

PARKING REQUIREMENTS
 Office = 107,420 S.F. @ 3.5 sp./1000 GFA = 376 spaces
 Warehouse = 31,750 @ 1 sp./1000 GFA = 32 spaces
 Total Required = 408 spaces

Spaces Provided = 422 spaces
 30 future spaces
 452 Total Spaces

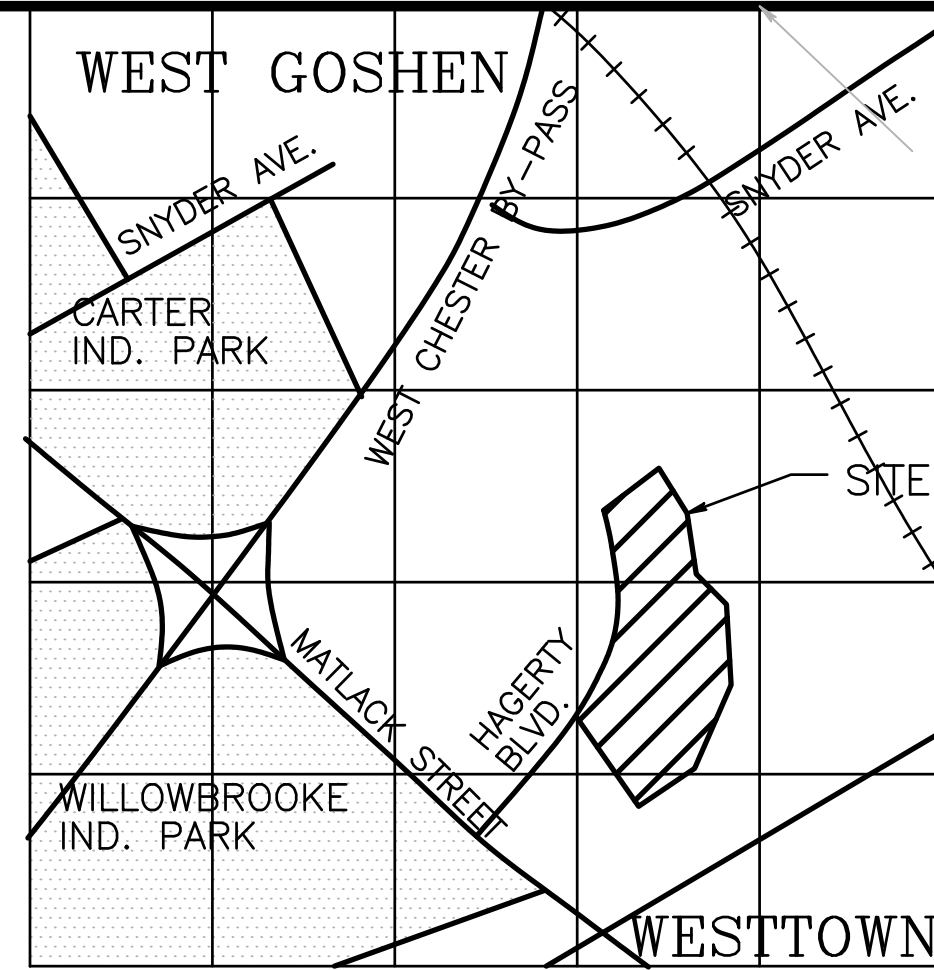
SETBACKS
 Front Yard = 20 ft.
 Side/Rear Yard = 10 ft.

ZONING
I-2 LIGHT INDUSTRIAL DISTRICT

Required	Proposed
Lot Size - 2 Acres (Min.)	14.093 Acres
Lot Width - @ Building Line - 200 ft.	>500 ft.
@ Setback - 50 ft.	>500 ft.
Lot Building Coverage - 50% Maximum	22.67%, 139,170 S.F.

Setbacks:
 Front - 50 ft. min. 50 ft.
 Side - 30 ft. min. 30 ft.
 Rear - 35 ft. min. 35 ft.

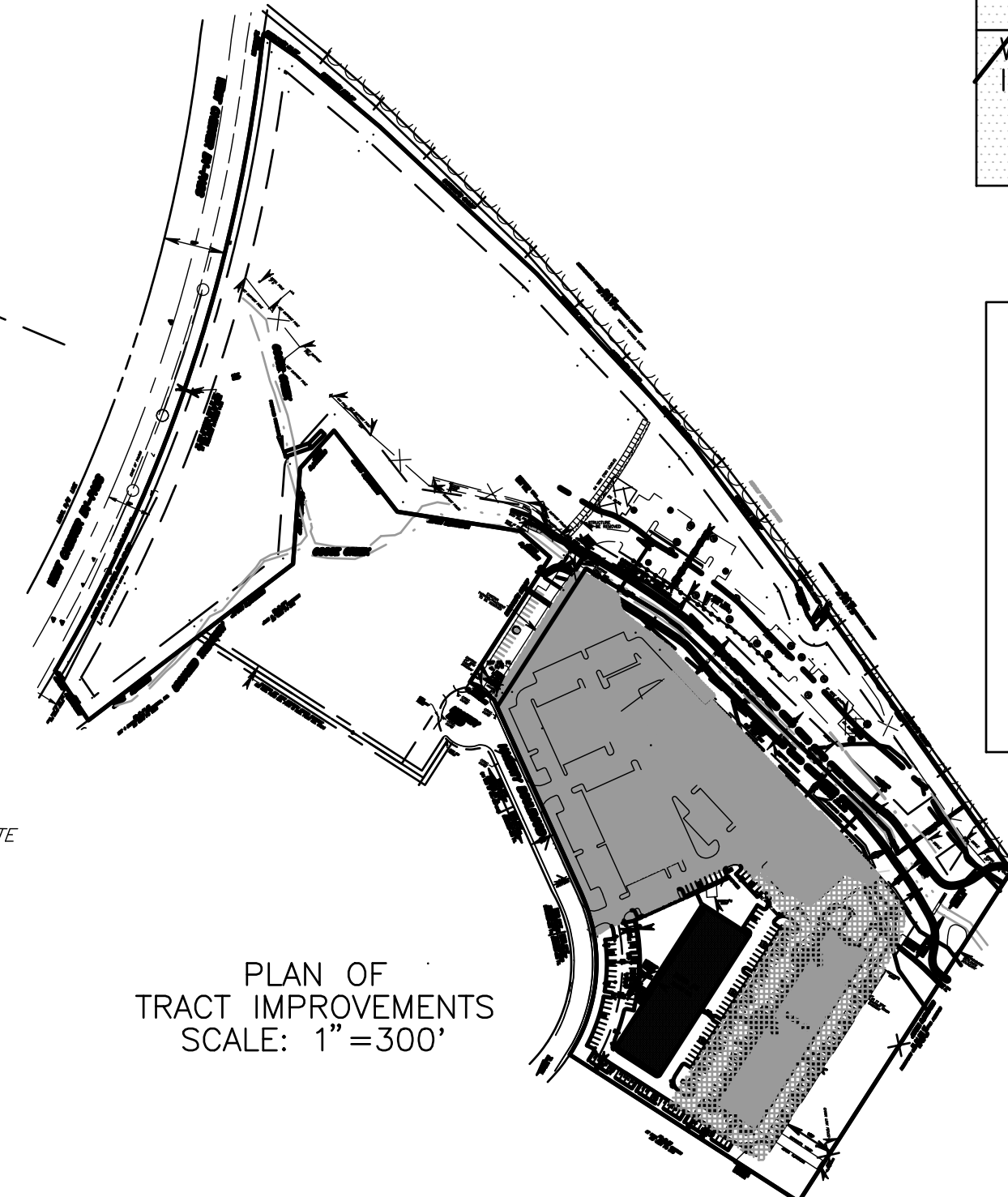
From Residential:
 Building Height - 100 ft. 100 ft.
 Building Height - 40 ft. max. <35 ft.
 Paved Surface - 60 % max. 35.29%, 4,974 Acres
 Green Area - 30% min. 42.04%, 5,924 Acres



LOCATION MAP
 SCALE: 1"=600'

COMMONWEALTH OF PENNSYLVANIA COUNTY OF CHESTER SS:
 On the _____ day of _____ A.D. 20____ before me, the subscriber, a Notary Public of the Commonwealth of Pennsylvania, residing in _____ personally appeared _____ who acknowledges himself to be the _____ and that, as such to do so, he executed the foregoing plan by signing his name by himself as that he is the owner of the designated land, that necessary approval of the plan has been obtained and is endorsed thereon and that he desires that the foregoing plan may be duly recorded.

Notary Public _____
 My Commission Expires _____



PLAN OF TRACT IMPROVEMENTS
 SCALE: 1"=300'

REVIEWED by the Planning Commission of West Goshen Township, Chester County, Pa., this _____ day of _____, 20____.

APPROVED by the Board of Supervisors of West Goshen Township, Chester County, Pa., this _____ day of _____, 20____.

REVIEWED by the Chester County Planning Commission this _____ day of _____, 20____.

REVIEWED by the West Goshen Township Engineer, _____ Date _____

Recorded in the Office of the Recorder of Deeds of Chester County at West Chester, Pennsylvania in Plan book _____ Page _____ of _____ on the _____ day of _____, 20____.

(Deputy) Recorder of Deeds _____

- NOTES**
- Boundary data taken from street location and entrance road topography for William E. Freese, prepared by Robert C. Drake & Assoc., Inc. dated 3-23-89. The site benchmark is the FIRM RM 249 elev. 354.66 (NGVD 1929)
 - Topography per survey conducted by Edward B. Walsh & Assoc.
 - The tract consists of fill material which is not reflected on the Chester & Delaware Counties Soil Survey.
 - Total tract area = 14.093 Ac.
 - A geotechnical evaluation in the areas of proposed improvements must be performed. The evaluation must document soil types, their bearing capacity and suitability for building construction with resolutions to limitations found. In addition, void areas and decomposable material must be located and determined. A soils compaction report must be submitted for the area of proposed improvements. A geotechnical report must be provided with recommendations concerning the appropriate building construction parking area and stormwater detention facility construction to avoid settlement and infiltration into the subsurface.
 - The architectural plans for each building must address the way that ventilation will be provided to properly remove any possible methane gas build up in or around the building foundation and slab.
 - The sanitary sewer system upon acceptable installation is hereby offered to West Goshen Sewer Authority for their ownership and maintenance.
 - The sanitary sewer system is to be installed in accordance with DEP, West Goshen Sewer Authority and Township Standards.
 - The tract proposed for improvement under this application application is located on tax parcels 52-7-32.1
 - The property owner shall own all stormwater management and conveyance facilities outside Hagerty Boulevard right of way and will be responsible for the maintenance of these facilities.
 - An existing seep of undetermined liquid is discharging from the subgrade at an existing parking lot along the western tract boundary. This liquid must be tested to verify it contains no deleterious components. If any are found they must be removed prior to discharge from the site.
 - The 100 year floodplain boundary as depicted is taken from FEMA FIRM 42029C0354 D. A floodplain study has been previously submitted in conjunction with a special exception hearing for a floodplain encroachment and a DEP/Army Corp. Joint permit for floodplain crossings, and approved to acknowledge the calculated location.
 - The proposed buildings will be subject to the West Goshen Sewer Authority tapping fee and Township inspection fee in effect at the time of application for connection.
 - Upon plan recordation, the parcels will be consolidated resulting in two separate parcels.
 - The parking lot and stormwater management system construction must be inspected by a geotechnical engineer. The geotechnical engineer must submit a report covering all testing to the township upon completion.
 - The riparian buffer provided is proposed to be reduced to 50 feet from the stream bank. This request is to recognize the substantial change in elevation beyond the stream banks that does not offer the benefits typically provided by the buffer area beyond the stream banks.

CERTIFICATE OF CONFORMANCE
 I hereby certify that to the best of my knowledge, these plans are in conformity with engineering, zoning, building, sanitation and other applicable township ordinances and regulations.

Adam J. Brower P.E.

AMENDED TITLE PLAN (FINAL)

7	10-1-13	REV. PER CCCD REVIEW COMMENTS 9-26-13
8	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
5	10-8-07	ADJUST GRADES PER CLIENT
4	3-26-07	REV. PER CCCD REVIEW COMMENTS
3	2-08-07	REV. RIPARIAN BUFFER AREA/LAYOUT
2	10-04-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
1	10-26-05	REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN FOR
GOSHEN LEISURE DEVELOPMENT

WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA.
 Edward B. Walsh & Associates, Inc. Project- 2188
 CIVIL ENGINEERS & SURVEYORS Date- 3-10-04

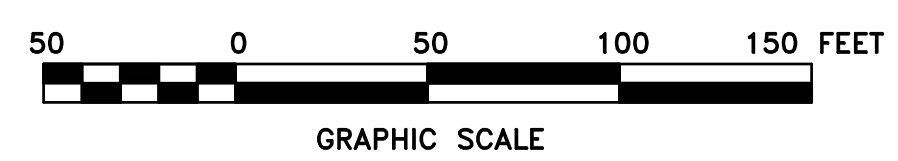
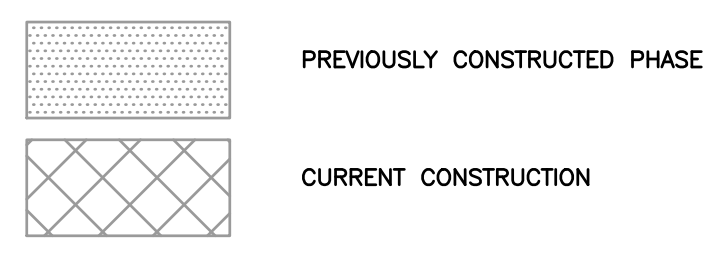
Whiteland Business Park 855 Springdale Drive, Suite 202
 Exton, Pennsylvania 19341
 Phone: 610-903-0060
 Fax: 610-903-0080

Scale- 1"= 50'
 Drawn- A.E.
 Checked- C.B.
 Sheet- 1 OF 12
 Ver- _____

Plotted: 10/27/2020 File: F:\B\2188\FPS\2188-B14.pro

SHEET INDEX

PLAN	SHEET NUMBER
TITLE PLAN	1 OF 12
EXISTING FEATURES PLAN	2 OF 12
GRADING PLAN	3 OF 12
EROSION AND SEDIMENTATION CONTROL PLAN	4 OF 12
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PROFILE SHEET	6 OF 12
DETAIL SHEET	7 OF 12
DETAIL SHEET	8 OF 12
LIGHTING PLAN	9 OF 12
LANDSCAPE PLAN	10 OF 12
LEASE PLAN	11 OF 12
RIPARIAN BUFFER PLAN	12 OF 12



U.P.I. No. 52-7-32.1

APPLICANT/OWNER
 Goshen Leisure Development Inc.
 211 Carter Drive
 West Chester, Pa. 19382
 610-436-5083

SOILS CLASSIFICATION

- GeB2 - GLENELG CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.
- GeC3 - GLENELG CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED.
- GnB2 - GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.
- WoA - WORSHAM SILT LOAM, 0 TO 3 PERCENT SLOPES.
- WoB - WORSHAM SILT LOAM, 3 TO 8 PERCENT SLOPES.

SENSITIVE NATURAL RESOURCES		
FEATURE	SYMBOL	ACREAGE
WATERBODY/STREAM		0.195 ACRES
WETLANDS		ACREAGE CONTAINED IN FLOODPLAIN AREA
FLOODPLAIN AREA		1.465 ACRES

**AMENDED
EXISTING FEATURES PLAN
(FINAL)**

8	10-1-13	REV. PER CCCD REVIEW COMMENTS 9-26-13
7	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
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3	10-04-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
2	12-8-05	REV. NEW TOPOGRAPHICAL SURVEY
1	10-26-05	REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN
FOR
GOSHEN LEISURE DEVELOPMENT

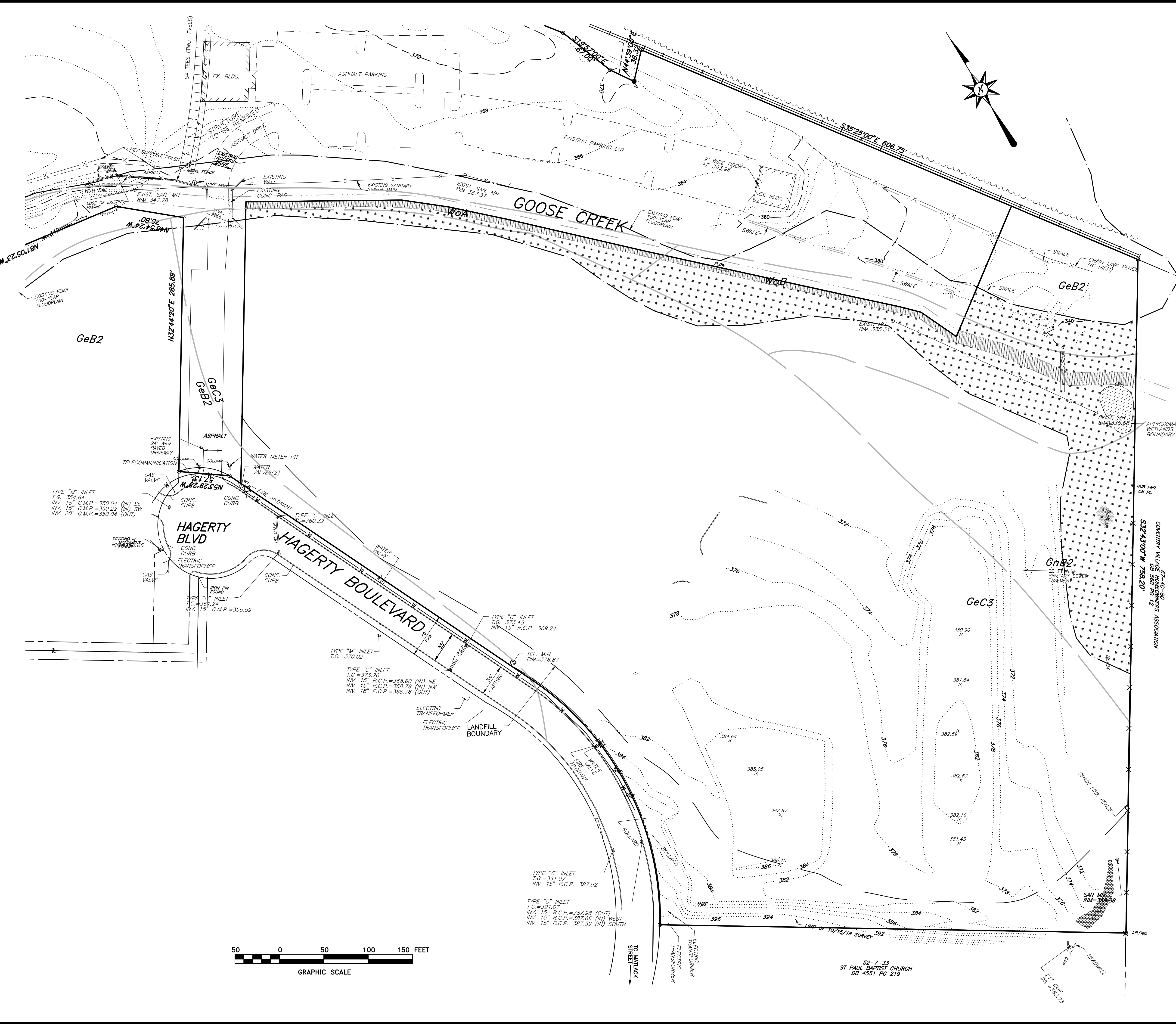
WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA.

Edward B. Walsh & Associates, Inc. **Project-** 2188
CIVIL ENGINEERS & SURVEYORS **Date-** 3-10-04

Whitelands Business Park
855 Springdale Drive, Suite 202
Exton, Pennsylvania 19341
Phone: 610-903-0060
Fax: 610-903-0080

Scale- 1" = 50'
Drawn- C.E.
Checked- A.B.
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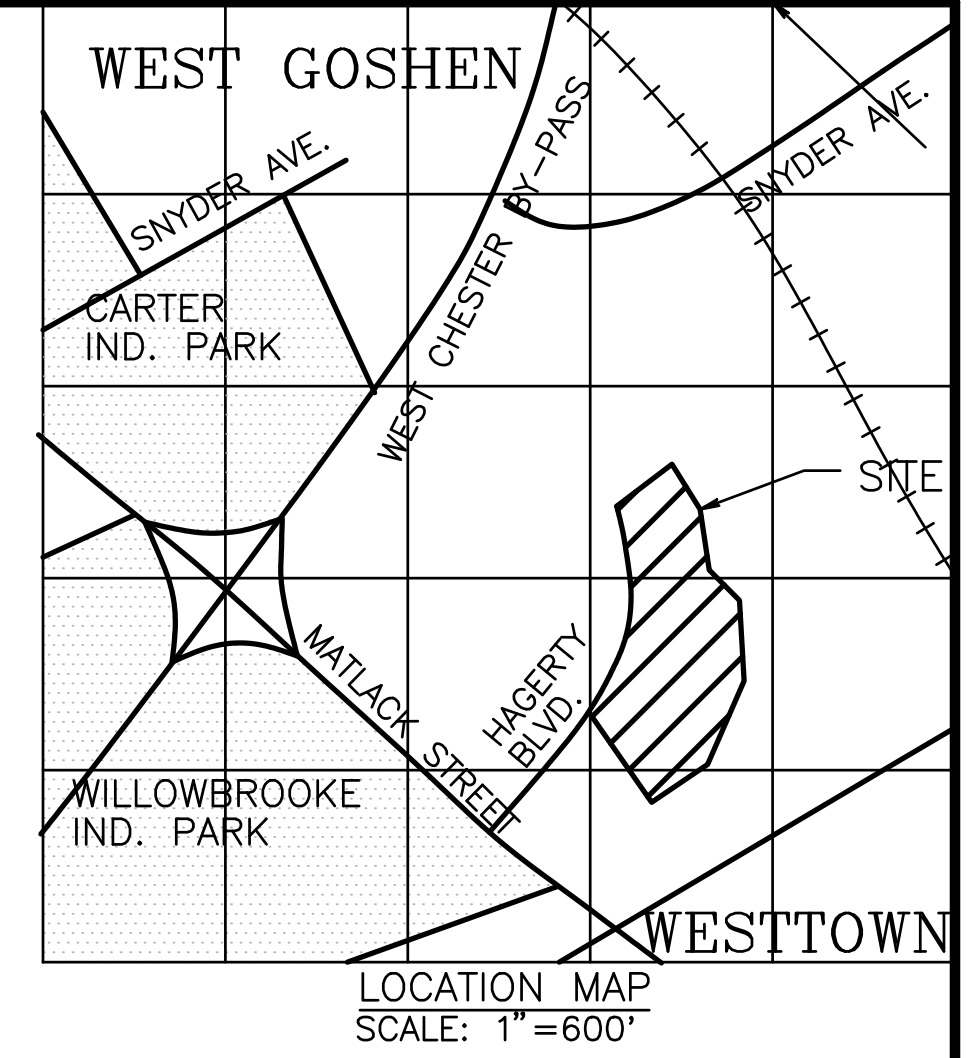
SOILS CHARACTERISTICS/LIMITATIONS									
SOIL TYPE	INFILTRATION POTENTIAL	DEPTH TO SEASONALLY HIGH WATER TABLE	DEPTH TO BEDROCK	HYDROLOGIC GROUP	RETENTION/DEFLECTION BASIN LOCATION	SOIL ERODIBILITY CLASS	UNIFIED SOIL CLASSIFICATION	HYDRIC SOIL YES/NO?	ALLUVIAL SOIL YES/NO?
Glenelg	High	5+ ft.	3-5 ft.	B	Recommended When High Pollution Risk Exists.	Medium	SM,GM,ML	No	No
Glenville	Low (SHT)	1-1.5 ft.	3-6 ft.	C	Recommended	High at grade. Medium of 4 ft. depth.	ML,ML-CL,MH	No	No

SOILS CLASSIFICATION

- GeB2 - GLENELG CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.
- GeC3 - GLENELG CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED.
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- WoB - WORSHAM SILT LOAM, 3 TO 8 PERCENT SLOPES.

LEGEND

- 430 - EXISTING INDEX CONTOUR
- 435 - EXISTING INTERIOR CONTOUR
- PROPOSED CONTOUR
- PROPOSED INLET
- PROPOSED STORM SEWER PIPE
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- CLEANOUT
- PROPOSED SANITARY SEWER PIPE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- SOILS LINE
- PROPOSED CURB
- LIGHT POLE & FIXTURE
- PROPOSED SPOT ELEVATION
- CONCRETE
- PROPOSED D-W ENDWALL
- LIMIT OF LANDFILL AREA
- PREVIOUSLY CONSTRUCTED PHASE
- CURRENT CONSTRUCTION
- DRAINAGE AREA BOUNDARY
- LIMIT OF DISTURBANCE
- SOIL BORING WITH LANDFILL CAP ELEVATION



LOCATION MAP
SCALE: 1"=600'

POST-CONSTRUCTION MAINTENANCE OF STORMWATER FACILITIES AND OVERALL SITE

The operation and maintenance of the BMPs on the site are the responsibility of the property owner.

- System Dewatering:
 - Should dewatering of the ponding area be required, the water must be discharged to a DEP approved dewatering facility (dirt bag or equal).
 - Any debris that is deposited in the rain garden areas must be recycled or removed and sent to an approved facility.
 - The systems must be checked annually. Should it not dewater for several days following a rain event the bottom must be tilled to loosen the soil. Following the tilling, the disturbed area must be stabilized with the seed mix specified for the rain garden area.
- Trees:
 - Trees must be maintained with pruning and watering during periods of drought.
 - Any dead or diseased trees must be replaced with a new tree. Regular removal of litter and debris within the system shall be performed. Stormwater facilities shall be inspected per the schedule noted below. The professional engineer shall be required to submit a written inspection report to the Township in accordance with the schedule established under the Post-Construction Stormwater Management Facilities Inspection Requirements set forth separately on these plans. Any trash, debris, etc., shall be removed and properly disposed of. Any sediment must be removed, spread in a grass area and stabilized with permanent seed mix and mulch. The stormwater management facilities shown on these plans, including storm inlets, storm drain pipes, detention systems, and the rain gardens are permanent and are not to be removed. The property owner shall assume the responsibility for perpetual maintenance of said facilities. If the owner fails to maintain the stormwater management facilities in good working condition acceptable to the Township, the Township shall send written notice to the owner specifying the areas of non-compliance and the steps that must be taken to cure the non-compliance. In the event that the owner does not cure the compliance within thirty (30) days of the notice, the Township may take such necessary and prudent action to maintain the stormwater management facilities and to charge the costs of the maintenance and/or repairs to the owner. The permission granted herein shall constitute an access easement for maintenance purposes should some be necessary by the Township. The maintenance responsibility shall be provided in a Stormwater Facilities Maintenance and Monitoring Agreement.

PARKING LOT SWEEPING

The parking lot must be swept with a mechanical broom system or vacuum. This must be performed 3 times per year (spring, fall and midwinter). The entire parking lot and driveway area must be swept. Relocate parked vehicles as necessary.

PCSM SHORT AND LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

Until the permittee or co-permittee has received written approval of a notice of termination, the permittee or co-permittee will remain responsible during the short term for compliance with the permit terms and conditions including long-term operation and maintenance of all pcsm bmps on the project site and is responsible for violations occurring on the project site.

The permittee or co-permittee shall be responsible for long-term operation and maintenance of pcsm bmps unless a different person is identified in the notice of termination and has agreed to long-term operation and maintenance of pcsm bmps.

For any property containing a pcsm bmp, the permittee or co-permittee shall record an instrument with the recorder of deeds which will ensure disclosure of the pcsm bmp and the obligations in the ordinary course of a title search of the subject property, the recorded instrument must identify the pcsm bmp and provide for necessary access related to long-term operation and maintenance for pcsm bmps and provide notice that the responsibility for long-term operation and maintenance of the pcsm bmp is a covenant that runs with the land and is enforceable by successors in interest by subjecting the property to a long-term operation and maintenance of pcsm bmps to permit termination.

The person responsible for performing long-term operation and maintenance shall be a professional organization, municipality, authority, private corporation or other person, to transfer the responsibility for pcsm bmps or to perform long-term operation and maintenance of the pcsm bmp or otherwise fails to comply with this requirement shall remain jointly and severally responsible with the landowner for long-term operation and maintenance of the pcsm bmps located on the property.

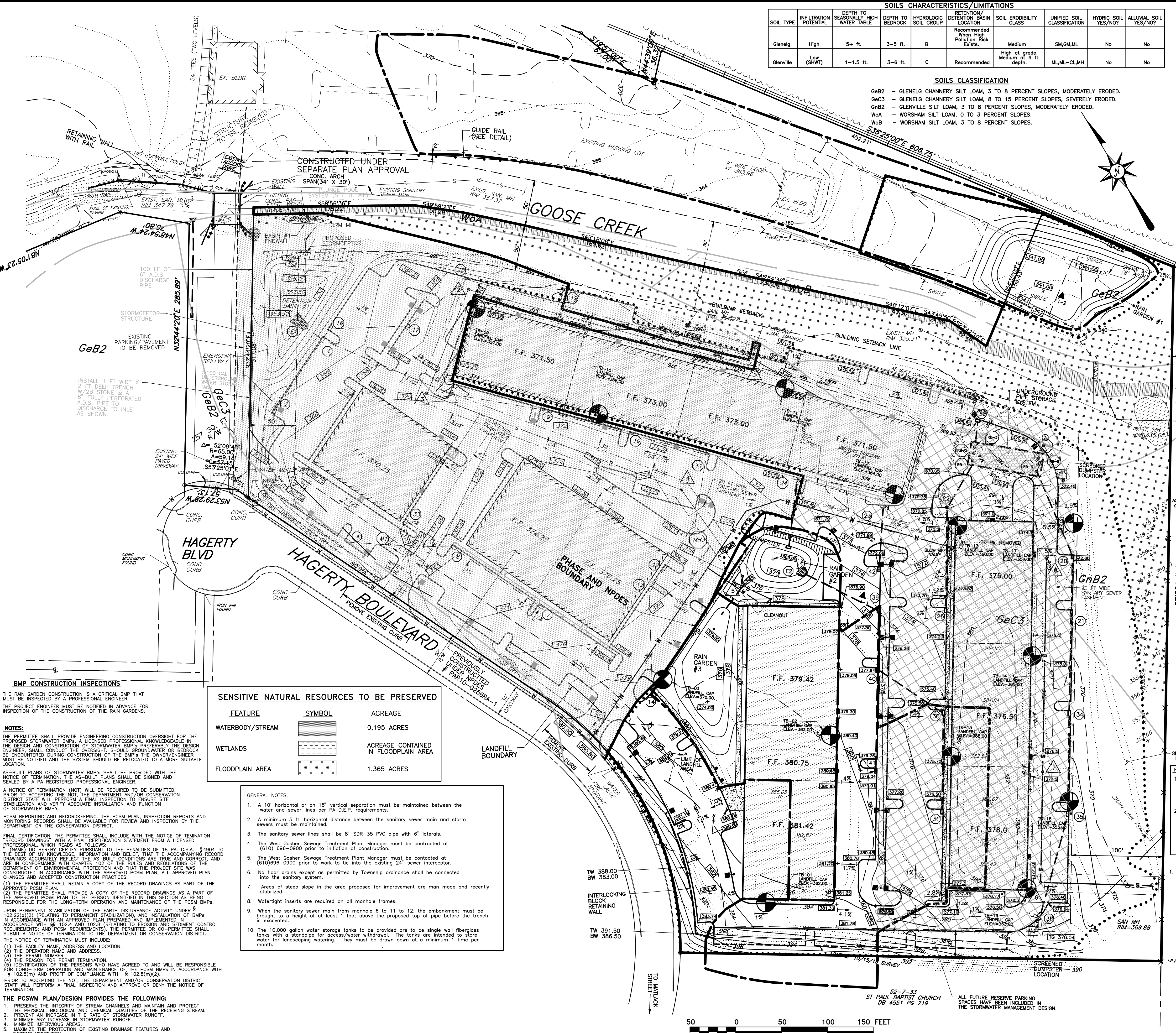
POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES INSPECTIONS:

- The permittee or co-permittee is responsible for ensuring inspections of the rain gardens are performed by a professional engineer.
- Inspections of the above facilities shall be conducted by a professional engineer. The engineer shall be a certified professional engineer in Pennsylvania on behalf of the applicant or registered entity.
- Annually for the first five (5) years.
- Once every three (3) years thereafter; and
- During or immediately after the cessation of a 100-year or greater storm event.

The professional engineer conducting the inspection shall be required to submit a written report to the Township within one (1) month following completion of the inspection. The report will present documentation and include pictures regarding the condition of the facility and recommend necessary repairs, if needed. Any repairs shall be implemented by the owner within one (1) month of the report issuance date.

POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES INCLUDE:

- Rain garden (1 & 2).
- Deciduous and evergreen trees.



BMP CONSTRUCTION INSPECTIONS

THE RAIN GARDEN CONSTRUCTION IS A CRITICAL BMP THAT MUST BE INSPECTED BY A PROFESSIONAL ENGINEER. THE PROJECT ENGINEER MUST BE NOTIFIED IN ADVANCE FOR INSPECTION OF THE CONSTRUCTION OF THE RAIN GARDENS.

NOTES:

THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMP'S. A LICENSED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF STORMWATER BMP'S. PREFERABLY THE DESIGN ENGINEER SHALL CONDUCT THE OVERSIGHT SHOULD GROUNDWATER OR BEDROCK BE ENCOUNTERED DURING CONSTRUCTION OF THE BMP'S. THE OWNER/ENGINEER MUST BE NOTIFIED AND THE SYSTEM SHOULD BE RELOCATED TO A MORE SUITABLE LOCATION.

AS-BUILT PLANS OF STORMWATER BMP'S SHALL BE PROVIDED WITH THE NOTICE OF TERMINATION. THE AS-BUILT PLANS SHALL BE SIGNED AND SEALED BY A PA REGISTERED PROFESSIONAL ENGINEER.

A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED PRIOR TO ACCEPTING THE NOT. THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION TO ENSURE SITE STABILIZATION AND VERIFY ADEQUATE INSTALLATION AND FUNCTION OF STORMWATER BMP'S.

PCSM REPORTING AND RECORDKEEPING. THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

FINAL CERTIFICATION. THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL ENGINEER WHICH READS AS FOLLOWS: "I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA. C.S.A. § 4904 TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN. ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES ARE REFLECTED HEREIN."

(1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS PART OF THE APPROVED PCSM PLAN.

(2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP'S.

UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER § 102.22(b)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMP'S IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §§ 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS), AND PCSM REQUIREMENTS, THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION MUST INCLUDE:

- THE FACILITY NAME, ADDRESS AND LOCATION.
- THE PERMIT NUMBER.
- THE OPERATOR NAME AND ADDRESS.
- THE REASON FOR PERMIT TERMINATION.
- IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP'S IN ACCORDANCE WITH § 102.20(a) AND PROFIT OF COMPLIANCE WITH § 102.10(b)(2).

PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION.

THE PCSM PLAN/DESIGN PROVIDES THE FOLLOWING:

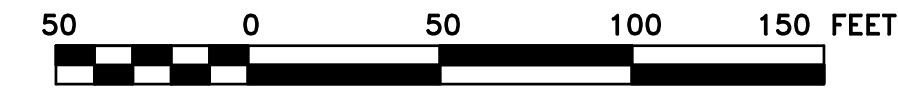
- PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM.
- PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF.
- MINIMIZE ANY INCREASE IN STORMWATER RUNOFF.
- MINIMIZE IMPERVIOUS AREAS.
- MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION.
- MINIMIZE LAND CLEARING AND GRADING.
- MINIMIZE SOIL COMPACTION.
- UTILIZES BMP'S THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF.

SENSITIVE NATURAL RESOURCES TO BE PRESERVED

FEATURE	SYMBOL	ACREAGE
WATERBODY/STREAM	[Symbol]	0.195 ACRES
WETLANDS	[Symbol]	ACREAGE CONTAINED IN FLOODPLAIN AREA
FLOODPLAIN AREA	[Symbol]	1.365 ACRES

GENERAL NOTES:

- A 10" horizontal or an 18" vertical separation must be maintained between the water and sewer lines per PA D.E.P. requirements.
- A minimum 5 ft. horizontal distance between the sanitary sewer main and storm sewers must be maintained.
- The sanitary sewer lines shall be 8" SDR-35 PVC pipe with 6" laterals.
- The West Goshen Sewage Treatment Plant Manager must be contacted at (610) 696-0900 prior to initiation of construction.
- The West Goshen Sewage Treatment Plant Manager must be contacted at (610)696-0900 prior to work to tie into the existing 24" sewer interceptor.
- No floor drains except as permitted by Township ordinance shall be connected into the sanitary system.
- Areas of steep slope in the area proposed for improvement are man made and recently stabilized.
- Watertight inserts are required on all manhole frames.
- When the sanitary sewer main from manhole 6 to 11 to 12, the embankment must be brought to a height of at least 1 foot above the proposed top of pipe before the trench is excavated.
- The 10,000 gallon water storage tanks to be provided are to be single wall fiberglass tanks with a standpipe for access/water withdrawal. The tanks are intended to store water for landscaping watering. They must be drawn down at a minimum 1 time per month.



GRAPHIC SCALE

10-1-13 REV. PER COCD REVIEW COMMENTS 9-26-13

AMENDED POST CONSTRUCTION STORMWATER MANAGEMENT/GRADING & UTILITIES PLAN (FINAL)

8	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
7	1-21-08	REV. PER GLACE & ASSOC. REVIEW LETTER DATED 1-9-08
6	10-8-07	ADJUST GRADES PER CLIENT
5	5-7-07	REV. PER COCD REVIEW LETTER DATED 4-30-07
4	3-26-07	REV. PER COCD REVIEW COMMENTS
3	2-08-07	REV. PER RIPARIAN BUFFER AREA/LAYOUT
2	10-04-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
1	10-26-05	REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN FOR GOSHEN LEISURE DEVELOPMENT

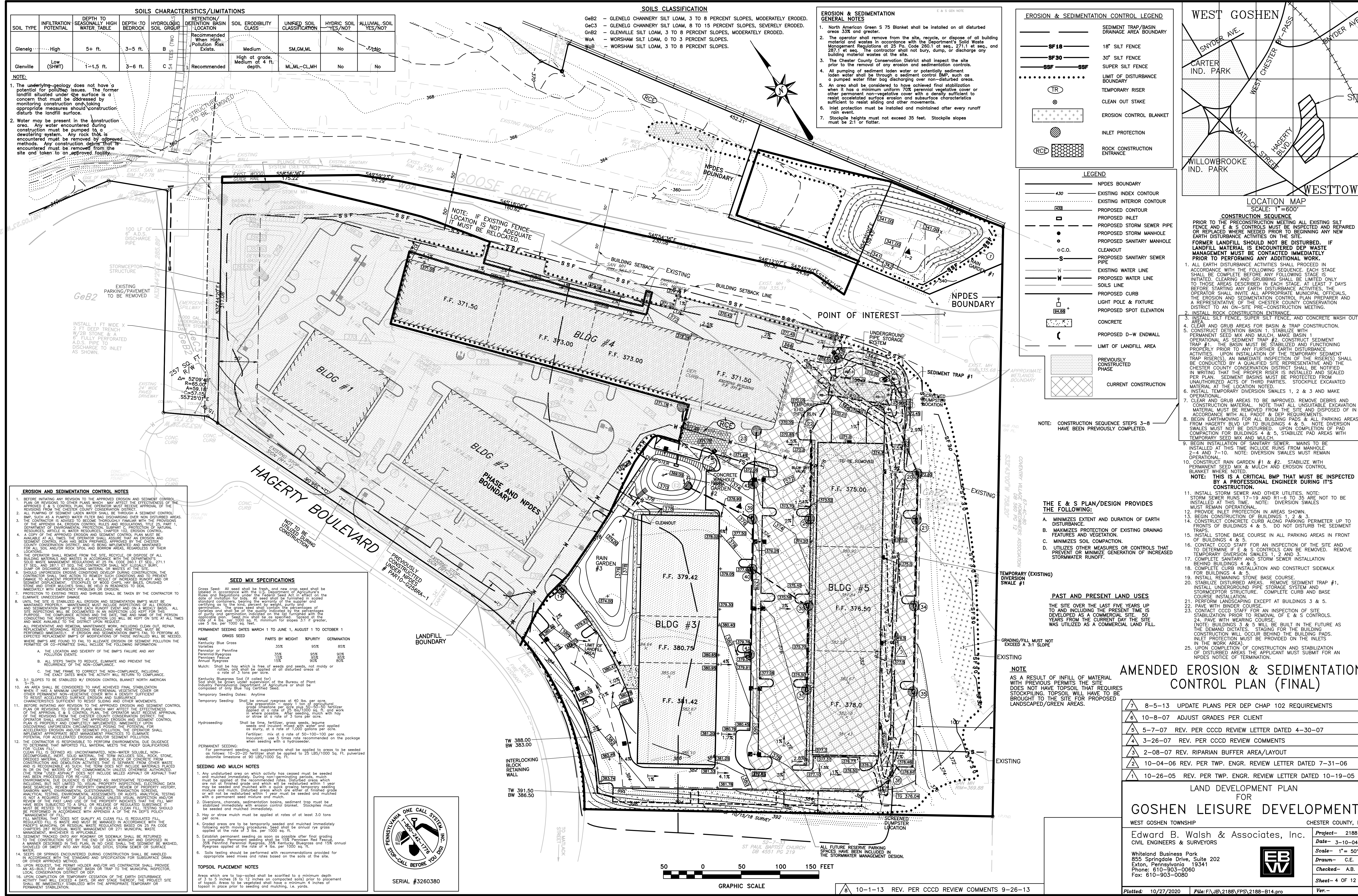
WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Whiteland Business Park
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SOILS CHARACTERISTICS/LIMITATIONS

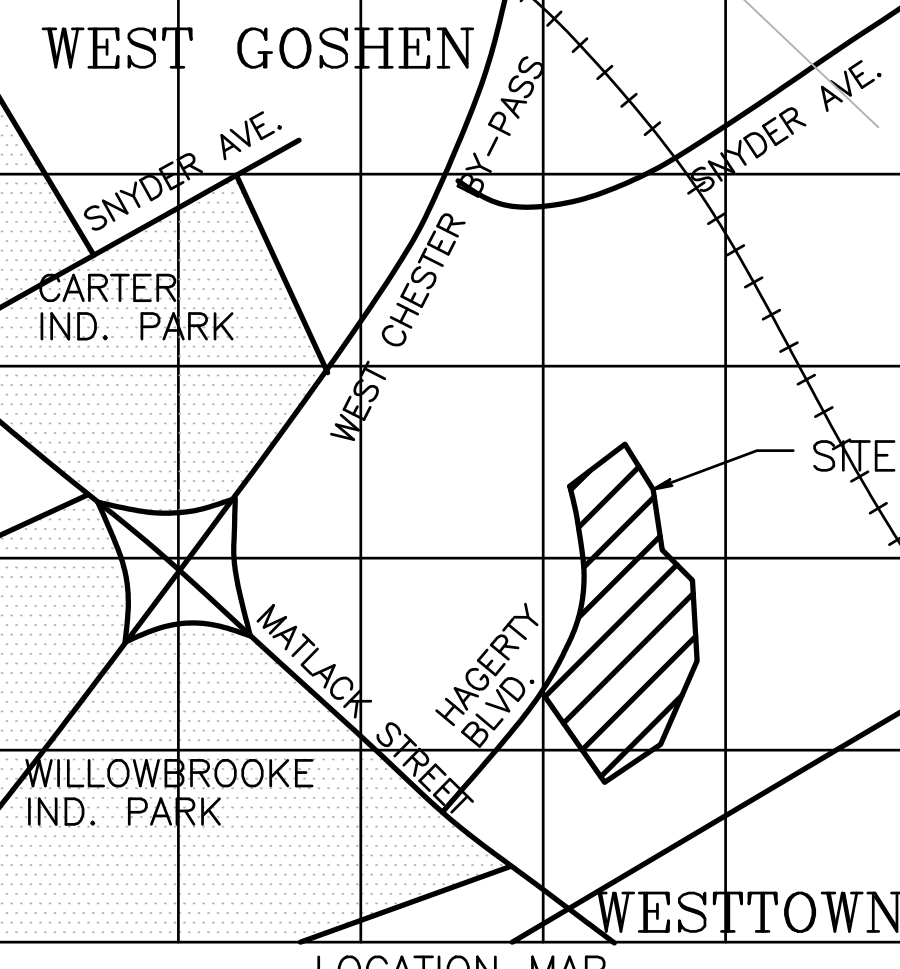
SOIL TYPE	INFILTRATION POTENTIAL	DEPTH TO SEASONALLY HIGH WATER TABLE	DEPTH TO BEDROCK	HYDROLOGIC SOIL GROUP	DEFLECTION LOCATION	SOIL ERODIBILITY CLASS	UNIFIED SOIL CLASSIFICATION	HYDRIC SOIL YES/NO?	ALLUVIAL SOIL YES/NO?
Glennel	High	5+ ft.	3-5 ft.	B	Recommended	Medium	SM,GM,ML	No	No
Oleville	Low (SHW)	1-4.5 ft.	3-6 ft.	C	Recommended	High of grade, Medium at 4 ft. depth	ML,ML-CL,MH	No	No

- NOTE:**
- The underlying geology does not have a potential for pollution issues. The former landfill situated under the surface is a concern that must be addressed by monitoring construction and taking appropriate measures should construction disturb the landfill surface.
 - Water may be present in the construction area. Any water encountered during construction must be pumped to a dewatering system. Any rock that is encountered must be removed by approved methods. Any construction debris that is encountered must be removed from the site and taken to an approved facility.

- ### SOILS CLASSIFICATION
- GeB2 - GLENELG CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.
 - GeC3 - GLENELG CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED.
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 - WoA - WORSHAM SILT LOAM, 0 TO 3 PERCENT SLOPES.
 - WoB - WORSHAM SILT LOAM, 3 TO 8 PERCENT SLOPES.

- ### EROSION & SEDIMENTATION CONTROL LEGEND
- SEDIMENT TRAP/BASIN DRAINAGE AREA BOUNDARY
 - 18" SILT FENCE
 - 30" SILT FENCE
 - SUPER SILT FENCE
 - LIMIT OF DISTURBANCE BOUNDARY
 - TEMPORARY RISER
 - CLEAN OUT STAKE
 - EROSION CONTROL BLANKET
 - INLET PROTECTION
 - ROCK CONSTRUCTION ENTRANCE

- ### LEGEND
- NPDES BOUNDARY
 - EXISTING INDEX CONTOUR
 - EXISTING INTERIOR CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED INLET
 - PROPOSED STORM SEWER PIPE
 - PROPOSED STORM MANHOLE
 - PROPOSED SANITARY MANHOLE
 - CLEANOUT
 - PROPOSED SANITARY SEWER PIPE
 - EXISTING WATER LINE
 - PROPOSED WATER LINE
 - SOILS LINE
 - PROPOSED CURB
 - LIGHT POLE & FIXTURE
 - PROPOSED SPOT ELEVATION
 - CONCRETE
 - PROPOSED D-W ENDWALL
 - LIMIT OF LANDFILL AREA
 - PREVIOUSLY CONSTRUCTED PHASE
 - CURRENT CONSTRUCTION



- ### CONSTRUCTION SEQUENCE
- PRIOR TO THE PRECONSTRUCTION MEETING ALL EXISTING SILT FENCE AND E & S CONTROLS MUST BE INSPECTED AND REPAIRED OR REPLACED WHERE NECESSARY PRIOR TO BEGINNING ANY NEW EARTH DISTURBANCE ACTIVITIES ON THE SITE.
- FORMER LANDFILL SHOULD NOT BE DISTURBED. IF LANDFILL MATERIAL IS ENCOUNTERED DEP WASTE MANAGEMENT MUST BE CONTACTED IMMEDIATELY PRIOR TO PERFORMING ANY ADDITIONAL WORK.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETE BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL NOTIFY APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARED AND A REPRESENTATIVE OF THE CHESTER COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
 - INSTALL ROCK CONSTRUCTION ENTRANCE
 - INSTALL SILT FENCE, SUPER SILT FENCE, AND CONCRETE WASH OUT
 - CLEAR AND GRUB AREAS FOR BASIN & TRAP CONSTRUCTION.
 - CONSTRUCT DETENTION BASIN #1. STABILIZE WITH PERMANENT SEED MIX AND MULCH. MAKE BASIN 1 OPERATIONAL AS SEDIMENT TRAP #2. CONSTRUCT SEDIMENT TRAP #1. THE BASIN SHOULD BE STABILIZED AND FUNCTIONING PROPERLY PRIOR TO ANY FURTHER EARTH DISTURBANCE ACTIVITIES. UPON INSTALLATION OF THE TEMPORARY SEDIMENT TRAP RISER(S), AN IMMEDIATE INSPECTION OF THE RISER(S) SHALL BE CONDUCTED BY A QUALIFIED SITE REPRESENTATIVE AND THE CHESTER COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS INSTALLED AND SEALED PER PLAN. SEDIMENT BASINS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THOSE ACTIVITIES. STOCKPILE EXCAVATED MATERIAL AT THE LOCATION NOTED.
 - INSTALL TEMPORARY DIVERSION SWALES 1, 2 & 3 AND MAKE OPERATIONAL.
 - CLEAR AND GRUB AREAS TO BE IMPROVED. REMOVE DEBRIS AND CONSTRUCTION MATERIAL. NOTE THAT ALL UNSUITABLE EXCAVATION MATERIAL MUST BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL PADOT & DEP REQUIREMENTS.
 - BEGIN EARTHMOVING FOR ALL BUILDING PADS & ALL PARKING AREAS FROM HAGERTY BLVD UP TO BUILDINGS 4 & 5. NOTE DIVERSION SWALES MUST NOT BE DISTURBED. UPON COMPLETION OF PAD COMPACTION FOR BUILDINGS 4 & 5, STABILIZE PAD AREAS WITH TEMPORARY SEED MIX AND MULCH.
 - BEGIN INSTALLATION OF SANITARY SEWER. MAINS TO BE INSTALLED AT THIS TIME INCLUDE BUILDING SANITARY MANHOLE 2-4 AND 7-10. NOTE DIVERSION SWALES MUST REMAIN OPERATIONAL.
 - CONSTRUCT RAIN GARDEN #1 & #2. STABILIZE WITH PERMANENT SEED MIX & MULCH AND EROSION CONTROL BLANKET WHERE NOTED.
 - THIS IS A CRITICAL BMP THAT MUST BE INSPECTED BY A PROFESSIONAL ENGINEER DURING ITS CONSTRUCTION.
 - INSTALL STORM SEWER AND OTHER UTILITIES. NOTE: STORM SEWER RISES #19 AND #1-16 TO 35' ARE NOT TO BE INSTALLED AT THIS TIME. NOTE: DIVERSION SWALES MUST REMAIN OPERATIONAL.
 - BEGIN INLET PROTECTION IN AREAS SHOWN.
 - PROVIDE CONSTRUCTION OF BUILDINGS 1, 2 & 3.
 - CONSTRUCT CONCRETE CURB AND PARKING PERIMETER UP TO FRONTS OF BUILDINGS 4 & 5. DO NOT DISTURB THE SEDIMENT TRAPS.
 - INSTALL STONE BASE COURSE IN ALL PARKING AREAS IN FRONT OF BUILDINGS 4 & 5.
 - CONTACT CCDD STAFF FOR AN INSPECTION OF THE SITE AND TO DETERMINE IF E & S CONTROLS CAN BE REMOVED. REMOVE TEMPORARY DIVERSION SWALES 1, 2 AND 3.
 - COMPLETE SANITARY AND STORM SEWER INSTALLATION BEHIND BUILDINGS 1 & 2.
 - COMPLETE CURB INSTALLATION AND CONSTRUCT SIDEWALK FOR BUILDINGS 4 & 5.
 - INSTALL REMAINING STONE BASE COURSE.
 - STABILIZE DISTURBED AREAS. REMOVE SEDIMENT TRAP #1.
 - INSTALL UNDERGROUND PIPE STORAGE SYSTEM AND STORMSEWER STRUCTURE. COMPLETE CURB AND BASE COURSE INSTALLATION.
 - PERFORM LANDSCAPING EXCEPT AT BUILDINGS 3 & 5.
 - PAVE WITH BINDER COURSE.
 - CONTACT CCDD STAFF FOR AN INSPECTION OF SITE.
 - STABILIZE REMAINING AREAS. STAGING OF THE BUILDING CONSTRUCTION WILL OCCUR BEHIND THE BUILDING PADS. INLET PROTECTION MUST BE PROVIDED ON THE INLETS IN THE WORK AREA.
 - UPON COMPLETION OF CONSTRUCTION AND STABILIZATION OF DISTURBED AREAS THE APPLICANT MUST SUBMIT FOR AN NPDES NOTICE OF TERMINATION.

- ### EROSION AND SEDIMENTATION CONTROL NOTES
- BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE REVISIONS FROM THE CHESTER COUNTY CONSERVATION DISTRICT.
 - ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
 - ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
 - A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT ALL TIMES. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN IS PREPARED, APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR THE DURATION OF THE PROJECT.
 - THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL EXCAVATED MATERIAL AND DEBRIS IN ACCORDANCE WITH DEP REGULATIONS AND DEP REGULATIONS AT 25 PA CODE 2601 ET SECT 271.1 AND 271.2.
 - DUMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
 - THE OPERATOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED TURBIDITY AND OR SEDIMENT DEPOSITION. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND OTHER MATERIALS SHALL BE COVERED BY SHEDS TO SEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OR EROSION.
 - PROTECTION TO EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE.
 - UNLESS THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BARRIERS EACH REPORT EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THE DURATION OF THE PROJECT. THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE AGENCY UPON REQUEST.
 - ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING AND REINFORCING, MUST BE COMPLETED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT OF BMP'S INSTALLED MUST BE NEEDED.
 - WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INQUIRE THE FOLLOWING INFORMATION:
 - THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
 - ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE REOCCURRENCE OF THE NON-COMPLIANCE.
 - THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.
 - 3:1 SLOPES TO BE STABILIZED W/ EROSION CONTROL BLANKET NORTH AMERICAN 5-75.
 - AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE EROSION.
 - BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVAL E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CHESTER COUNTY CONSERVATION DISTRICT.
 - THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED IMMEDIATELY UPON DISCOVERING UNDESIRABLE CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENTATION. THE OPERATOR SHALL IMPLEMENT UNDESIRABLE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENTATION.
 - THE CONTRACTOR IS RESPONSIBLE TO PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE THAT IMPORTED FILL MATERIAL MEETS THE FOLLOWING QUALIFICATIONS FOR "CLEAN FILL":
 - CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-COMPOSTABLE, INERT SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, CONCRETE MATERIALS, ASPHALT, BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION/DEMOLITION ACTIVITIES. CLEAN FILL DOES NOT INCLUDE MATERIALS PLACED AND IS RESPONSIBLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED AND IS RESPONSIBLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED AND IS RESPONSIBLE AS SUCH.
 - THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN REPAIRED.
 - ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO: VISUAL INSPECTION, RECORDING DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY HISTORY, SANITARY MAPS, ENVIRONMENTAL ASSESSMENTS OR AUDITS, ANALYTICAL TESTING, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS, ANALYTICAL TESTING IS NOT REQUIRED UNLESS VISUAL INSPECTION AND RECORDING DATA REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF HAZARDOUS MATERIALS. THE FILL MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEP POLICY.
 - MANAGEMENT OF FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE PAIRS, MUNICIPAL, OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.
 - SEMENT TRACKED ON ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY OR REMOVED FROM A MANNER DESCRIBED IN THIS PLAN, IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOULED OR SWEEP INTO ANY ROAD SIDE DRAIN OR TRAP.
 - SEDS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
 - UPON REQUEST, THE PERMIT HOLDER AND/OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL, RESIDUAL, CONSERVATION DISTRICT OR DEP.
 - UPON COMPLETION OF TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

SEED MIX SPECIFICATIONS

Gross Seed: All seed shall be fresh and new crop seed shall be stored in accordance with the U.S. Department of Agriculture's date of germination for seed. All seed shall be furnished in sealed bags certifying as to the kind, percent by weight, purity and germination. The gross seed shall contain the percentages of varieties and shall be of the quality indicated by the percentages of purity and germination indicated on the bag furnished with the seed. The net seed shall be a minimum of 90% greater, size of 2 to 4, per 1000 sq. ft. minimum for slopes 3:1 or greater.

NAME	PARTS BY WEIGHT	% PURITY	GERMINATION
Kentucky Blue Grass	35%	95%	85%
Perennial Ryegrass	35%	95%	90%
Annual Ryegrass	15%	95%	80%

Mulch: Shall be hay which is free of weeds and seeds, not moldy or rotten, and shall be applied at the rate of 2.0 tons per acre.

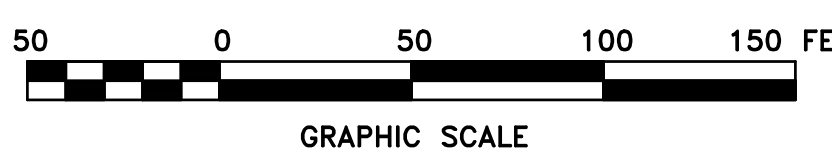
Kentucky Bluegrass Sod (if called for): Shall be green under supervision of a professional agronomist, must be applied at the rate of 25 lbs/1000 sq. ft. and work in if where possible. After seeding, mulch with hay or straw at a rate of 1.000 gallons per acre.

Hydroseeding: Shall be lime, fertilizer, grass seeds, legume seeds and mulch mixed together and applied as slurry, at a rate of 1,000 gallons per acre.

Fertilizer: mix at a rate of 50-100-100 per acre. Inoculant: use 5 times rate recommended on the package when seeding with a hydroseeder.

PERMANENT SEEDING: For permanent seeding, soil supplements shall be applied to grass to be seeded as follows: 10-20-20 fertilizer applied to 25 LBS/1000 Sq. Ft. powdered dolomite lime at 90 LBS/1000 Sq. Ft.

- ### SEEDING AND MULCH NOTES
- Any undisturbed area on which activity has ceased must be seeded and mulched. Seeding shall be performed in accordance with the following:
 - Disturbed areas which are not of finished grade and which will be reseeded within 1 year may be seeded and mulched with a quick growing temporary seeding mixture and mulch. Disturbed areas which are not of finished grade or will not be reseeded within 1 year must be seeded and mulched with a permanent seed mixture and mulch.
 - Diversions, channels, sedimentation basins, sediment trap must be stabilized immediately with erosion control blanket. Stockpiles must be seeded and mulched immediately.
 - Hay or straw mulch must be applied at rates of at least 3.0 tons per acre.
 - Graded areas are to be temporarily seeded and mulched immediately following completion of construction at a rate of 5 lbs. per 1000 sq. ft. applied at the rate of 5 lbs. per 1000 sq. ft.
 - Establish permanent seeding as soon as possible after final grading is complete. Permanent seeding shall be 15% Perennial Ryegrass, 30% Perennial Ryegrass, 30% Kentucky Bluegrass and 15% Annual Ryegrass applied at the rate of 4 lbs. per 1000 sq. ft.
 - Soils testing should be performed with recommendations provided for appropriate seed mixes and rates based on the soils at the site.
- TOPSOIL PLACEMENT NOTES**
- Areas which are to top-soiled shall be scarified to a minimum depth of 3 to 6 inches (6 to 12 inches on compacted soils) prior to placement of topsoil. Areas to be reseeded shall have a minimum 4 inches of topsoil in place prior to seeding and mulching, i.e. yards.



10-1-13 REV. PER CCDD REVIEW COMMENTS 9-26-13

- ### THE E & S PLAN/DESIGN PROVIDES THE FOLLOWING:
- MINIMIZES EXTENT AND DURATION OF EARTH DISTURBANCE.
 - MAXIMIZES PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION.
 - MINIMIZES SOIL COMPACTION.
 - UTILIZES OTHER MEASURES OR CONTROLS THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF.
- PAST AND PRESENT LAND USES**
- THE SITE OVER THE LAST FIVE YEARS UP TO AND INCLUDING THE PRESENT TIME IS DEVELOPED AS COMMERCIAL SITE. 50 YEARS FROM THE CURRENT DAY THE SITE WAS UTILIZED AS A COMMERCIAL LAND FILL.

AMENDED EROSION & SEDIMENTATION CONTROL PLAN (FINAL)

NO.	DATE	DESCRIPTION
7	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
6	10-8-07	ADJUST GRADES PER CLIENT
5	5-7-07	REV. PER CCDD REVIEW LETTER DATED 4-30-07
4	3-26-07	REV. PER CCDD REVIEW COMMENTS
3	2-08-07	REV. RIPARIAN BUFFER AREA/LAYOUT
2	10-04-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
1	10-26-05	REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN FOR GOSHEN LEISURE DEVELOPMENT.

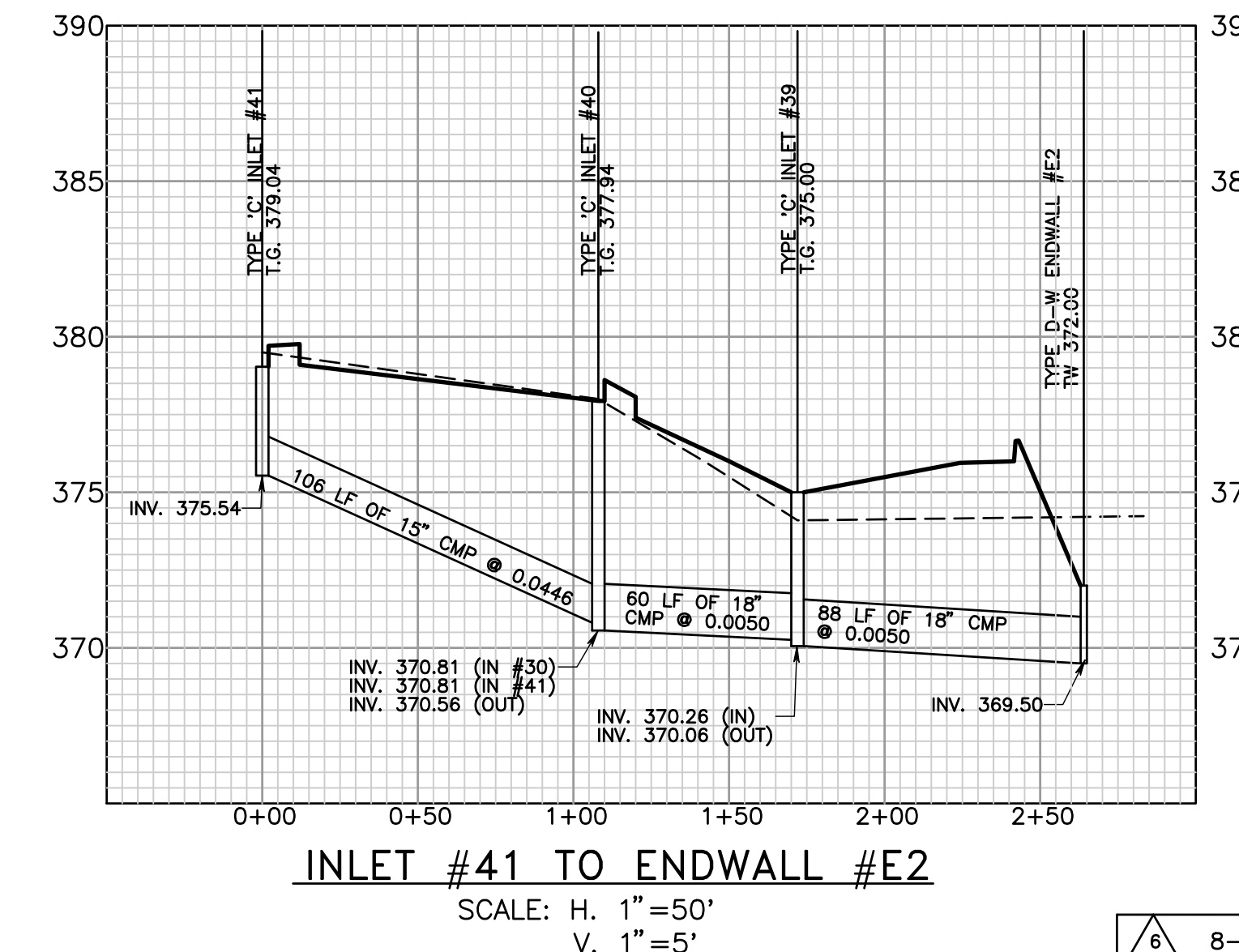
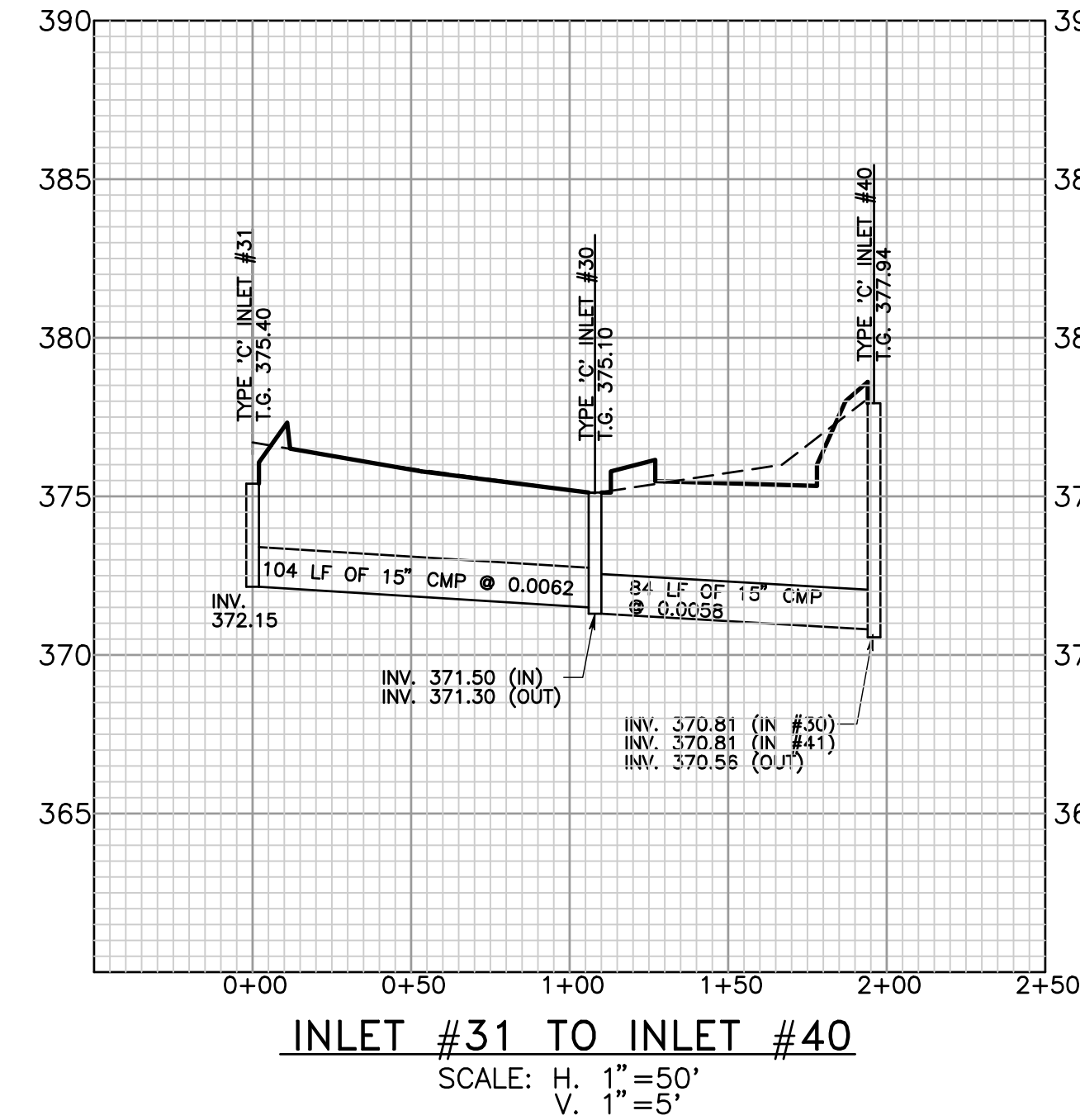
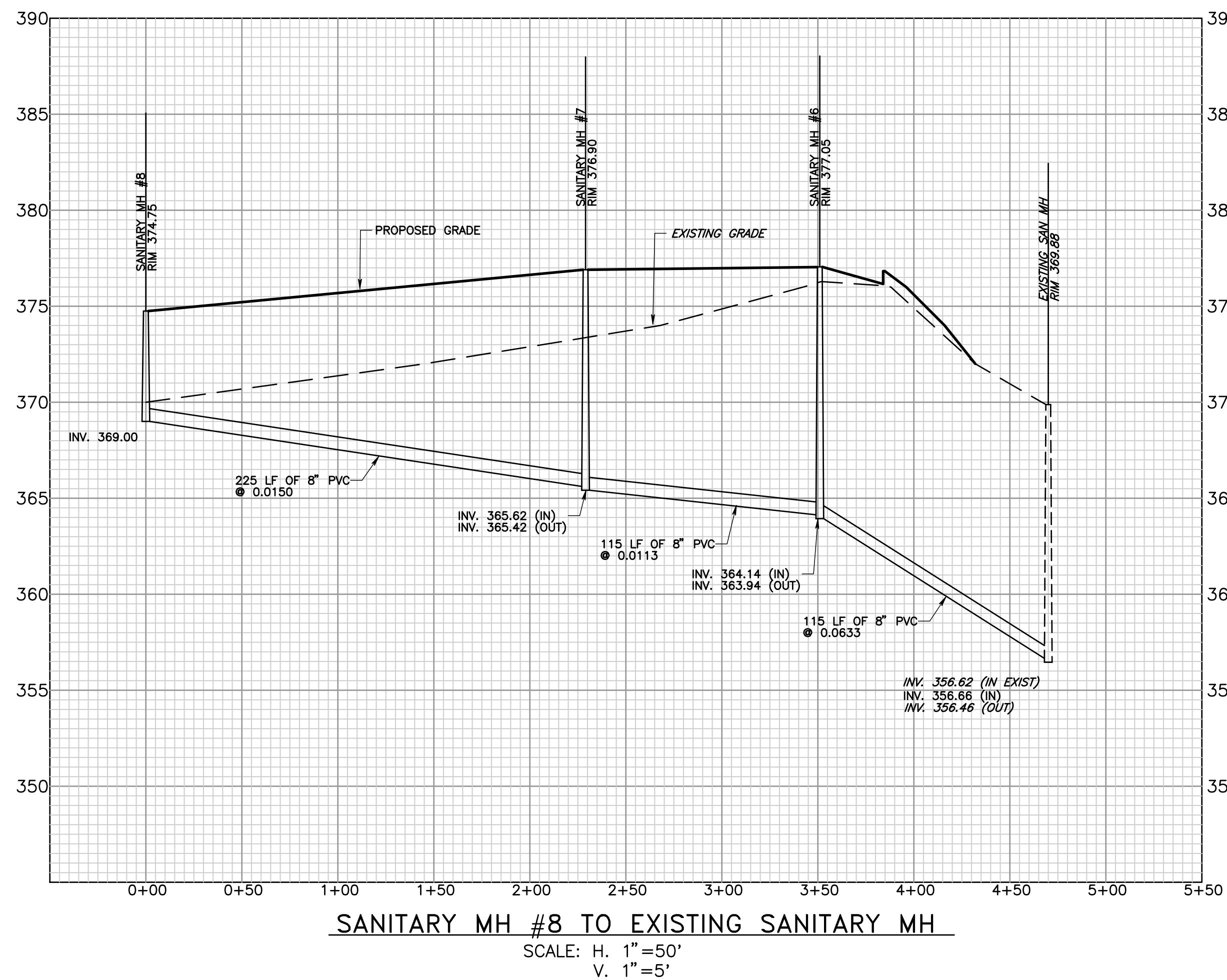
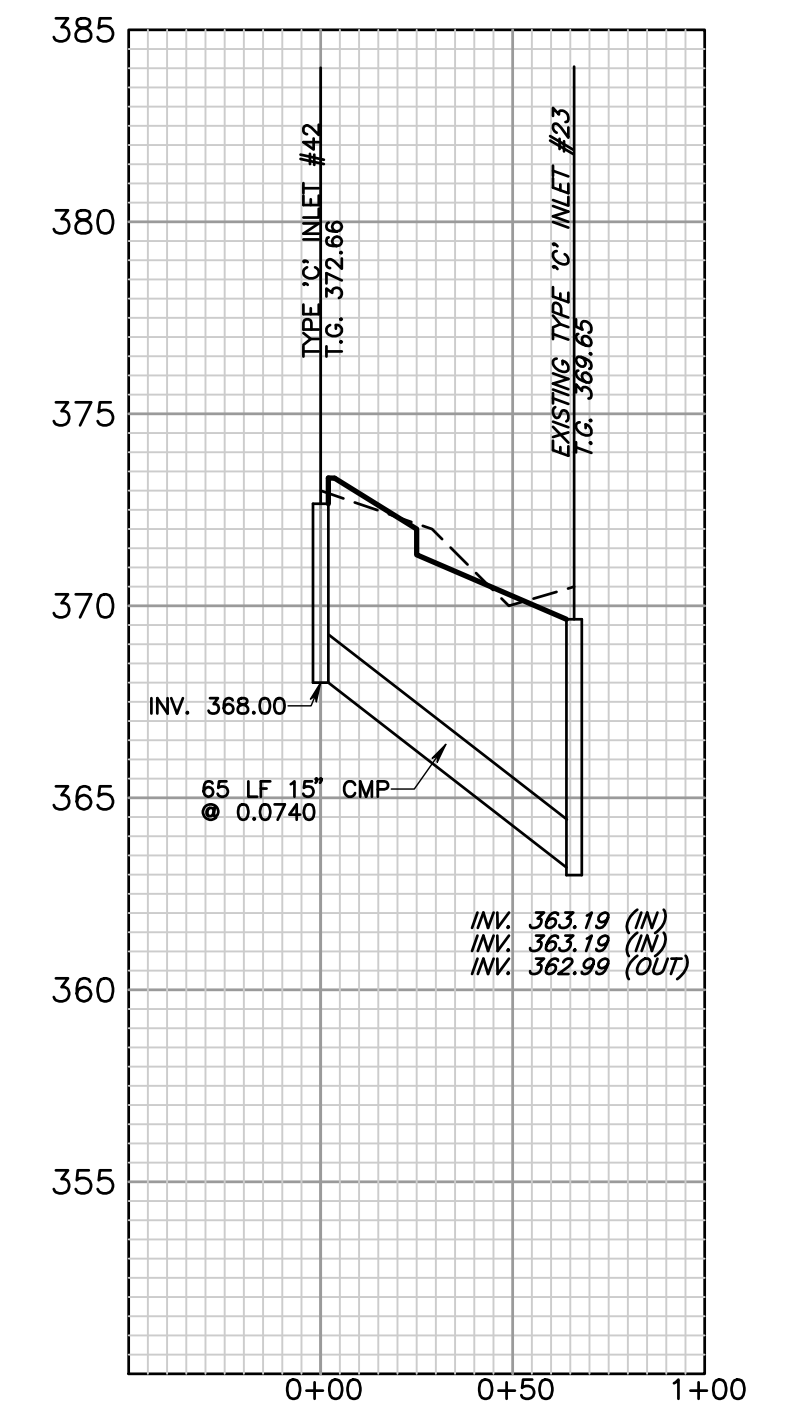
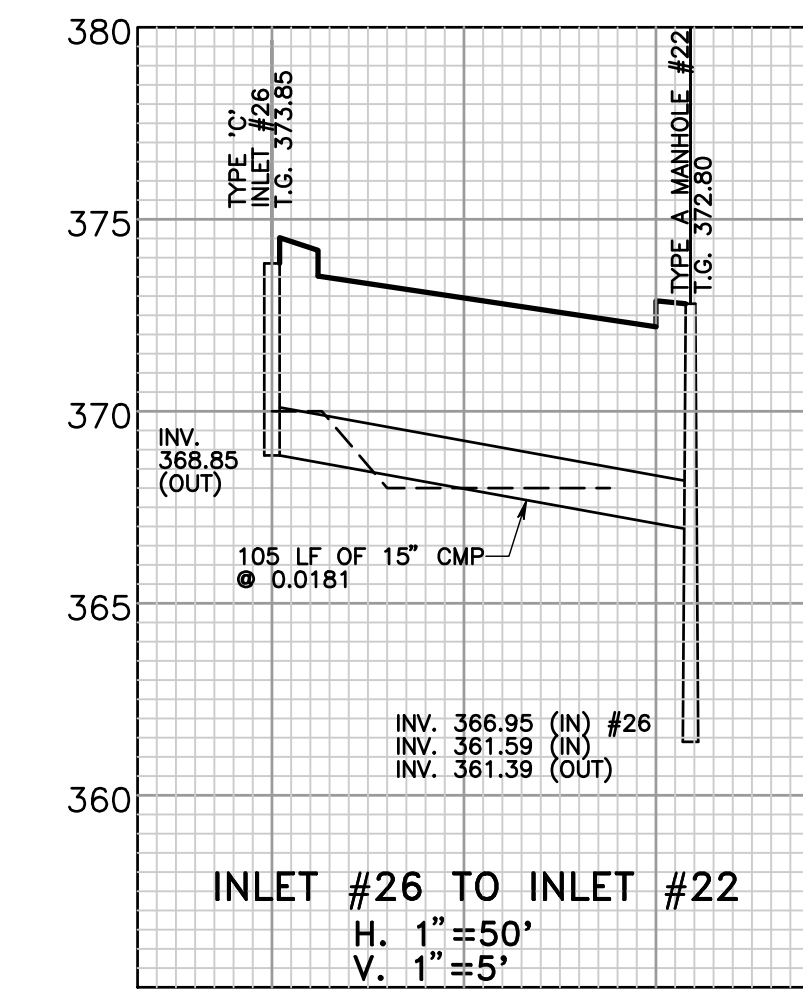
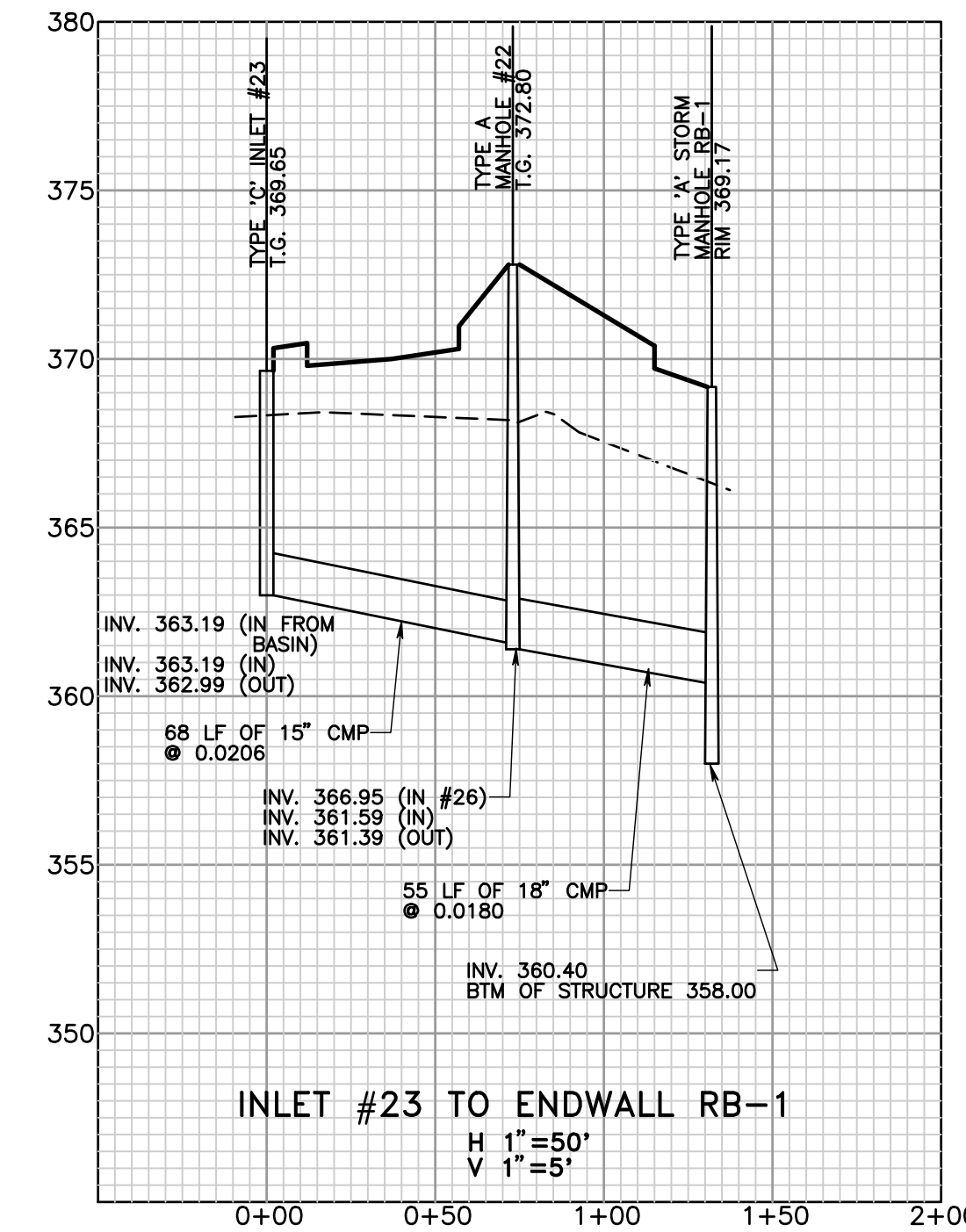
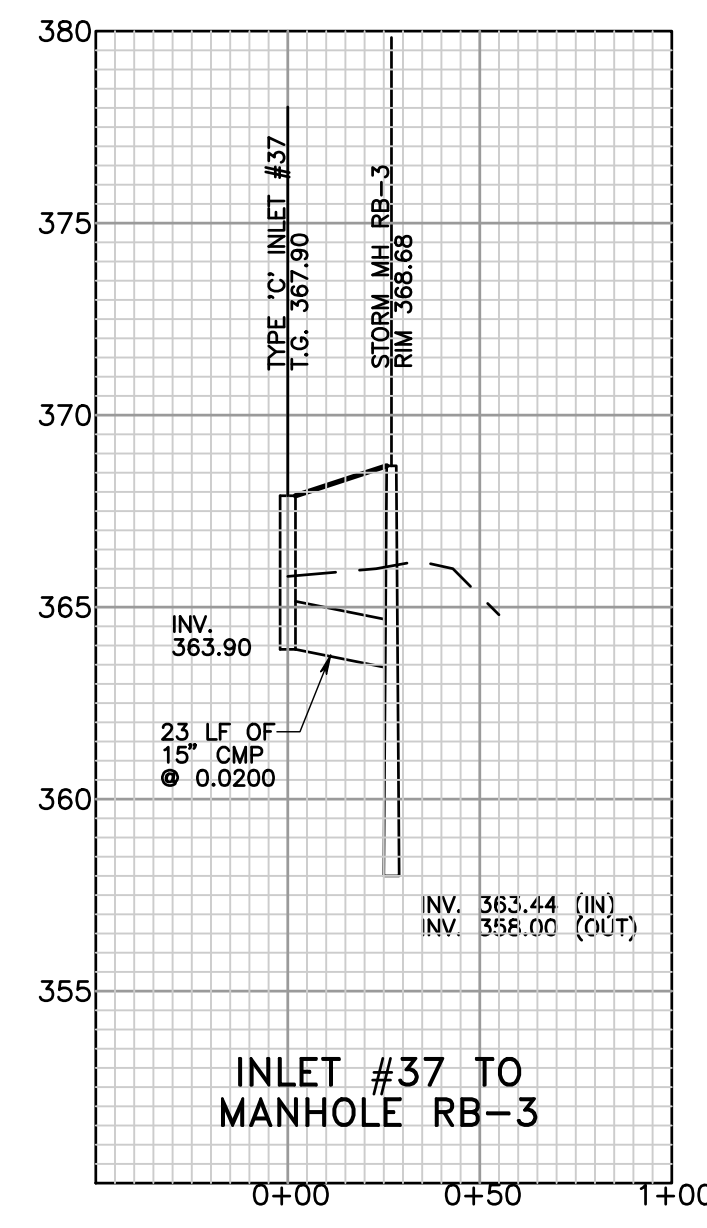
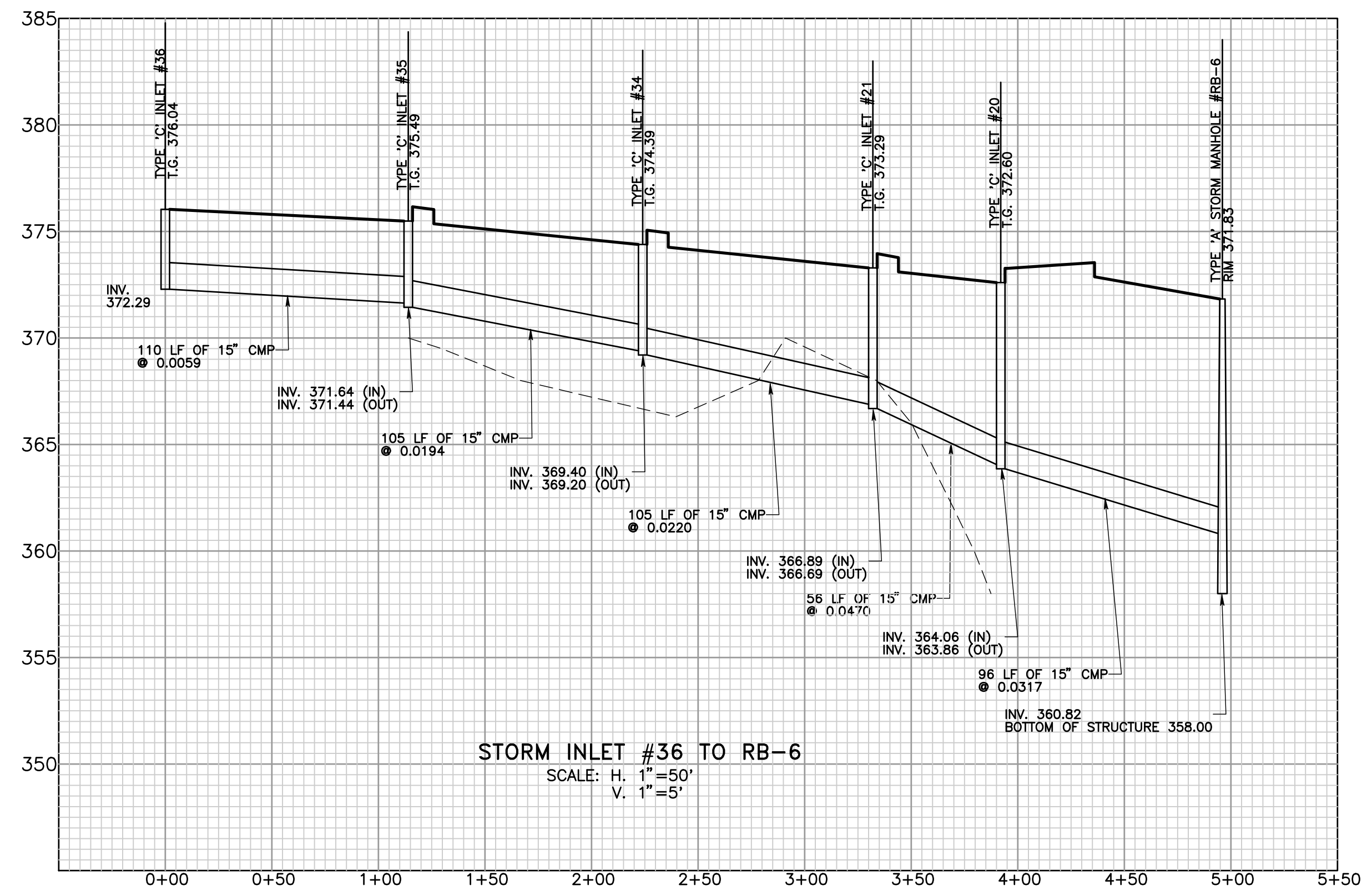
WEST GOSHEN TOWNSHIP, CHESTER COUNTY, PA.

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Whitelead Business Park
855 Springdale Drive, Suite 202
Exton, Pennsylvania 19341
Phone: 610-903-0060
Fax: 610-903-0080

Project- 2188
Date- 10-30-04
Scale- 1"= 50'
Drawn- C.E.
Checked- A.B.
Sheet- 4 OF 12
Ver.-

Plotted: 10/27/2020 File: F:\B\2188\FPS\2188-B14.pro

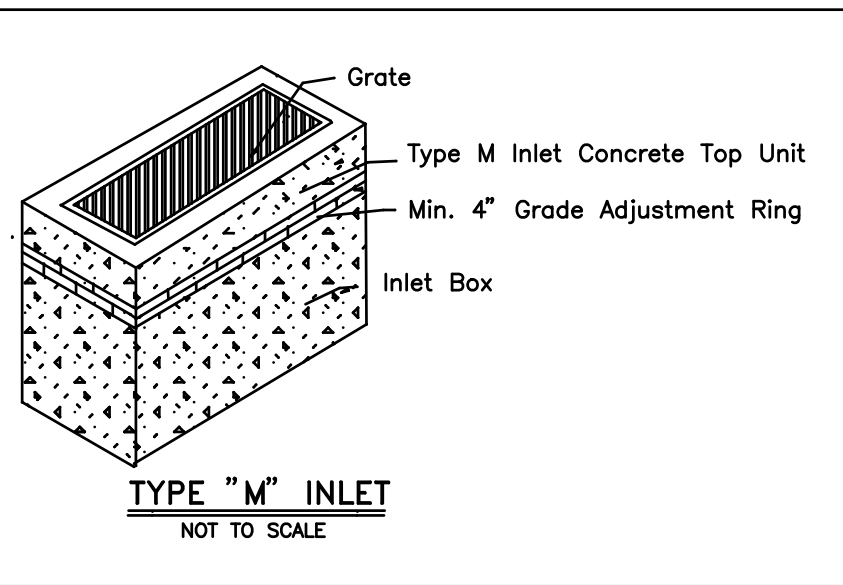


AMENDED PROFILES (FINAL)

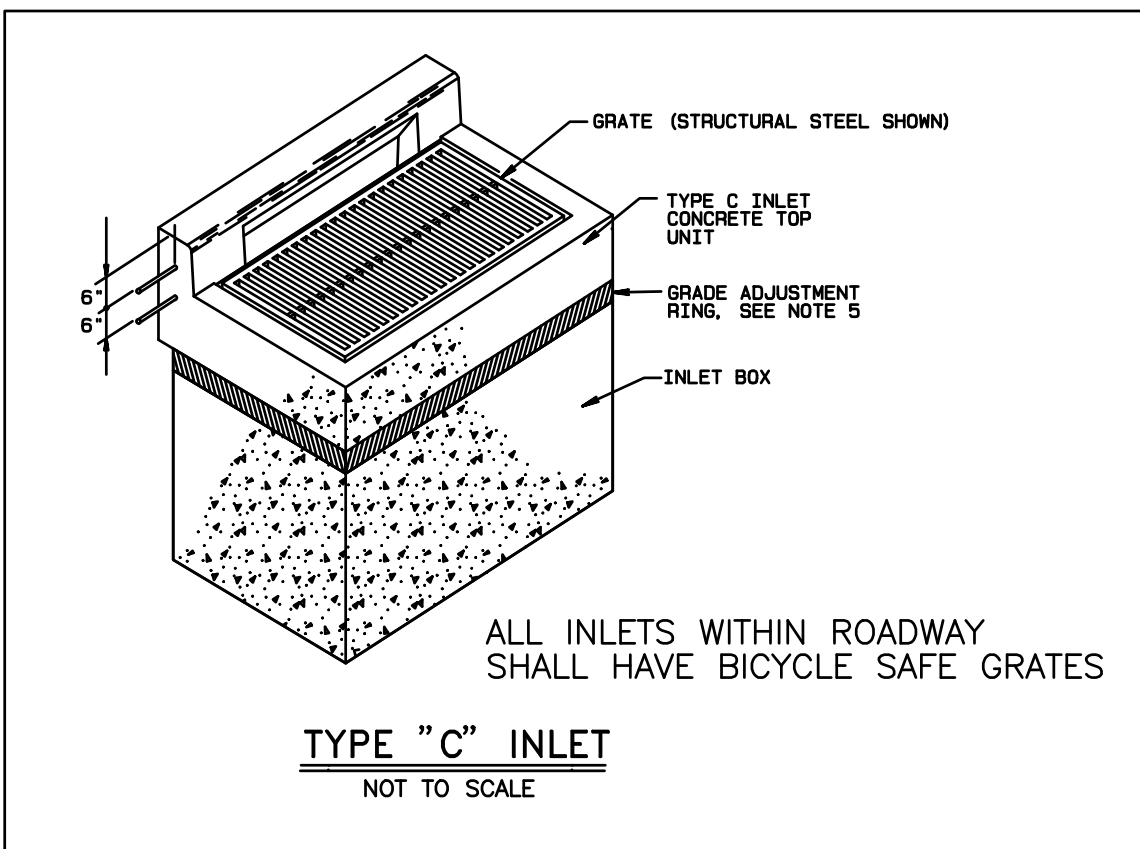
- 6 8-5-13 UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
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LAND DEVELOPMENT PLAN
 FOR
GOSHEN LEISURE DEVELOPMENT
 WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA.
 Edward B. Walsh & Associates, Inc.
 CIVIL ENGINEERS & SURVEYORS
 Whiteland Business Park
 855 Springdale Drive, Suite 202
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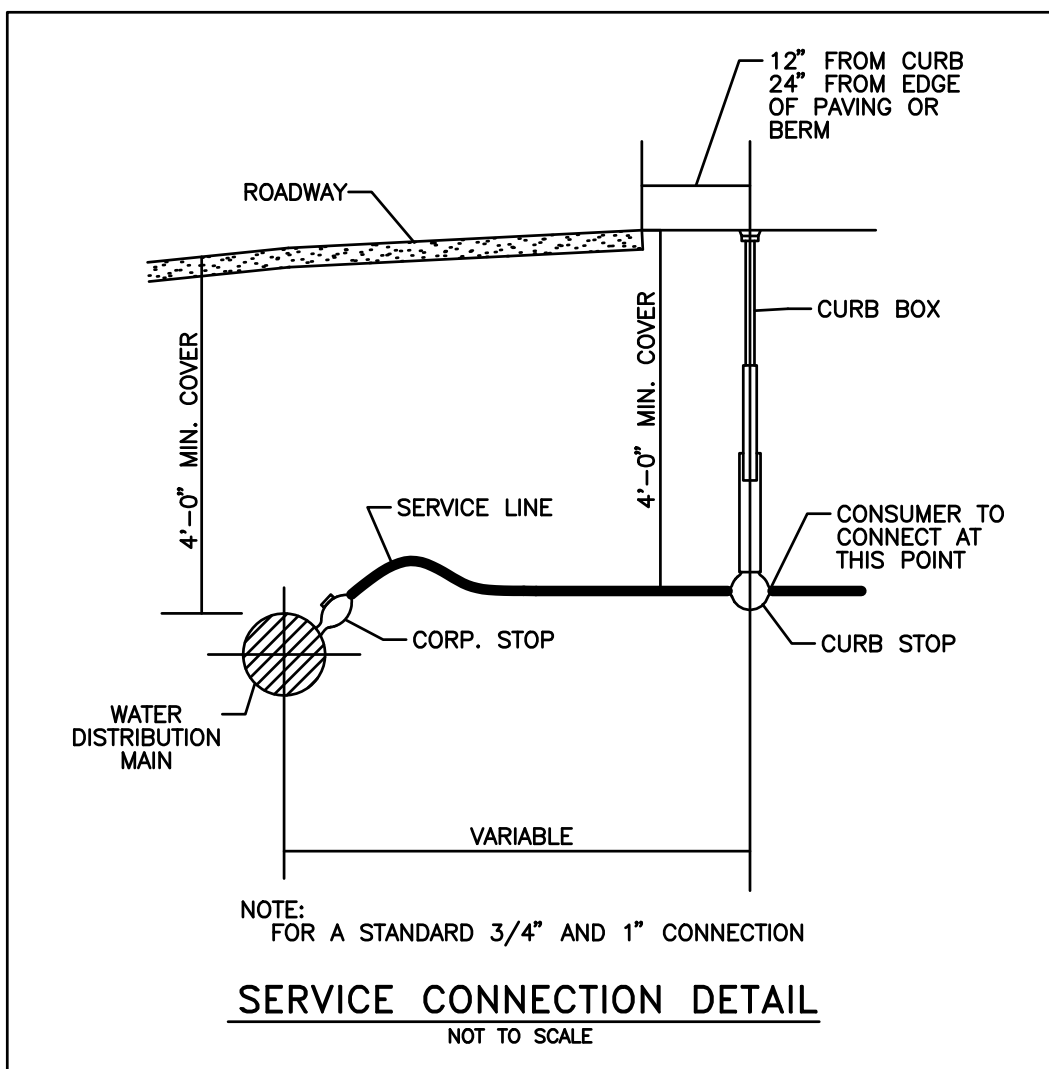


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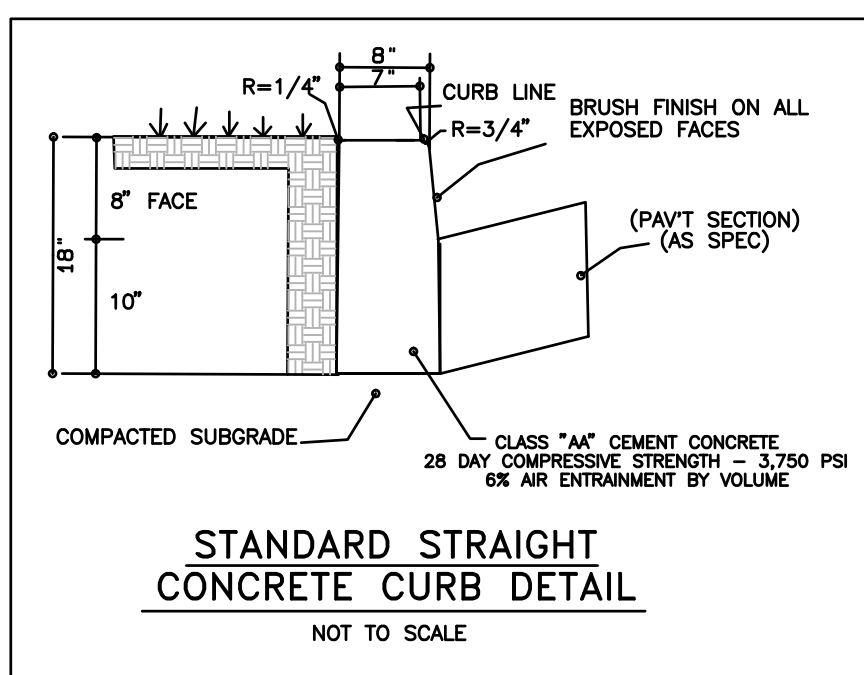


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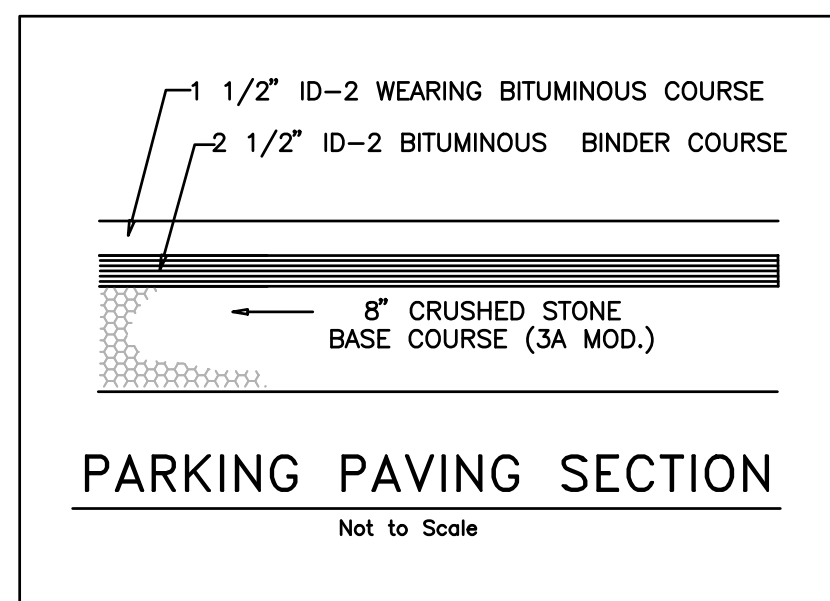
NOTE #5: GRADE ADJUSTMENT RING A MINIMUM OF TWO (2) COURSE OF BRICK MASONRY OR GRADE RING SHALL BE PLACED TO BRING THE GRATE OR COVER TO PROPER ELEVATION. IF BRICK IS USED, EVERY THREE VERTICAL JOINTS SHALL BE LEFT OPEN. IF GRADE RINGS ARE USED, THE HORIZONTAL JOINTS SHALL BE LEFT OPEN TO FACILITATE DRAINAGE OF THE BASE COURSE. GEOTEXTILE FABRIC SHALL BE WRAPPED AROUND THE BRICK MASONRY OR GRADE RINGS TO PREVENT THE WASHING OF FINES INTO THE STRUCTURE.



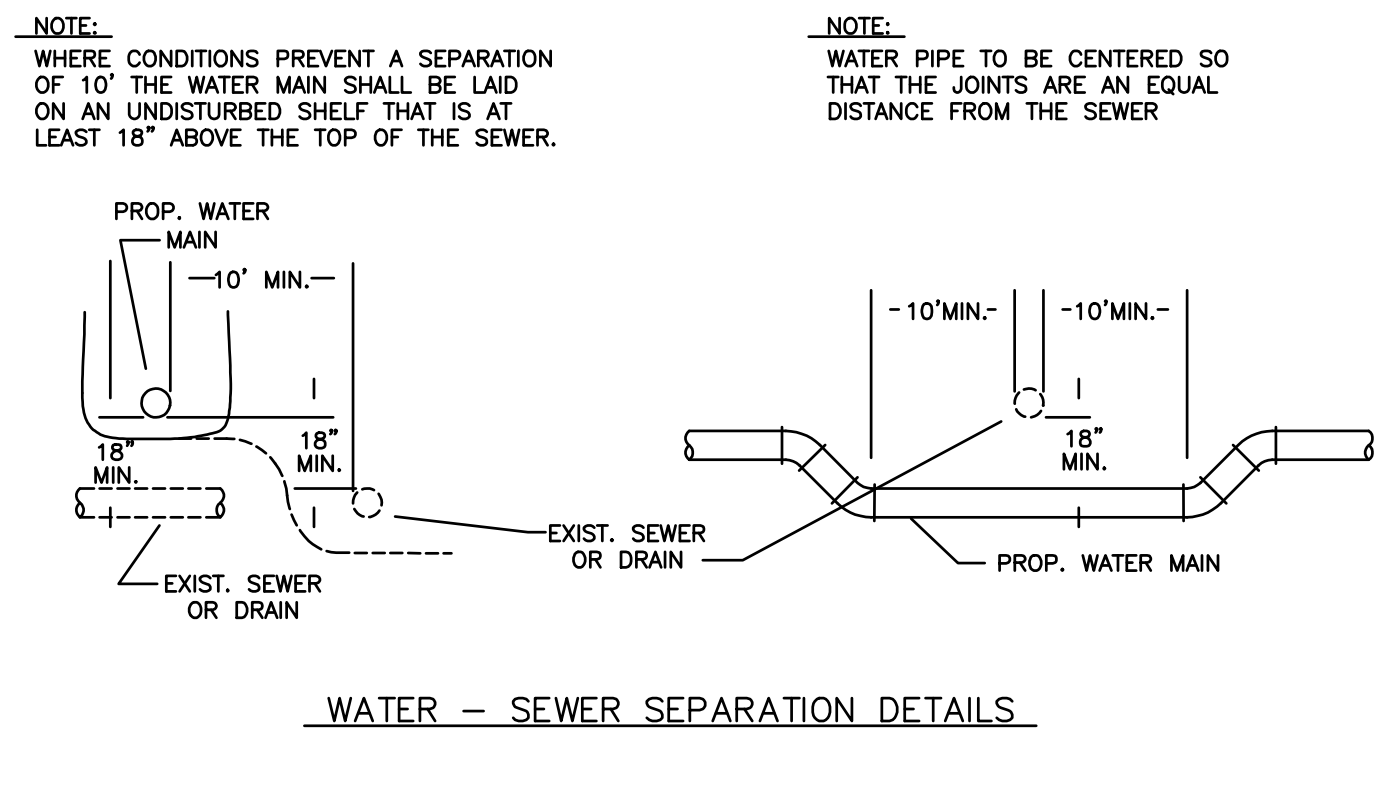
SERVICE CONNECTION DETAIL
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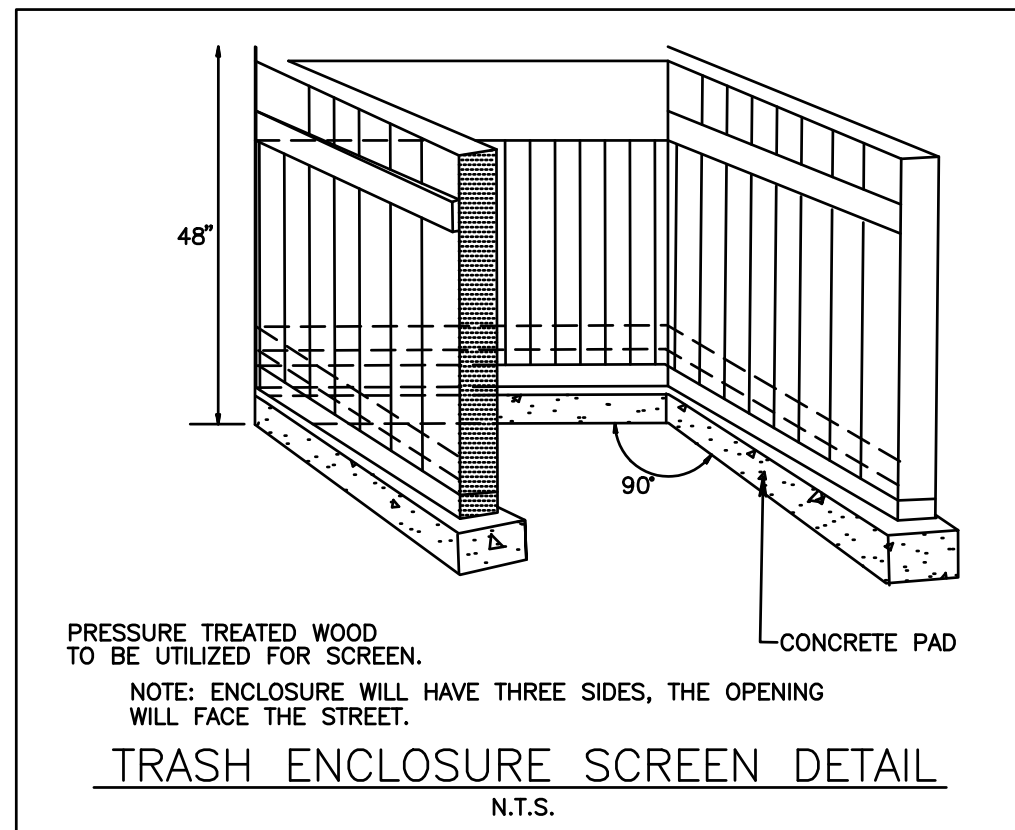
STANDARD STRAIGHT CONCRETE CURB DETAIL
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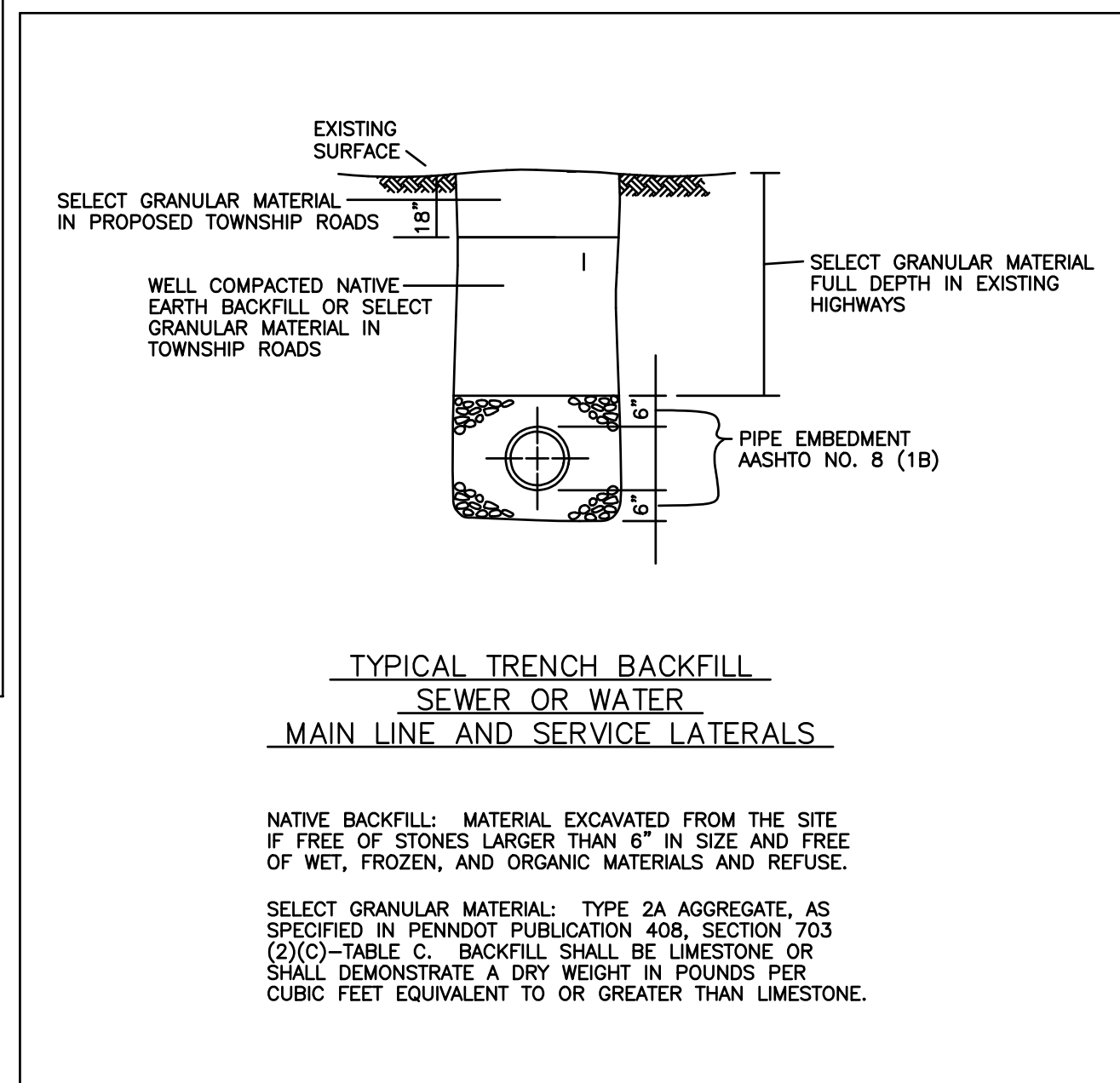
PARKING PAVING SECTION
Not to Scale



WATER - SEWER SEPARATION DETAILS

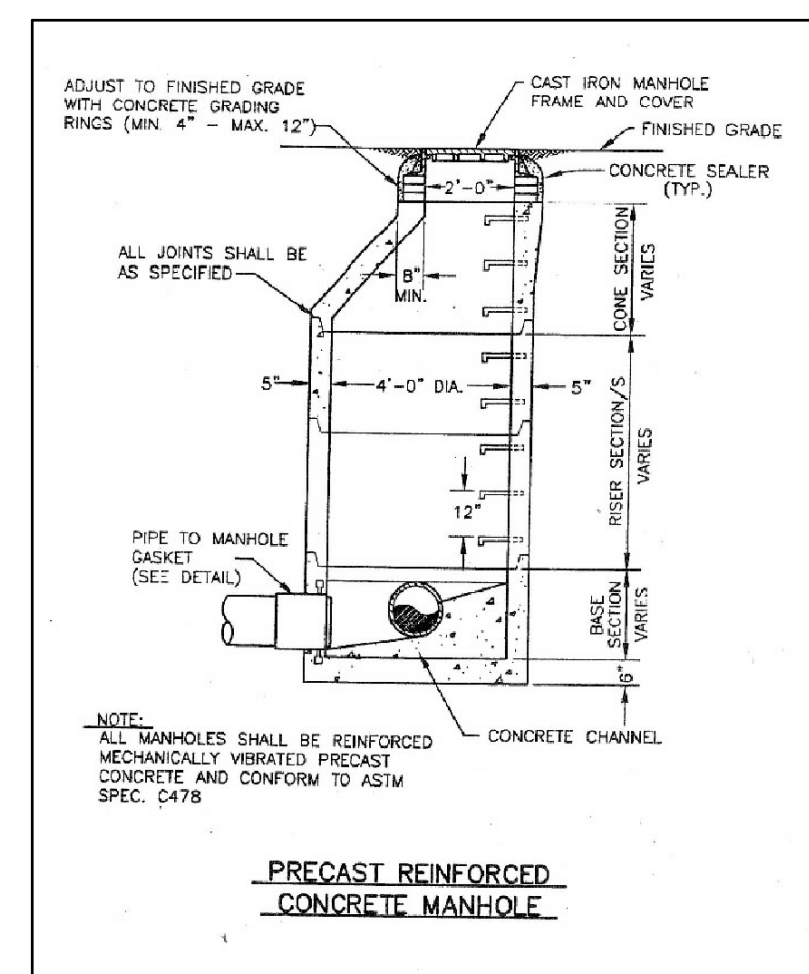


TRASH ENCLOSURE SCREEN DETAIL
N.T.S.

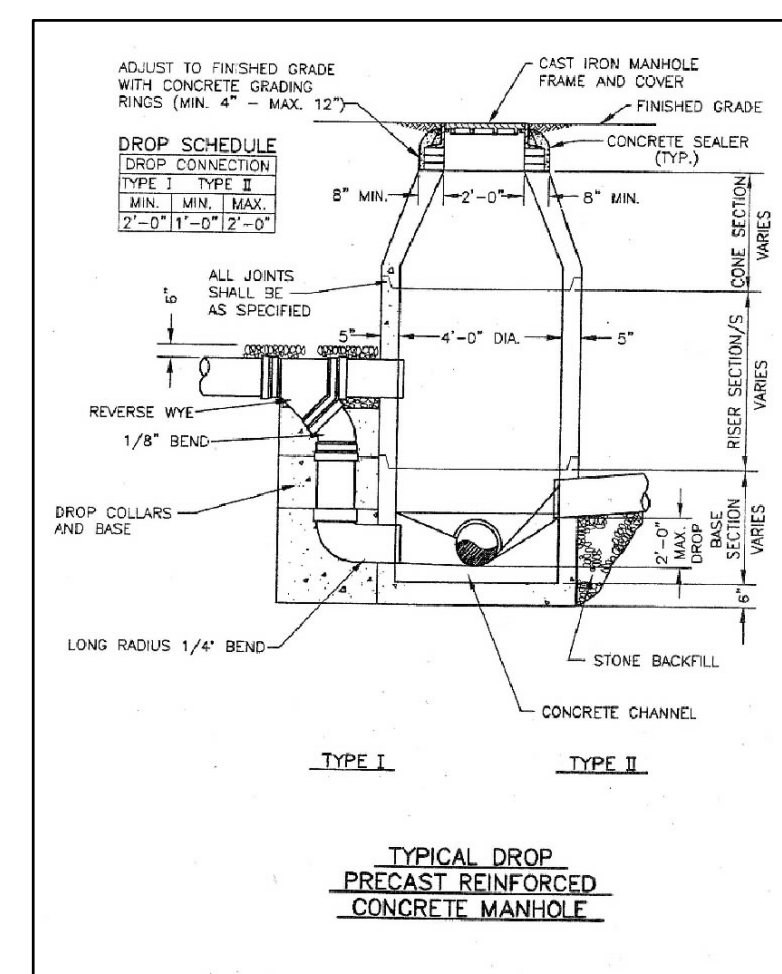


TYPICAL TRENCH BACKFILL SEWER OR WATER MAIN LINE AND SERVICE LATERALS

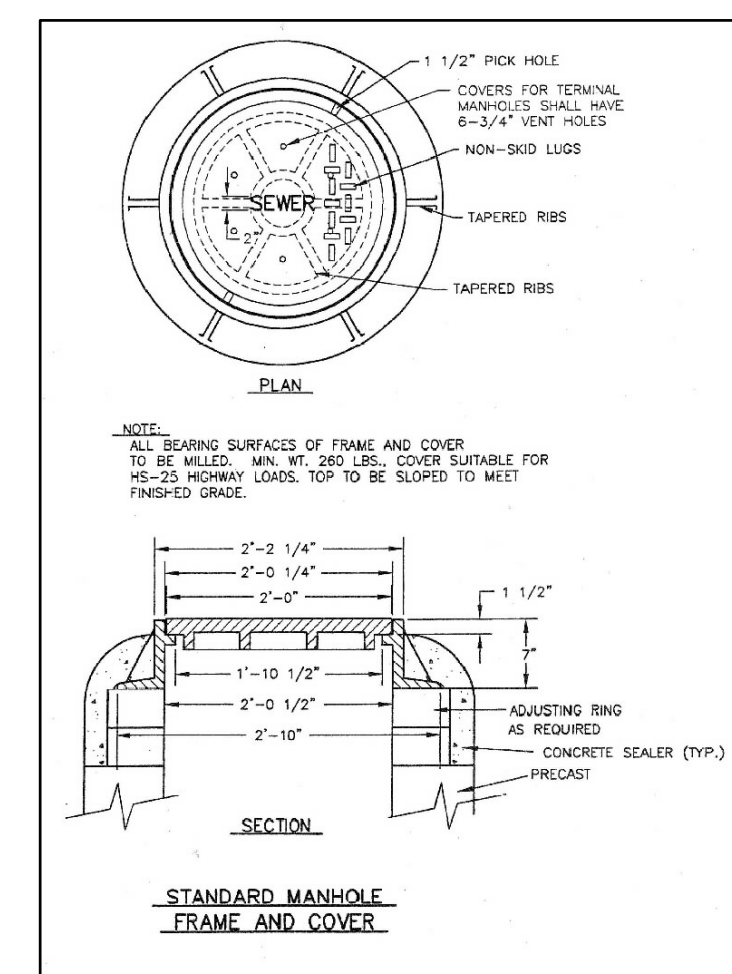
NATIVE BACKFILL: MATERIAL EXCAVATED FROM THE SITE IF FREE OF STONES LARGER THAN 8" IN SIZE AND FREE OF WET, FROZEN, AND ORGANIC MATERIALS AND REFUSE.
SELECT GRANULAR MATERIAL: TYPE 2A AGGREGATE, AS SPECIFIED IN PENNDOT PUBLICATION 408, SECTION 703 (2)(C)-TABLE C. BACKFILL SHALL BE LIMESTONE OR SHALL DEMONSTRATE A DRY WEIGHT IN POUNDS PER CUBIC FEET EQUIVALENT TO OR GREATER THAN LIMESTONE.



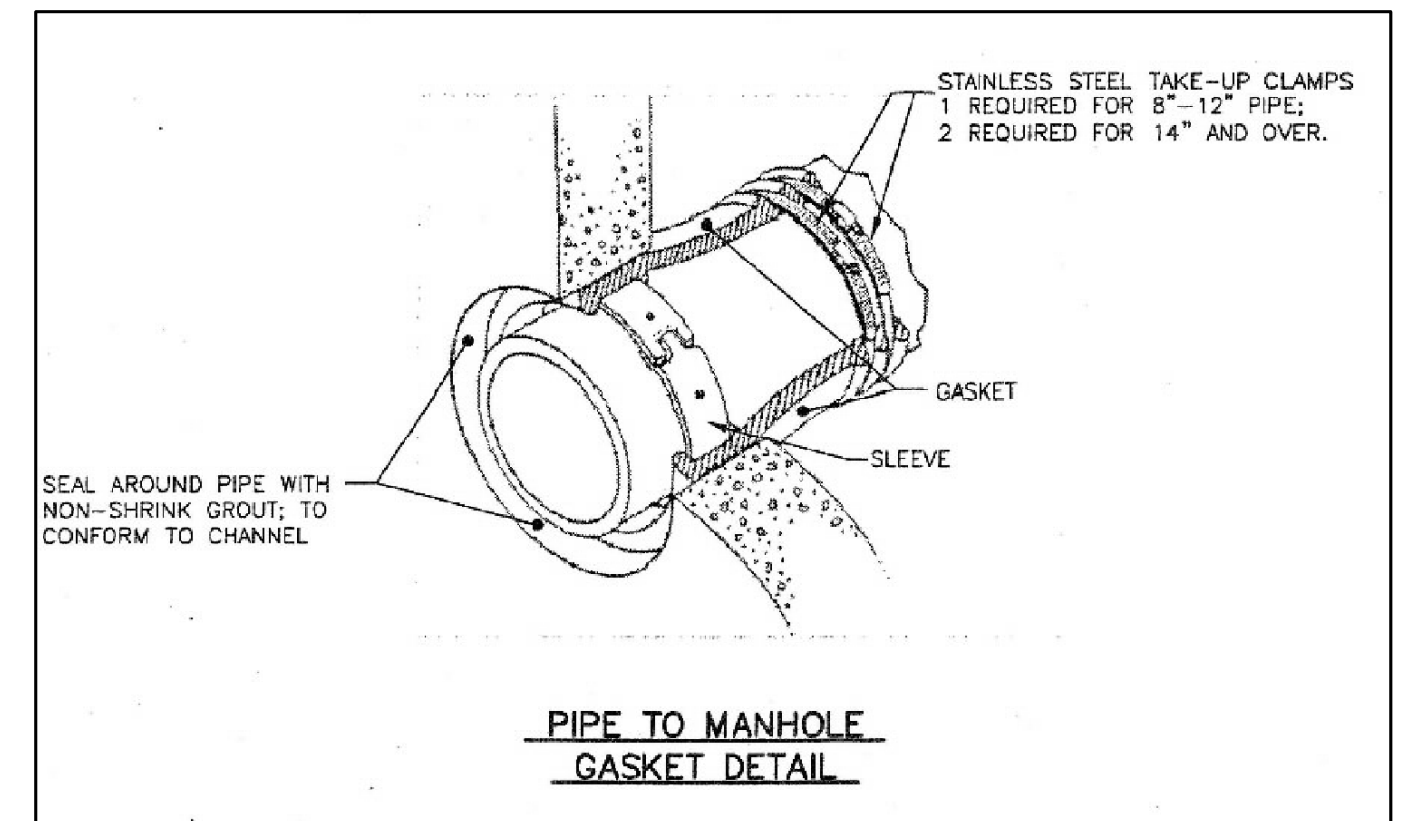
PRECAST REINFORCED CONCRETE MANHOLE



TYPICAL DROP PRECAST REINFORCED CONCRETE MANHOLE



STANDARD MANHOLE FRAME AND COVER

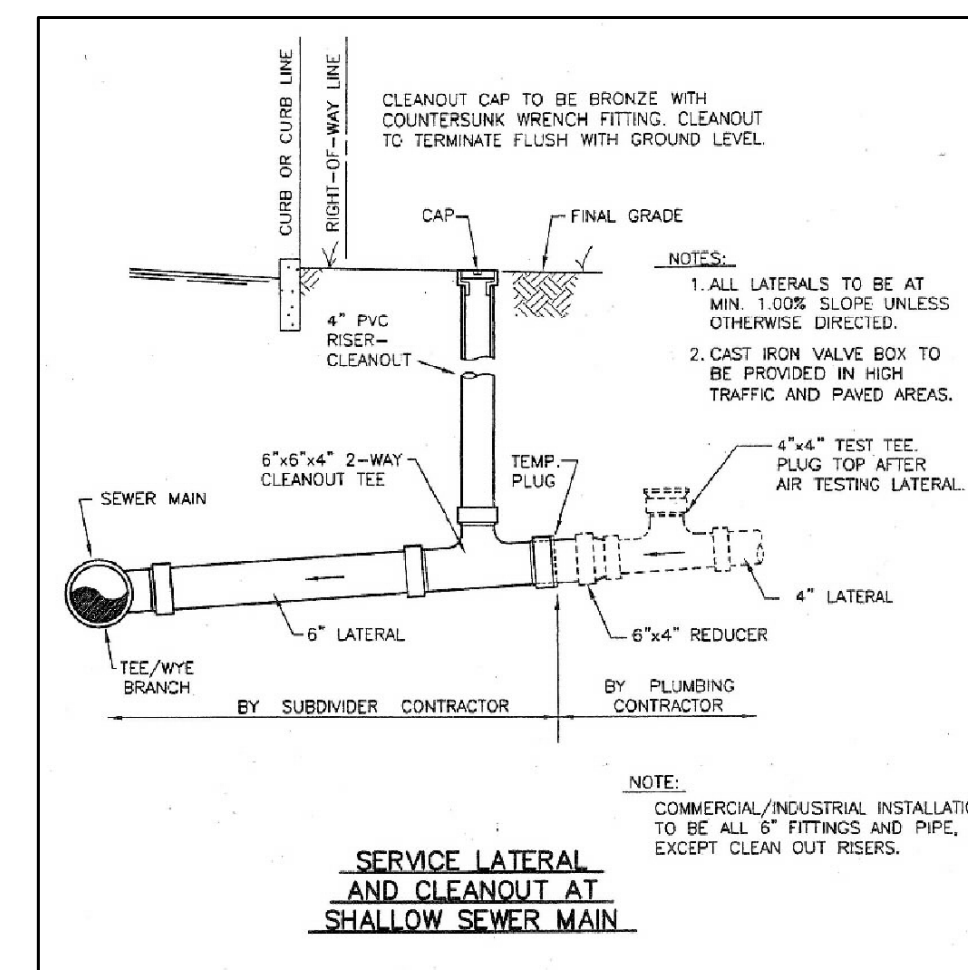


PIPE TO MANHOLE GASKET DETAIL

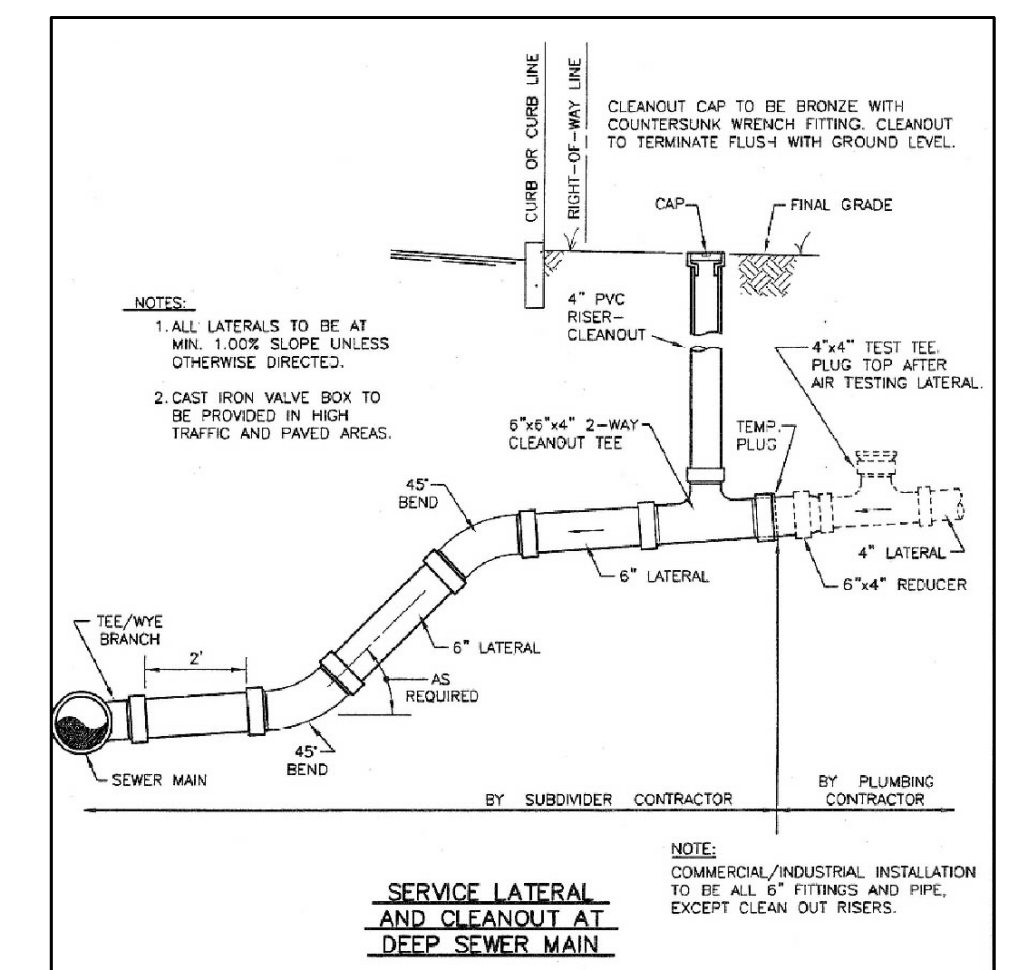
SECTION VIEW PLAN VIEW

DETAIL ROCK ENERGY DISSIPATOR

ENDWALL NO.	LENGTH	MIN. WIDTH	MAX. WIDTH	AVE. SIZE	GRADATION (N.S.A. NO.)	PLACEMENT THICKNESS
E-2	10.00'	4.50'	8.50'	3"	R-3	9"
RECHARGE BED	15.00'	4.50'	19.50'	9"	R-5	27"



SERVICE LATERAL AND CLEANOUT AT SHALLOW SEWER MAIN



SERVICE LATERAL AND CLEANOUT AT DEEP SEWER MAIN

AMENDED DETAIL SHEET (FINAL)

- 8 8-5-13 UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
- 9 10-8-07 ADJUST GRADES PER CLIENT
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- 1 10-26-05 REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN FOR
GOSHEN LEISURE DEVELOPMENT

WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA.

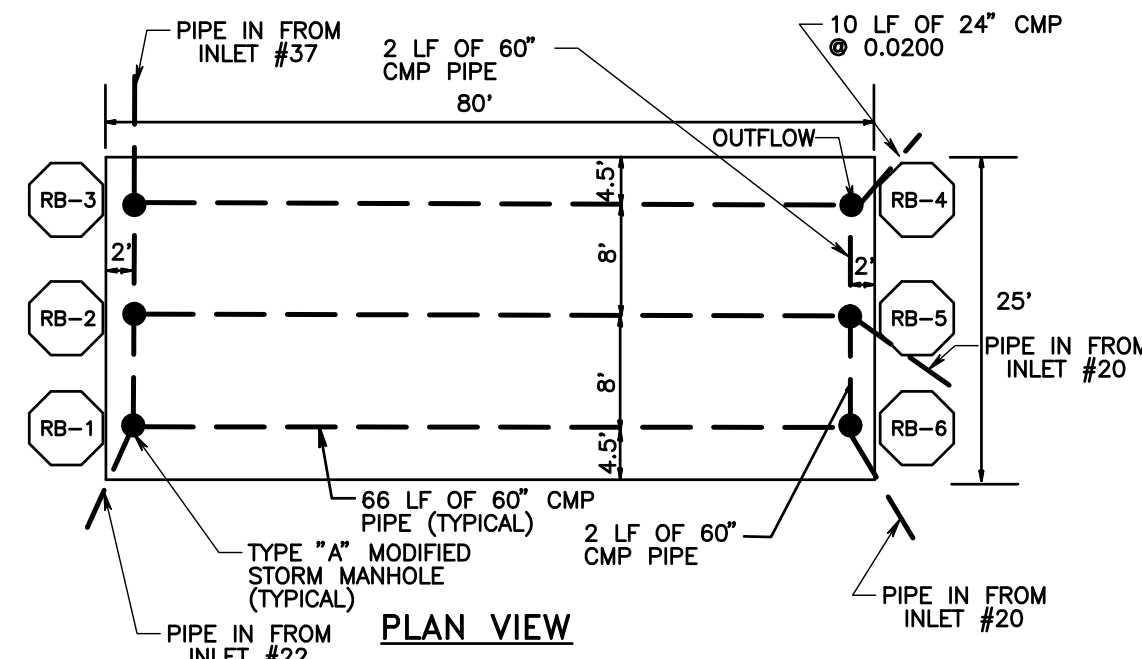
Edward B. Walsh & Associates, Inc. Project- 2188
CIVIL ENGINEERS & SURVEYORS Date- 3-10-04

Whiteland Business Park Scale- 1" = 50'
855 Springdale Drive, Suite 202 Drawn- C.E.
Exton, Pennsylvania 19341 Checked- A.B.
Phone: 610-903-0060 Sheet- 7 OF 12
Fax: 610-903-0080

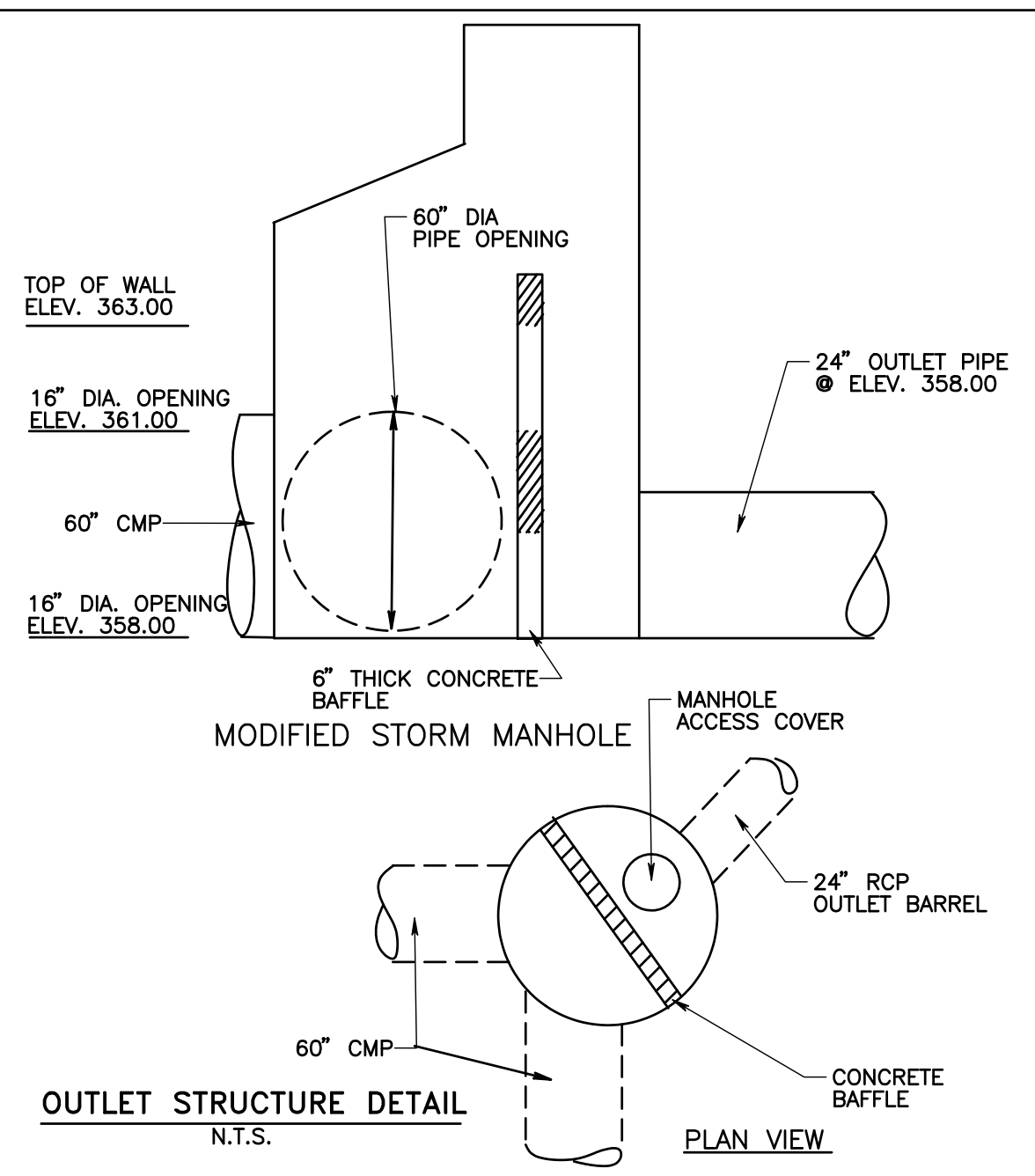
Plotted: 10/27/2020 File: F:\J\B\2188\FPS\2188-B14.prc Ver.-

STRUCTURE NO.	GRATE/RIM ELEV.	INV IN/OUT ELEV.
RB-1	370.14	360.40 IN 358.00 OUT
RB-2	370.04	358.00 OUT
RB-3	369.94	363.44 IN 358.00 OUT
RB-4	371.40	358.00 OUT
RB-5	371.67	360.00 IN 358.00 OUT
RB-6	371.94	360.82 IN 358.00 OUT

NOTE: INSTALL 1/2" THICK STEEL PLATE OVER OUTLET PIPE IN RB-1 TO PROVIDE A 20" DIA. ORIFICE AT ELEVATION 358.00.



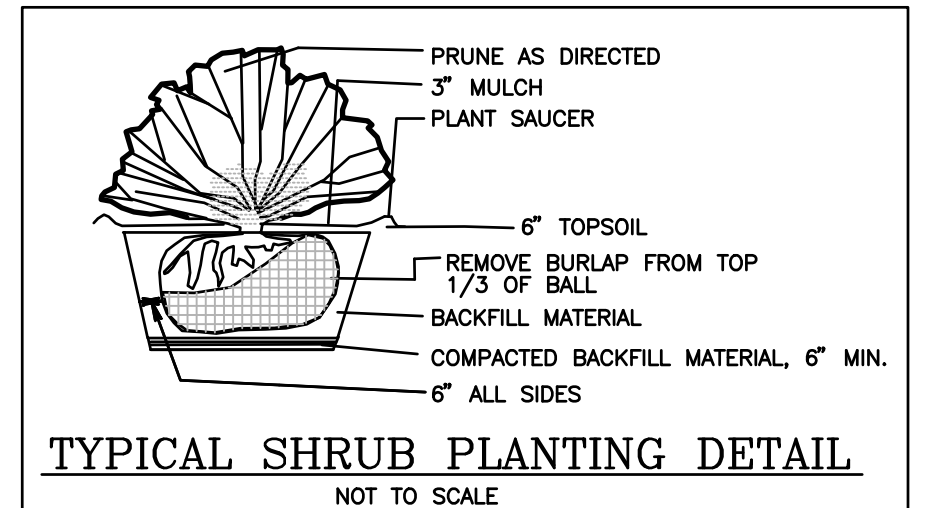
UNDERGROUND PIPE STORAGE SYSTEM #1
NOT TO SCALE



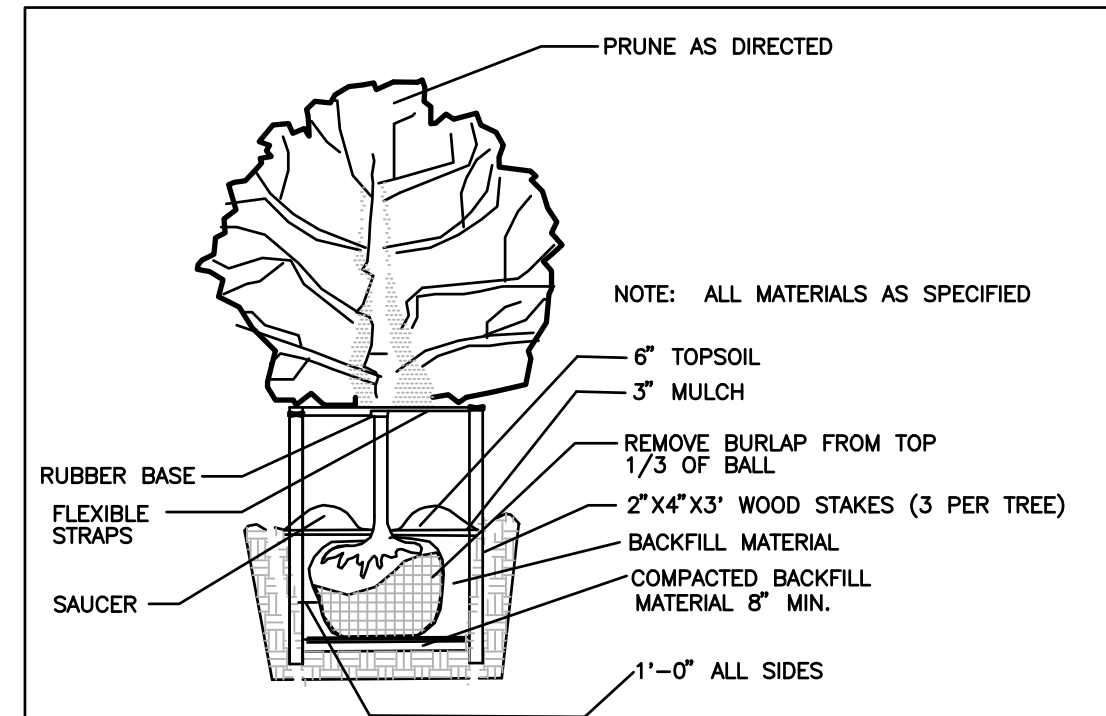
OUTLET STRUCTURE DETAIL
N.T.S.

LANDSCAPE NOTES:

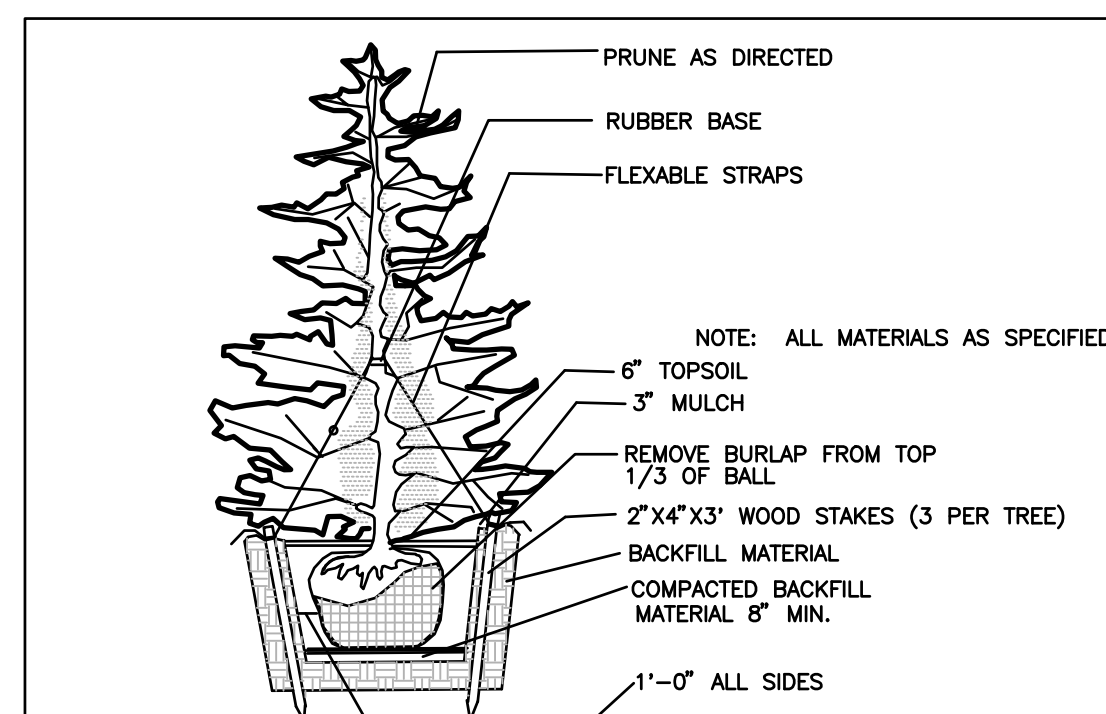
- PLANT LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL STAKE LOCATIONS FOR APPROVALS BY THE LANDSCAPE ARCHITECT PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
- PROVIDE CONTINUOUS MULCH (2" THICK) IN ALL BEDDING AND GROUND COVER AREAS AND AT THE BASE OF SPECIMEN TREES.
- SIZES OF PLANT MATERIAL GIVEN ARE TO BE CONSIDERED MINIMUM.
- NO SUBSTITUTIONS FOR PLANT MATERIAL ARE ACCEPTABLE UNLESS APPROVED BY LANDSCAPE ARCHITECT.
- CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE, INCLUDING WATERING OF PLANT MATERIAL UNTIL JOB IS TURNED OVER TO OWNER.
- CONTRACTOR SHALL LOOSEN SUBGRADE OF PLANTING BED AREAS TO A MINIMUM DEPTH OF TWENTY-FOUR INCHES (24") USING A CULTIVATOR OR SIMILAR EQUIPMENT. REMOVE STONES ONE TO ONE AND A HALF INCHES (1 - 1 1/2") IN ANY DIMENSIONS AND STICKS, RUBBISH AND OTHER EXTRANEOUS MATTER.
- WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED OR SUSPECTED, SUCH AS RUBBLE FILL, UNACCEPTABLE TOPSOIL, ADVERSE DRAINAGE CONDITIONS OR OTHER OBSTRUCTIONS, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER AND THE LANDSCAPE ARCHITECT IN WRITING BEFORE PLANTING ANY TREES, SHRUBS OR LAWN AREAS.
- TREES AND SHRUBS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS, FIBROUS ROOT SYSTEMS.
- TREES AND SHRUBS SHALL BE FREE FROM DEFECTS AND INJURIES AND CERTIFIED BY APPROPRIATE FEDERAL AND STATE AUTHORITIES TO BE FREE FROM DISEASES AND INSECT INFESTATIONS.
- TREES AND SHRUBS SHALL BE FRESHLY DUG AND NURSERY GROWN. THEY SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN LOCALITY OF THE PROJECT OR PROPERLY ACCLIMATED TO CONDITIONS OF THE LOCALITY OF THE PROJECT.
- ALL PLANTING BEDS SHALL BE MULCHED WITH DOUBLE GROUND HARDWOOD MULCH INSTALLED AT A MINIMUM DEPTH OF TWO INCHES (2").
- ALL CANOPY TREES MUST HAVE A SPREAD EQUAL TO FIFTY PERCENT (50%) OF THE HEIGHT.
- ALL PLANTING BEDS WITHOUT SHRUB OR GROUND COVER PLANT MATERIAL SHALL BE PLANTED WITH A BLUE GRASS SEED MIX.
- ALL PARKING LOT TREES ARE TO BE PRUNED TO PROVIDE SEVEN FEET (7') CLEARANCE FROM THE GROUND AT BASE OF TREE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION ON THIS PLAN.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER AND/OR LANDSCAPE ARCHITECT.
- THIS PLAN IS INTENDED FOR LANDSCAPE PURPOSES ONLY.
- NO MORE THAN FIVE INCHES (5") OF SOIL SHALL BE PLACED AROUND THE TRUNKS OF TREES WHICH ARE TO REMAIN. FOR THOSE TREES WHICH ARE TO REMAIN, WHERE MORE THAN FIVE INCHES (5") OF SOIL ARE TO BE PLACED, TREE WELLS SHALL BE CONSTRUCTED TO PRESERVE SUCH TREES.
- ALL SIZES AND GRADING STANDARD FOR PLANT MATERIALS SHALL CONFORM WITH THE LATEST EDITION OF AMERICAN STANDARD OF NURSERY STOCK AS SPONSORED BY THE AMERICAN ASSOCIATES OF NURSERMEN, INC., AND APPROVED MAY 2, 1986 BY THE AMERICAN NATIONAL STANDARDS INSTITUTE, INC., OR THE LATEST REVISED EDITION OF THIS STANDARD.
- TOPSOIL REMOVED BY GRADING OPERATIONS SHALL BE REDISTRIBUTED AND STABILIZED AS SOON AS POSSIBLE FOLLOWING THE COMPLETION OF A PHASE OF WORK OR THE ENTIRE PROJECT. ALL EXPOSED EARTH SURFACES SHALL BE STABILIZED BY THE FOLLOWING METHODS OR APPROVED EQUAL:
 - SEEDING OR PLANTING OF SLOPES WITH A GRADIENT OF THIRTY PERCENT (30%) OR LESS STEEP.
 - SODDING OR HYDRO SEEDING OF SLOPES WITH A GRADIENT OF THIRTY PERCENT (30%) OR MORE STEEP.
- ALL TREES TO BE RETAINED SHALL BE PROTECTED DURING CONSTRUCTION FROM EQUIPMENT DAMAGE BY SNOW FENCING OR OTHER EFFECTIVE BARRIERS.
- THE CONTRACTOR SHALL LABEL EACH TREE AND SHRUB WITH SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.
- ALL DISTURBED AREAS ARE TO BE SEEDING TO ESTABLISH A VIABLE LAWN.
- ANY TREE OR SHRUB WITH DIES WITHIN TWELVE (12) MONTHS OF THE DEDICATION OF PUBLIC IMPROVEMENTS OF OCCUPANCY SHALL BE REPLACED. ANY TREE OR SHRUB WHICH, WITHIN THE AFORESAID TIME PERIOD IS DREEMED, IN THE OPINION OF AN AGENT AUTHORIZED BY THE TOWNSHIP, NOT TO HAVE SURVIVED OR GROWN IN A MANNER CHARACTERISTIC OF ITS TYPE SHALL BE REPLACED. ANY SUBSTITUTIONS SHALL BE APPROVED BY THE TOWNSHIP.
- EXISTING TREES AND SHRUBS AT THE CORNER OF AN INTERSECTION OF STREETS AND/OR DRIVEWAYS, SHALL BE CUT TO THE HEIGHT OF TWENTY-FOUR INCHES (24") FROM POINT OF INTERSECTION OF CORNER PROPERTY LINES BACK SEVENTY-FIVE FEET (75') TO AVOID BLOCKING SIGHT DISTANCE TO ONCOMING TRAFFIC AND SHRUBS OR GROUNDCOVERS TO BE PLANTED SHALL BE OF THE DWARF VARIETY AND SHALL NOT EXCEED TWENTY-FOUR INCHES (24") IN HEIGHT AT MATURITY.
- ALL TREES ALONG THE RIGHT-OF-WAY OF ANY PROPERTY SHALL BE KEPT TRIMMED NINE FEET (9') ABOVE ANY SIDEWALK AND ELEVEN FEET (11') ABOVE ALL STREETS.
- PROPER SIGHT LINES SHALL BE MAINTAINED AT ALL INTERSECTIONS OF STREETS. THERE SHALL BE A CLEAR SIGHT TRIANGLE MEASURING SEVENTY-FIVE FEET (75') ALONG THE INTERSECTING STREET LINES FROM THE POINT OF INTERSECTION INDICATING ON THE PLAN, THAT IS MAINTAINED FREE AND CLEAR OF STRUCTURES, SIGNS AND OTHER VISUAL OBSTRUCTIONS.
- ALL TREES TO BE RETAINED WITHIN TWENTY-FIVE FEET (25') OF A BUILDING, PARKING OR OTHER PROPOSED IMPROVEMENTS SHALL BE PROTECTED DURING CONSTRUCTION FROM EQUIPMENT DAMAGE BY SNOW FENCING OR OTHER EFFECTIVE BARRIERS.
- STREET TREES SHALL BE PLANTED OUTSIDE THE PUBLIC RIGHT-OF-WAY.
- ALL PLANTING BEDS, LAWN AREAS AND TREE BASES ARE TO BE TOP DRESSED WITH 6" OF ORGANIC TOPSOIL.



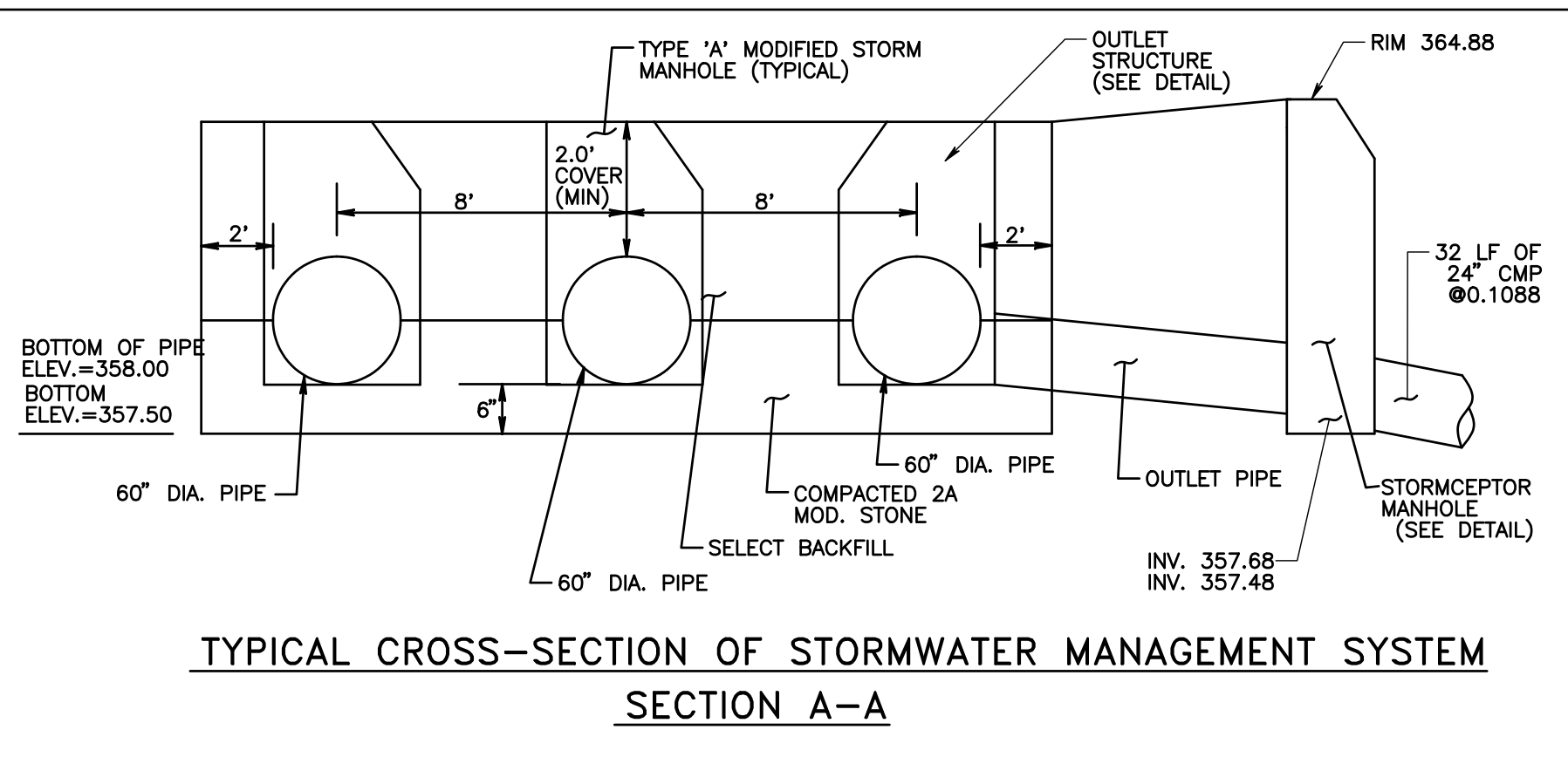
TYPICAL SHRUB PLANTING DETAIL
NOT TO SCALE



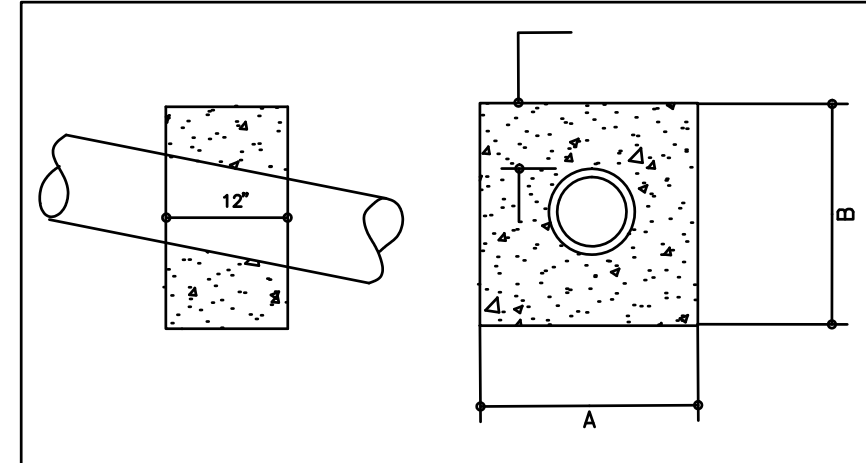
TYPICAL DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

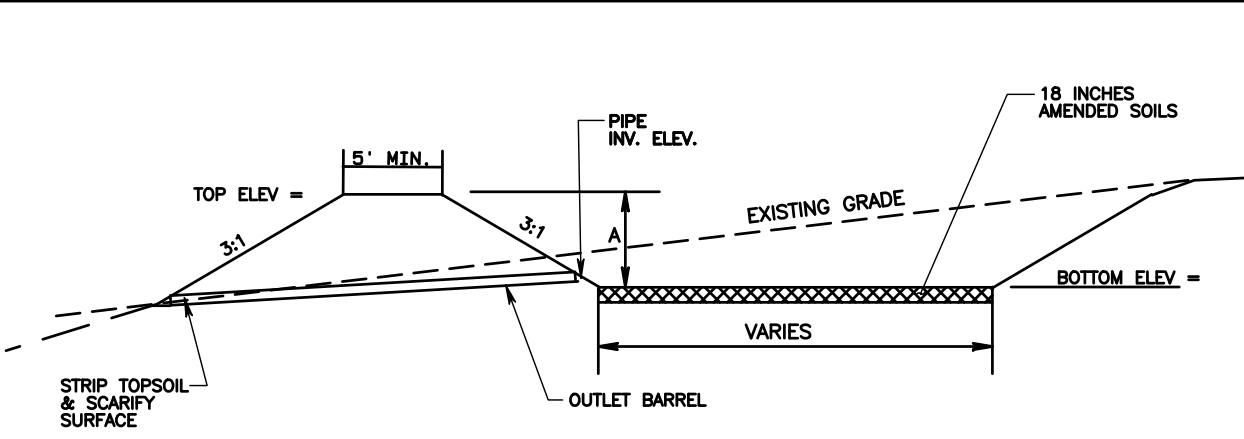


TYPICAL CROSS-SECTION OF STORMWATER MANAGEMENT SYSTEM SECTION A-A



RETENTION BASIN #	NO. OF COLLARS	*A* WIDTH (FT.)	*B* HEIGHT (FT.)	*C* VERTICAL PROJECTION (FT.)	SPACING (FT.)
2	2	4.3	4.3	1.4	12.5

CONCRETE ANTI-SEEP COLLAR
NOT TO SCALE



CONSTRUCTION SEQUENCE (THIS SEQUENCE IS A CRITICAL SEQUENCE THAT MUST BE INSPECTED BY A LICENSED ENGINEER.)

- EXCAVATE & GRADE THE INFILTRATION AREA USING LIGHT TRACK EQUIPMENT. NOTE: IF GROUNDWATER IS ENCOUNTERED THE OWNER/ENGINEER SHOULD BE CONTACTED FOR A SOLUTION.
- COMPACT BERM TO 95% MODIFIED PROCTOR DENSITY, NO ORGANIC MATERIAL SHALL BE USED IN THE BERM CONSTRUCTION.
- PLACE AMENDED SOILS ON PREPARED SYSTEM. REFER TO AMENDED SOILS SPECIFICATION, MINIMUM DEPTH 18 INCHES.
- AFTER FINAL GRADING AND PLACEMENT OF AMENDED SOILS, THE BOTTOM SHOULD BE DEEPLY FILLED BY MEANS OF ROTARY TILLERS OR DISC HARROWS.
- USE TEMPORARY SEEDING SPECIFICATION FOR THE AREAS WITHIN THE FILTRATION AREA AND PERMANENT SEEDING FOR ALL OTHER AREAS.
- DURING CONSTRUCTION REMOVE ALL SILT THAT ENTERS THE INFILTRATION AREA AND REPLACE WITH GRANULAR MATERIAL AND SEED PER TEMPORARY SEEDING SPECIFICATIONS.
- AFTER STABILIZATION OF THE AREAS DRAINING TO THE INFILTRATION AREA, (MINIMUM 70% COVER OF VEGETATION), REWORK THE BOTTOM OF THE INFILTRATION AREA AND LIGHTLY TILL AND SEED PER WETLAND SEEDING SPECIFICATIONS.

NOTE: WETLAND SEED MIX TO BE APPLIED TO STORAGE AREA OF ALL RAIN GARDENS.

BIORETENTION RAIN GARDEN/TRENCH CROSS SECTION
NOT TO SCALE

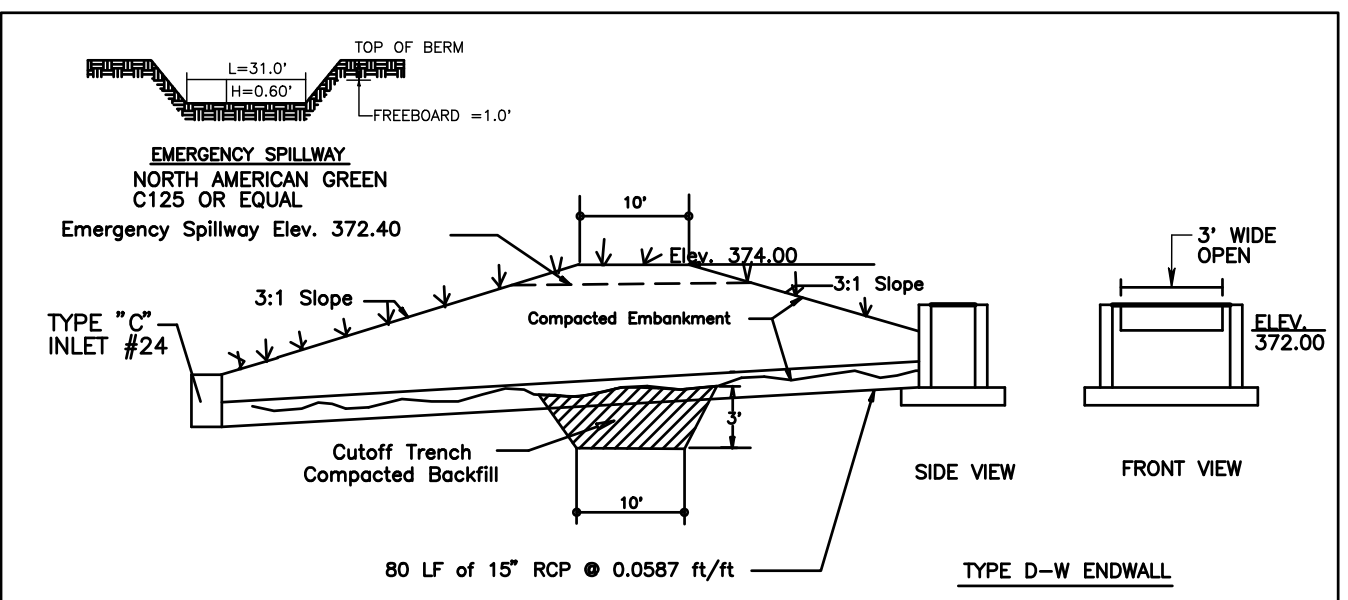
AMENDED SOIL SPECIFICATION
66% CLEAN TOPSOIL
34% COMPOST

Rain Garden Seed Mix: ERNMX-120.

Botanical Name	Common Name
Carex vulpinoidea	Fox Sedge
Elymus virginicus	Virginia Wild Rye
Verbena hastata	Blue Vervain
Carex crinita	Fringed (Nodding) Sedge
Carex lurida	Lurid (Shallow) Sedge
Glyceria grandis	American Mannagrass
Glyceria striata	Fowl Mannagrass
Juncus effusus	Soft Rush
Scirpus cyperinus	Wool Grass
Sporangium americanum	Eastern Lesser Bur Reed
Sporangium eurycarpum	Giant Bur Reed
Scirpus atrovirens	Green Bulrush
Carex comosa	Cosmas (Bristly) Sedge
Carex gynandra	Nodding Sedge
Carex lupulina	Hop Sedge
Glyceria canadensis	Rattlesnake Grass

Seeding rate: 15 bulk lbs per acre or 1/3-1/2 lbs per 1,000 ft².

ERNST CONSERVATION SEED
9015 MERCER PARK
MEADVILLE, PA 16335
www.ernstseed.com
1-800-873-3321 Fax (814) 336-5191



RAIN GARDEN #2 EMBANKMENT CROSS SECTION
NOT TO SCALE

FILL MATERIAL/COMPACTION NOTES:
ALL EARTH FILL SHALL BE FREE FROM CONSTRUCTION DEBRIS, BRUSH, ROOTS AND OTHER ORGANIC MATERIAL SUBJECT TO DECOMPOSITION. THE FILL MATERIAL IN ALL EARTH DAMS AND EMBANKMENTS SHALL BE COMPACTED TO AT LEAST NINETY-FIVE PERCENT (95%) OF THE MAXIMUM DENSITY OBTAINED FROM COMPACTION TESTS PERFORMED BY THE APPROPRIATE METHOD IN ASTM D698 AND TO THE SATISFACTION OF THE TOWNSHIP.

AMENDED PCSWM DETAIL SHEET (FINAL)

8	10-1-13	REV. PER CCCD REVIEW COMMENTS 9-26-13
7	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
6	10-8-07	ADJUST GRADES PER CLIENT
5	5-7-07	REV. PER CCCD REVIEW LETTER DATED 4-30-07
4	3-26-07	REV. PER CCCD REVIEW COMMENTS
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2	10-04-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
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LAND DEVELOPMENT PLAN FOR GOSHEN LEISURE DEVELOPMENT

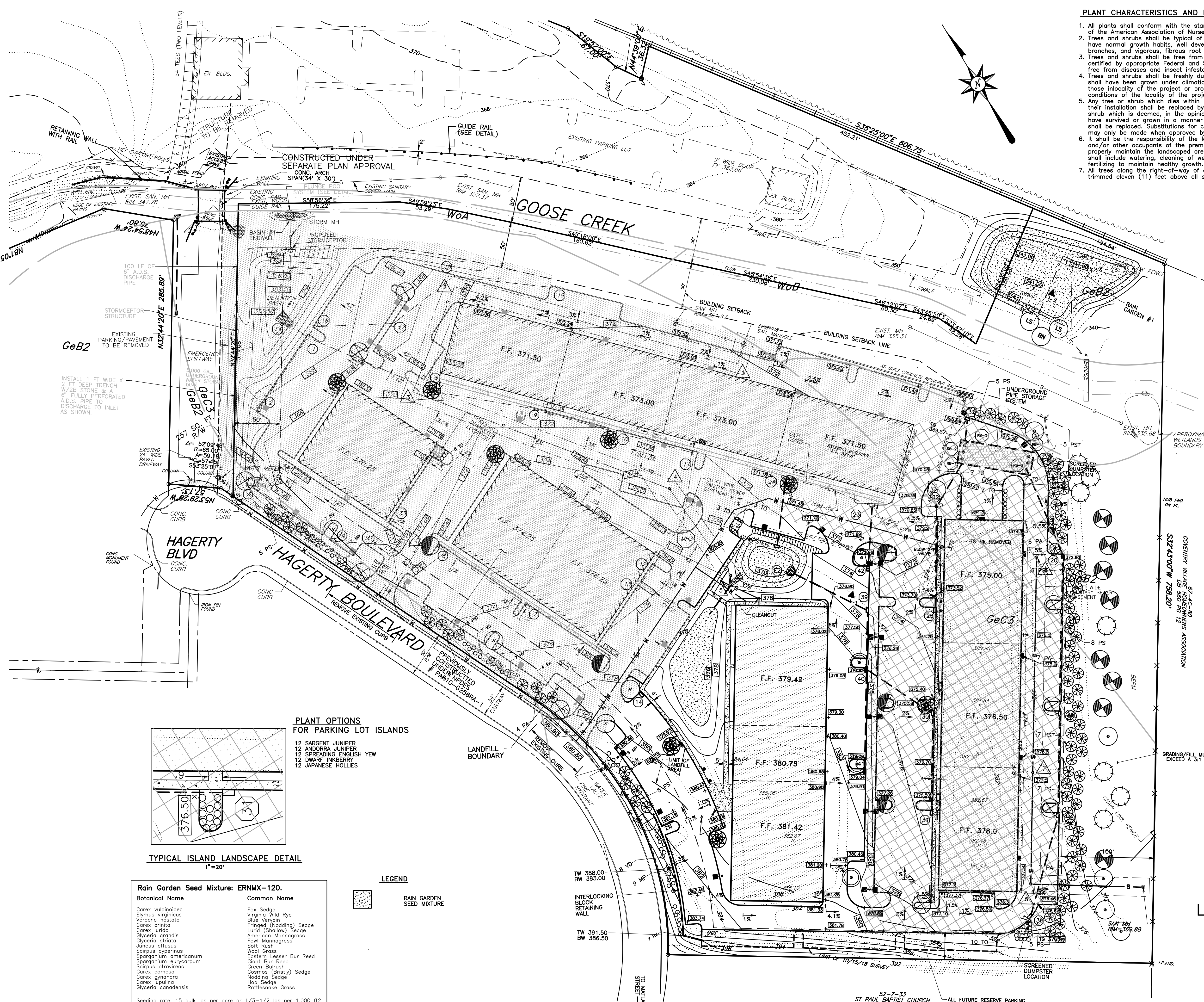
WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Whiteland Business Park
855 Springdale Drive, Suite 202
Exton, Pennsylvania 19341
Phone: 610-903-0060
Fax: 610-903-0080

Project- 2188
Date- 5-11-99
Scale- 1" = 50'
Drawn- C.E.
Checked- A.B.
Sheet- 8 OF 12

Plotted: 10/27/2020 File: F:\B\2188\FPS\2188-B14.pro Ver.-



PLANT CHARACTERISTICS AND MAINTENANCE

- All plants shall conform with the standards for nursery stock of the American Association of Nurserymen.
- Trees and shrubs shall be typical of their species and variety; have normal growth habits, well developed, densely foliated branches, and vigorous, fibrous root systems.
- Trees and shrubs shall be free from defects and injuries and certified by appropriate Federal and State Authorities to be free from diseases and insect infestations.
- Trees and shrubs shall be freshly dug and nursery grown. They shall have been grown under climatic conditions similar to those of the locality of the project.
- Any tree or shrub which dies within 18 months following their installation shall be replaced by the developer. Any tree or shrub which is deemed, in the opinion of the Township, not to have survived or grown in a manner characteristic of its type, shall be replaced. Substitutions for certain species of plants may only be made when approved by the Board of Supervisors.
- It shall be the responsibility of the landowners, tenants and/or other occupants of the premises to adequately and properly maintain the landscaped areas, which responsibility shall include watering, cleaning of weeds and debris, pruning/fertilizing to maintain healthy growth.
- All trees along the right-of-way of any property shall be kept trimmed eleven (11) feet above all streets.

LEGEND

	EXISTING	PROPOSED
CURB	—	—
SIDEWALK	—	—
PRIVACY FENCE	—	—
RAMP	—	—
SANITARY SEWER	—	—
SANITARY MANHOLE	—	—
STORM SEWER	—	—
STORM MANHOLE	—	—
INLET	—	—
CONTOUR LINE	—	—
UTILITY POLE	—	—
PARKING LOT LIGHT	—	—
LIMIT OF LANDFILL AREA	—	—

PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME	SIZE
ILEX GLABRA COMPACTA	DWARF INKBERRY	18"-24"
JUNIPERUS HORIZ FLUMOSA	ANDORRA JUNIPER	18"-24"
JUNIPER CHINENSIS SARGENTII	SARGENT JUNIPER	18"-24"
ILEX CRENATA COMPACTA	JAPANESE HOLLY	18"-24"
TAKUS BACCATA REPANDENS	SPREADING ENGLISH YEW	18"-24"

PLANT SCHEDULE SHRUBS

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SPREAD/HEIGHT	CALIPER	CONDITION
HV	21	HAMAMELIS VIRGINIANA	WITCH HAZEL	3'-4'	—	B & B
MP	21	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	3'-4'	—	B & B
VD	15	VIBURNUM DENTATUM	ARROWWOOD	3'-4'	—	B & B
TO	43	THUJA OCCIDENTALIS NIGRA	DARK AMERICAN ARBORVITAE	5'	—	B & B

PLANT SCHEDULE EVERGREEN TREES

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SPREAD/HEIGHT	CALIPER	CONDITION
PA	24	PICEA ABIES	NORWAY SPRUCE	8'	—	B & B
PS	42	PINUS STROBUS	WHITE PINE	8'	—	B & B SHEARED
PST	17	PSUEDOTSUGA TAXIFOLIA	DOUGLAS FIR	8'	—	B & B

PLANT SCHEDULE BUFFER TREES

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SPREAD/HEIGHT	CALIPER	CONDITION
○	5	ACER RUBRUM OCTOBER GLORY	OCTOBER GLORY RED MAPLE	12'-14'	2"-2 1/2"	B & B
●	8	LIRIODENDRON TULIPFERA	TULIP POPLAR	12'-14'	2"-2 1/2"	B & B
⊙	7	QUERCUS PALUSTRIS	PIN OAK	12'-14'	2"-2 1/2"	B & B

PLANT SCHEDULE SHADE TREES

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SPREAD/HEIGHT	CALIPER	CONDITION
○	5	TILIA CORDATA GREENSPIRE	GREENSPIRE LINDEN	12'-14'	2"-2 1/2"	B & B
●	5	ZELKOVA SERRATA VILLAGE GREEN	VILLAGE GREEN ZELKOVA	12'-14'	2"-2 1/2"	B & B
⊕	10	PLATANUS X ACERFOLIA BLOODGOOD	BLOODGOOD LONDON PLANETREE	12'-14'	2"-2 1/2"	B & B
●	9	CARPINUS BETULUS EUROPEAN FASTIGIATA	EUROPEAN HORNBEEAM	12'-14'	2"-2 1/2"	B & B
⊙	4	ACER RUBRUM RED SUNSET	RED SUNSET RED MAPLE	12'-14'	2"-2 1/2"	B & B

- PLANT OPTIONS FOR PARKING LOT ISLANDS**
- 12 SARGENT JUNIPER
 - 12 ANDORRA JUNIPER
 - 12 SPREADING ENGLISH YEW
 - 12 DWARF INKBERRY
 - 12 JAPANESE HOLLIES

TYPICAL ISLAND LANDSCAPE DETAIL
1"=20'

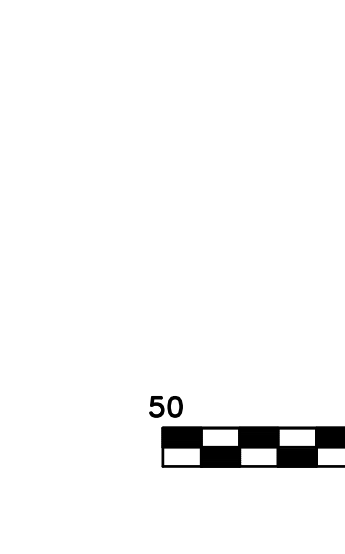
Rain Garden Seed Mixture: ERNMX-120.

Botanical Name	Common Name
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Verbena hastata	Blue Vervain
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Glyceria striata	Fowl Mannagrass
Juncus effusus	Soft Rush
Scirpus cyperinus	Wool Grass
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Sparganium eurycarpum	Giant Bur Reed
Scirpus atrovirens	Green Bulrush
Carex comosa	Cosmos (Bristly) Sedge
Carex gynandra	Nodding Sedge
Carex lupulina	Hop Sedge
Glyceria canadensis	Rattlesnake Grass

Seeding rate: 15 bulk lbs per acre or 1/3-1/2 lbs per 1,000 ft².

ERNST CONSERVATION SEED
9006 MERCER PIKE
MEADVILLE, PA 16335
www.ernstseed.com
1-800-873-3321 Fax (814) 336-5191

LEGEND



SEE SHEET #8 FOR LANDSCAPE NOTES AND LANDSCAPE DETAILS

AMENDED LANDSCAPE PLAN (FINAL)

- 5 10-8-07 ADJUST GRASSES PER CLIENT
- 4 3-26-07 REV. PER CCCD REVIEW COMMENTS
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LAND DEVELOPMENT PLAN FOR GOSHEN LEISURE DEVELOPMENT

WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA

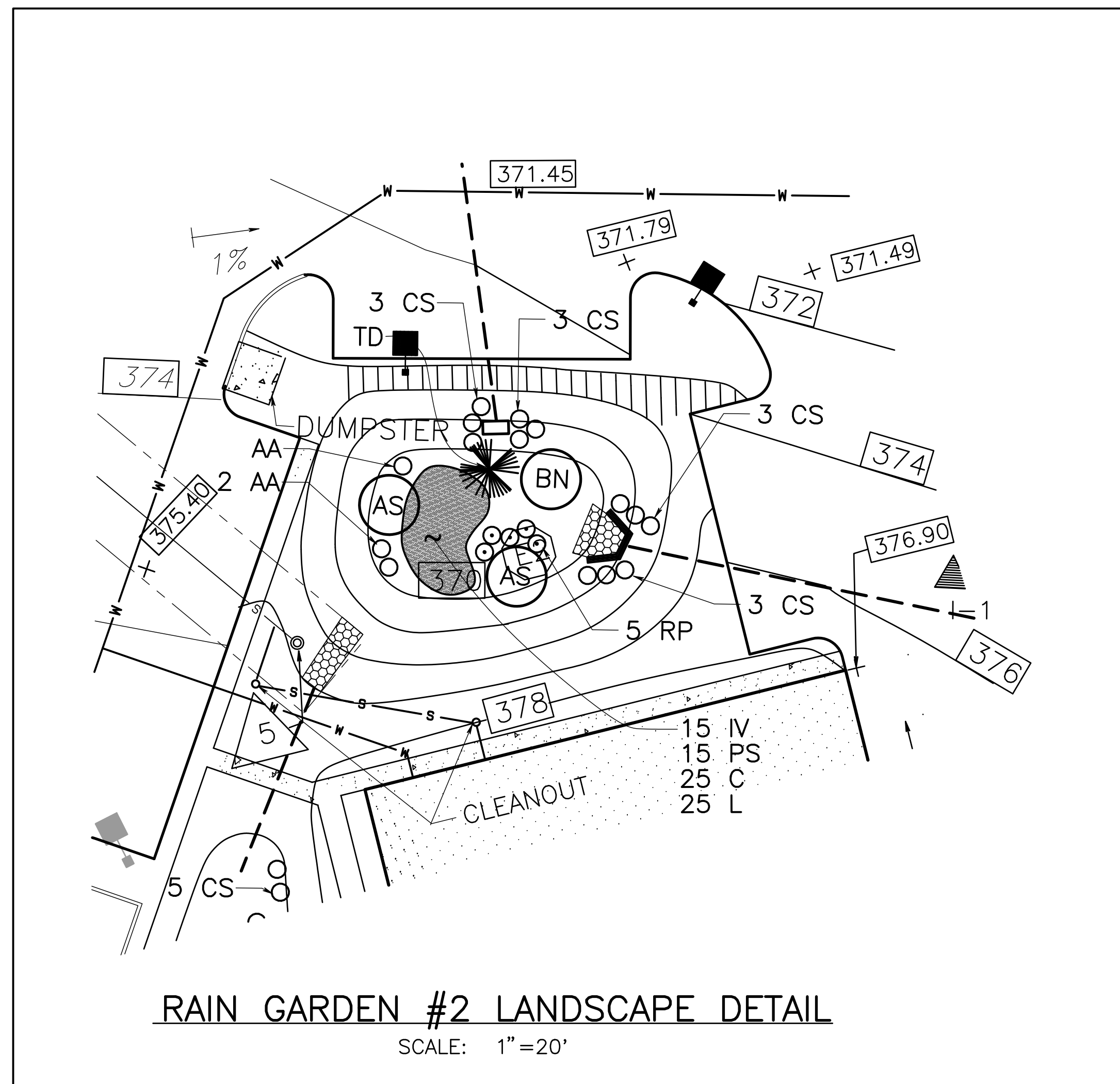
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- 10-1-13 REV. PER CCCD REVIEW COMMENTS 9-26-13
- 8-5-13 UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS



PLANT SCHEDULE SHRUBS

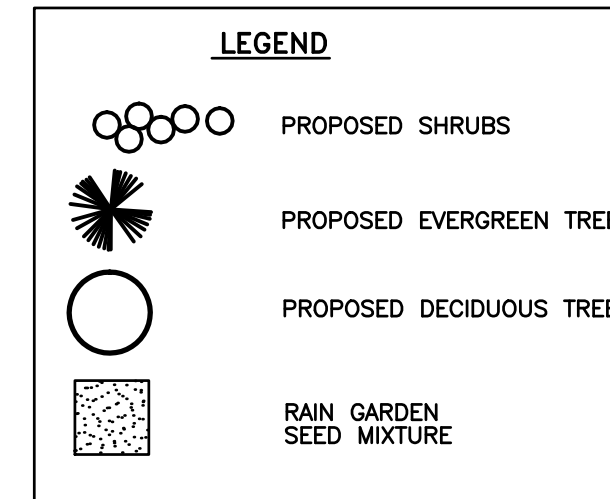
SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	CONDITION
AA	8	Aronia Arbutifolia Brittanisana	Red Chokeberry	2'	B & B
CS	17	Cornus Sericea Stolonifera	Redosier Dogwood	2'	B & B
RP	10	Rosa Palustris	Swamp Rose	2'	B & B

PLANT SCHEDULE TREES

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	CALIPER	CONDITION
AS	5	Amelanchier Alnifolia	Saskatoon Serviceberry	5'-7'	2"	B & B
BN	3	Betula Nigra Heritage	Heritage River Birch	8-10'	2"	B & B
TD	4	Taxodium Diatichum	Bald Cypress	5'		B & B

PLANT SCHEDULE GRASSES

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
SM	20	Scirpus Maritimus	Alkali Bulrush	2" PLUGS	CONTAINER
SL	20	Sagittaria Latifolia	Duck Potato	2" PLUGS	CONTAINER
C	50	Carex Crinita	Fringed Sedge	2" PLUGS	CONTAINER
L	25	Leersia Oryzoides	Rice Cut Grass	2" PLUGS	CONTAINER



WETLAND PLANTING REQUIREMENTS

LISTED PLANTS ARE TO BE OBTAINED BY TRANSPLANTING NURSERY STOCK FROM LOCAL AQUATIC PLANT NURSERIES. THE TRANSPLANTING MUST BE PERFORMED BETWEEN EARLY APRIL TO MID-JUNE. THE PLANTS SHOULD BE ORDERED AT LEAST THREE MONTHS IN ADVANCE TO ENSURE THE AVAILABILITY OF THE LISTED PLANTS. PLANTS SHOULD BE INSTALLED IN CLUMPS WITH INDIVIDUAL PLANTS LOCATED AN AVERAGE OF 24 INCHES ON CENTER WITHIN EACH CLUMP. INDIVIDUAL PLANTS SHOULD BE SPACED 24 INCHES ON CENTER. POST-NURSERY CARE OF WETLAND PLANTS IS VERY IMPORTANT IN THE INTERVAL BETWEEN DELIVERY OF THE PLANTS AND THEIR SUBSEQUENT INSTALLATION, AS THEY ARE PRONE TO DESICCATION. STOCK SHOULD BE FREQUENTLY WATERED AND SHADED WHILE ON-SITE.

PLANT SCHEDULE HERBACEOUS PERENNIALS

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
AF	15	Aster Firmus	Shining Aster	2" PLUGS	CONTAINER
BC	25	Bidens Cernua	Nodding Bur Marigold	2" PLUGS	CONTAINER
LL	30	Ludwigia Linearis	Narrowleaf Primrose Willow	2" PLUGS	CONTAINER
SR	20	Solidago Riddellii	Ridell's Goldenrod	2" PLUGS	CONTAINER
IV	30	Iris Versicolor	Blue Flag	2" PLUGS	CONTAINER
PS	35	Pen Thorum Sedoides	Ditch Stonecrop	2" PLUGS	CONTAINER
MR	15	Mimulus Ringens	Square Stemmed Monkey Flower	2" PLUGS	CONTAINER

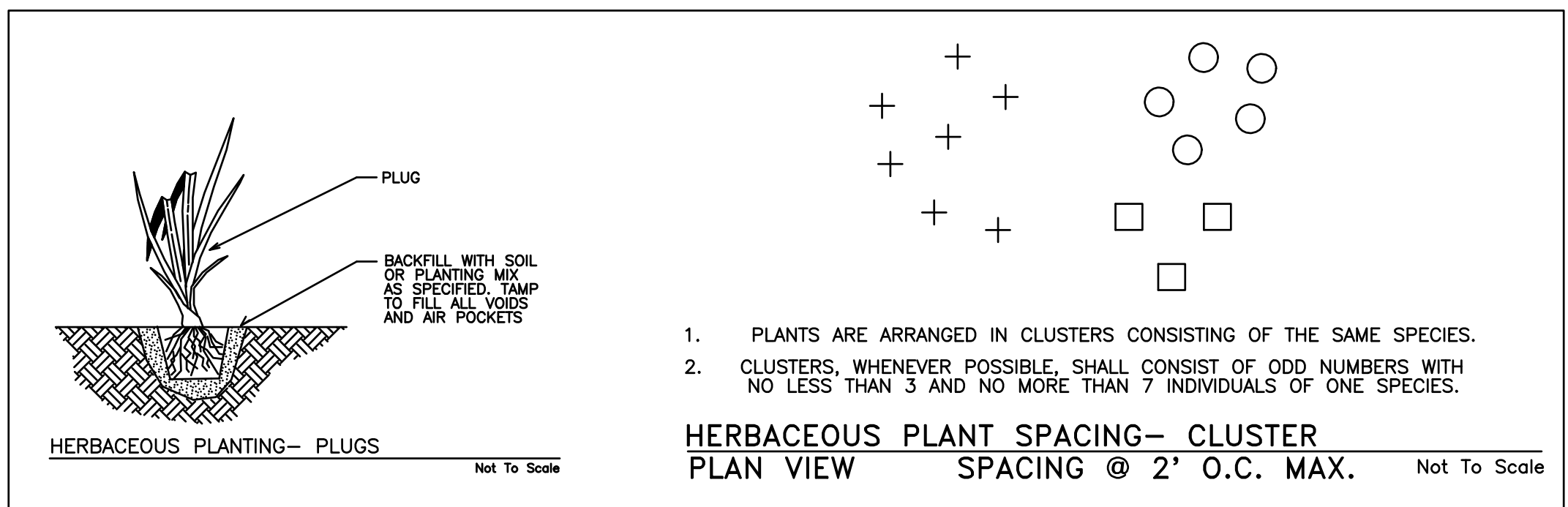
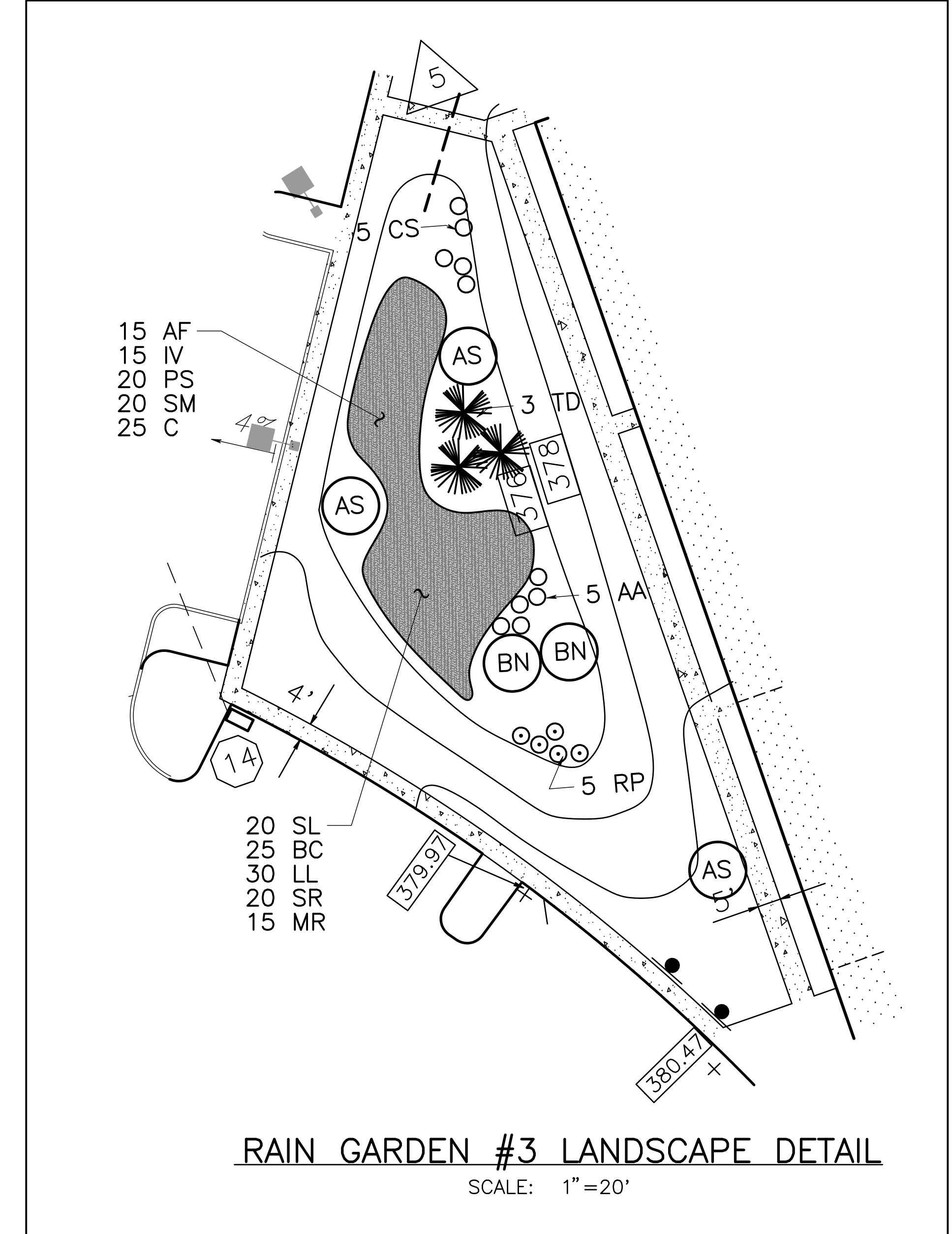
Rain Garden Seed Mixture: ERNMX-120.

Botanical Name	Common Name
Carex vulpinoidea	Fox Sedge
Elymus virginicus	Virginia Wild Rye
Verbena hastata	Blue Vervain
Carex crinita	Fringed (Nodding) Sedge
Carex lurida	Lurid (Shallow) Sedge
Glyceria grandis	American Mannagrass
Juncus striato	Fowl Mannagrass
Juncus effusus	Soft Rush
Scirpus cyperinus	Wool Grass
Sparganium americanum	Eastern Lesser Bur Reed
Sparganium eurycarpum	Giant Bur Reed
Scirpus atrovirens	Green Bulrush
Carex comosa	Cosmos (Bristly) Sedge
Carex gymandra	Nodding Sedge
Carex lupulina	Hoop Sedge
Glyceria canadensis	Rattlesnake Grass

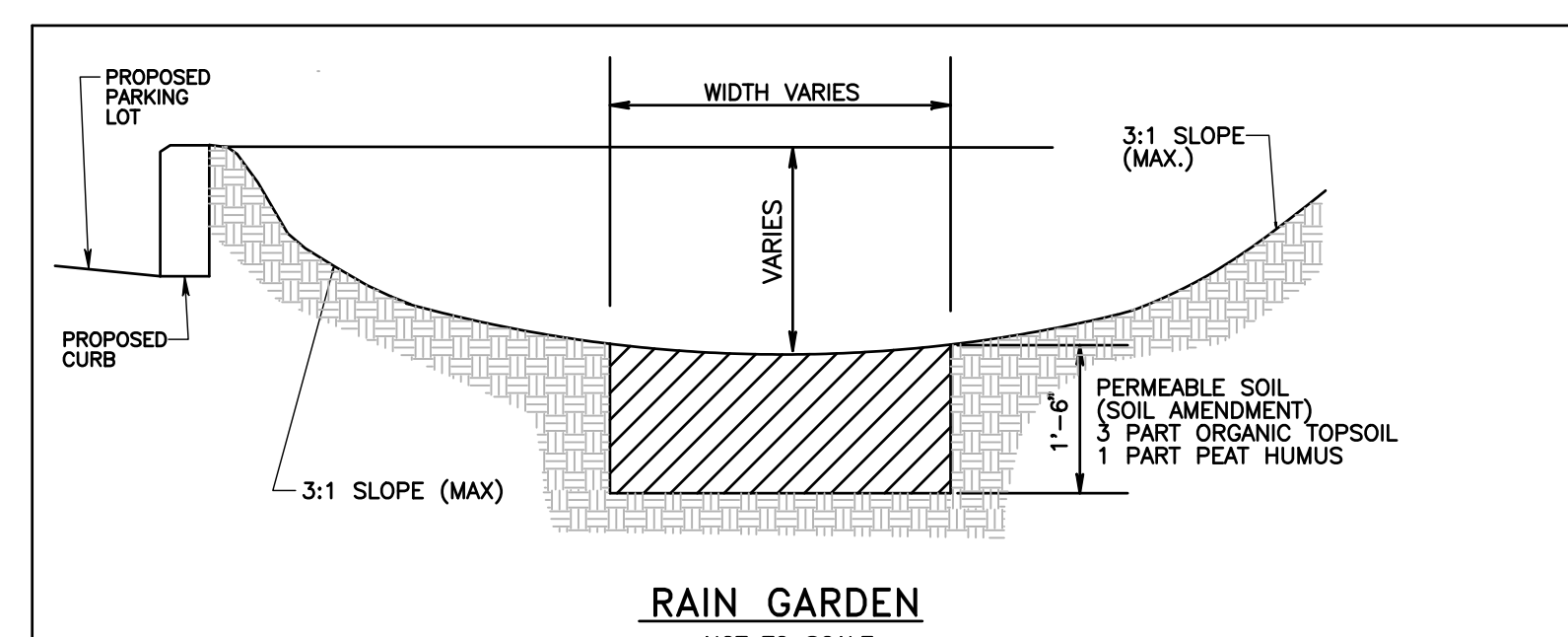
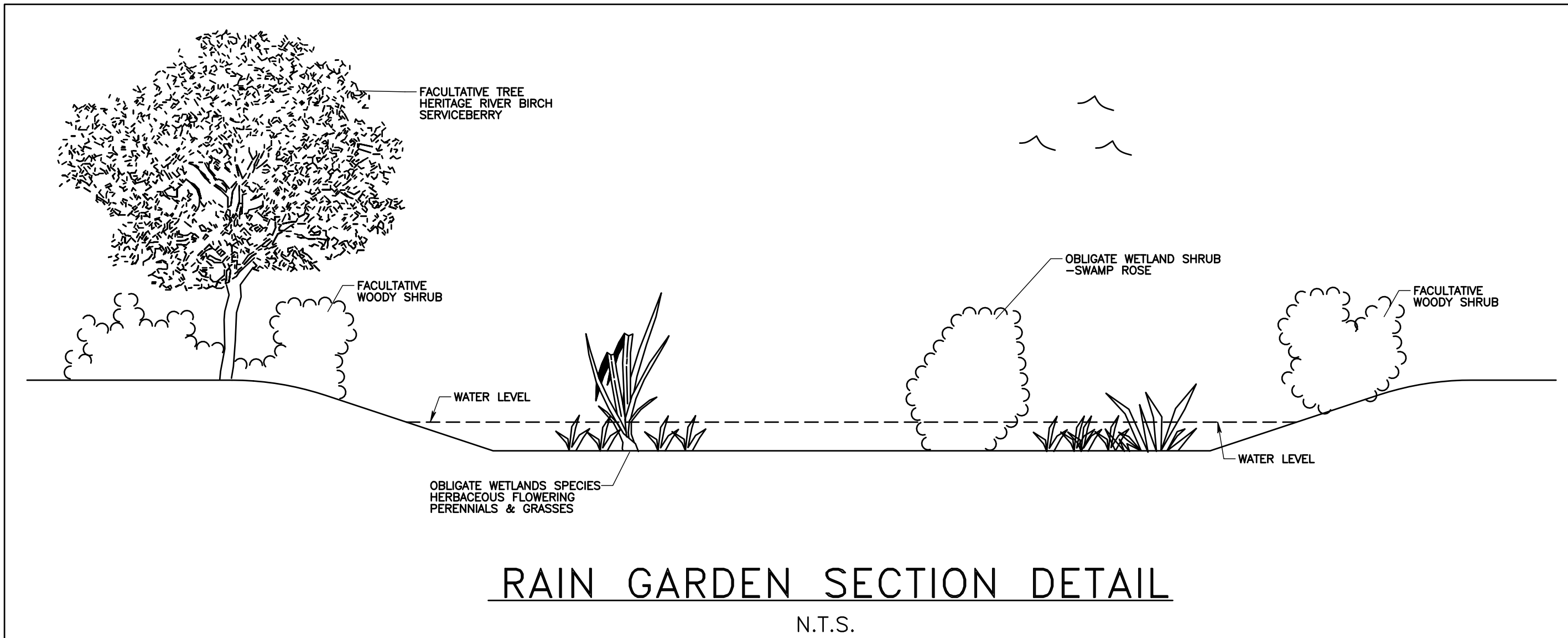
Seeding rate: 15 bulk lbs per acre or 1/3-1/2 lbs per 1,000 ft².

ERNST CONSERVATION SEED
9006 MERCER PIKE
HEADVILLE, PA 16335
www.ernstseed.com

1-800-873-3321 Fax (814) 336-5191



1. PLANTS ARE ARRANGED IN CLUSTERS CONSISTING OF THE SAME SPECIES.
 2. CLUSTERS, WHENEVER POSSIBLE, SHALL CONSIST OF ODD NUMBERS WITH NO LESS THAN 3 AND NO MORE THAN 7 INDIVIDUALS OF ONE SPECIES.
- HERBACEOUS PLANT SPACING- CLUSTER PLAN VIEW** SPACING @ 2' O.C. MAX. Not To Scale



- NOTE:**
1. AT CURB OPENINGS THE BOTTOM OF RAIN GARDEN ELEVATION VERSUS FINISH PAVEMENT ELEVATION VARIES.
 2. THE OWNER/PROJECT ENGINEER MUST BE CONTACTED IF DURING INSTALLATION OF THE RAIN GARDEN ANY UNFAVORABLE CONDITIONS ARE ENCOUNTERED (I.E. GROUNDWATER AND/OR BEDROCK) TO DETERMINE THE APPROPRIATE RESOLUTION.

RAIN GARDEN SPECIFICATIONS

RAIN GARDEN	TOP OF BED ELEVATION	BOTTOM OF BED/ STORAGE AREA (ELEVATION)
1	342.00	341.00
2	374.00	369.00
3	374.00	378.00

AMENDED RAIN GARDEN PLAN (FINAL)

LAND DEVELOPMENT PLAN FOR
GOSHEN LEISURE DEVELOPMENT

WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA

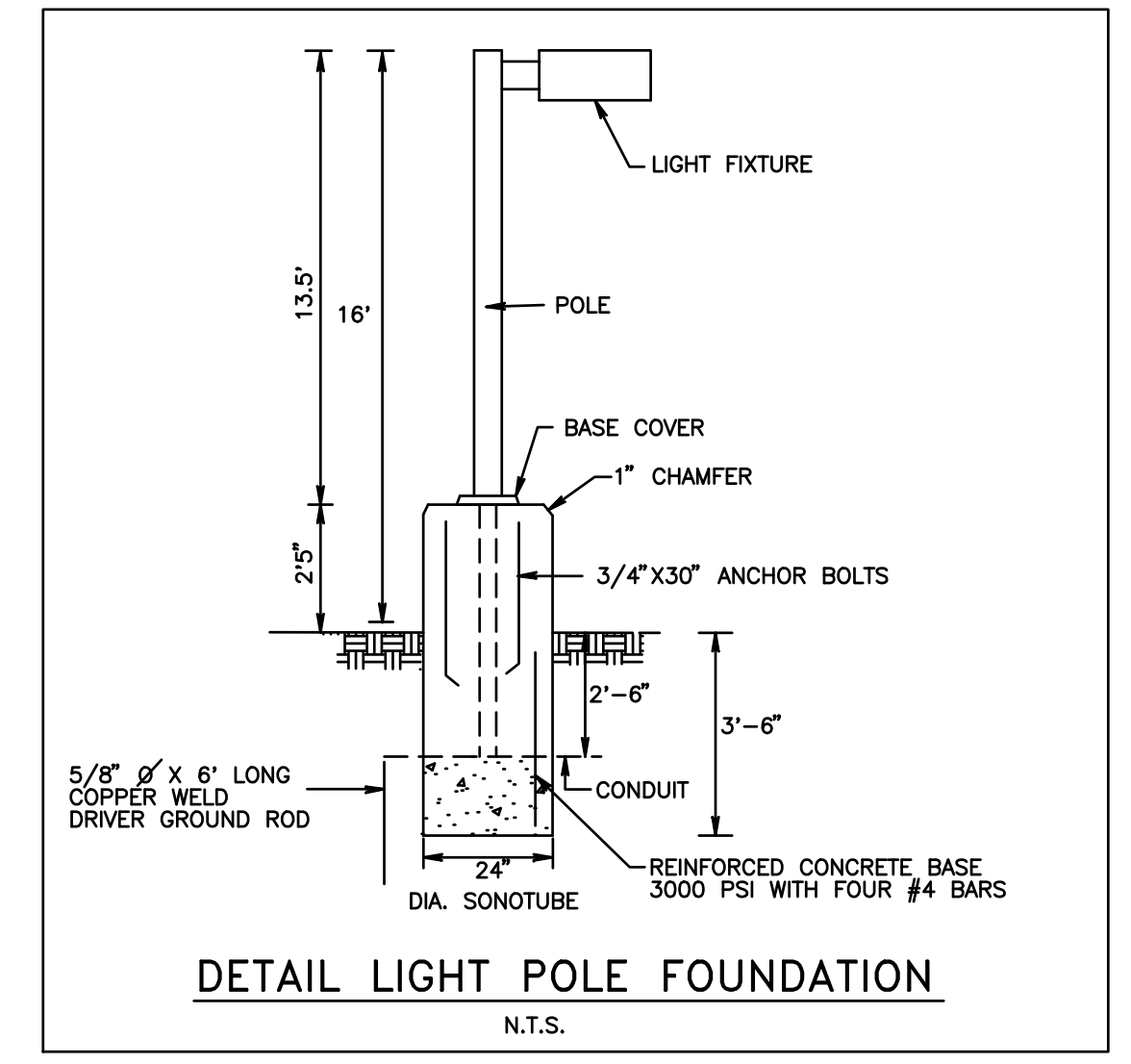
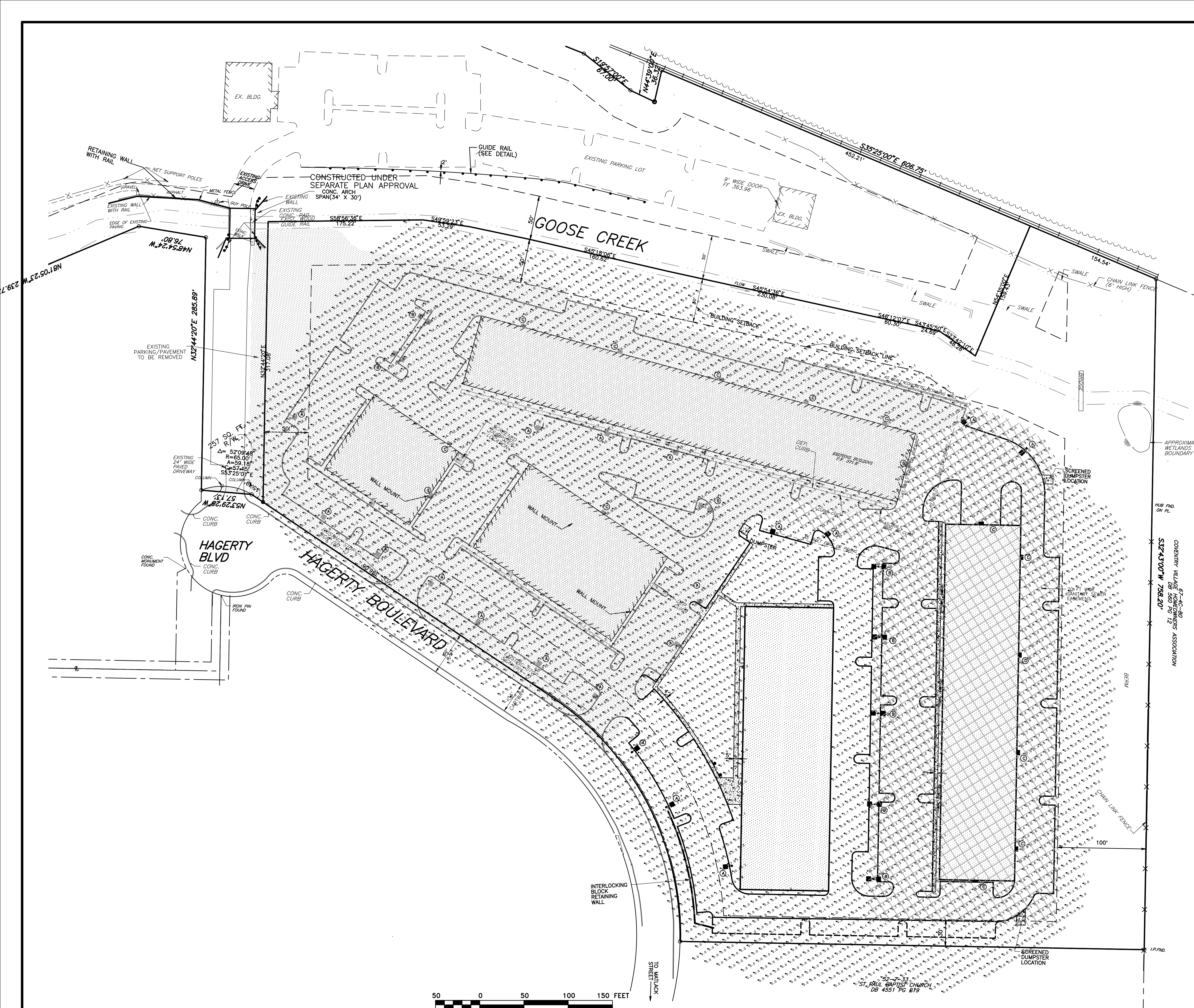
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Whiteland Business Park
855 Springdale Drive, Suite 202
Exton, Pennsylvania 19341
Phone: 610-903-0060
Fax: 610-903-0080

EBW

Project- 2188
Date- 5-11-99
Scale- 1"= 50'
Drawn- C.E.
Checked- A.B.
Sheet-9A OF 12
Ver.-

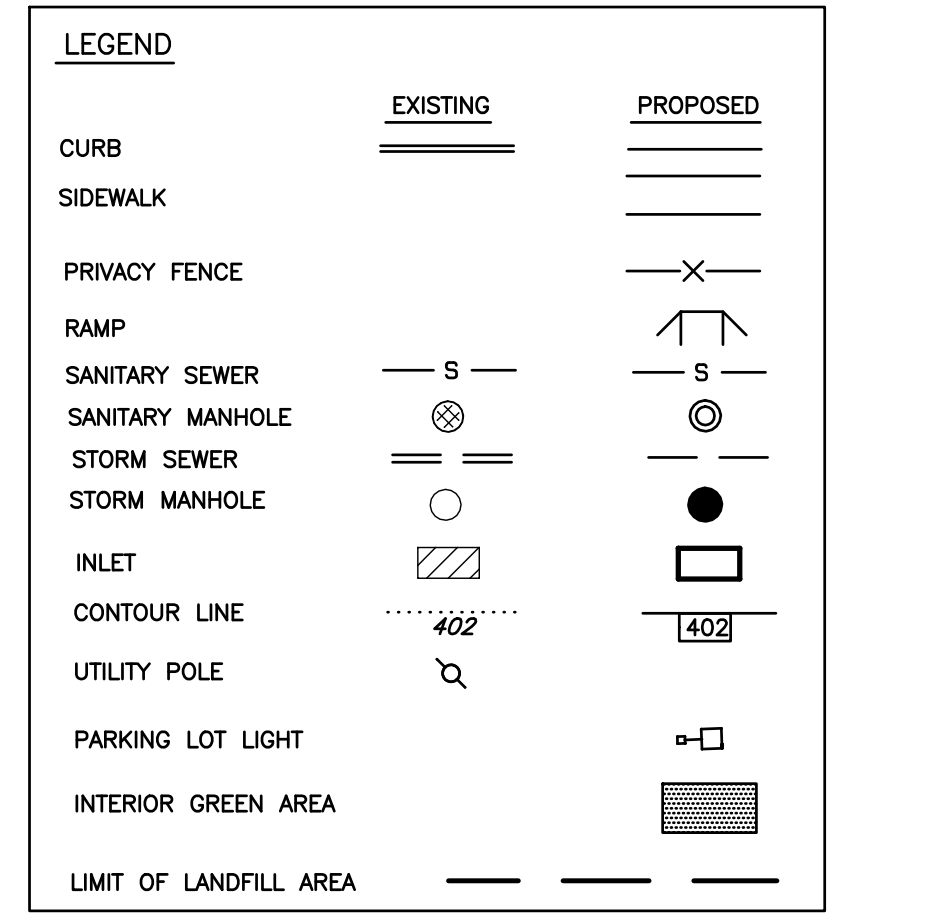
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LUMINAIRE SCHEDULE

Symbol	Qty	Catalog Number	Description	Lamp	Mounting Height	File	Lumens	LLF
ⓐ	19	ECA 181 FH 400MH	ECOLINE TYPE FH OPTICS POST MOUNT SINGLE FIXTURE HORIZ. POS.	400 WATT METAL HALIDE LAMP	16'	ECPH4M.IES	32000	0.72
ⓑ	8	ECA 182 FH 400MH	ECOLINE TYPE FH OPTICS POST MOUNT DOUBLE FIXTURE HORIZ. POS.	400 WATT METAL HALIDE LAMP	16'	ECPH4M.IES	32000	0.72
ⓒ	15	ECW 181 FH 400MH	ECOLINE TYPE FH OPTICS WALL MOUNT SINGLE FIXTURE HORIZ. POS.	400 WATT METAL HALIDE LAMP	16'	ECPH4M.IES	32000	0.72

MAINTAINED FOOTCANDLES	INITIAL FOOTCANDLES
AVERAGE Fc = 1.9	AVERAGE Fc = 2.63
MAXIMUM Fc = 29.0	MAXIMUM Fc = 40.27
MINIMUM Fc = 0.1	MINIMUM Fc = 0.138



AMENDED LIGHTING PLAN (FINAL)

7	10-1-13	REV. PER CCCD REVIEW COMMENTS 9-26-13
6	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
5	10-8-07	ADJUST GRADES PER CLIENT
4	3-26-07	REV. PER CCCD REVIEW COMMENTS
3	2-08-07	REV. RIPARIAN BUFFER AREA/LAYOUT
2	10-06-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
1	10-26-05	REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN FOR
GOSHEN LEISURE DEVELOPMENT

WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA

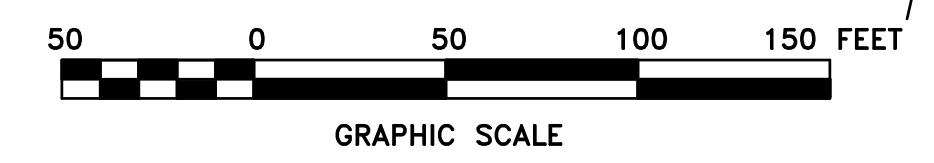
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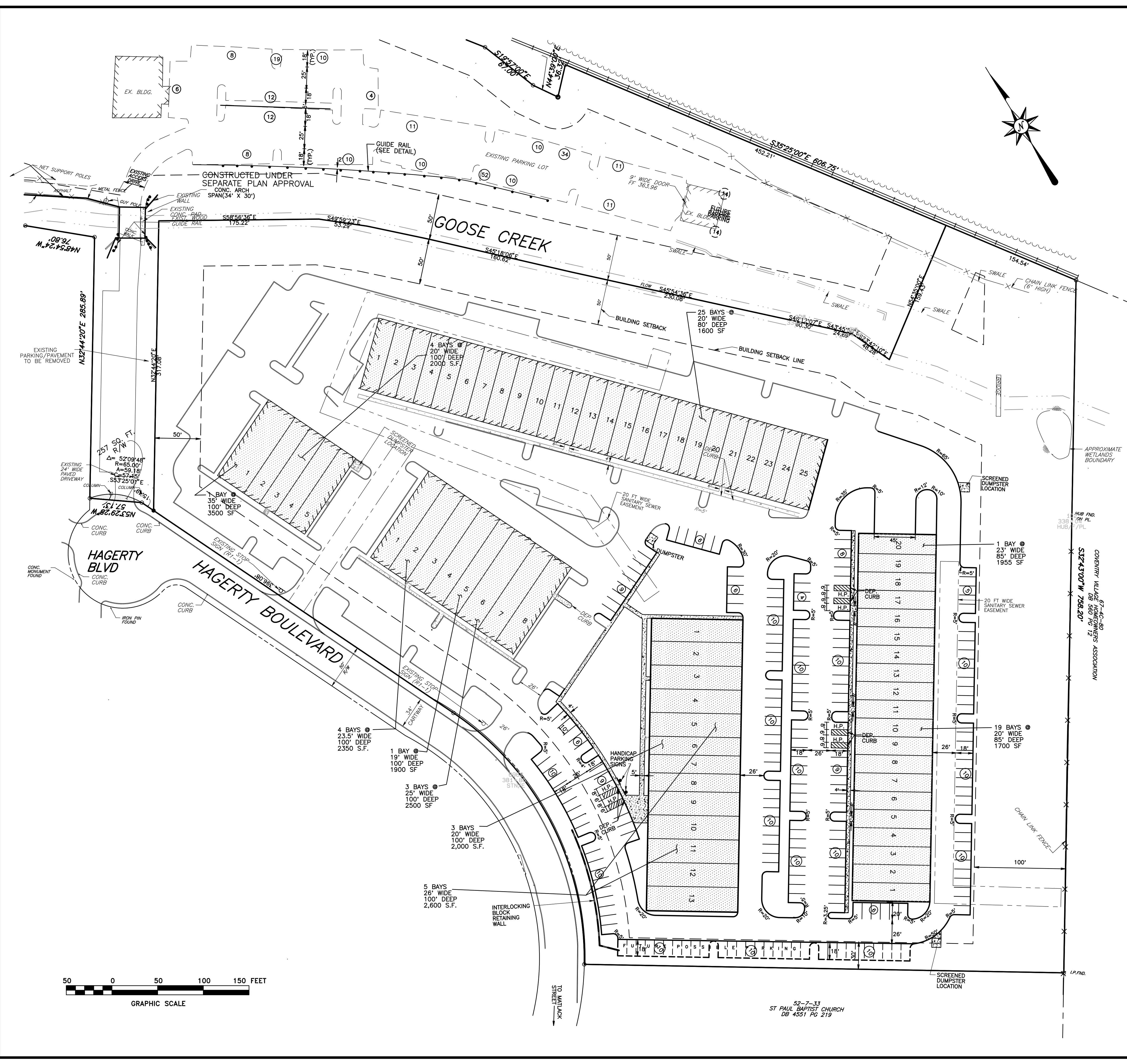
Whiteland Business Park
855 Springdale Drive, Suite 202
Exton, Pennsylvania 19341
Phone: 610-903-0060
Fax: 610-903-0080

EBW

Project- 2188
Date- 5-11-99
Scale- 1" = 50'
Drawn- C.E.
Checked- A.B.
Sheet- 10 OF 12
Ver.-

Plotted: 10/27/2020 File: F:\JB\2188\FPS\2188-B14.pro





AMENDED
LEASE PLAN (FINAL)

7	10-1-13	REV. PER CCCD REVIEW COMMENTS 9-26-13
6	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
5	10-8-07	ADJUST GRADES PER CLIENT
4	3-26-07	REV. PER CCCD REVIEW COMMENTS
3	2-08-07	REV. RIPARIAN BUFFER AREA/LAYOUT
2	10-04-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
1	10-26-05	REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN
FOR
GOSHEN LEISURE DEVELOPMENT

WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA.

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

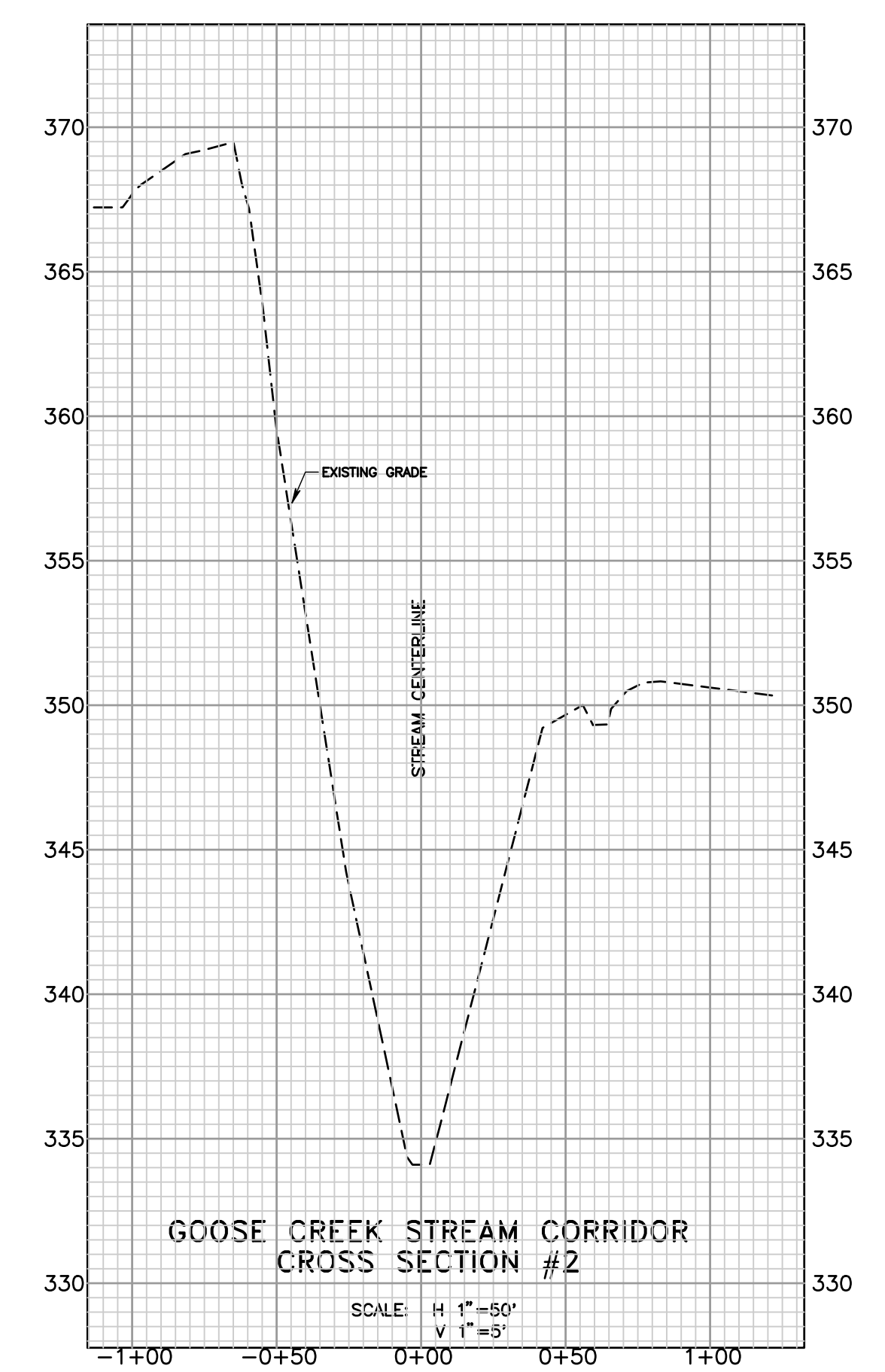
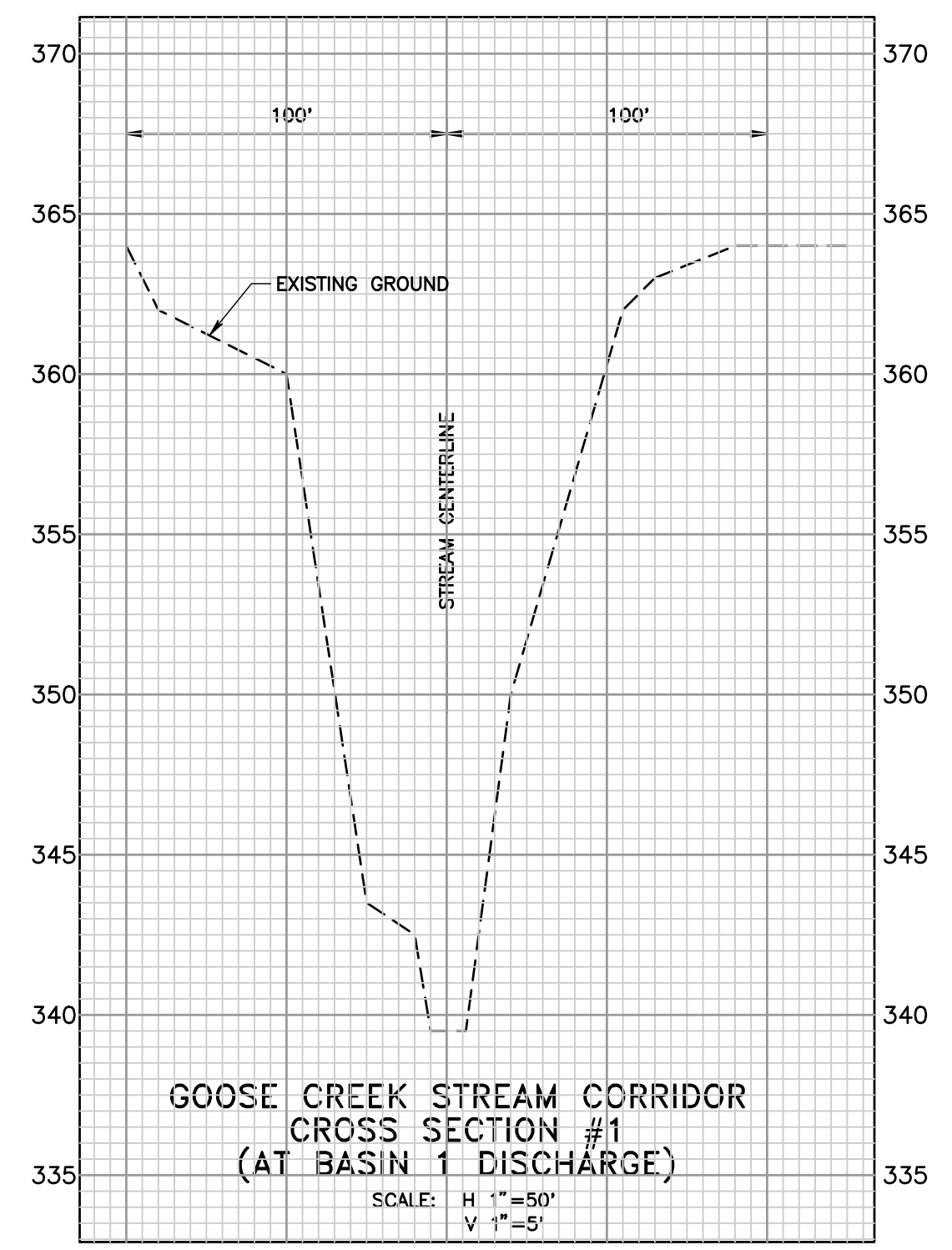
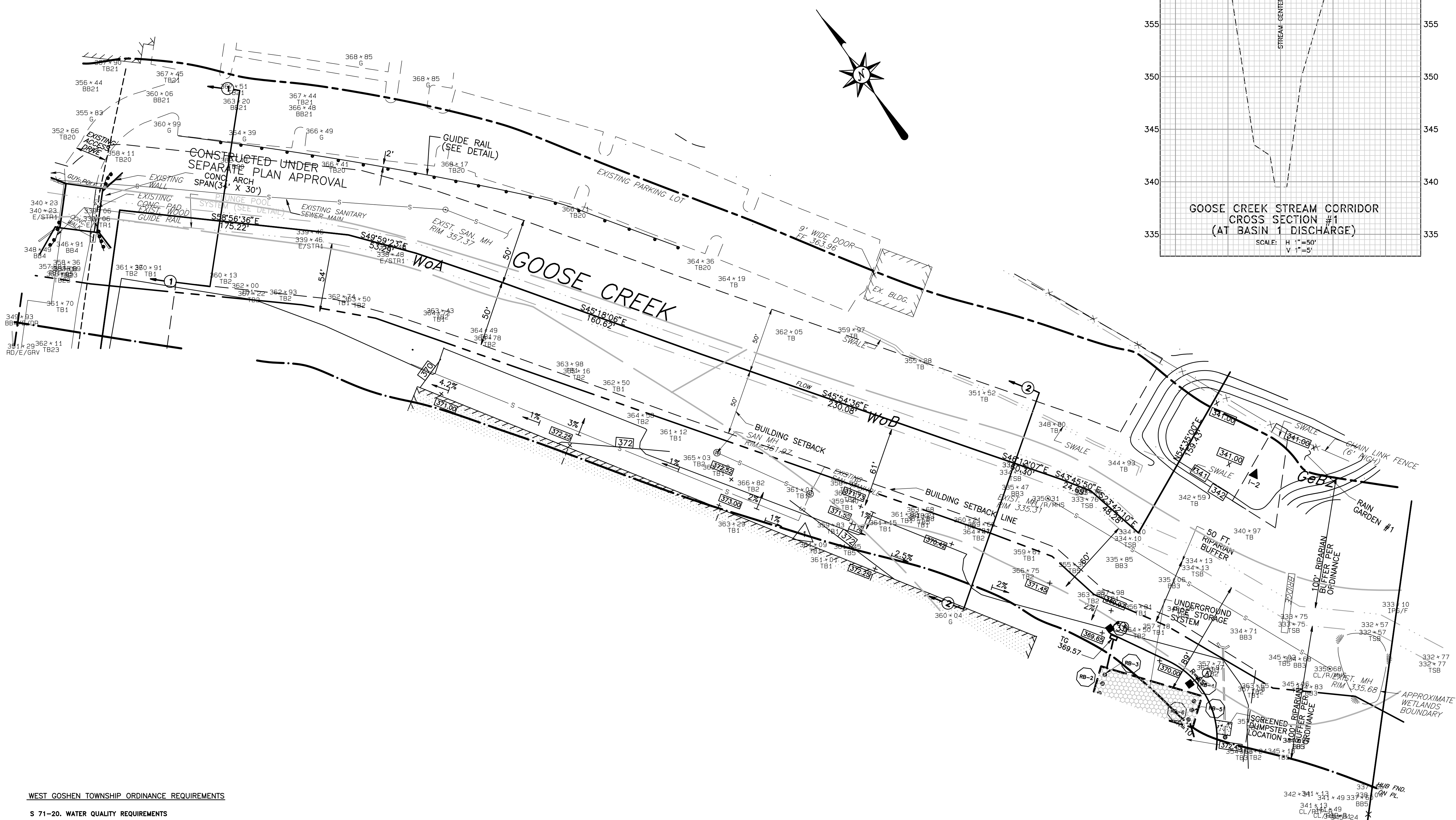
Whiteland Business Park
855 Springdale Drive, Suite 202
Exton, Pennsylvania 19341
Phone: 610-903-0060
Fax: 610-903-0080



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Date- 3-10-04
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Drawn- C.E.
Checked- A.B.
Sheet- 11 OF 12

Plotted: 10/27/2020 File: F:\B\2188\FPS\2188-B14.pro Ver: -

52-7-33
ST PAUL BAPTIST CHURCH
DB 4551 PG 219



AMENDED RIPARIAN BUFFER PLAN AND DETAIL SHEET (FINAL)

7	10-1-13	REV. PER CCCD REVIEW COMMENTS 9-26-13
6	8-5-13	UPDATE PLANS PER DEP CHAP 102 REQUIREMENTS
5	10-8-07	ADJUST GRADES PER CLIENT
4	3-26-07	REV. PER CCCD REVIEW COMMENTS
3	2-08-07	REV. RIPARIAN BUFFER AREA/LAYOUT
2	10-04-06	REV. PER TWP. ENGR. REVIEW LETTER DATED 7-31-06
1	10-26-05	REV. PER TWP. ENGR. REVIEW LETTER DATED 10-19-05

LAND DEVELOPMENT PLAN FOR
GOSHEN LEISURE DEVELOPMENT

WEST GOSHEN TOWNSHIP CHESTER COUNTY, PA

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

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Project- 2188
Date- 3-10-04
Scale- 1"= 40'
Drawn- C.E.
Checked- A.B.
Sheet- 12 OF 12

