) | 40 | 126 | ASTM D761 modifier |
| Opening Size | 40-80 | 40-80 | US Std Sieve |
| Aggregate Depth | 6 | 10 | CW-02216 |
- Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and on occasional multiple truck. Acceptable materials are Trevis Spunbond 1115, Mirafi 1001, Typar 5401, or equivalent.
- Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevis Spunbond 1115, Mirafi 8005, or equivalent.
- Fabric not meeting these specifications may be used only when design procedure and supporting documentation are applied to determine aggregate depth and fabric strength.



- ### DESIGN CRITERIA
- Drainage Area:** Maximum drainage area above the check dam shall not exceed two (2) acres.
- Height:** Not greater than 2 feet. Center shall be maintained 9 inches lower than abutments at natural ground elevation.
- Slope:** Shall be 2:1 or flatter.
- Spacing:** The check dams shall be spaced as necessary in the channel so that the crest of the downstream dam is at the elevation of the toe of the upstream dam. This spacing is equal to the height of the check dam divided by the channel slope.
- Therefore:
 $S = h/s$
 Where:
 $S =$ spacing interval (ft.)
 $h =$ height of check dam (ft.)
 $s =$ channel slope (ft./ft.)
- Example:
 For a channel with a 4% slope and 2 ft. high stone check dams, they are spaced as follows:
 $S = \frac{2}{.04} = 50$ ft.
- Stone size: Use a well graded stone matrix 2 to 9 inches in size (NYS -DOT Light Stone Fill meets these requirements). The overflow of the check dams will be stabilized to resist erosion that might be caused by the check dam. See Figure SA.9 on page SA.24 for details. Check dams should be anchored in the channel by a cutoff trench 1.5 ft. wide and 0.5 ft. deep and lined with filter fabric to prevent soil migration.

- ### NOTES
- INSTALL STONE CHECK DAM IN ACCORDANCE WITH THE "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", SECTION 7A IN ALL TEMPORARY OF PERMANENT DRAINAGE SWALES ON SITE.
 - CHECK DAMS SHALL REMAIN IN PLACE UNTIL THE DRAINAGE SWALE IS STABILIZED.
 - LIGHT STONE FILL (NYS DOT ITEM 820.03) SHALL BE PLACED ON FILTER FABRIC ACCORDING TO THE GRADERS AND SWALE LINES SHOWN ON THE PLANS.
 - SET SPACING OF CHECK DAMS SO THAT THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
 - EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
 - PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SOUL AND EROSION WITH STONE OR LINER AS APPROPRIATE.
 - ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO BLOCKAGE OR DAMAGE FROM DISPLACED STONE.
 - MAXIMUM DRAINAGE AREA 2 ACRES.
 - LOCATION OF CHECK DAMS SHALL BE AS REQUIRED TO PROVIDE ADEQUATE EROSION CONTROL AND MAY BE DIRECTED BY THE ENGINEER IN AREAS OTHER THAN SHOWN ON THIS PLAN DURING CONSTRUCTION AND UNTIL SITE IS STABILIZED.

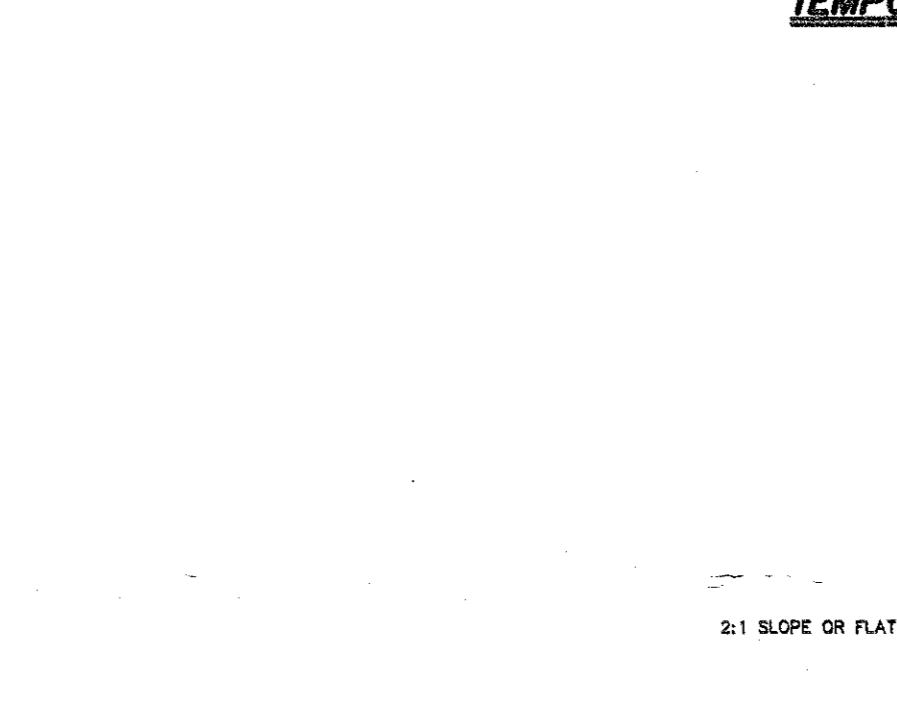
- ### DESIGN CRITERIA
- Stabilization of the swale shall be completed within 7 days of installation in accordance with the appropriate standard and specifications for vegetative stabilization or stabilization with mulch as determined by the time of year.
 - In highly erodible soils, as defined by the local approving agency, refer to the next higher slope grade for type of stabilization.
 - Recycled Concrete Equivalent shall be concrete broken into the required size, and shall contain no steel reinforcement. New York Standards and Specifications Page SA.4 August 2005 For Erosion and Sediment Control Outlet
 - Swale shall have an outlet that functions with a minimum of erosion, and dissipates runoff velocity prior to discharge off the site.
 - Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin until the drainage area above the swale is adequately stabilized.
 - The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet condition.
 - If a swale is used to divert clean water flows from entering a disturbed area, a sediment trapping device may not be needed.
 - RECP (ROLLED EROSION CONTROL PRODUCT) SHALL BE JUTE OR EXCELSIOR MATTING, PROVIDE 4" MIN TOPSOIL AND SEED WITH KENTUCKY BLUEGRASS, CREEPING RED FESCUE AND PERENNIAL RYGRASS AT A RATE OF 25, 20 AND 10 LBS PER ACRE RESPECTIVELY.
 - AS AN ALTERNATE PRACTICE TO TEMPORARY SWALES, EARTH DIKES MAY BE USED. SEE DETAIL THIS SHEET.

TEMPORARY SWALE DETAIL

NOT TO SCALE

CONDITION	CHANNEL GRADE	RECP (SEE DESIGN CRITERIA)	SEED & STRAW MULCH	RECP (SEE DESIGN CRITERIA)	SEED & COVER WITH RECP, 500 OR LINED WITH PLASTIC OR 2" STONE
1	0.5 - 3.0%				
2	3.1 - 5.0%				
3	5.1 - 8.0%				
4	8.1 - 20%				

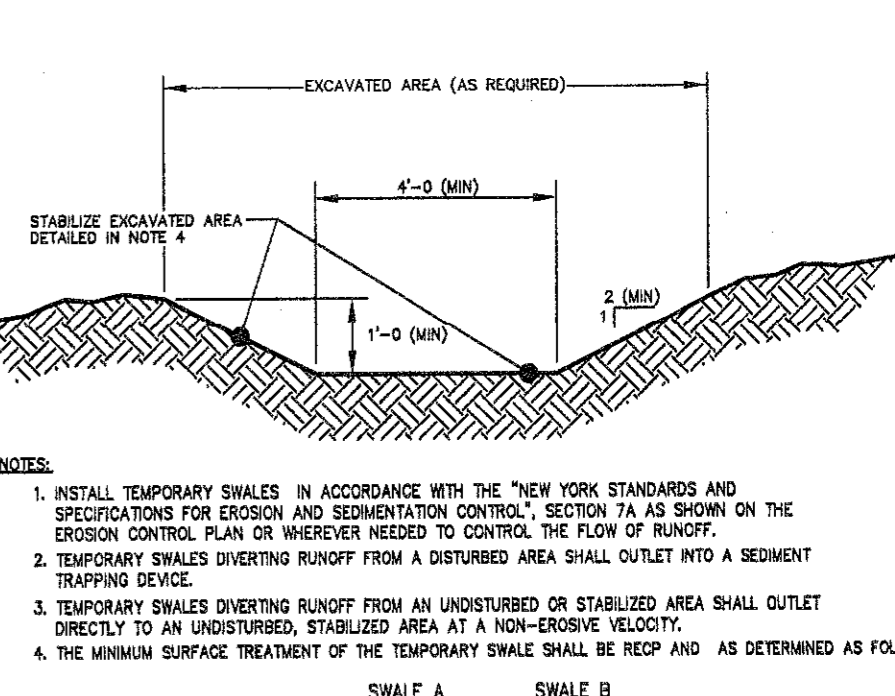
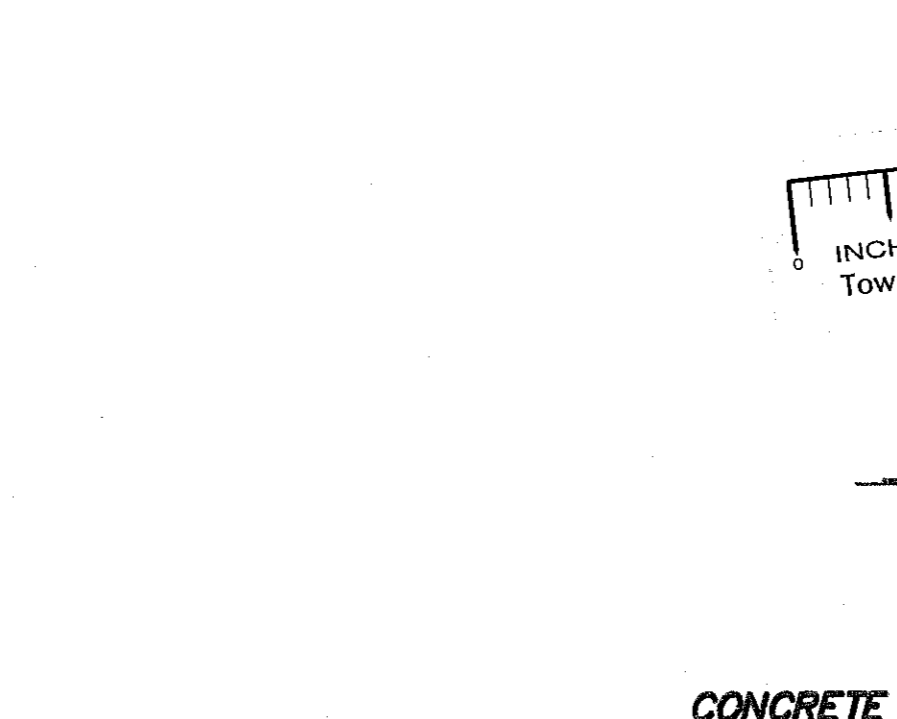
REQUIRED SURFACE TREATMENT:
 <5 ACRES: RECP (SEE DESIGN CRITERIA)
 5-10 ACRES: RECP (SEE DESIGN CRITERIA)
 10-20 ACRES: RECP (SEE DESIGN CRITERIA)
 20-50 ACRES: RECP (SEE DESIGN CRITERIA)
 50-100 ACRES: RECP (SEE DESIGN CRITERIA)
 100-500 ACRES: RECP (SEE DESIGN CRITERIA)
 500-1000 ACRES: RECP (SEE DESIGN CRITERIA)
 1000+ ACRES: RECP (SEE DESIGN CRITERIA)



EARTH DIKE

NOT TO SCALE

- ### CONSTRUCTION SPECIFICATIONS
- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
 - ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
 - TOP WIDTH MAY BE WIDER AND SIDE SLOPES BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
 - FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
 - EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN UNLESS EITHER THE DIKE GRADING OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
 - STABILIZATION SHALL BE (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART ON THE PREVIOUS PAGE.
 - AS AN ALTERNATE PRACTICE TO EARTH DIKES, TEMPORARY SWALES MAY BE USED. SEE DETAIL THIS SHEET.



TEMPORARY SWALE DETAIL

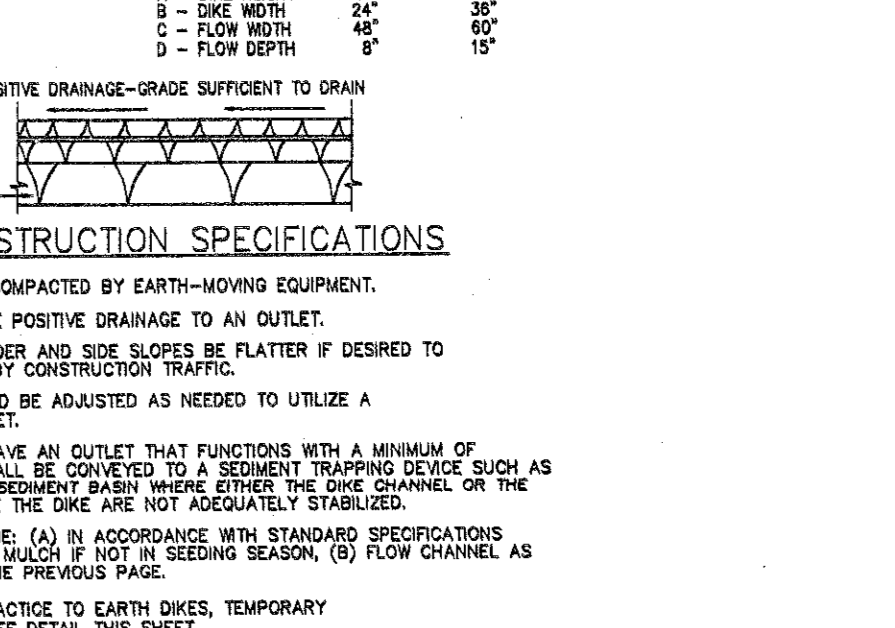
NOT TO SCALE

SWALE A	SWALE B
DRAINAGE AREA <5 ACRES	5-10 ACRES
BOTTOM WIDTH OF FLOW CHANNEL 4'	5'
DEPTH OF FLOW CHANNEL 1'	1'
SIDE SLOPES 2:1	2:1
GRADE 0.5% MIN. 20% MAX	0.5% MIN. 20% MAX

- ### NOTES
- INSTALL TEMPORARY SWALES IN ACCORDANCE WITH THE "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", SECTION 7A AS SHOWN ON THE EROSION CONTROL PLAN OR WHEREVER NEEDED TO CONTROL THE FLOW OF RUNOFF.
 - TEMPORARY SWALES DIVERTING RUNOFF FROM A DISTURBED AREA SHALL OUTLET INTO A SEDIMENT TRAPPING DEVICE.
 - TEMPORARY SWALES DIVERTING RUNOFF FROM AN UNDISTURBED OR STABILIZED AREA SHALL OUTLET DIRECTLY TO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.
 - THE MINIMUM SURFACE TREATMENT OF THE TEMPORARY SWALE SHALL BE RECP AND AS DETERMINED AS FOLLOWS:

CONCRETE TRUCK WASHOUT SECTION

NOT TO SCALE



- ### DESIGN CRITERIA
- Drainage Area - The drainage area for storm drain inlets shall not exceed one acre. The crest elevations of these structures shall provide storage for these practices until positive storage flow.
- Type 1 - Excavated Drop Inlet Protection**
- Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool. Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is obtained. This material should be incorporated into the site in a stabilized manner.

PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK

This Site Plan Approved.

Charles J. ...

Date December 22, 2011

SPA 179 + SPA 179 A-1

HERSBERG & HERSBERG
 Consulting Engineers and Land Surveyors
 18 Locust Street
 Albany, New York 12203

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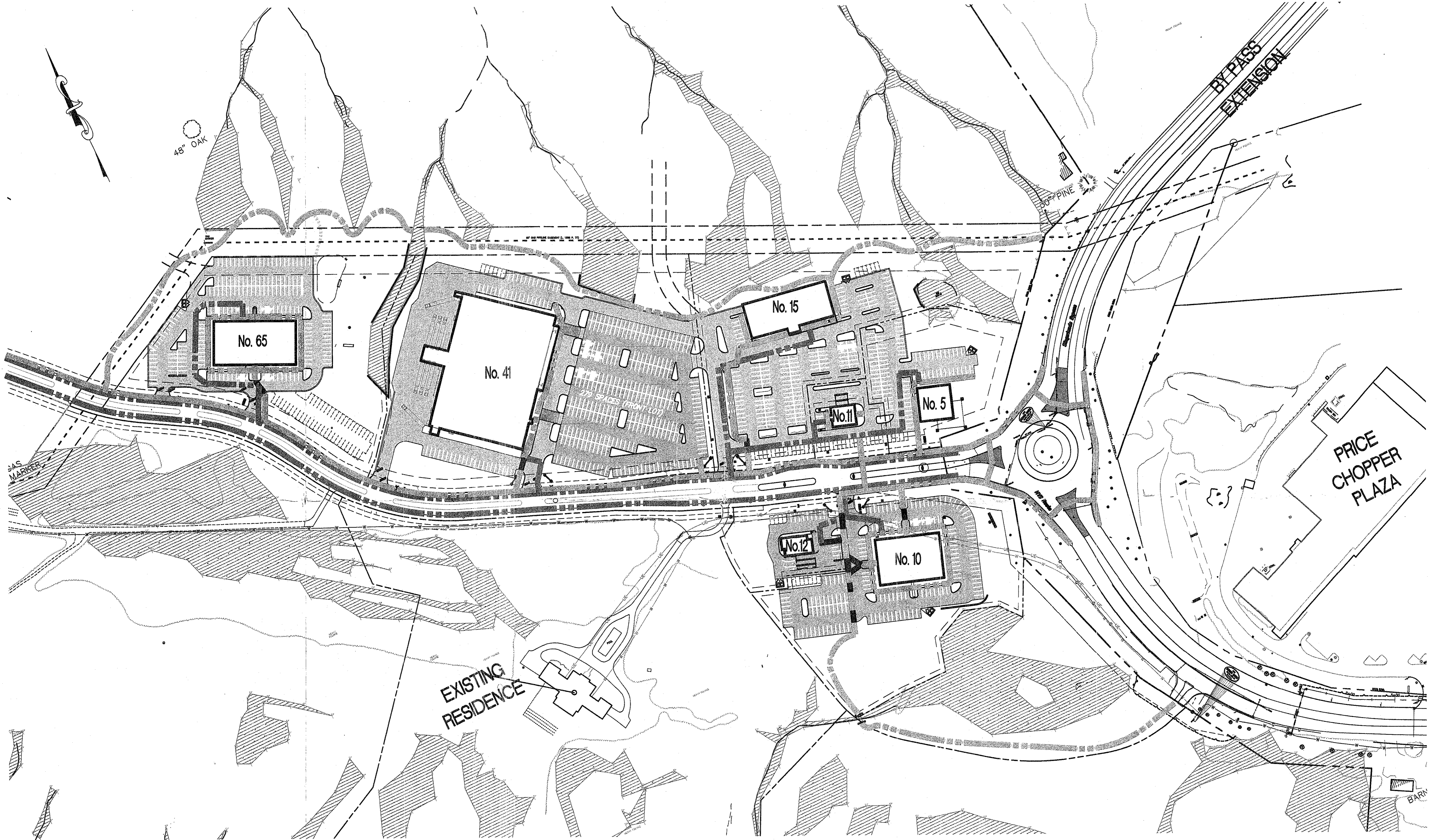
STATE OF NEW YORK
 COUNTY OF ALBANY
 24225

REVISIONS	DATE
TOWN RESUBMISSION	3/25/11
SWPPP	8/15/11
BAL COMMENT LETTER	9/14/11
	10/9/11

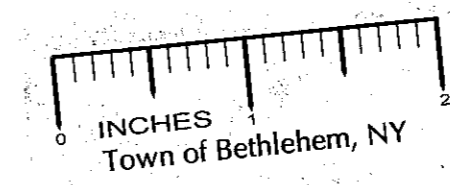
PROPOSED EROSION & SEDIMENT CONTROL DETAILS - PHASE 1B
 VISTA TECHNOLOGY CAMPUS
 TOWN OF BETHLEHEM
 ALBANY COUNTY, STATE OF NEW YORK

SCALE: AS NOTED
 DATE: 3/23/11
 FILE: 100228

100228-phase1B.dwg



DESCRIPTION		MATERIAL TYPE
NATURE TRAIL		BARK CHIPS
PEDESTRIAN WALK WAY		CONCRETE
PEDESTRIAN WALK WAY		ASPHALT
PEDESTRIAN WALK WAY		STAMPED ASPHALT
SHARED BICYCLE LANE		ASPHALT



TOWN OF BETHLEHEM PLANNING BOARD APPROVAL

PLANNING BOARD
 TOWN OF BETHLEHEM
 ALBANY COUNTY, NEW YORK

This Site Plan Approved.

George J. Jumper
 Title Chairman

Date *December 22nd 2011*

HERSHBERG & HERSHBERG
 Consulting Engineers and Land Surveyors
 18 Locust Street
 Albany, New York 12203

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REVISIONS	DATE	REMARKS
	9/29/11	BEL COMMENT
	11/19/11	DELINEATE TYPE OF WALKS

PROPOSED PEDESTRIAN ACCESS PLAN - PHASE 1B
 VISTA TECH CAMPUS
 TOWN OF BETHLEHEM
 ALBANY COUNTY, STATE OF NEW YORK

SCALE: 1"=100'
 CHK: DRH
 DATE: 9/25/11
 100328 - phase1b.dwg
 BY: WK
 FILE: 100328