

LEGEND
FOR ENTIRE PLAN SET
(NOT TO SCALE)

EXISTING

PROPOSED

ON-SITE PROPERTY LINE / R.O.W. LINE	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE
EASEMENT LINE	SETBACK LINE
CONCRETE CURB & GUTTER	STORM SEWER
SANITARY SEWER MAIN	SANITARY SEWER LATERAL
UG WATER LINE	UG ELECTRIC LINE
UG GAS LINE	OVERHEAD WIRE
UG TELEPHONE LINE	UG CABLE LINE
SPOT ELEVATIONS	CONTOUR LINE
HYDRANT	SANITARY MANHOLE
STORM MANHOLE	WATER METER
WATER VALVE	GAS VALVE
GAS METER	TYPICAL END SECTION
HEADWALL OR ENDWALL	YARD INLET
CURB INLET	CLEAN OUT
SANITARY LABEL	STORM LABEL
TYPICAL LIGHT	ACORN LIGHT
TRAFFIC LIGHT	UTILITY POLE
TYPICAL SIGN	TYPICAL NOTE TEXT
PARKING COUNTS	ELECTRIC MANHOLE
TELEPHONE MANHOLE	ELECTRIC BOX
ELECTRIC PEDESTAL	MONITORING WELL
TEST PIT	BENCHMARK
BORING	UTILITY POLE W/LIGHT
POLE LIGHT	WETLANDS
100 YEAR FLOOD PLAIN	LIMITS OF DISTURBANCE

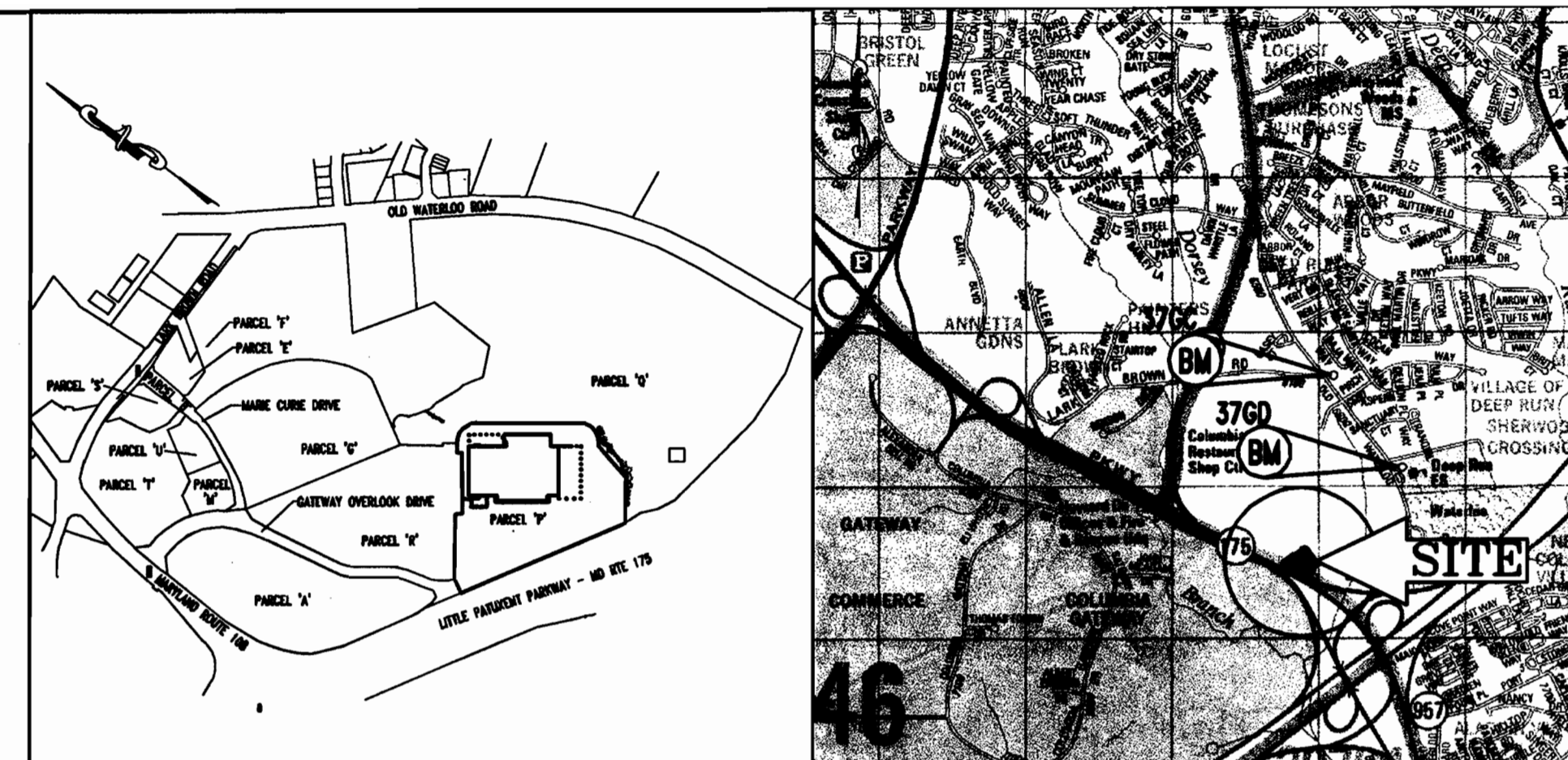


ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
LOWE'S OF COLUMBIA, MARYLAND
GATEWAY OVERLOOK SHOPPING CENTER
PARCEL P, BENSON EAST (F 05-58)

GENERAL NOTES:

- THE SUBJECT PROPERTY IS ZONED NEW TOWN PER THE HOWARD COUNTY COMPREHENSIVE ZONING PLAN DATED 2/2/04.
- EXISTING USE: VACANT LOT
PROPOSED USE: HOME IMPROVEMENT - ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
- BUILDING HEIGHT: 31'-4" **
**PLEASE REFER TO ARCHITECTURAL BUILDING ELEVATIONS, SHEET 28.
- REFUSE SHALL BE DISPOSED OF DAILY IN TRASH RECEPTALS. TRASH REMOVAL WILL BE PRIVATELY CONTRACTED.
- UTILITIES:
WATER, PUBLIC - 12" WATER LINE RUNS ALONG THE WEST SIDE OF THE PROPOSED BUILDING WITH A 10" STUB FOR THIS SITE. CONTRACT # 24-4284 D.
SEWER, PUBLIC - AN 8" SANITARY SEWER LINE RUNS ALONG THE WEST SIDE OF THE PROPOSED BUILDING AND ALONG THE FRONT OF THE PROPOSED BUILDING WITH AN 8" CONNECTION. CONTRACT # 24-4284 D.
STORM DRAIN - A 36" STORM DRAINAGE LINE IS SITUATED AT THE SOUTHEAST CORNER OF THE PROPERTY AND OUTLETS INTO A REGIONAL SWM FACILITY AND A 30" STORM DRAINAGE LINE IS SITUATED AT THE NORTHEAST CORNER OF THE PROPERTY AND OUTFALLS INTO A REGIONAL SWM FACILITY.
- ALL HOWARD COUNTY STORM WATER QUANTITY AND QUALITY REQUIREMENTS WILL BE MET BY AN EX. REGIONAL STORMWATER MANAGEMENT FACILITY COMPLETED UNDER SDP-04-163, DATED OCT. 18, 2004. THE STORMWATER MANAGEMENT FACILITIES PROPOSED FOR THIS SITE ARE ALL PRIVATELY OWNED AND MAINTAINED. WATER QUALITY VOLUME AND CHANNEL PROTECTION WILL BE PROVIDED IN TWO WET PONDS AND ONE MICROPOOL EXTENDED DETENTION POND. NO STORMWATER MANAGEMENT IS PROVIDED FOR THE RESIDENTIAL USE PARCELS LOCATED ALONG OLD WATERLOO ROAD.
- ELECTION DISTRICT: 6
- DEED REFERENCE: PARCEL 482: LIBER 1151, FOLIO 56 LIBER 5289, FOLIO 330 PARCEL 587: LIBER 9266, FOLIO 229
- TAX MAP: 37, GRID: 1 & 2, PARCEL: P
- PROPERTY IS OUTSIDE THE 100-YEAR FLOOD PLAIN (FEMA FIRM # 240044 0038 B MAP 12/4/88).
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, MSHA STANDARDS AND SPECIFICATIONS, AND LOWE'S STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 3760 AND 376C WERE USED FOR THIS PROJECT.
- THERE ARE NO WETLANDS OR FLOOD PLAINS LOCATED ON PARCEL P.
- THERE ARE NO KNOWN BURIAL GROUNDS ON SITE.
- THE LOCATION AND ELEVATIONS OF THE EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF EXISTING UTILITIES IN THE WORK AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING BOHLER ENGINEERING, P.C. AT (703) 709-9500 IN THE EVENT OF ANY DISCREPANCIES ON THE PLAN OR IN THE RELATIONSHIP OF EXISTING GRADES WITH PROPOSED GRADES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF A DISCREPANCY BETWEEN A SCALED DIMENSION AND A FIGURED DIMENSION SHOWN ON THE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
- CONTRACTOR SHALL CONTACT THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1880.
- PUBLIC WATER AND SEWER ARE PROVIDED FOR THIS SITE.
- EXISTING UTILITIES (PUBLIC WATER & PUBLIC SANITARY SEWER) ARE PROPOSED BY OTHERS. PLEASE REFER TO NOTE #1.B UNDER SITE PLAN/DOCUMENT REFERENCES ON GENERAL NOTES SHEET (SHEET NO. 2).
- THE TRAFFIC IMPACT STUDY FOR THE OVERALL GATEWAY OVERLOOK SHOPPING CENTER WAS PREPARED BY WELLS & ASSOCIATES, LLC DATED 10/07/02 AND REVISED ON 02/20/03 AND FURTHER REVISED ON 01/17/05. A TRAFFIC GENERATION COMPARISON LETTER FOR THE PROPOSED LOWE'S SITE IS INCLUDED IN THIS SUBMITTAL PACKAGE.
- THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1202(b)(1)(i) OF THE FOREST CONSERVATION MANUAL, SINCE IT HAD PRELIMINARY PLAN APPROVAL PRIOR TO 12/31/92.
- LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL SHALL BE PROVIDED AS SHOWN ON THE LANDSCAPE SHEET. SURETY SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$81,900.00.
- OUTDOOR LIGHTING CONFORMS TO SECTION 134 OF THE ZONING REGULATIONS; SEE SHEET NO. 25 FOR DETAILS.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH MAXIMUM 2' CONTOUR INTERVALS PREPARED BY CONTROL POINT ASSOCIATES, INC. DATED 4/21/05.
- A KNOX BOX (FIRE DEPARTMENT ACCESS BOX) IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5' IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTEGRATED WITH THE FIRE ALARM SYSTEM NFPA-1 10.12.1.).
- A CROSS ACCESS EASEMENT AGREEMENT BETWEEN PARCELS P AND R SHALL BE RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MD.

GENERAL NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.



OVERALL PLAN VIEW
SCALE: 1"=80'

LOCATION MAP
COPYRIGHT ADC THE MAP PEOPLE
PERMIT USE NO. 20602153-5
SCALE: 1"=2000'

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SITE ANALYSIS DATA CHART

A. TOTAL PROJECT AREA: 590,838 S.F. OR 13.33 AC.	
B. LIMIT OF DISTURBED AREA: 594,815 S.F. OR 13.66 AC.	
C. PRESENT ZONING: NT (NEW TOWN) DISTRICT - EMPLOYMENT CENTER COMMERCIAL	
D. PROPOSED USE: HOME IMPROVEMENT - ONE STORY RETAIL SALES AND WAREHOUSE BUILDING.	
E. FLOOR AREA:	MAIN BUILDING (RETAIL SALES FLOOR AREA) = 117,737 S.F.
	GARDEN CENTER = 31,815 S.F.
	OFFICE AREA = 3,753 S.F.
	RECEIVING/STORAGE = 13,446 S.F.
	UTILITY ROOMS = 1,258 S.F.
	VESTIBULES = 1,319 S.F.
	TOTAL AREA = 169,328 S.F.
F. TOTAL NUMBER OF UNITS ALLOWED FOR PROJECT: N/A.	
G. TOTAL NUMBER OF UNITS PROPOSED ON SUBMISSION: N/A.	
H. MAXIMUM NUMBER OF EMPLOYEES: 175 (TOTAL) MAXIMUM NUMBER OF TENANTS: ONE (1)	
I. PARKING SPACES REQUIRED: 637 NET LEASABLE AREA/RETAIL SALES: 117,737 S.F./1,000 x 5 = 589 SPACES NET LEASABLE AREA/OFFICE USE: 3,753 S.F./1,000 x 2 = 8 SPACES GARDEN CENTER AREA: 31,815 S.F./1,000 x 1 = 32 SPACES TOTAL REQUIRED: 629 SPACES (NET LEASABLE AREA/RETAIL SALES DOES NOT INCLUDE THE OFFICE AREA, RECEIVING/STORAGE AREA, UTILITY ROOMS OR VESTIBULES) GARDEN CENTER PARKING REQUIREMENTS ARE PER SEC. 133.D.4.g OF THE HOWARD COUNTY ZONING REGULATIONS.	
J. PARKING SPACES PROVIDED:	STANDARD (9'x18') = 646 SPACES
	CONTRACTOR (10'x18') = 25 SPACES
	HANDICAP (6'x20') = 14 SPACES
	TOTAL = 685 SPACES
K. OPEN SPACE ON SITE: .71 AC. OR 5.30% OF SITE AREA.	
L. AREA OF RECREATION OPEN SPACE REQUIRED: N/A.	
M. BUILDING COVERAGE ON SITE: 3.89 AC. OR 29.18% OF SITE AREA.	
N. APPLICABLE DPZ FILE REFERENCE: F-05-58, SDP-04-163/24-4284-D, F-06-102, 503-05, PB 373 AND FDP-240-A	

BENCHMARK

GEODETIC SURVEY CONTROL #376D
N 553,237.204
E 1,372,353.605
ELEV. 290.931'
LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #376C
N 553,250.791
E 1,370,946.348
ELEV. 331.855'
LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

APPLICANT

LOWE'S HOME CENTERS, INC.
MATTHEW MINTON
P.O. BOX 1111
N. WILKESBORO, NC 28656
PHONE: (336) 658-4806

ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
P	8281 GATEWAY OVERLOOK DRIVE

PERMIT INFORMATION CHART

SUBDIVISION NAME: BENSON EAST	SECTION/AREA: X	LOT/PARCEL #: PARCEL P
PLAN NUMBER: 18448	BLOCK #/ZONING: 20 NEW TOWN	TAX MAP #/ELECT. DISTRICT: 37 6TH
WATER CODE: D 06	SEWER CODE: 3390000	SENSUS TRACT: 8067.03

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING (LOWE'S HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

COVER SHEET

BOHLER ENGINEERING, P.C.

* PROFESSIONAL ENGINEERING SERVICES *
* 22630 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164 *
* CONTACT: DAVID B. NEWBERRY *
* (703) 709-9500 FAX: (703) 709-9501 * WWW.BEPCORP.COM

DESIGNED BY: DBN
DRAWN BY: JWK
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: N.T.S.
DRAWING NO.: 1 OF 33

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/10/06
12/19/06
12/20/06

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 8-31-06

PREPARED BY:
BOHLER ENGINEERING, P.C.
22630 DAVIS DRIVE, SUITE 200
STERLING, VIRGINIA 20164
(703) 709-9500

MISS UTILITY



BEFORE YOU DIG, CALL 1-800-257-7777
PROJECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

DEMOLITION NOTES

- BOHLER ENGINEERING, P.C. IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION.
- ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AS WELL AS ALL FEDERAL, STATE AND LOCAL REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO BOHLER ENGINEERING, P.C. IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF SITE ACTIVITY.
- PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS RESPONSIBLE FOR/TO:
 - ENSURING THAT COPIES OF ALL APPLICABLE PERMITS AND APPROVALS ARE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW.
 - INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL AND/OR TREE PROTECTION MEASURES PRIOR TO SITE DISTURBANCE.
 - LOCATING (VERTICALLY AND HORIZONTALLY) ALL UTILITIES AND SERVICES, INCLUDING, BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
 - PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE SYSTEM THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
 - FAMILIARIZING THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
 - COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES.
 - A COMPLETE INSPECTION FOR CONTAMINANTS BY A LICENSED ENVIRONMENTAL TESTING AGENCY, OF ALL BUILDINGS AND/OR STRUCTURES TO BE REMOVED. SAME SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS. ANY/ALL CONTAMINANTS SHALL BE REMOVED AND DISPOSED OF BY A FEDERALLY LICENSED CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. ALL ENVIRONMENTAL WORK INCLUDING HAZARDOUS MATERIAL, SOILS, ASBESTOS, OR OTHER REFERENCED OR IMPLIED HEREIN IS THE SOLE RESPONSIBILITY OF THE OWNER'S ENVIRONMENTAL CONSULTANT.
- BOHLER ENGINEERING P.C. IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
 - THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF HIS ACTIVITIES. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION.
 - IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH DIRECTION BY OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
 - EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
 - CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH: THE "MANUAL ON UNIFORM TRAFFIC CONTROL," AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHTS - OF - WAY.
 - CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
 - DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINE WITHOUT WRITTEN PERMISSION OF THE APPLICABLE PROPERTY OWNER, AND/OR APPROPRIATE GOVERNMENT AGENCY.
 - USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
 - CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
 - THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
 - DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWN, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES.

GRADING & UTILITY NOTES

- LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO BOHLER ENGINEERING, P.C.. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. ALL PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL UTILITIES AND SERVICES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY BOHLER ENGINEERING, P.C. OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY BOHLER ENGINEERING, P.C. SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
- DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
- THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS/DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, BOHLER ENGINEERING, P.C. IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME.
- WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS SHALL BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTOR'S PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE.
- ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER OR OWNER'S REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT.
- ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE IN CONFORMANCE WITH THE GEOTECHNICAL REPORT OR LOWE'S STANDARD REQUIREMENTS, WHICH EVER IS GREATER, AND SHALL ALSO BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
- THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
- PAVEMENT SHALL BE SAW CUT IN STRAIGHT LINES TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS SHALL BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
- THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS SHALL BE ADJUSTED, IF REQUIRED, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MINIMUM SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO BOHLER ENGINEERING, P.C. IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
- IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY BOHLER ENGINEERING, P.C. IN WRITING OF ANY CONFLICTS.
- CONTRACTOR SHALL BE REQUIRED TO SECURE ALL NECESSARY PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR SHALL SUPPLY A COPY OF APPROVALS TO BOHLER ENGINEERING, P.C. AND OWNER PRIOR TO INITIATING WORK.

LOWE'S GRADING AND DRAINAGE NOTES

- ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, & ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE. ANY BURNING ON SITE SHALL BE SUBJECT TO LOCAL ORDINANCES & LOWE'S SPECIFICATIONS.
- ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
- GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
- SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED.
- AFTER PERMITS HAVE BEEN OBTAINED & EROSION CONTROL MEASURES INSTALLED, THE CONTRACTOR SHALL GRADE BUILDING PAD, GARDEN CENTER & APRONS TO 0" - 1/2" OF SUBGRADE AS PER SECTION 02300, DIVISION 2 OF LOWE'S STANDARD SITE SPECIFICATIONS.
- IMMEDIATELY APPLY & COMPACT STONE BASE FOR BUILDING PAD TO +/- 1/2" PRIOR TO EXCAVATING INTERIOR & PERIMETER FOOTINGS.
- FRENCH DRAIN SHALL BE INSTALLED IF DIRECTED BY THE GEOTECHNICAL ENGINEER OR AS SHOWN ON PLANS.
- GENERAL CONTRACTOR SHALL PROVIDE 2' x 2' x 6" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING.
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH DIVISION 2 OF LOWE'S STANDARD SITE SPECIFICATIONS.
- ALL ROOF DRAINS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END.

LOWE'S SITE UTILITY NOTES

- LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY GENERAL CONTRACTOR THE PROPER UTILITY COMPANY PROVIDER.
- GENERAL CONTRACTOR SHALL PROVIDE 2' x 2' x 6" THICK CONCRETE APRON AT ALL CLEANOUTS, VALVES AND METERS OUTSIDE OF BUILDING.
- GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
- ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM ROAD RIGHT-OF-WAY TO TRANSFORMER LOCATION. ASSOCIATED COST BY GENERAL CONTRACTOR.
- GENERAL CONTRACTOR SHALL FURNISH (2) - 4" TELEPHONE CONDUIT(S) AS SHOWN ON PLAN, VERIFY LOCATION OF TIE IN AT TELEPHONE COMPANY'S SERVICE LINE. PROVIDE NYLON PULL CURDS INSIDE CONDUIT.
- THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
- DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
- ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END.
- ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 3'-0" FROM THE MAIN.
- ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
- GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH DIVISION 2 OF LOWE'S STANDARD SITE SPECIFICATIONS.
- REFER TO FIRE PROTECTION SHEETS FOR LOCATION AND DETAIL OF FIRE LINE LEAD IN.
- FIRE LINE SHALL BE STUBBED UP 1' ABOVE FFE IN SPRINKLER ROOM.
- REFER TO PLUMBING SHEETS FOR LOCATION OF SEWER, DOMESTIC, AND IRRIGATION CONNECTIONS.

WATER LINE NOTES:

- NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, UTILITY POLE, LIGHT POLE, OR ANY OTHER OBSTRUCTION.
- FIRE LANES SHALL BE MARKED WITH SIGNS OF YELLOW WEATHER RESISTANT PAINT WITH LETTERING STATING, "FIRE LANE - NO PARKING".
- ALL PROPOSED WATER METERS ON-SITE TO BE LOCATED OUTSIDE OF THE BUILDING.
- PER THE LOCATION ANALYSIS REPORT BY SCHIRMER ENGINEERING DATED FEBRUARY 16, 2005, A FIRE PUMP WILL BE REQUIRED TO SATISFY LOWE'S SPRINKLER DESIGN CRITERIA. THE PROP. LOCATION OF THE FIRE PUMP IN THE BUILDING WILL BE DEPICTED UPON FURTHER COORDINATION WITH THE ARCHITECT IN THE FUTURE.
- ALL WATER MAINS ON SITE SHALL BE D.I.P. (CLASS 52 UNLESS OTHERWISE NOTED).
- PLEASE REFER TO "WATER AND SEWER EXTENSIONS PLAN SET" CONTRACT NO. 24-4284-D PREPARED BY PATTON, HARRIS, RUST, AND ASSOCIATES, P.C. P.C DATED 04/28/05, REVISED 4/06/06 FOR INFORMATION ON THE EXISTING 12" WATER MAIN ON-SITE.

SANITARY SEWER NOTES:

- PLEASE REFER TO "WATER AND SEWER PLAN SET" CONTRACT NO. 24-4284-D PREPARED BY PATTON, HARRIS, RUST, AND ASSOCIATES, P.C. DATED 04/28/05, REVISED 4/06/06 FOR INFORMATION ON THE EXISTING 8" PUBLIC SANITARY SEWER MAIN ON SITE.
- ALL SANITARY SEWER LINES SHALL BE D.I.P. OR PVC UNLESS OTHERWISE NOTED.
- ALL SANITARY MANHOLES ON-SITE SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.

- DEVELOPER/OWNERS PLANS:**
 - BENSON EAST EROSION AND SEDIMENT CONTROL AND LANDSCAPE PLANS PREPARED BY PATTON, HARRIS, RUST, AND ASSOCIATES, P.C. DATED 08/03/2004 (SDP-04-163).
 - WATER AND SEWER EXTENSION PLANS FOR BENSON EAST PREPARED BY PATTON, HARRIS, RUST, AND ASSOCIATES, P.C. DATED 6/8/05 (REVISED 04/06/06) (CONTRACT #24-4284-D).
 - ROADWAY AND STORM DRAIN PLANS PREPARED BY PATTON, HARRIS, RUST, AND ASSOCIATES, P.C. DATED 8/15/05 (REVISED 04/20/06) (REFERENCE #F-05-058).
 - ALL EXISTING CONDITIONS AND EXISTING TOPOGRAPHY ARE TAKEN FROM THE "DEVELOPER'S CONCEPTUAL GRADING PLAN" PREPARED BY PATTON, HARRIS, RUST, AND ASSOCIATES, P.C. DATED 06/28/05.

CONTACT INFORMATION:
PATTON, HARRIS, RUST, AND ASSOCIATES, P.C.
8818 CENTRE PARK DRIVE
COLUMBIA, MD 21045
TELEPHONE: (410) 395-7033
FAX: (410) 395-5811
CONTACT: DOMINICK COLANGELO
- SURVEY:** ALTA/ACSM LAND TITLE SURVEY PREPARED BY CONTROL POINT ASSOCIATES, INC. DATED 04/21/05. (CPA PROJECT # 5043506.SR)

CONTACT INFORMATION:
CONTROL POINT ASSOCIATES, INC.
22630 DAVIS DRIVE, SUITE 200
STERLING, VA 20164
TELEPHONE: (703) 709-9400
FAX: (703) 904-9797
CONTACT: KEVIN STEINHILBER, P.L.S.
- GEOTECHNICAL INFORMATION:** A REPORT OF GEOTECHNICAL INVESTIGATION: PROPOSED LOWE'S HOME IMPROVEMENT WAREHOUSE SITE. PREPARED BY WHITESTONE ASSOCIATES, INC. DATED 07/15/05. (WHITESTONE PROJECT #WP05-7817).

CONTACT INFORMATION:
WHITESTONE ASSOCIATES, INC.
1600 MANOR DRIVE, SUITE 220
CHAFFONT, PA 18914
TELEPHONE: (215) 393-8200
FAX: (215) 393-8574
CONTACT: JEFFREY SCHAUMBURG, P.E.
- PHASE I ENVIRONMENTAL SITE ASSESSMENT:** A PHASE I ENVIRONMENTAL SITE ASSESSMENT PREPARED BY WHITESTONE ASSOCIATES, INC. DATED 04/18/05. (WHITESTONE PROJECT #WP05-7803).

CONTACT INFORMATION:
WHITESTONE ASSOCIATES, INC.
1600 MANOR DRIVE, SUITE 220
CHAFFONT, PA 18914
TELEPHONE: (215) 393-8200
FAX: (215) 393-8574
CONTACT: KEITH D'AMBROSIO

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 12/11/06
CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 12/19/06
CHIEF DIVISION & LAND DEVELOPMENT DATE

[Signature] 12/19/06
DIRECTOR DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

[Signature] 12/19/06
HOWARD COUNTY HEALTH OFFICER DATE

[Signature] 12/19/06
HOWARD COUNTY HEALTH DEPARTMENT DATE

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE **8-31-06**

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

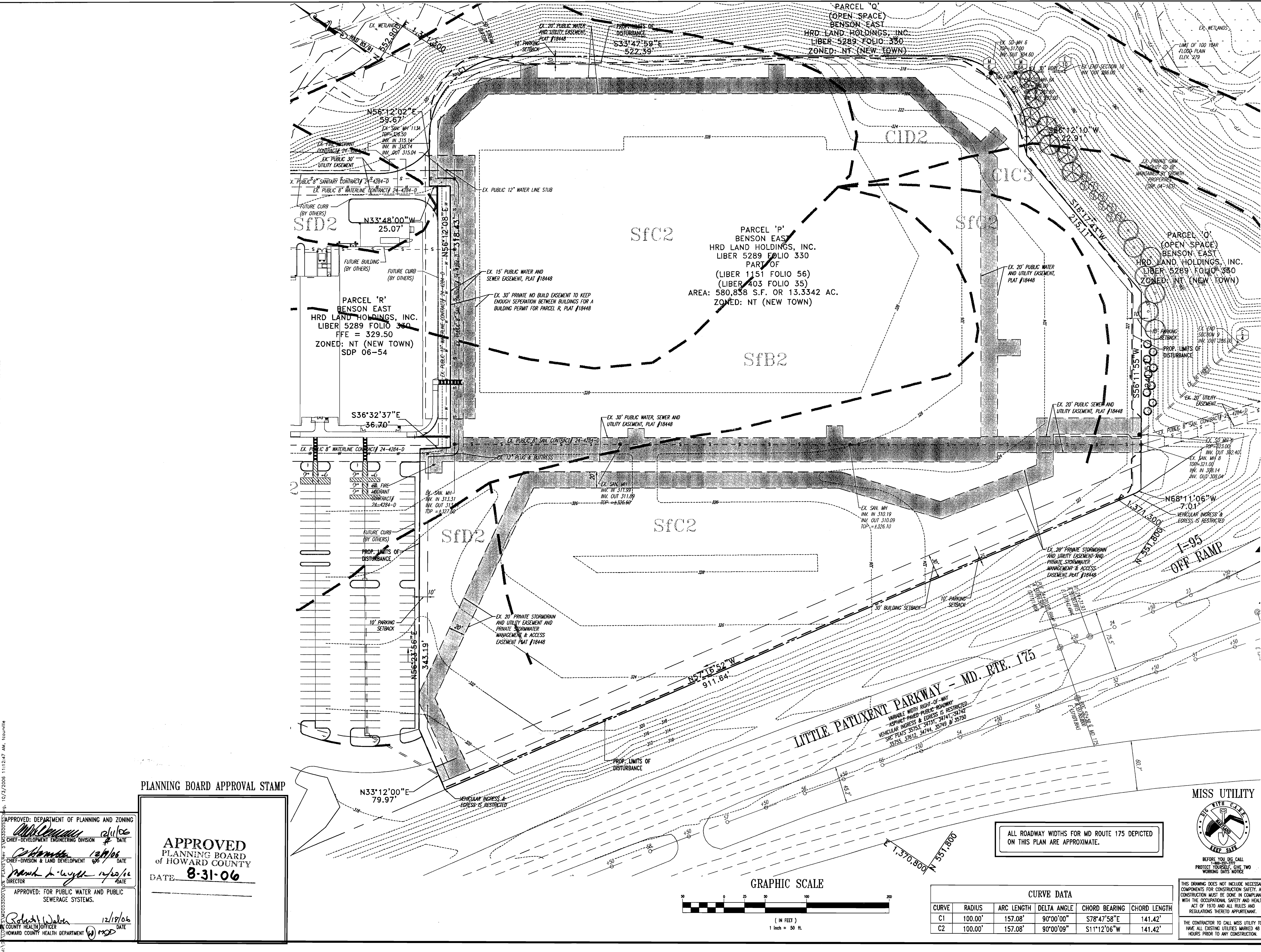
PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
(LOWE'S HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRD 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: GENERAL NOTES

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22550 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164
CONTACT: DAVID B. NEWECKER
*(703) 709-9000 FAX: (703) 709-9501 *WWW.BEINC.COM*

DESIGNED BY: DBN
DRAWN BY: JWK
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: N.T.S.
DRAWING NO.: 2 OF 33
ADAM J. VOLANTH
PROFESSIONAL ENGINEER NO. 21342

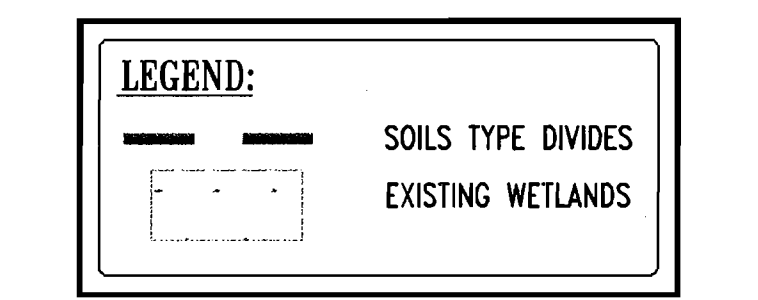


- NOTES:**
1. THE ADJACENT PROPERTY TO THE WEST OF THE PROP. LOWE'S SITE IS A COMMERCIAL USE AND ZONED AS NT (NEW TOWN).
 2. HOWARD COUNTY REFERENCE NUMBERS:
SITE PLAN DEVELOPMENT PREPARED BY:
PATTON, HARRIS, RUST AND ASSOCIATES, P.C.
DATED: APRIL 22, 2005

WATER AND SEWER PLANS PREPARED BY:
PATTON, HARRIS, RUST AND ASSOCIATES, P.C.
DATED: JUNE 8, 2005 (REV. APRIL 6, 2006)
SDP-04-163

ROADWAY AND STORM DRAIN PLANS PREPARED BY:
PATTON, HARRIS, RUST AND ASSOCIATES, P.C.
DATED: AUGUST 18, 2005 (REV. APRIL 20, 2006)
SDP-04-163
 3. REFER TO THE COVER SHEET FOR THE LEGEND.
 4. REFER TO EASEMENT PLAN FOR ALL EXISTING EASEMENT DESCRIPTIONS, WIDTHS, BEARINGS AND DISTANCES.
 5. REFER TO GENERAL NOTES SHEET FOR STANDARD DEMOLITION NOTES.

- ON-SITE SOILS INFORMATION:****
1. C1C3 - CHILLUM GRAVELLY LOAM, 5%-10% SLOPES, SEVERELY ERODED.
 2. C1D2 - CHILLUM GRAVELLY LOAM, 10%-15% SLOPES, MODERATELY ERODED.
 3. S1C2 - SASSAFRAS GRAVELLY SANDY LOAM, 5%-10% SLOPES, MODERATELY ERODED.
 4. S1B2 - SASSAFRAS GRAVELLY SANDY LOAM, 1%-5% SLOPES, MODERATELY ERODED.
 5. S1D2 - SASSAFRAS GRAVELLY SANDY LOAM, 10%-15% SLOPES, MODERATELY ERODED.
- REFERENCE:**
SOIL SURVEY
HOWARD COUNTY, MD
PREPARED BY:
UNITED STATES DEPARTMENT OF AGRICULTURE
DATED: JULY 1968



BENCHMARK

GEODETIC SURVEY CONTROL #376D
N 553,237.204
E 1,372,353.605
ELEV. 290.931'
LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #376C
N 553,250.791
E 1,370,946.348
ELEV. 331.855'
LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING (LOWE HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

EXISTING CONDITIONS PLAN

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22830 DAVEN TRAIL, SUITE 300 STROBEL, VIRGINIA, 20166
CONTACT: DAVID B. NEMBECK
(703) 708-9500 FAX: (703) 708-9501

DESIGNED BY: DBN
DRAWN BY: JWK
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: 1"=50'
DRAWING NO.: 3 OF 33

ADAM B. BOHLER
PROFESSIONAL ENGINEER NO. 21342

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF-DEVELOPMENT ENGINEERING DIVISION
DATE: 12/19/06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
DATE: 12/19/06

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: 8-31-06

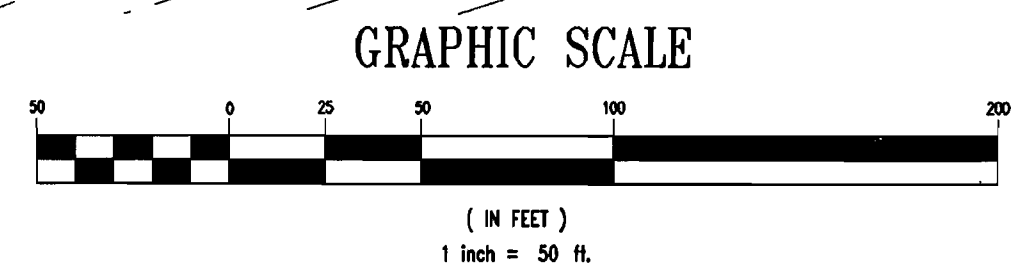
APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF-DEVELOPMENT ENGINEERING DIVISION
DATE: 12/19/06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
DATE: 12/19/06

APPROVED: DEPARTMENT OF HEALTH
CHIEF-DIVISION & LAND DEVELOPMENT
DATE: 12/19/06

APPROVED: DEPARTMENT OF HEALTH
CHIEF-DIVISION & LAND DEVELOPMENT
DATE: 12/19/06

ALL ROADWAY WIDTHS FOR MD ROUTE 175 DEPICTED ON THIS PLAN ARE APPROXIMATE.



CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'

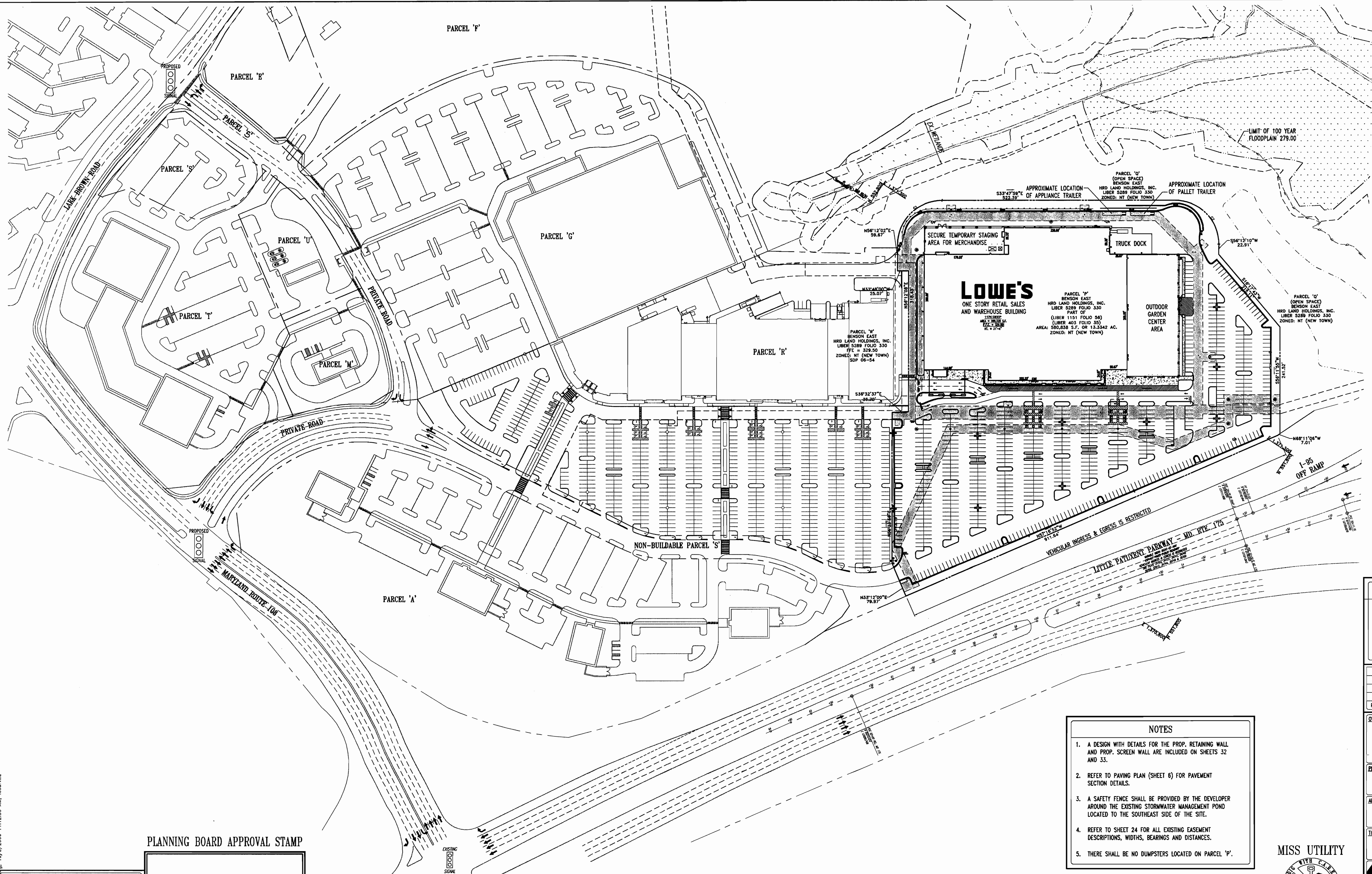
MISS UTILITY

BEFORE YOU DIG CALL 800-495-9777
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE.

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREBY APPLICABLE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

10/3/2006 11:12:47 AM tconville
 12/19/06 10:56:54 AM tconville
 12/19/06 10:56:54 AM tconville



LEGEND

—FP— FLOOD PLAIN

WETLANDS

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRO LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 (LOWES HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
 PARCEL P
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
 OVERALL SITE LAYOUT PLAN

BOHLER ENGINEERING, P.C.
 PROFESSIONAL ENGINEERING SERVICES
 622530 DAVIS DRIVE, SUITE 800 STERLING, VIRGINIA, 20164
 CONTACT: DAVID B. NEWBCKER
 (703) 708-9500 FAX: (703) 708-9501 www.behler.com

DESIGNED BY: DBN
 DRAWN BY: MWM
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: 1"=100'
 DRAWING NO.: 4 OF 33
 PROFESSIONAL ENGINEER NO.: 21342

- NOTES**
1. A DESIGN WITH DETAILS FOR THE PROP. RETAINING WALL AND PROP. SCREEN WALL ARE INCLUDED ON SHEETS 32 AND 33.
 2. REFER TO PAVING PLAN (SHEET 6) FOR PAVEMENT SECTION DETAILS.
 3. A SAFETY FENCE SHALL BE PROVIDED BY THE DEVELOPER AROUND THE EXISTING STORMWATER MANAGEMENT POND LOCATED TO THE SOUTHEAST SIDE OF THE SITE.
 4. REFER TO SHEET 24 FOR ALL EXISTING EASEMENT DESCRIPTIONS, WIDTHS, BEARINGS AND DISTANCES.
 5. THERE SHALL BE NO DUMPSTERS LOCATED ON PARCEL 'P'.

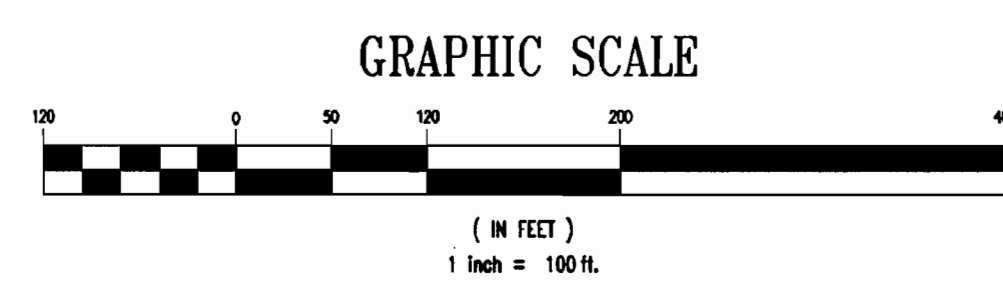
MISS UTILITY



BEFORE YOU DIG, CALL 1-800-368-7777
 PROJECT YOURSELF: GIVE TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.



CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'

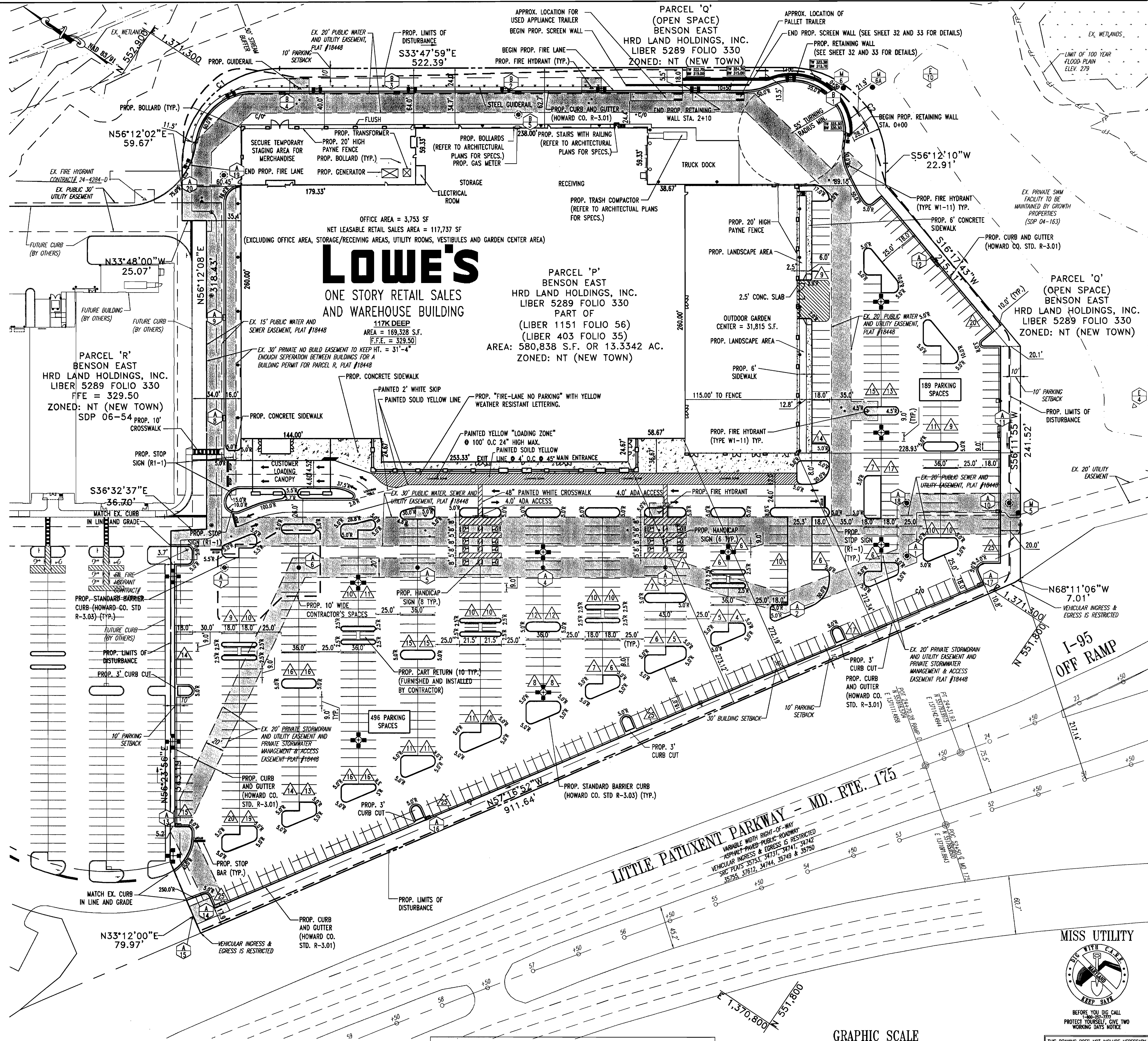
PLANNING BOARD APPROVAL STAMP

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE: **8-31-06**

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/1/06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 HOWARD COUNTY HEALTH DEPARTMENT
 DATE: 12/18/06

10/23/2006 11:12:50 AM, I:\counfile



LOWE'S

OFFICE AREA = 3,753 SF
 NET LEASABLE RETAIL SALES AREA = 117,737 SF
 (EXCLUDING OFFICE AREA, STORAGE/RECEIVING AREAS, UTILITY ROOMS, VESTIBULES AND GARDEN CENTER AREA)

117K DEEP
 AREA = 169,328 S.F.
 F.F.E. = 328.00

PARCEL 'P'
 BENSON EAST
 HRD LAND HOLDINGS, INC.
 LIBER 5289 FOLIO 330
 PART OF
 (LIBER 1151 FOLIO 56)
 AREA: 580,838 S.F. OR 13.3342 AC.
 ZONED: NT (NEW TOWN)

PARCEL 'R'
 BENSON EAST
 HRD LAND HOLDINGS, INC.
 LIBER 5289 FOLIO 330
 FFE = 329.50
 ZONED: NT (NEW TOWN)
 SDP 06-54 PROP. 10' CROSSWALK

PARCEL 'Q'
 BENSON EAST
 HRD LAND HOLDINGS, INC.
 LIBER 5289 FOLIO 330
 ZONED: NT (NEW TOWN)

NOTES

1. A DESIGN WITH DETAILS FOR THE PROP. RETAINING WALL AND PROP. SCREEN WALL ARE INCLUDED ON SHEETS 32 AND 33.
2. PLEASE REFER TO PAVING PLAN (SHEET 6) FOR PAVEMENT SECTION DETAILS.
3. A SAFETY FENCE SHALL BE PROVIDED BY THE OWNER AROUND THE EXISTING SWM POND LOCATED TO THE SOUTHEAST SIDE OF THE SITE.
4. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
5. ALL RADI SHALL BE 4' UNLESS OTHERWISE NOTED.
6. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH DIVISION 2 OF LOWE'S STANDARD SPECS.

BENCHMARK

GEODETIC SURVEY CONTROL #370D
 N 553,237.204
 E 1,372,353.605
 ELEV. 290.931'
 LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #370C
 N 553,250.791
 E 1,370,946.348
 ELEV. 331.855'
 LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 (LOWE'S HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
 PARCEL P
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

DETAILED SITE PLAN

BOHLER ENGINEERING, P.C.
 PROFESSIONAL ENGINEERING SERVICES
 25250 DAVIS DRIVE, SUITE 400 SPOTSWYLD, VIRGINIA, 20184
 CONTACT: DAVID B. NEMCEK
 (703) 708-9600 FAX: (703) 708-9503

DESIGNED BY: DBN
 DRAWN BY: WBM
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: 1"=50'
 DRAWING NO.: 5 OF 33
 PROFESSIONAL ENGINEER NO. 21342

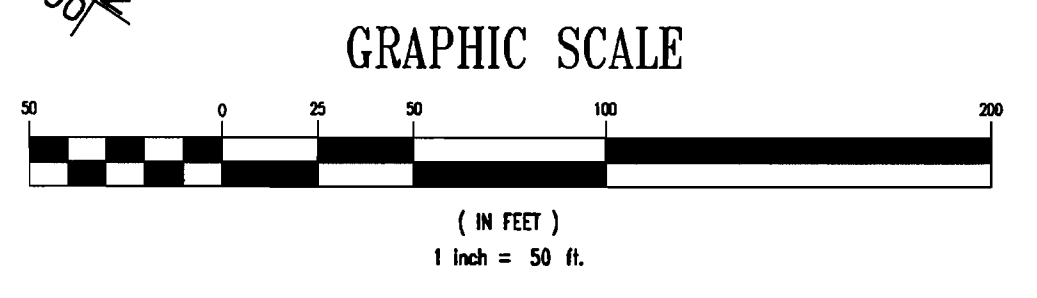
PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 APPROVED: DEPARTMENT OF PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 8-31-06

CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'



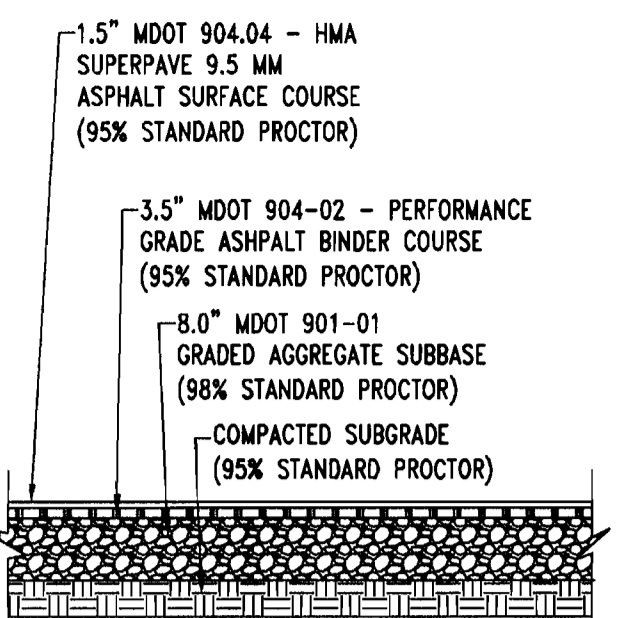
MISS UTILITY
 BEFORE YOU DIG CALL 811
 PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 APPROVED: DEPARTMENT OF PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

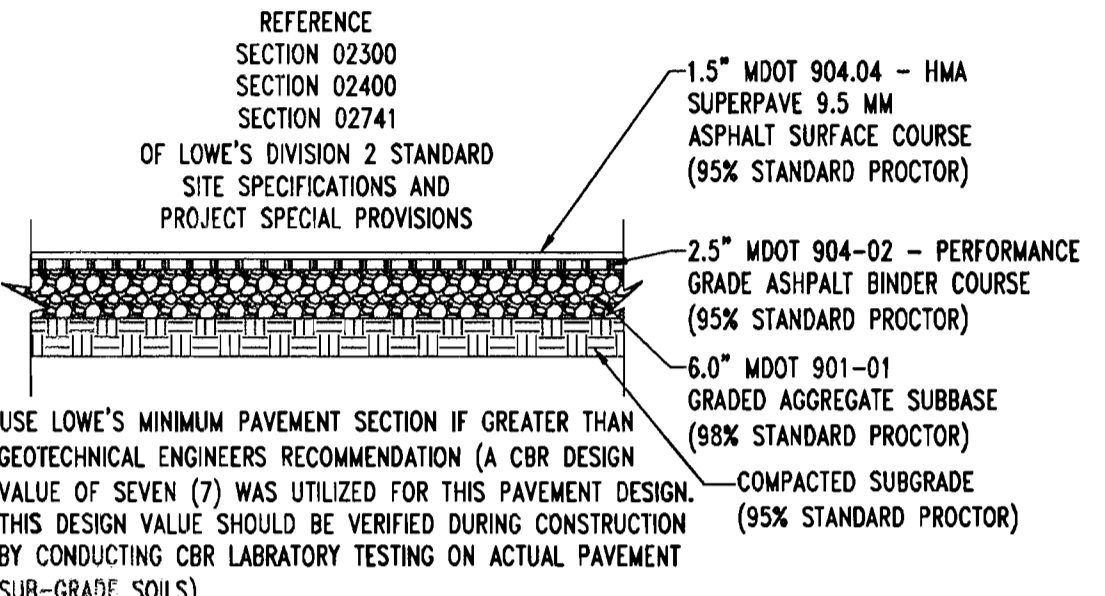
APPROVED: HOWARD COUNTY HEALTH DEPARTMENT



NOTE: USE LOWE'S MINIMUM PAVEMENT SECTION IF GREATER THAN GEOTECHNICAL ENGINEERS RECOMMENDATION (A CBR DESIGN VALUE OF SEVEN (7) WAS UTILIZED FOR THIS PAVEMENT DESIGN. THIS DESIGN VALUE SHOULD BE VERIFIED DURING CONSTRUCTION BY CONDUCTING CBR LABORATORY TESTING ON ACTUAL PAVEMENT SUB-GRADE SOILS)

HEAVY DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE

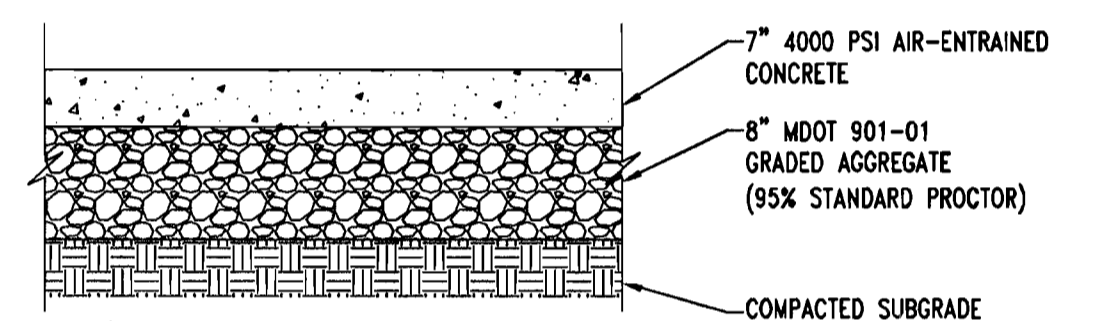
REFERENCE SECTION 02300 SECTION 02400 SECTION 02741 OF LOWE'S DIVISION 2 STANDARD SITE SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS



NOTE: USE LOWE'S MINIMUM PAVEMENT SECTION IF GREATER THAN GEOTECHNICAL ENGINEERS RECOMMENDATION (A CBR DESIGN VALUE OF SEVEN (7) WAS UTILIZED FOR THIS PAVEMENT DESIGN. THIS DESIGN VALUE SHOULD BE VERIFIED DURING CONSTRUCTION BY CONDUCTING CBR LABORATORY TESTING ON ACTUAL PAVEMENT SUB-GRADE SOILS)

STANDARD DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE

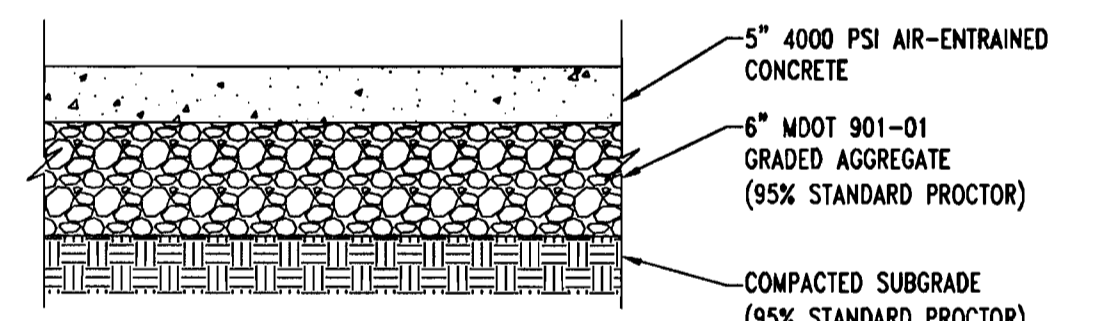
REFERENCE SECTION 02300 SECTION 02400 SECTION 02741 OF LOWE'S DIVISION 2 STANDARD SITE SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS



NOTE: USE LOWE'S MINIMUM PAVEMENT SECTION IF GREATER THAN GEOTECHNICAL ENGINEERS RECOMMENDATION (A CBR DESIGN VALUE OF SEVEN (7) WAS UTILIZED FOR THIS PAVEMENT DESIGN. THIS DESIGN VALUE SHOULD BE VERIFIED DURING CONSTRUCTION BY CONDUCTING CBR LABORATORY TESTING ON ACTUAL PAVEMENT SUB-GRADE SOILS)

HEAVY DUTY CONCRETE PAVEMENT SECTION
NOT TO SCALE

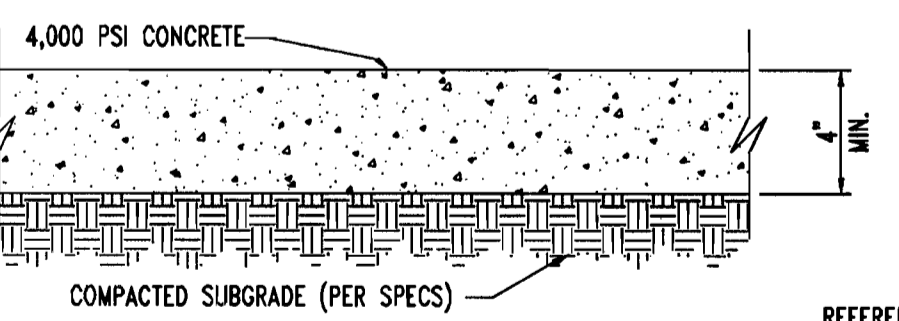
REFERENCE SECTION 02300 SECTION 02400 SECTION 02741 OF LOWE'S DIVISION 2 STANDARD SITE SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS



NOTE: USE LOWE'S MINIMUM PAVEMENT SECTION IF GREATER THAN GEOTECHNICAL ENGINEERS RECOMMENDATION (A CBR DESIGN VALUE OF SEVEN (7) WAS UTILIZED FOR THIS PAVEMENT DESIGN. THIS DESIGN VALUE SHOULD BE VERIFIED DURING CONSTRUCTION BY CONDUCTING CBR LABORATORY TESTING ON ACTUAL PAVEMENT SUB-GRADE SOILS)

STANDARD DUTY CONCRETE PAVEMENT SECTION
NOT TO SCALE

REFERENCE SECTION 02300 SECTION 02400 SECTION 02741 OF LOWE'S DIVISION 2 STANDARD SITE SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS



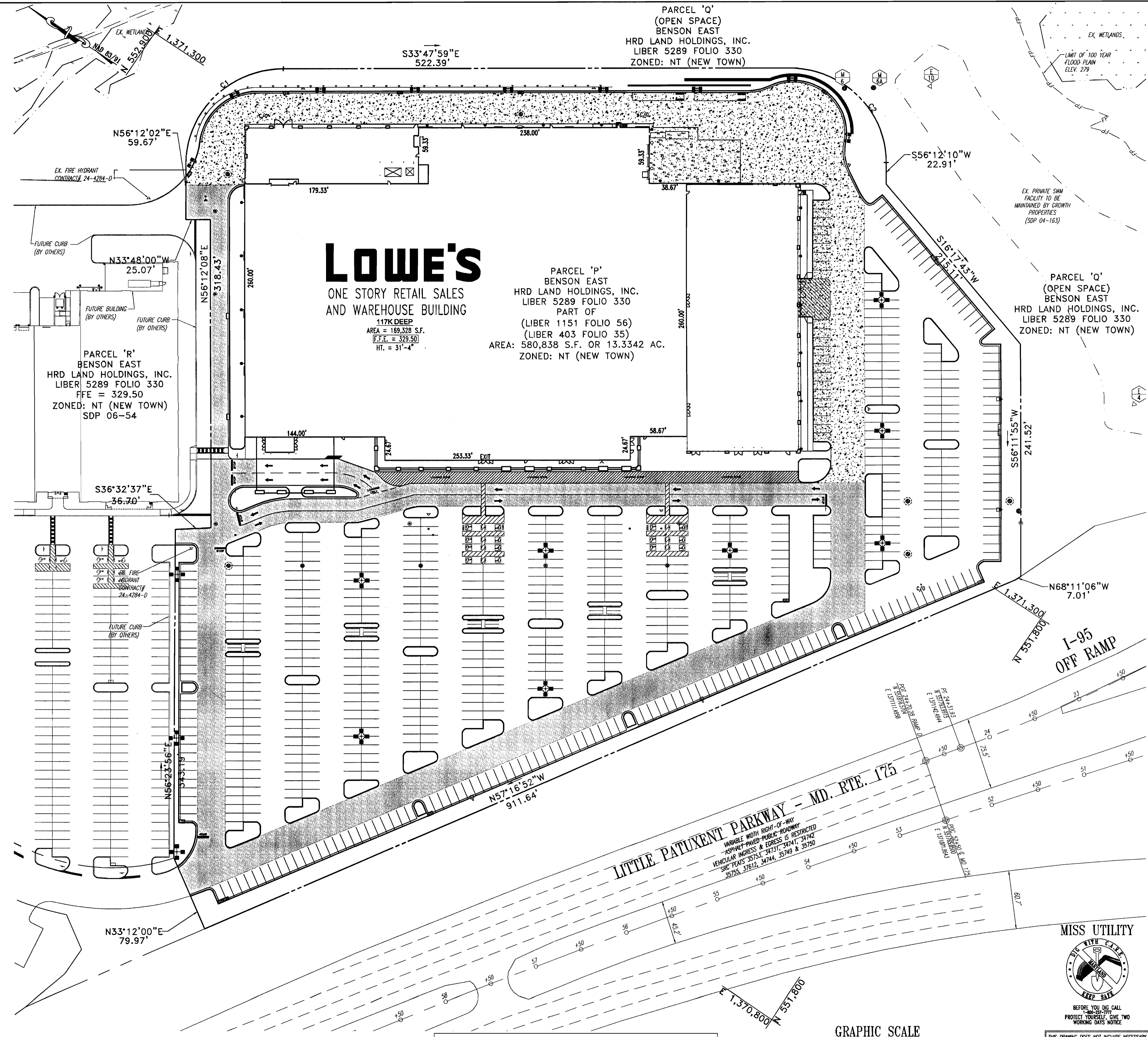
① CONTRACTION JOINTS SPACE TO BE EQUAL TO SIDEWALK WIDTH
② EXPANSION JOINTS 100' O/C
③ ALL JOINTS SEALED PER SPEC

STANDARD DUTY CONCRETE SIDEWALK DETAIL
NOT TO SCALE

REFERENCE SECTION 02751 OF LOWE'S DIVISION 2 STANDARD SITE SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 12/19/06
 APPROVED: DEPARTMENT OF PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 DATE: 12/19/06

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 8-31-06



LOWE'S
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 117K DEEP
 AREA = 169,328 S.F.
 F.F.E. = 329.50
 HT. = 31'-4"

PARCEL 'P'
 BENSON EAST
 HRD LAND HOLDINGS, INC.
 LIBER 5289 FOLIO 330
 PART OF
 (LIBER 1151 FOLIO 56)
 (LIBER 403 FOLIO 35)
 AREA: 580,838 S.F. OR 13.3342 AC.
 ZONED: NT (NEW TOWN)

PARCEL 'R'
 BENSON EAST
 HRD LAND HOLDINGS, INC.
 LIBER 5289 FOLIO 330
 F.F.E. = 329.50
 ZONED: NT (NEW TOWN)
 SDP 06-54

PARCEL 'O'
 (OPEN SPACE)
 BENSON EAST
 HRD LAND HOLDINGS, INC.
 LIBER 5289 FOLIO 330
 ZONED: NT (NEW TOWN)

PARCEL 'O'
 (OPEN SPACE)
 BENSON EAST
 HRD LAND HOLDINGS, INC.
 LIBER 5289 FOLIO 330
 ZONED: NT (NEW TOWN)

LEGEND

- HEAVY DUTY CONCRETE PAVING
- HEAVY DUTY ASPHALT PAVING
- STANDARD DUTY ASPHALT PAVING
- STANDARD DUTY CONCRETE PAVING

BENCHMARK

GEODETIC SURVEY CONTROL #376D
 N 553,237.204
 E 1,372,353.605
 ELEV. 290.931'
 LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #376C
 N 553,250.791
 E 1,370,946.348
 ELEV. 331.855'
 LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 (LOWE'S HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
 PARCEL P
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

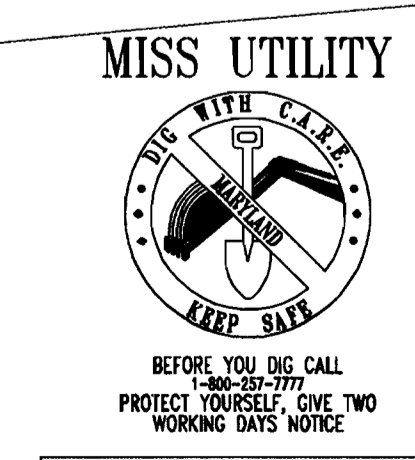
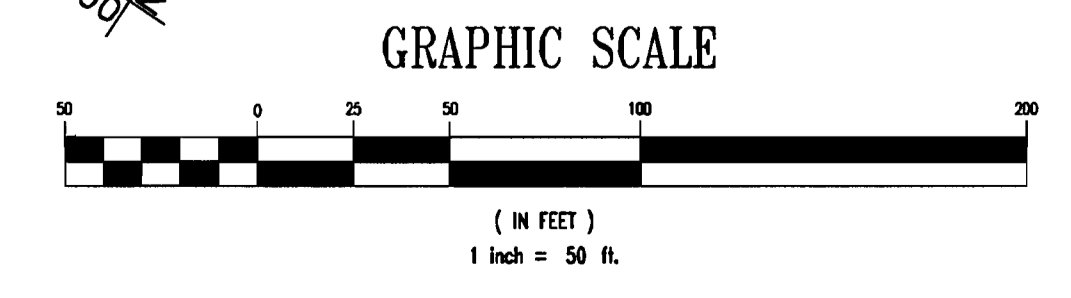
TITLE: PAVING PLAN

BOHLER ENGINEERING, P.C.
 PROFESSIONAL ENGINEERING SERVICES
 22830 DAVIS DRIVE, SUITE 800 STERLING, VIRGINIA 20164
 CONTACT: DAVID B. BOHLER
 (703) 709-9500 FAX: (703) 709-9501

DESIGNED BY: DBN
 DRAWN BY: MWM
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: 1"=50'
 DRAWING NO.: 6 OF 33
 PROFESSIONAL ENGINEER NO. 21342

CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'

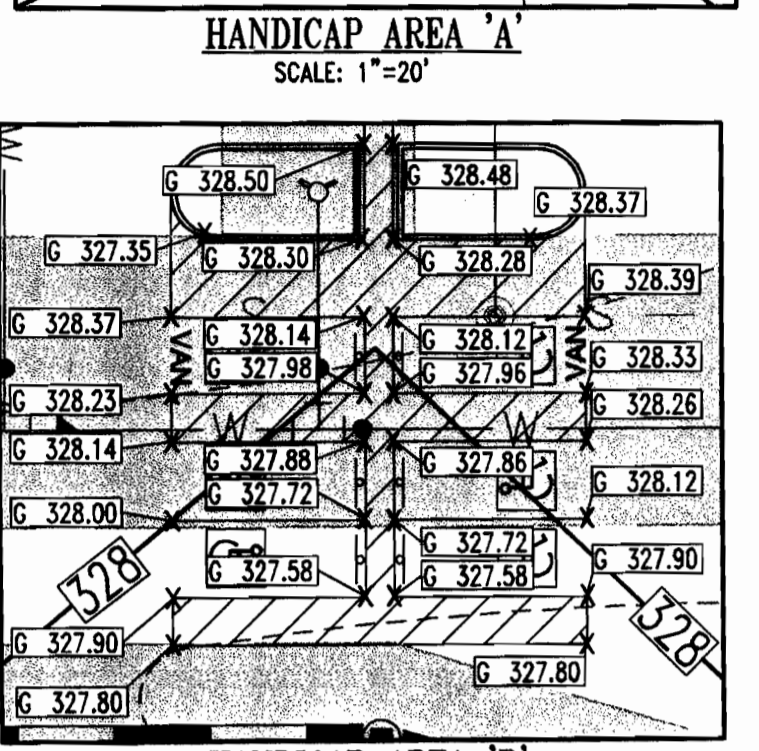
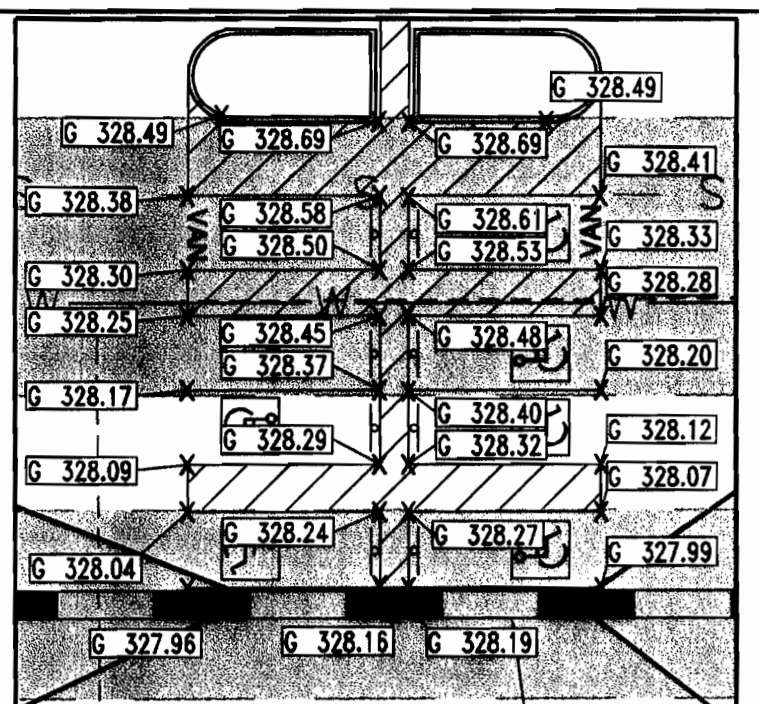
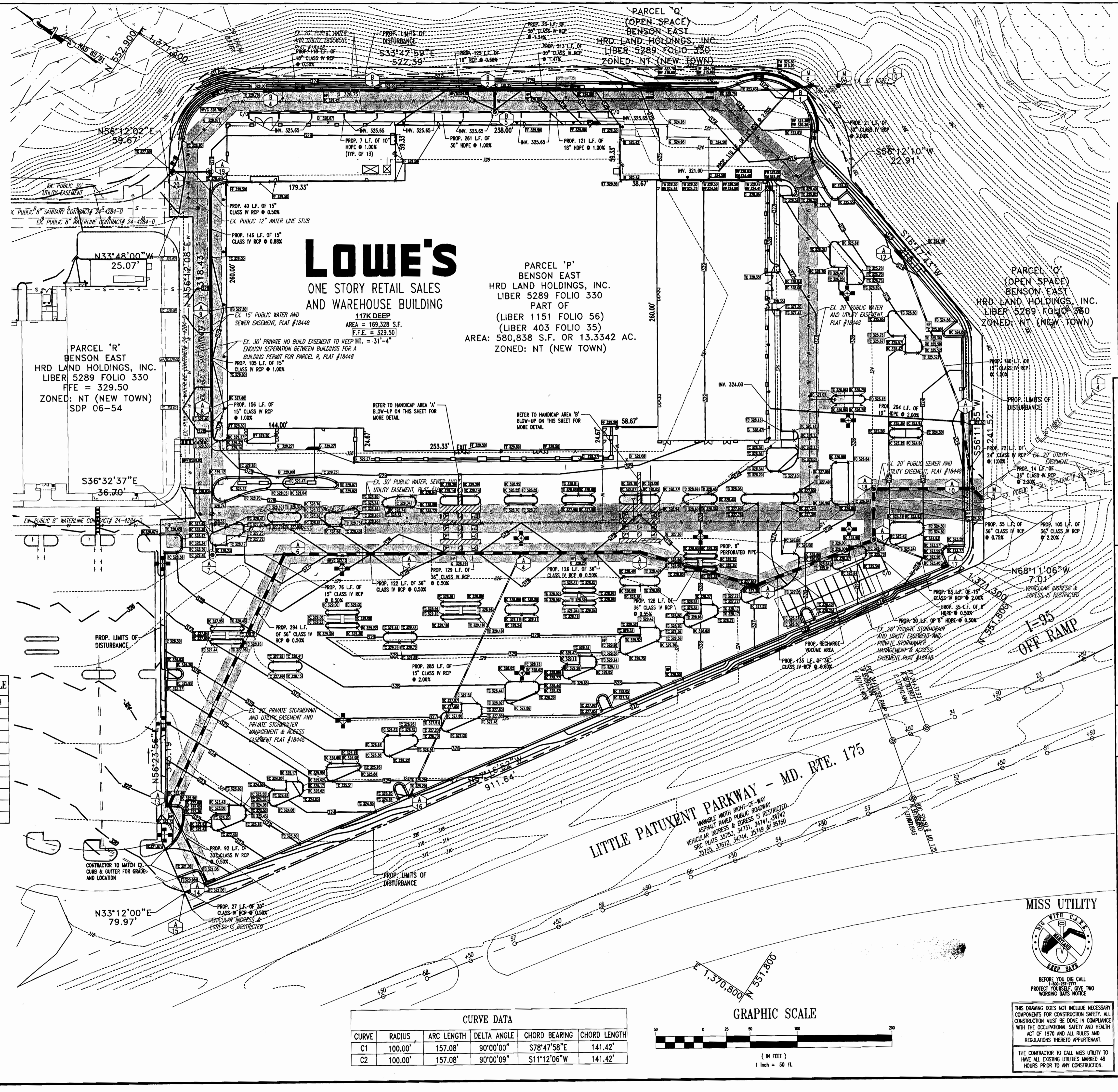


THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.
 THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

STORM DRAIN STRUCTURE SCHEDULE				
STRUCTURE NO.	DESCRIPTION	INV. IN	INV. OUT	TOP ELEV.
5	EXISTING MANHOLE	302.50 (36")	302.40 (36")	323.00
1	PROP. PRECAST MANHOLE HOWARD CO. STD. G 5.12	305.06 (36")	305.73 (36")	325.26
2	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	318.49 (15")	305.06 (8")	326.38
3	PROP. TYPE "E" INLET HOWARD CO. STD. SD 4.21	306.78 (36")	306.68 (36")	327.21
4	PROP. TYPE "E" INLET HOWARD CO. STD. SD 4.21	307.51 (36")	307.41 (36")	327.33
5	PROP. TYPE "E" INLET HOWARD CO. STD. SD 4.21	308.26 (36")	308.16 (36")	327.21
6	PROP. TYPE "E" INLET HOWARD CO. STD. SD 4.21	308.97 (36")	308.87 (36")	326.02
7	PROP. PRECAST MANHOLE HOWARD CO. STD. G 5.12	320.38 (15")	320.28 (15")	328.33
8	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	322.01 (15")	321.91 (15")	327.60
9	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	323.16 (15")	323.06 (15")	327.60
10	PROP. PRECAST MANHOLE HOWARD CO. STD. G 5.12	302.91 (36")	302.81 (36")	322.00
11	(2) PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	319.07 (15")	318.97 (24")	322.50
12	(2) PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	319.92 (10")	---	323.70
13	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	310.94 (30")	310.44 (36")	321.90
14	(2) PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	311.50 (30")	311.40 (30")	320.50
15	PROP. STUB	---	311.64 (30")	---
16	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	---	320.95 (15")	324.70
17	(2) PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	---	320.15 (15")	322.90
18	PROP. PRECAST MANHOLE HOWARD CO. STD. G 5.12	305.22 (36")	305.32 (36")	325.50
19	PROP. PRECAST MANHOLE HOWARD CO. STD. G 5.12	324.55 (15")	324.45 (15")	328.98
20	(2) PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	---	324.75 (15")	327.50
M 6	EXISTING MANHOLE	310.50 (30")	304.60 (30")	317.00
B 1	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	317.64 (30")	310.92 (30")	321.64
B 2	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	322.35 (18")	322.25 (30")	328.25
B 3	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	323.23 (15")	322.98 (18")	328.00
B 4	PROP. DOUBLE TYPE "S" INLET HOWARD CO. STD. SD 4.23	323.92 (15")	323.82 (15")	328.00
B 5	PROP. PRECAST MANHOLE HOWARD CO. STD. G 5.12	322.90 (30")	322.80 (30")	329.00

SITE ANALYSIS
 DISTURBED AREA 594,815 S.F. OR 13.66 AC.
 TOTAL SITE AREA 580,838 S.F. OR 13.33 AC.
 EARTH WORK
 CUT: 3,790 CU. YDS.
 FILL: 4,100 CU. YDS.
 EARTH QUANTITIES LISTED ABOVE ARE BASED ON A GRADING PLAN PREPARED BY BOHLER ENGINEERING, P.C. ENTITLED "BENSON EAST" DATED 07/28/05, REVISED 10/17/05. PROJECT NO. MDO53500

STORMDRAIN PIPE SCHEDULE		
SIZE	DESCRIPTION	LENGTH
8"	HDPE	55'
10"	HDPE	295'
12"	RCP	116'
15"	RCP	864'
18"	RCP	125'
18"	HDPE	121'
24"	RCP	72'
30"	HDPE	261'
30"	RCP	476'
36"	RCP	1108'



NOTE

- PLEASE REFER TO STORMWATER MANAGEMENT POND SIZING CRITERIA FOR WATER QUALITY VOLUME, FOREBAY CALCULATIONS, AND CHANNEL PROTECTION VOLUME CALCULATIONS PREPARED BY PATTON, HARRIS, RUST, AND ASSOCIATES, P.C. DATED 01/26/05. (PROJECT NAME: BENSON EAST PROJECT #11621-1-0).
- REFER TO EASEMENT PLAN FOR ALL EXISTING EASEMENTS DESCRIPTIONS, WIDTHS, BEARINGS, AND DISTANCES.
- REFER TO GENERAL NOTES SHEET FOR ANY APPLICABLE GRADING NOTES.

BENCHMARK

GEODETIC SURVEY CONTROL #376D
 N 553,237.204
 E 1,372,353.605
 ELEV. 290.931'
 LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #376C
 N 553,250.791
 E 1,370,946.348
 ELEV. 331.855'
 LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-8000

PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 (LOWES HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING AND DRAINAGE PLAN

BOHLER ENGINEERING, P.C.
 * PROFESSIONAL ENGINEERING SERVICES *
 22630 DAYS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164
 * CONTRACT: DAVID B. NEWMAN *
 * (703) 709-9500 FAX: (703) 709-9501 *
 WWW.BE-VA.COM

DESIGNED BY: DBN
 DRAWN BY: JWK
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: 1"=50'
 DRAWING NO.: 7 OF 33

BEFORE YOU DIG CALL MISS UTILITY
 PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

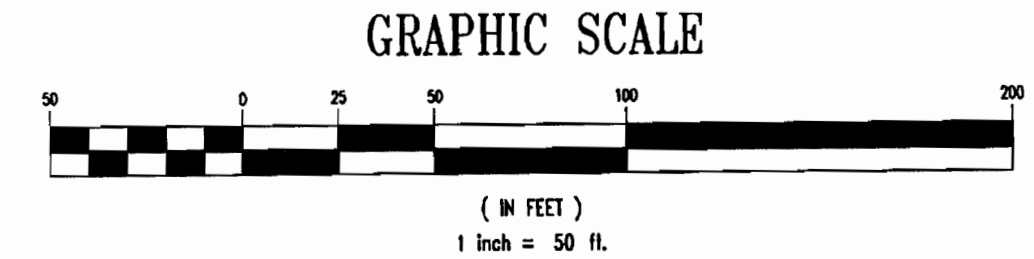
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THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

PROFESSIONAL ENGINEER NO. 21542

CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'



PLANNING BOARD APPROVAL STAMP

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 8-31-06

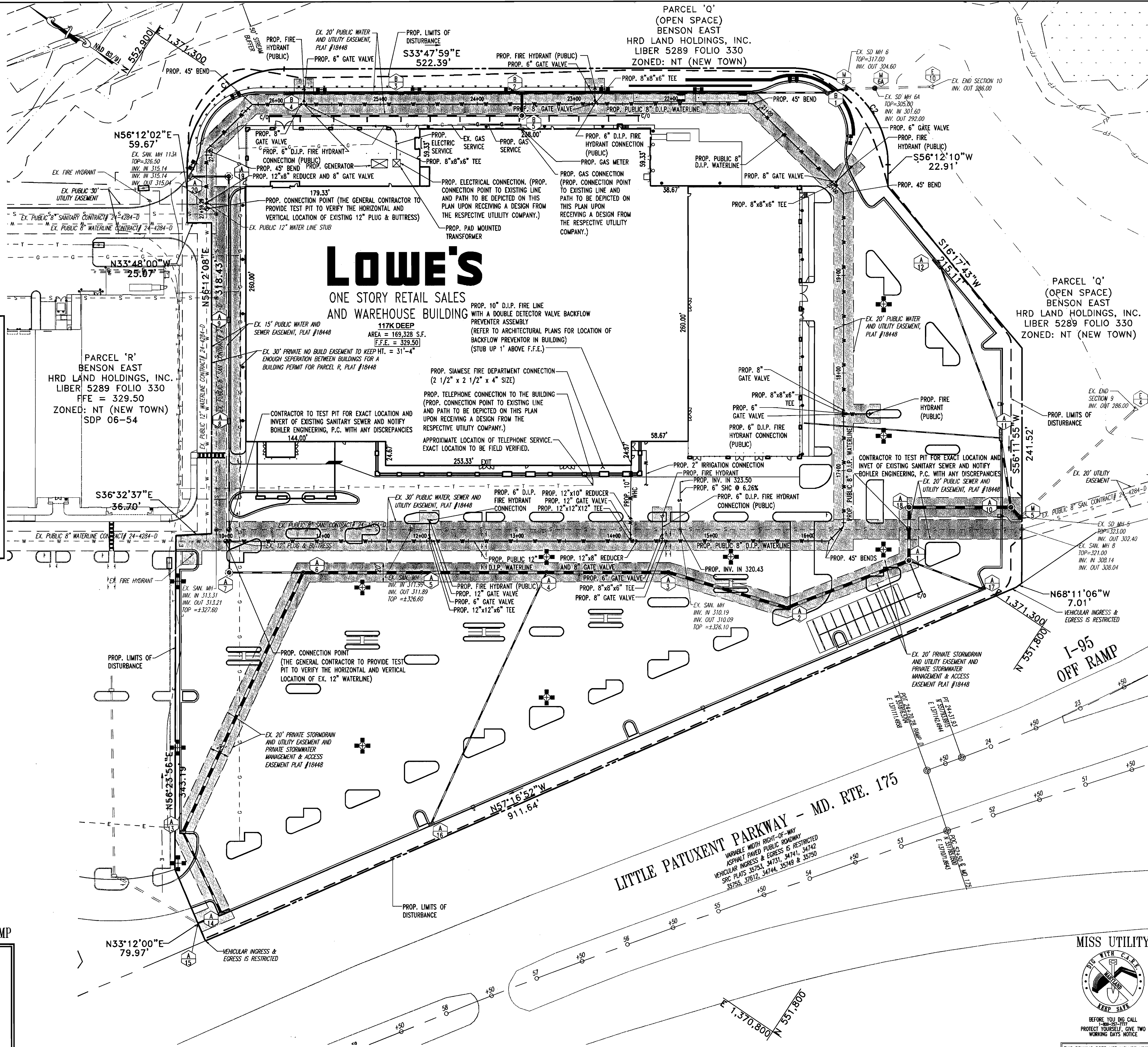
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF-DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/19/06

APPROVED: CHIEF-DIVISION & LAND DEVELOPMENT
 DIRECTOR
 DATE: 12/19/06

APPROVED: COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT
 DATE: 12/19/06

DATE: 10/27/2006 11:13:04 AM, NEWTOWN



LOWE'S

ONE STORY RETAIL SALES AND WAREHOUSE BUILDING

PARCEL 'R'
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
FFE = 329.50
ZONED: NT (NEW TOWN)
SDP 06-54

PARCEL 'Q'
(OPEN SPACE)
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
ZONED: NT (NEW TOWN)

UTILITY CONTACT INFORMATION:

NATURAL GAS AND ELECTRIC BALTIMORE GAS AND ELECTRIC 7317 PARKWAY DRIVE SOUTH HANOVER, MD 21076 PHONE: (410) 859-9383	WATER AND SANITARY SEWER HOWARD COUNTY PUBLIC WORKS BUREAU OF UTILITIES 8250 OLD MONTGOMERY ROAD COLUMBIA, MD 21045 PHONE: (410) 313-4910
TELEPHONE VERIZON 7133 RUTHERFORD ROAD BALTIMORE, MD 21244 PHONE: (410) 224-5286	EROSION AND SEDIMENT CONTROL DEPARTMENT OF INSPECTIONS, LICENSES & PERMITS 3430 COURTHOUSE DRIVE ELLCOTT CITY, MD 21043 PHONE: (410) 313-2455
STORMWATER MANAGEMENT HOWARD COUNTY PLANNING AND ZONING DEPARTMENT 3430 COURTHOUSE DRIVE ELLCOTT CITY, MD 21043 PHONE: (410) 313-2350	PLANNING AND ZONING HOWARD COUNTY PLANNING AND ZONING DEPARTMENT 3430 COURTHOUSE DRIVE ELLCOTT CITY, MD 21043 PHONE: (410) 313-2350

ADDITIONAL WATER/SEWER INFORMATION:

TYPE OF BUILDING	-COMMERCIAL
DRAINAGE AREA	-DORSEY
TREATMENT PLANT	-LITTLE PATUXENT WRP
NUMBER OF W-H-C	-1
NUMBER OF S-H-C	-1
WATER LINE NUMBER	-D06
SEWER LINE NUMBER	-3390000
TEST GRADIENT	-700
ZONE	-500

NOTE

- REFER TO EASEMENT PLAN FOR ALL EXISTING EASEMENTS DESCRIPTIONS, WIDTHS, BEARINGS, AND DISTANCES.
- REFER TO GENERAL NOTES SHEET FOR ANY APPLICABLE UTILITY NOTES.

BENCHMARK

<p>GEODETIC SURVEY CONTROL #376D N 553,237.204 E 1,372,353.605 ELEV. 290.931' LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL</p> <p>GEODETIC SURVEY CONTROL #376C N 553,250.791 E 1,370,946.348 ELEV. 331.855' LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY</p>

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING (LOWES HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: UTILITY PLAN

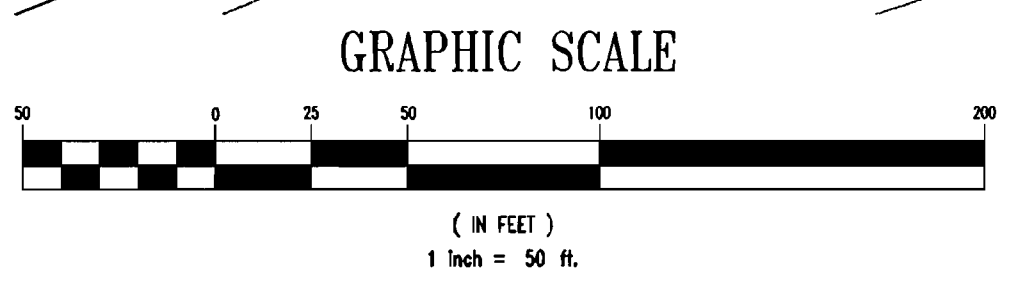
BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
252530 LANTANA DRIVE, SUITE 3000 STROUDS, VIRGINIA, 20164
CONTACT: DAVID B. NEMCEK
(703) 709-9500 FAX: (703) 709-9501

DESIGNED BY: DBN
DRAWN BY: MMW
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: 1"=50'
DRAWING NO.: 9 OF 33
ADAM P. VOLKMAN
PROFESSIONAL ENGINEER NO. 21342

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 12/19/06
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
DATE: 12/19/06

8-31-06



NOTE: MISS UTILITY HAS NOT MARKED THIS SITE. ONLY A BOUNDARY SURVEY HAS BEEN CONDUCTED BY CONTROL POINT ASSOCIATES, INC. FOR THIS SITE.

MISS UTILITY
BEFORE YOU DIG CALL 1-800-221-7777
PROTECT YOURSELF. GIVE TWO WORKING DAYS NOTICE.

BEFORE YOU DIG CALL 1-800-221-7777
PROTECT YOURSELF. GIVE TWO WORKING DAYS NOTICE.

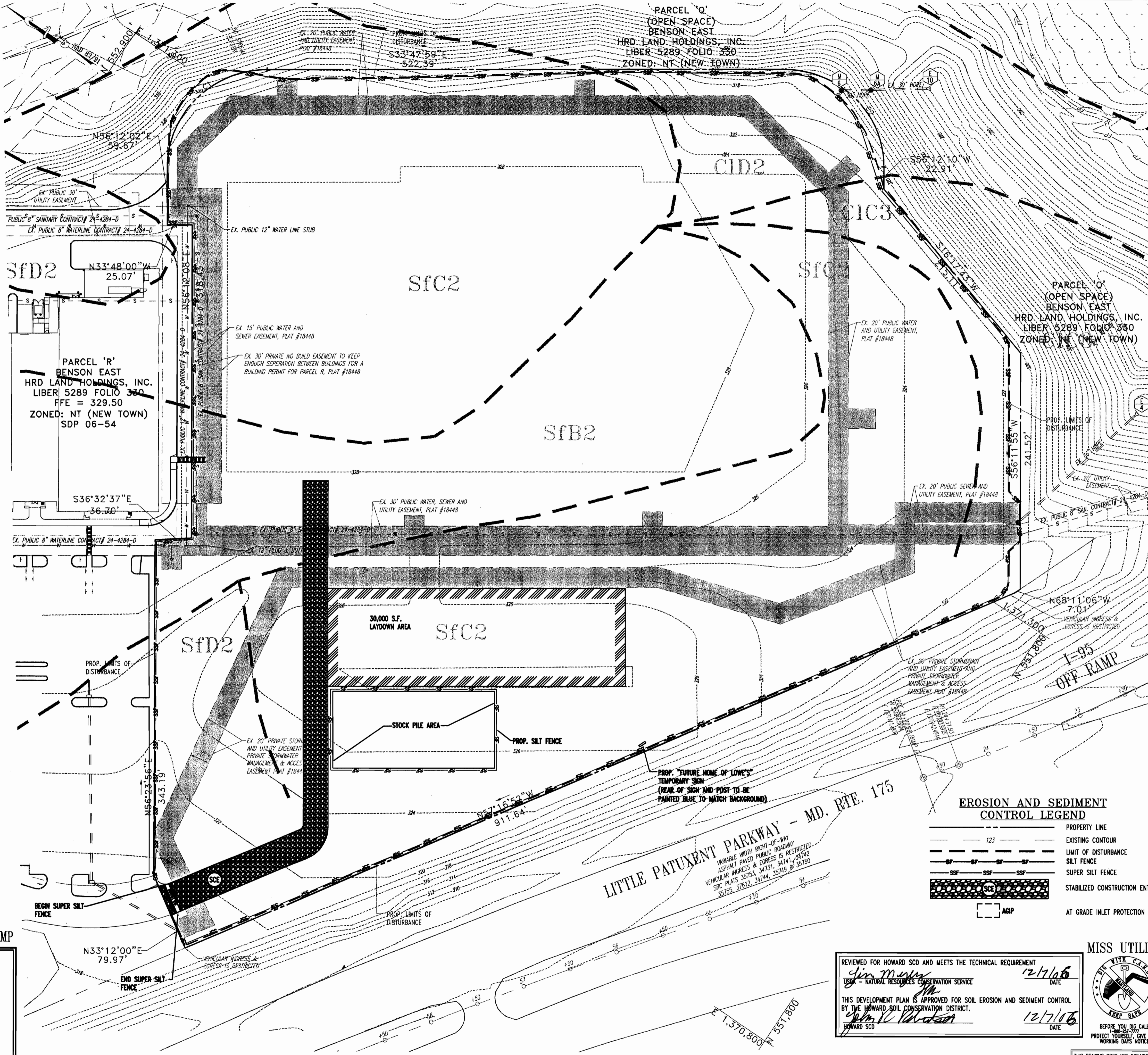
THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

SEQUENCE OF CONSTRUCTION

1. NOTIFY HOWARD COUNTY'S SEDIMENT CONTROL INSPECTOR AT 410-313-1855 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL NOT COMMENCE ANY LAND DISTURBING ACTIVITIES PRIOR TO OBTAINING A GRADING PERMIT.
3. THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH LOWE'S CONSTRUCTION MANAGER AND THE HOWARD COUNTY EROSION AND SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES. 1 DAY
4. ALL AREAS WHICH ARE TO BE DISTURBED SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DISTURBED AREAS WITHIN THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED SHALL BE PERMANENTLY OR TEMPORARILY STABILIZED WITHIN:
 - A. SEVEN CALENDAR DAYS ON SLOPES GREATER THAN 3:1, ALL WATERWAYS AND TO THE SURFACE OF ALL PERIMETER CONTROLS.
 - B. FOURTEEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS OF THE PROJECT.
5. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND CONCRETE WASH OUT AREA. ALL HARD SURFACE PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORK DAY. 1 DAY
6. INSTALL PERIMETER SUPER SILT FENCE. THIS MUST BE INSPECTED AND APPROVED BY HOWARD COUNTY'S SEDIMENT CONTROL INSPECTOR. NO ADDITIONAL CONSTRUCTION ACTIVITY WILL BE AUTHORIZED WITHOUT APPROVAL. 5 DAYS
7. INSTALL UTILITIES AS SHOWN. GENERAL CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES. GENERAL CONTRACTOR SHALL COORDINATE WITH THE RETAINING WALL CONTRACTOR TO ALLOW FOR RETAINING WALL AND ASSOCIATED MATERIALS TO BE INSTALLED. 30 DAYS
8. BEGIN BUILDING CONSTRUCTION. 60 DAYS
9. INSTALL CURB AND GUTTER AND APPLY BASE STONE FOR ALL PARKING AREAS. 20 DAYS
10. FLUSH THE PROPOSED STORM DRAIN SYSTEM TO REMOVE ANY SEDIMENT. THIS MUST BE INSPECTED AND APPROVED BY HOWARD COUNTY'S SEDIMENT CONTROL INSPECTOR. 1 DAY
11. AS THE SITE IS BROUGHT TO FINAL GRADE, PERMANENTLY STABILIZE ALL DISTURBED AREAS WITHIN FOURTEEN (14) DAYS. 10 DAYS
12. INSTALL ALL PERMANENT LANDSCAPING. 10 DAYS
13. AFTER CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DISTURBED AREAS HAVE BEEN STABILIZED, SEDIMENT CONTROL DEVICES CAN BE REMOVED UPON COORDINATION WITH LOWE'S, AND THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 2 DAYS

SITE ANALYSIS

TOTAL SITE AREA - 580,842 S.F. OR 13.33 AC
 AREA DISTURBED - 546,815 S.F. OR 13.66 AC
 TOTAL CUT - 3,790 CU. YDS.
 TOTAL FILL - 4,100 CU. YDS.
 EARTH QUANTITIES LISTED ABOVE ARE BASED ON A GRADING PLAN PREPARED BY BOHLER ENGINEERING, P.C. ENTITLED: "LOWE'S OF COLUMBIA" DATED 07/28/05, REVISED 10/21/05 PROJECT NUMBER MD053500.
 SILT FENCE - 500 LF
 SUPER SILT FENCE - 3,132 LF
 AT GRADE INLET PROTECTION - 18 EA



- ON-SITE SOILS INFORMATION:**
1. C1C3 - CHILLUM GRAVELLY LOAM, 5%-10% SLOPES, SEVERELY ERODED.
 2. C1D2 - CHILLUM GRAVELLY LOAM, 10%-15% SLOPES, MODERATELY ERODED.
 3. S1C2 - SASSAFRAS GRAVELLY SANDY LOAM, 5%-10% SLOPES, MODERATELY ERODED.
 4. S1B2 - SASSAFRAS GRAVELLY SANDY LOAM, 1%-5% SLOPES, MODERATELY ERODED.
 5. S1D2 - SASSAFRAS GRAVELLY SANDY LOAM, 10%-15% SLOPES, MODERATELY ERODED.

REFERENCE:
 SOIL SURVEY
 HOWARD COUNTY, MD
 PREPARED BY:
 UNITED STATES DEPARTMENT OF AGRICULTURE
 DATED: JULY 1968

ENGINEER'S CERTIFICATE
 "I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL IS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENT OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature of Engineer: *Adam J. Volanth*
 DATE: 11/21/06

DEVELOPER'S CERTIFICATE
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature of Developer: *David E. Sheffer*
 DATE: 10/18/06

- NOTES**
1. THE OWNER OF THE SHOPPING CENTER IS RESPONSIBLE FOR ALL ROUGH GRADING AND DISTURBANCE ON-SITE WHICH IS INVOLVED IN THE EROSION AND SEDIMENT CONTROL PLANS PREPARED BY PATTON, HARRIS, RUST AND ASSOCIATES, P.C.
 2. REFER TO GENERAL NOTES SHEET FOR ANY APPLICABLE EROSION AND SEDIMENTATION NOTES.

BENCHMARK

GEODETIC SURVEY CONTROL #37GD
 N 553,237.204
 E 1,372,353.605
 ELEV. 290.931'
 LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #37GC
 N 553,250.791
 E 1,370,946.348
 ELEV. 331.855'
 LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC. AND DEVELOPMENT CORPORATION
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 (LOWE'S HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

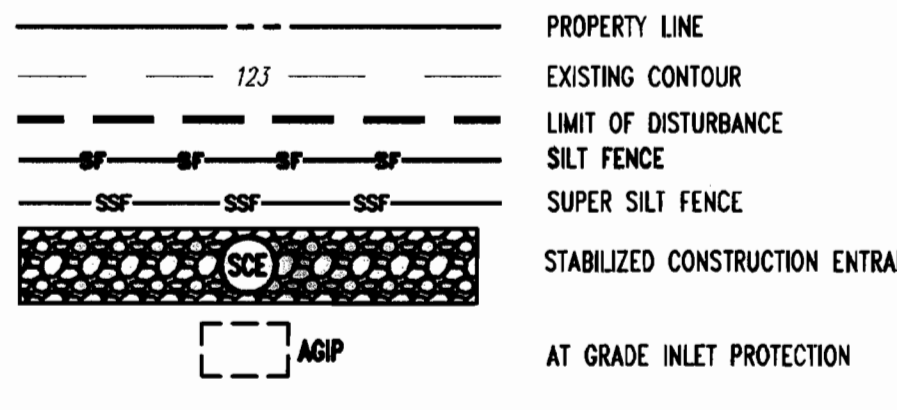
AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
 PARCEL P
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: EROSION & SEDIMENT CONTROL PLAN PHASE I

BOHLER ENGINEERING, P.C.
 PROFESSIONAL ENGINEERING SERVICES
 222950 DAVIS PARKWAY SUITE 200 STERLING, VIRGINIA 20164
 CONTACT: DAVID B. NEBECKER
 (703) 709-9500 FAX: (703) 709-9501

DESIGNED BY: DBN
 DRAWN BY: WMM
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: 1"=50'
 DRAWING NO.: 10 OF 33
 PROFESSIONAL ENGINEER NO. 21342

EROSION AND SEDIMENT CONTROL LEGEND



REVIEWED FOR HOWARD SCD AND MEETS THE TECHNICAL REQUIREMENT
 Signature: *Jim Moran*
 DATE: 12/16/06
 USA - NATURAL RESOURCES CONSERVATION SERVICE

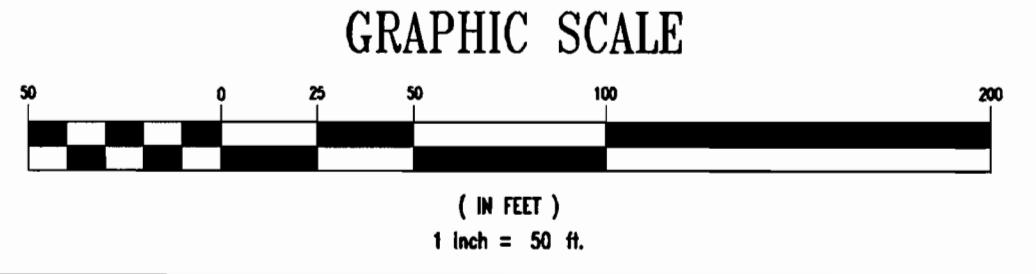
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *John C. Moran*
 DATE: 12/16/06
 HOWARD SCD



CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'

THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY



PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *Chris Williams*
 DATE: 12/16/06
 CHIEF-DEVELOPMENT ENGINEERING DIVISION

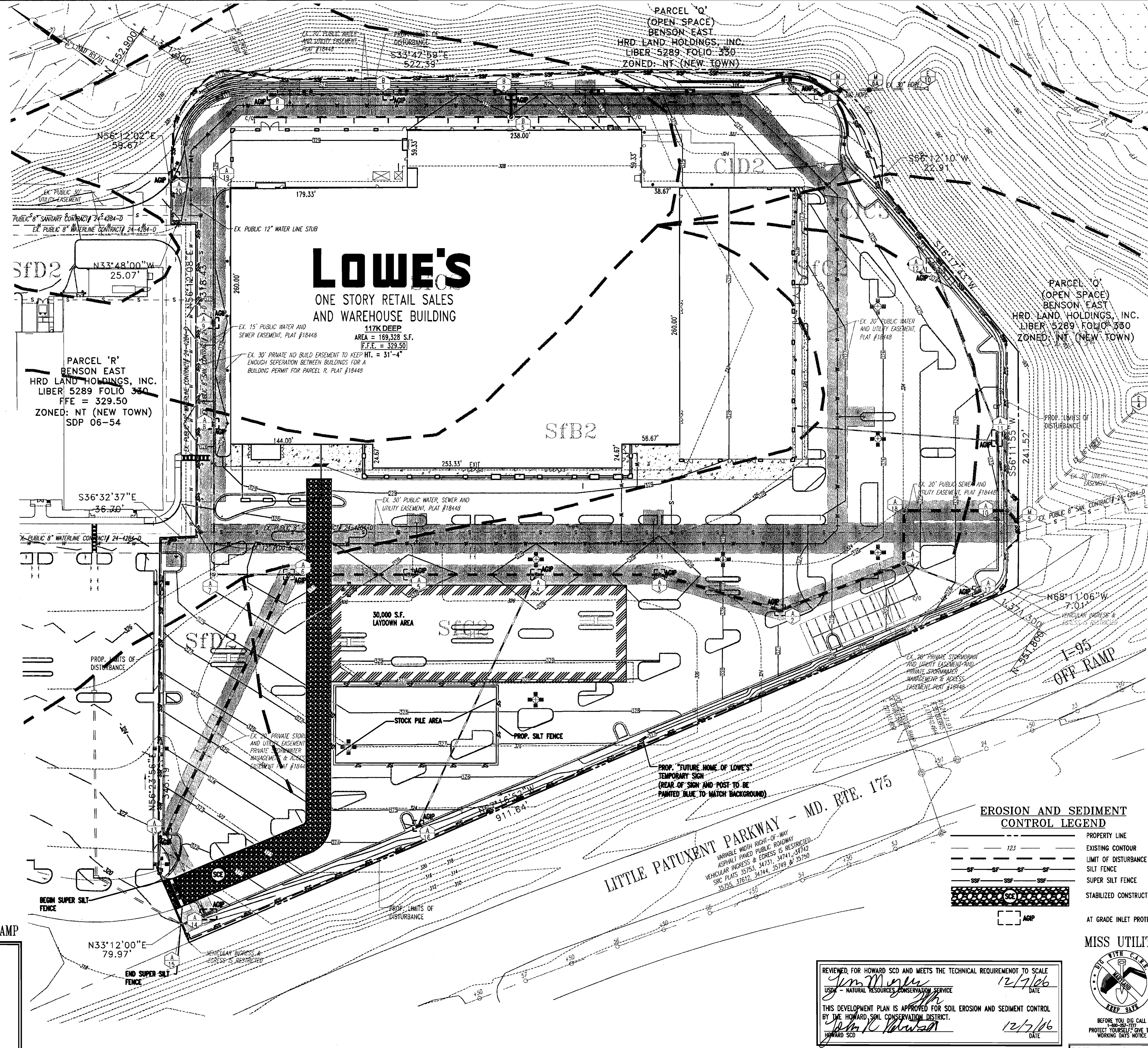
Signature: *Robert J. Weller*
 DATE: 12/16/06
 CHIEF-DIVISION & LAND DEVELOPMENT

Signature: *Robert J. Weller*
 DATE: 12/16/06
 DIRECTOR

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 Signature: *Robert J. Weller*
 DATE: 12/16/06
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

8-31-06

10/3/2006 11:13:28 AM
 10/3/2006 11:13:28 AM
 10/3/2006 11:13:28 AM



ON-SITE SOILS INFORMATION:

- C1C3 - CHILLUM GRAVELLY LOAM, 5%-10% SLOPES, SEVERELY ERODED.
- C1D2 - CHILLUM GRAVELLY LOAM, 10%-15% SLOPES, MODERATELY ERODED.
- S1C2 - SASSAFRAS GRAVELLY SANDY LOAM, 5%-10% SLOPES, MODERATELY ERODED.
- S1B2 - SASSAFRAS GRAVELLY SANDY LOAM, 1%-5% SLOPES, MODERATELY ERODED.
- S1D2 - SASSAFRAS GRAVELLY SANDY LOAM, 10%-15% SLOPES, MODERATELY ERODED.

REFERENCE:
SOIL SURVEY
HOWARD COUNTY, MD
PREPARED BY:
UNITED STATES DEPARTMENT OF AGRICULTURE
DATED: JULY 1968

ENGINEER'S CERTIFICATE
"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL IS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
SIGNATURE OF ENGINEER: *Adam J. Volanth* DATE: 11/21/06
ADAM J. VOLANTH P.E.

DEVELOPER'S CERTIFICATE
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
SIGNATURE OF DEVELOPER: *David E. Shelton* DATE: 10/19/06

NOTES

- THE OWNER OF THE SHOPPING CENTER IS RESPONSIBLE FOR ALL ROUGH GRADING AND DISTURBANCE ON-SITE WHICH IS INVOLVED IN THE EROSION AND SEDIMENT CONTROL PLANS PREPARED BY PATTON, HARRIS, RUST AND ASSOCIATES, P.C.
- REFER TO GENERAL NOTES SHEET FOR ANY APPLICABLE EROSION AND SEDIMENTATION NOTES.
- REFER TO SHEET 10 FOR THE PROPOSED SEQUENCE OF CONSTRUCTION.

BENCHMARK

GEODETIC SURVEY CONTROL #37GD
N 553,237.204
E 1,372,353.605
ELEV. 290.931'
LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #37GC
N 553,250.791
E 1,370,946.348
ELEV. 331.855'
LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE HOUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
(LOWE'S HOME IMPROVEMENT)

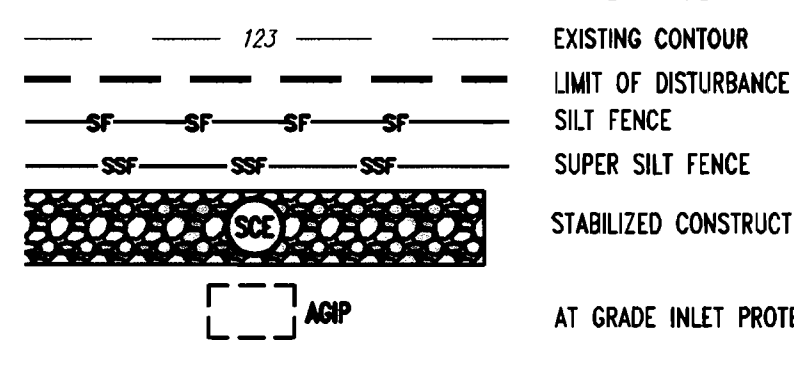
AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: EROSION & SEDIMENT CONTROL PLAN PHASE II

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22250 DAVIS DRIVE, SUITE 200 SPRINGFIELD, VIRGINIA 20154
CONTACT: DAVID B. NEWECEK
(703) 709-9800 FAX: (703) 709-9801 | WWW.BEPCOM.COM

DESIGNED BY: DBN
DRAWN BY: MWM
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: 1"=50'
DRAWING NO.: 11 OF 33
PROFESSIONAL ENGINEER NO. 21542

EROSION AND SEDIMENT CONTROL LEGEND

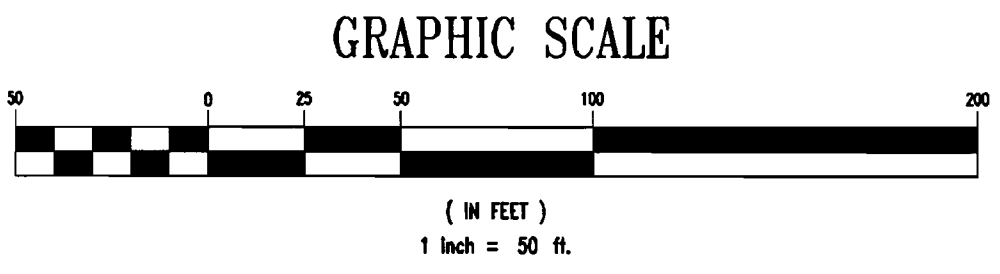


LITTLE PATUXENT PARKWAY - MD. RTE. 175
VARIABLE WIDTH RIGHT-OF-WAY
ASPHALT PAVED PUBLIC ROADWAY
VEHICULAR ACCESS & EGRESS IS RESTRICTED
SIC PLATS 35763, 34731, 34741, 34742
39255, 37619, 34744, 39749 & 35750

REVIEWED FOR HOWARD SCD AND MEETS THE TECHNICAL REQUIREMENT TO SCALE
Jim M. M... 12/7/06
USDA - NATURAL RESOURCES CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John C. ... 12/7/06

CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'



THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY

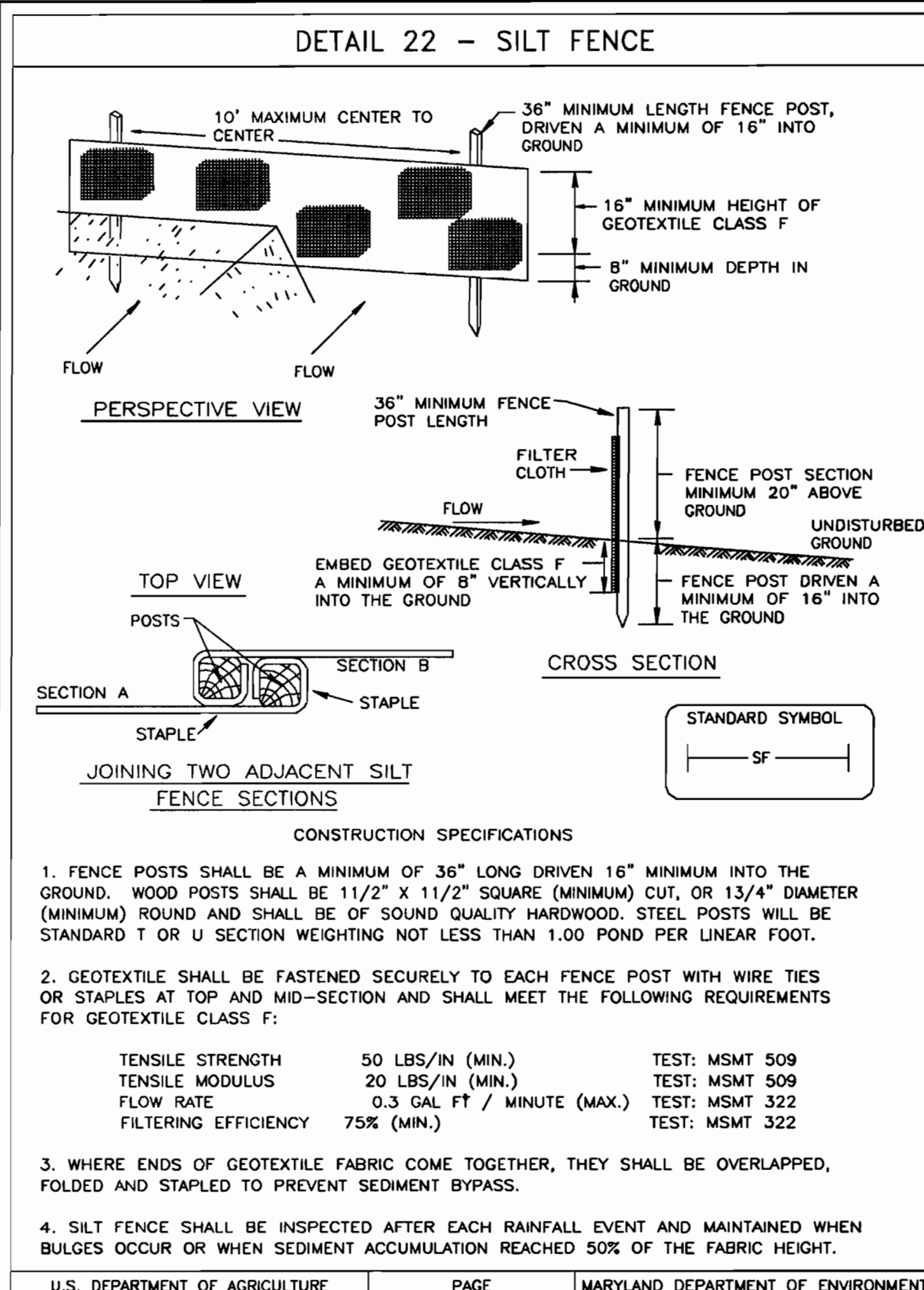
PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 12/10/06
CHIEF-DEVELOPMENT ENGINEERING DIVISION
... 12/19/06
CHIEF-DIVISION & LAND DEVELOPMENT
... 12/28/06
DIRECTOR

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
Robert Weber 12/19/06
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 8-31-06

DATE PLOTTED: 10/17/2006 11:13:37 AM; 10/17/2006 11:13:37 AM; 10/17/2006 11:13:37 AM



SILT FENCE

SILT FENCE DESIGN CRITERIA

SLOPE STEEPNESS	(MAXIMUM) SLOPE LENGTH	(MAXIMUM) SILT FENCE LENGTH
FLATTER THAN 50:1	UNLIMITED	UNLIMITED
50:1 TO 10:1	125 FEET	1,000 FEET
10:1 TO 5:1	100 FEET	750 FEET
5:1 TO 3:1	60 FEET	500 FEET
3:1 TO 2:1	40 FEET	250 FEET
2:1 AND STEEPER	20 FEET	125 FEET

NOTE: IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA GENERAL CLASSIFICATION SYSTEM, SOIL CLASS A) MAXIMUM SLOPE LENGTH AND SILT FENCE LENGTH WILL BE UNLIMITED. IN THESE AREAS A SILT FENCE MAY BE THE ONLY PERIMETER CONTROL REQUIRED.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

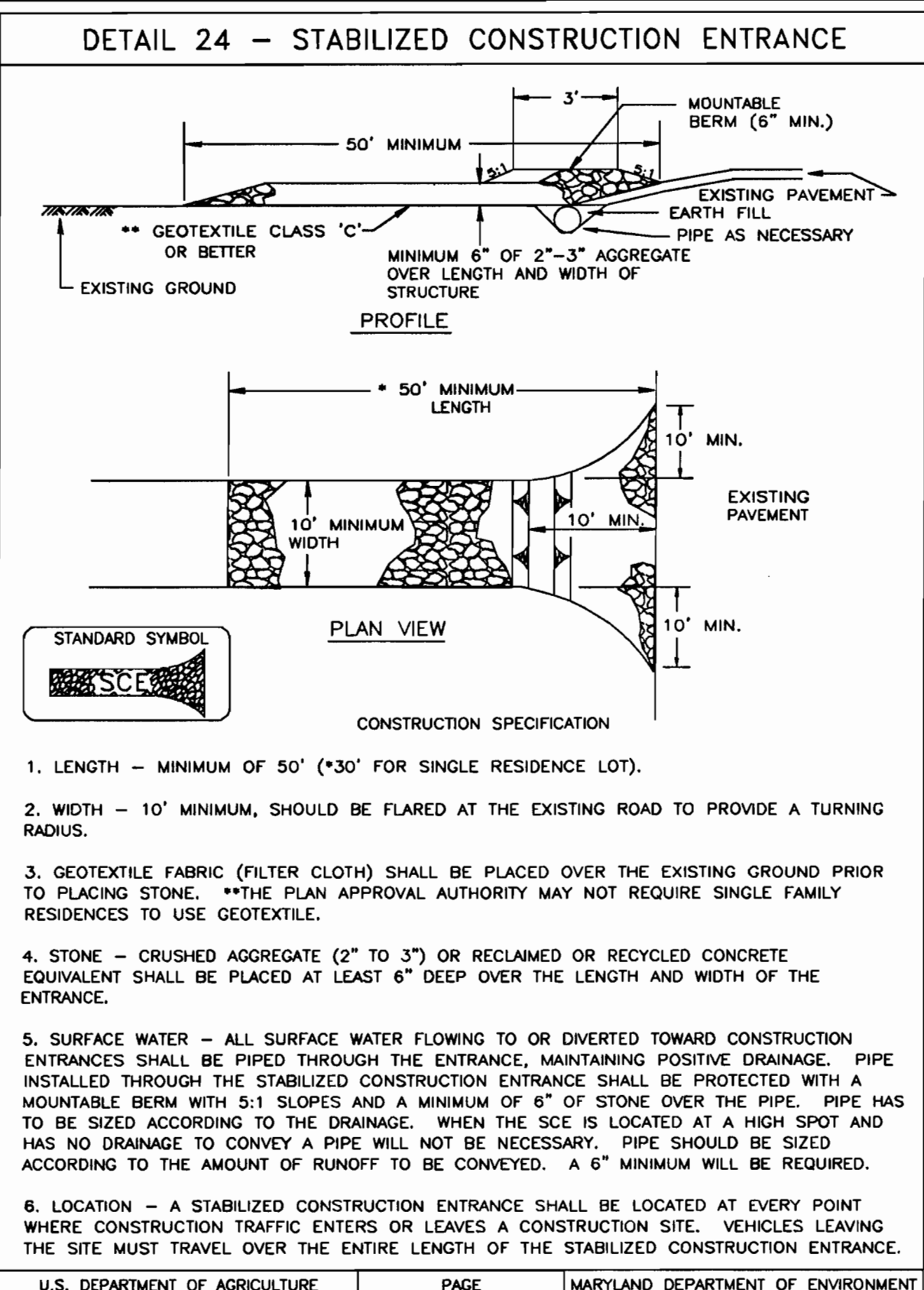


PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/11/06

APPROVED: PLANNING BOARD
 DATE: 8-31-06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 COUNTY HEALTH OFFICER
 DATE: 12/18/06

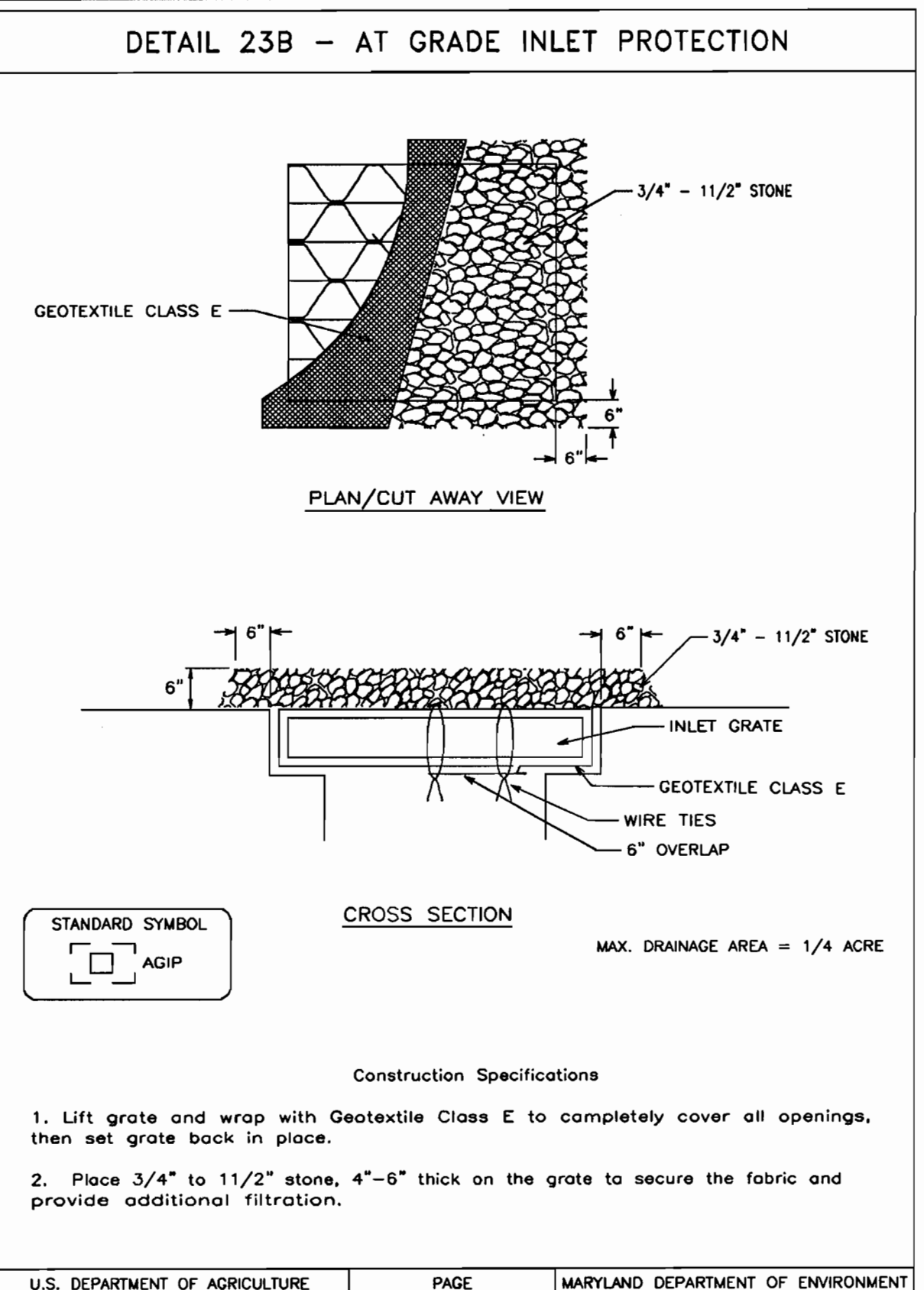
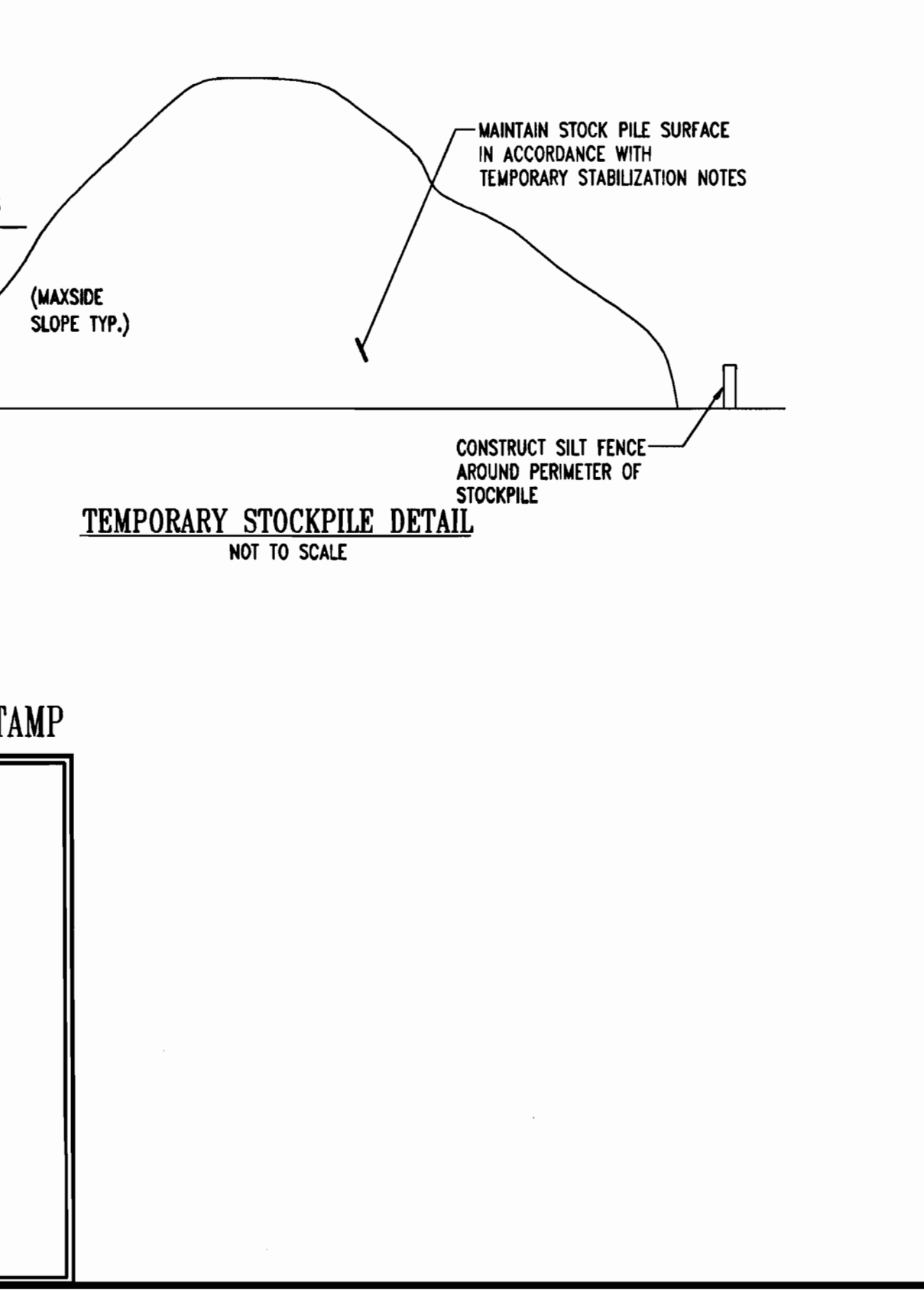


STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATION

- LENGTH - MINIMUM OF 50' (*30' FOR SINGLE RESIDENCE LOT).
- WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. **THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
- STONE - CRUSHED AGGREGATE (2" TO 3"), OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-17-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

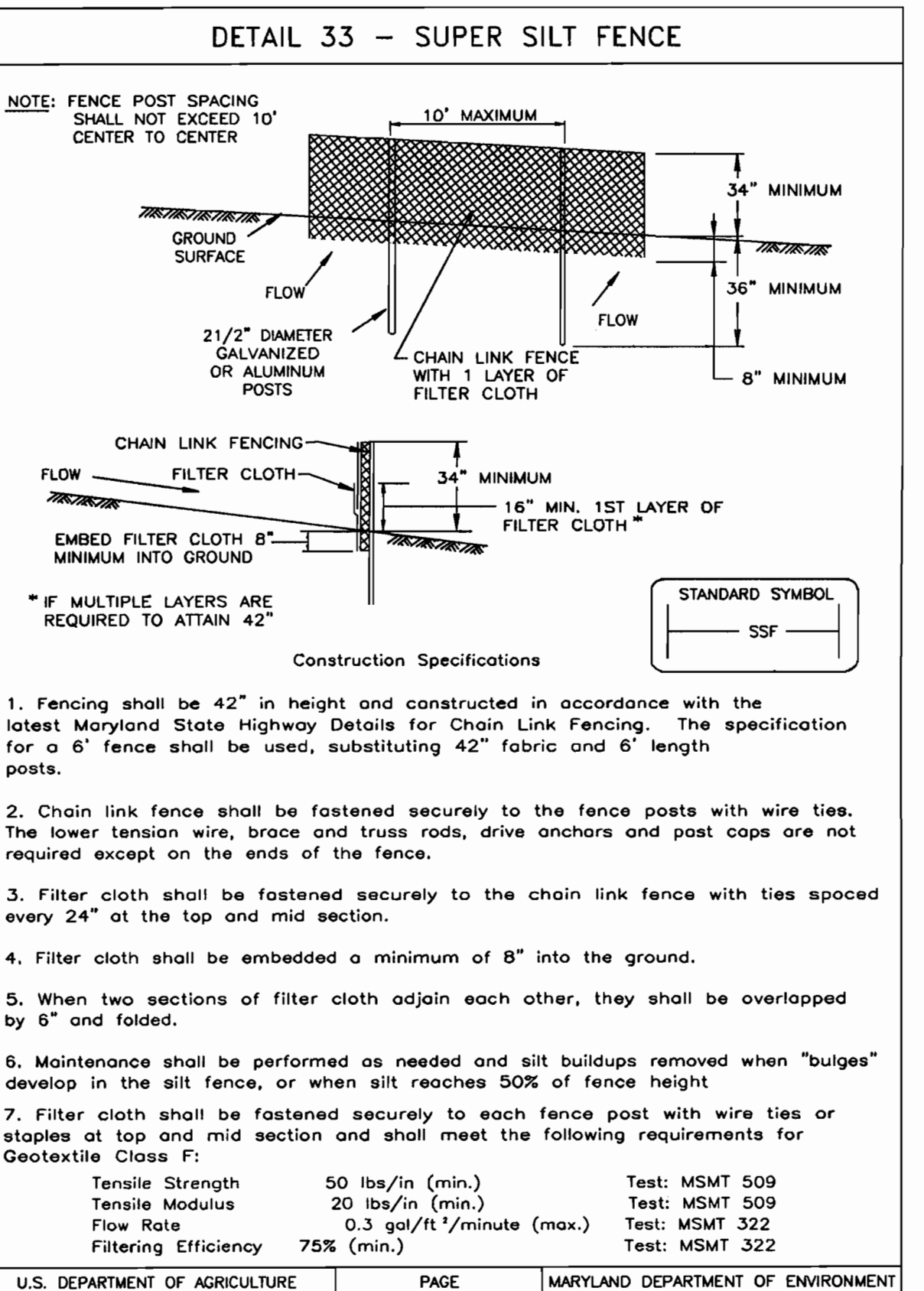
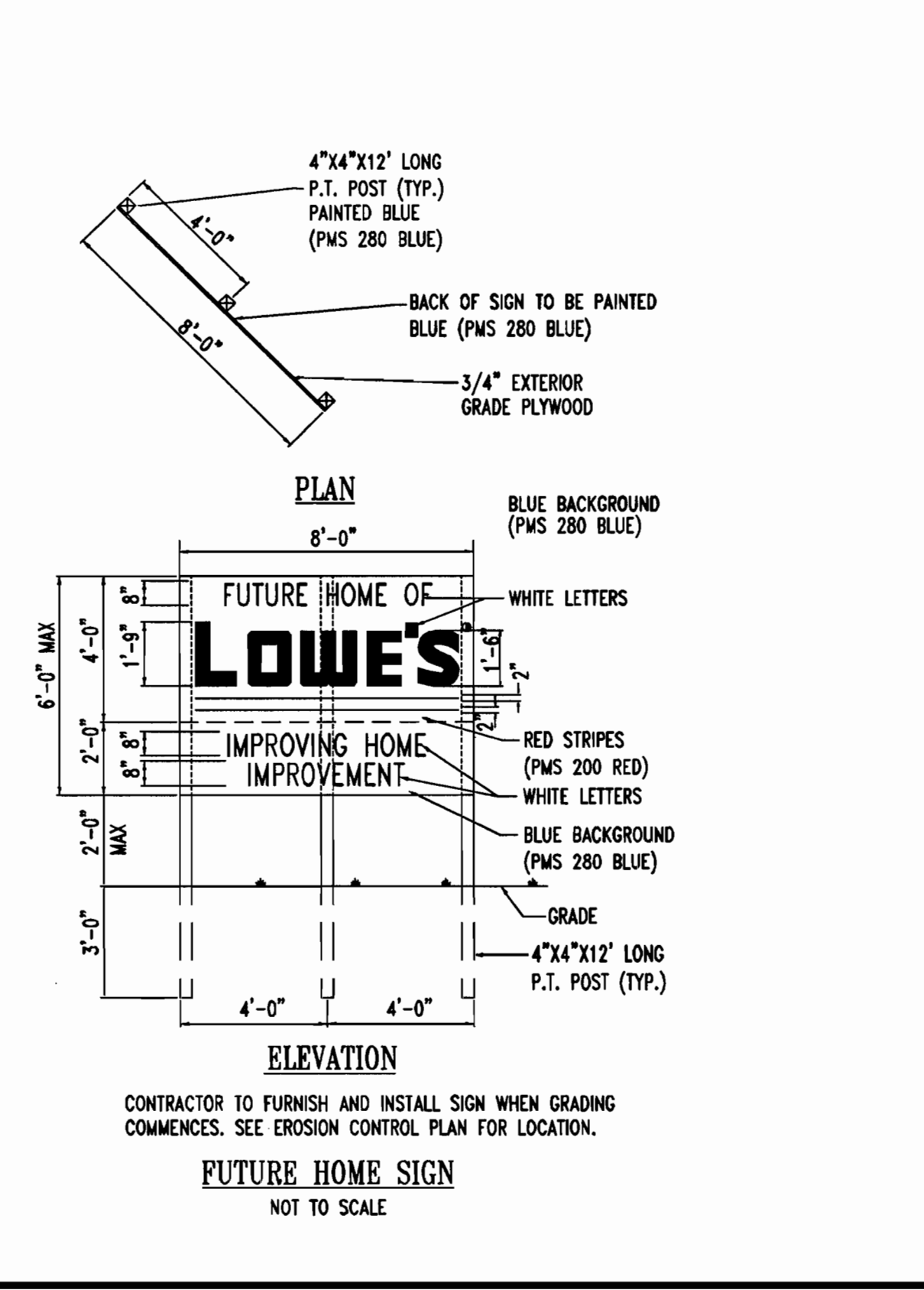


AT GRADE INLET PROTECTION

CONSTRUCTION SPECIFICATIONS

- Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
- Place 3/4" to 1 1/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-18-5A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

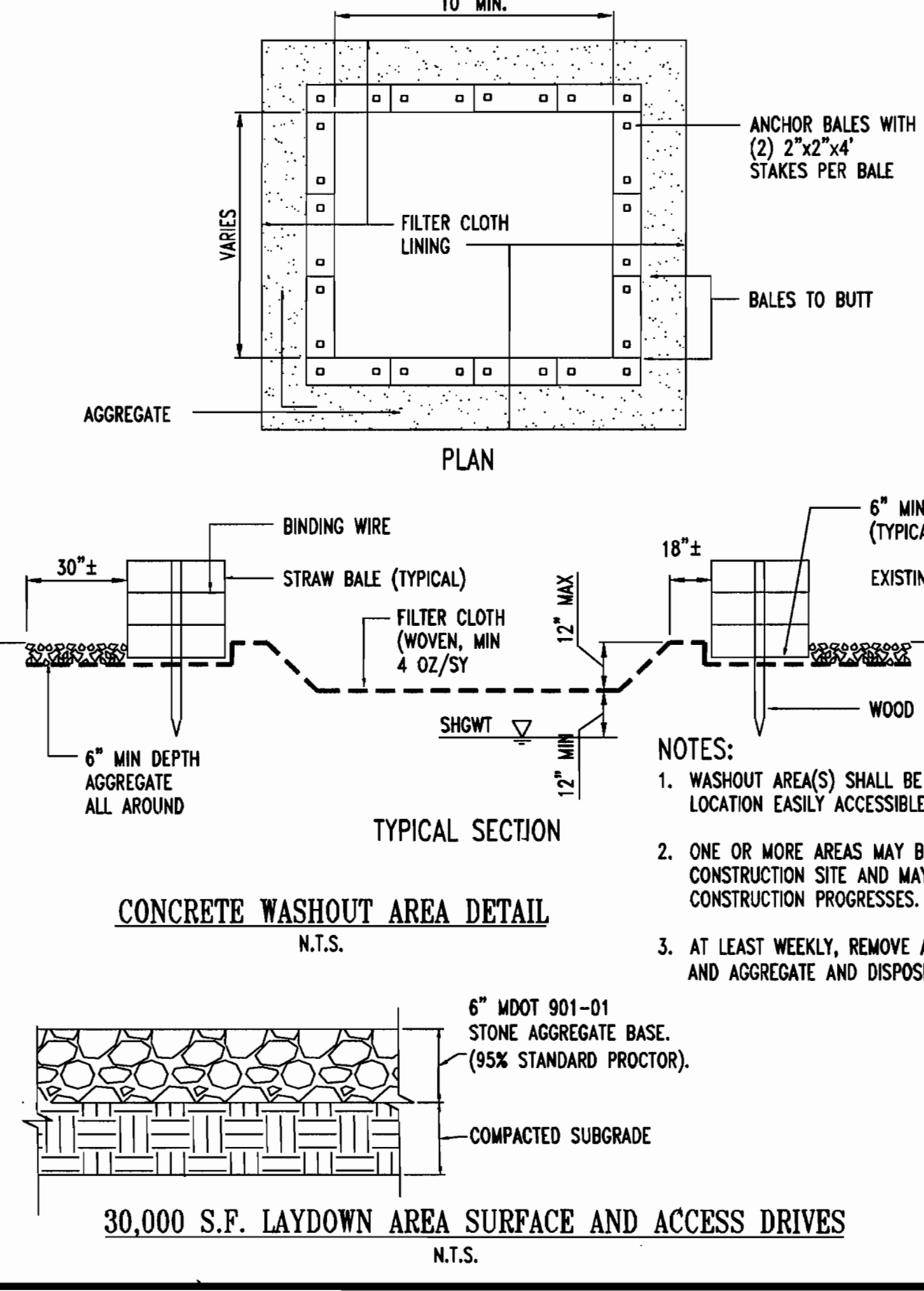


SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-26-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Engineer: Adam P. Volanth P.E.
 Date: 12/18/06

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Developer: David E. Shetter
 Date: 12/18/06

REVIEWED FOR HOWARD SCD AND MEETS THE TECHNICAL REQUIREMENTS
 Signature: Jim Maylin
 Date: 12/7/06

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: John K. Robertson
 Date: 12/7/06

MISS UTILITY

BEFORE YOU DIG CALL 800-257-7777
 PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

DESIGNED BY: DDM
 DRAWN BY: JWK
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: N.T.S.
 DRAWING NO.: 12 OF 33

BOHLER ENGINEERING, P.C.
 PROFESSIONAL ENGINEERING SERVICES
 22030 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164
 CONTACT: DAVID B. BOHLER
 (703) 258-9500 FAX: (703) 208-9501 E: dbohler@bohlereng.com

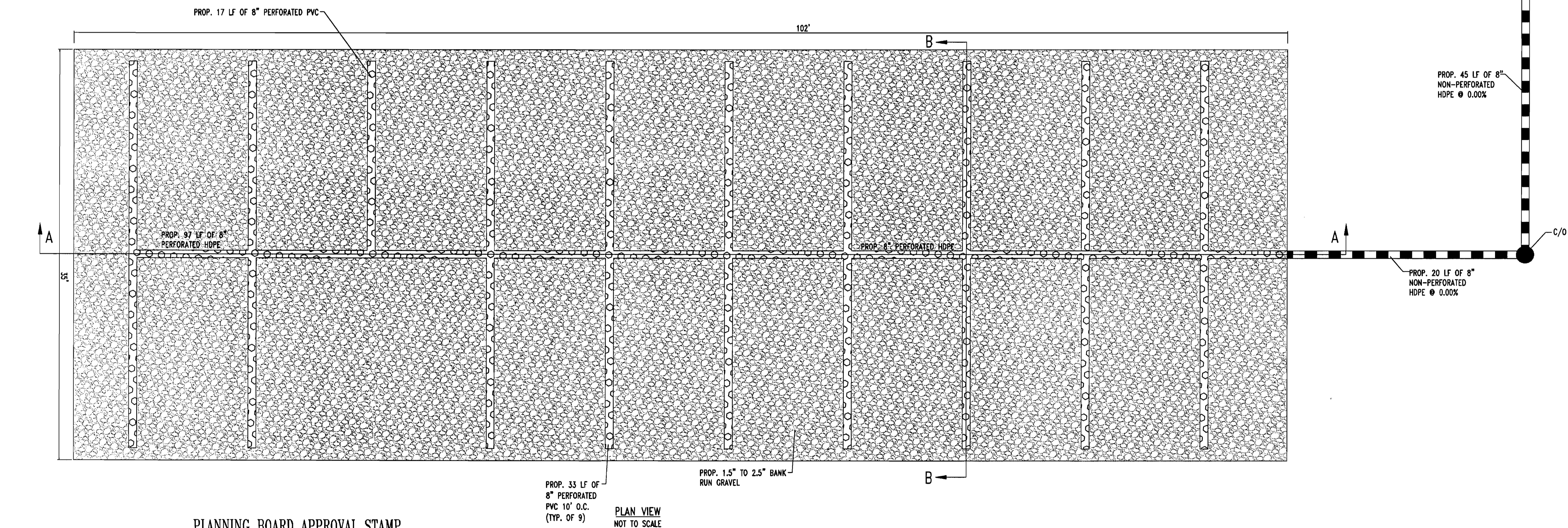
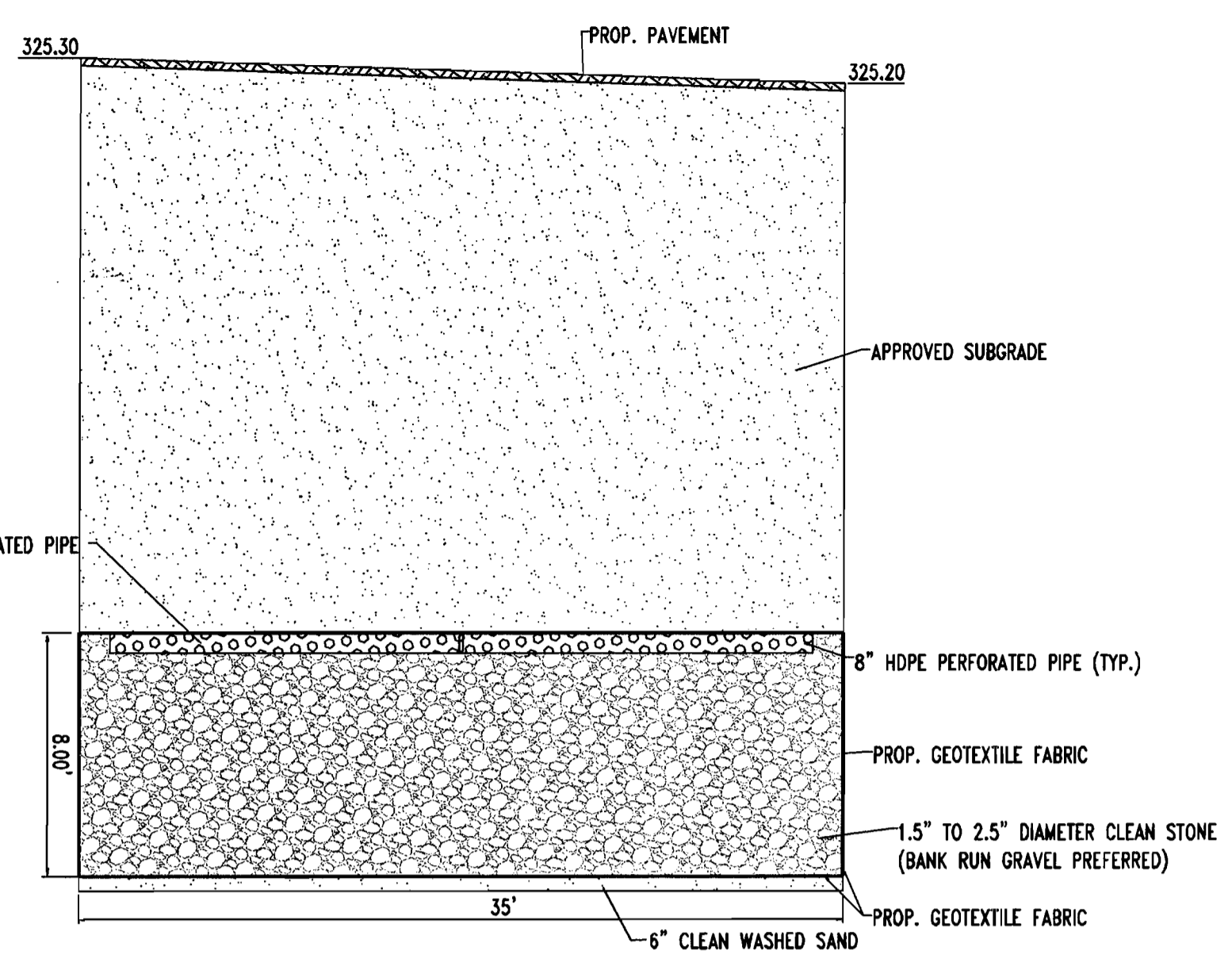
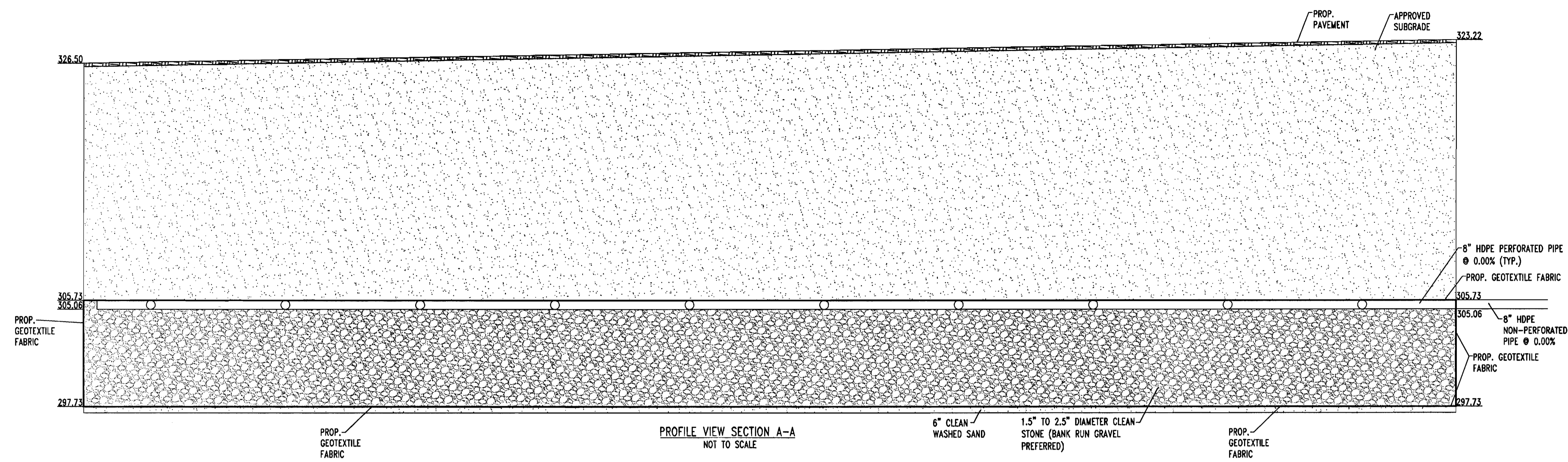
OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING (LOWES HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID: 1 & 2 ZONED NEW TOWN
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: EROSION & SEDIMENT CONTROL NOTES & DETAILS

APPROVED: BOHLER ENGINEERING, P.C.
 PROFESSIONAL ENGINEER NO. 21342



- OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER RECHARGE TRENCHES**
1. THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
 2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
 3. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
 4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
 5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
 6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 12/11/06
 CHIEF-DEVELOPMENT ENGINEERING DIVISION
 12/11/06
 CHIEF-DIVISION & LAND DEVELOPMENT
 12/20/06
 DIRECTOR
 12/19/06
 HOWARD COUNTY HEALTH DEPARTMENT

PLANNING BOARD APPROVAL STAMP

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: **8-31-06**

MISS UTILITY

BEFORE YOU DIG CALL
 1-800-291-7777
 PROTECT YOURSELF, ONE TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

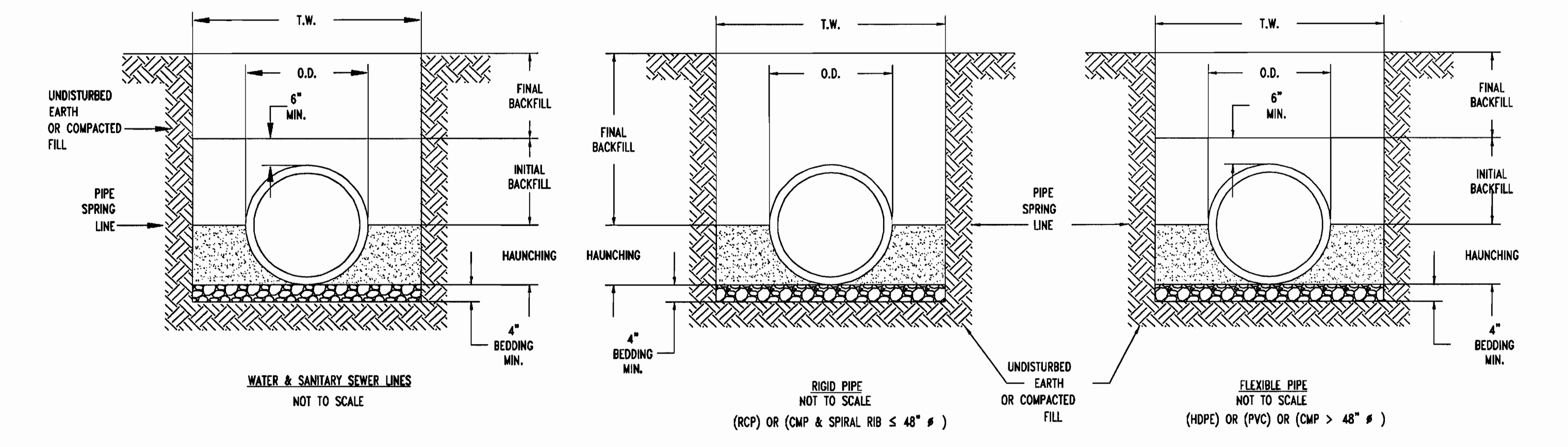
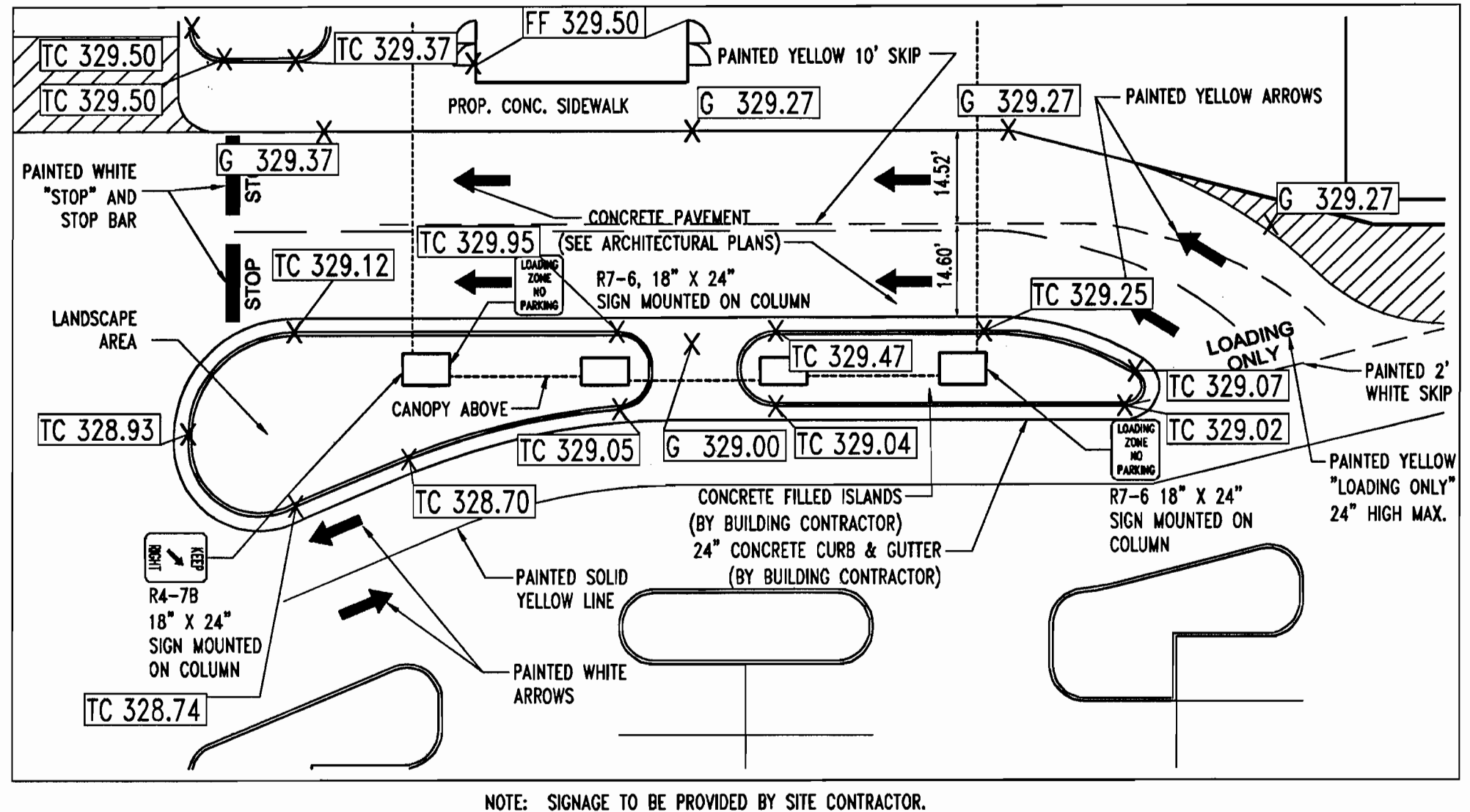
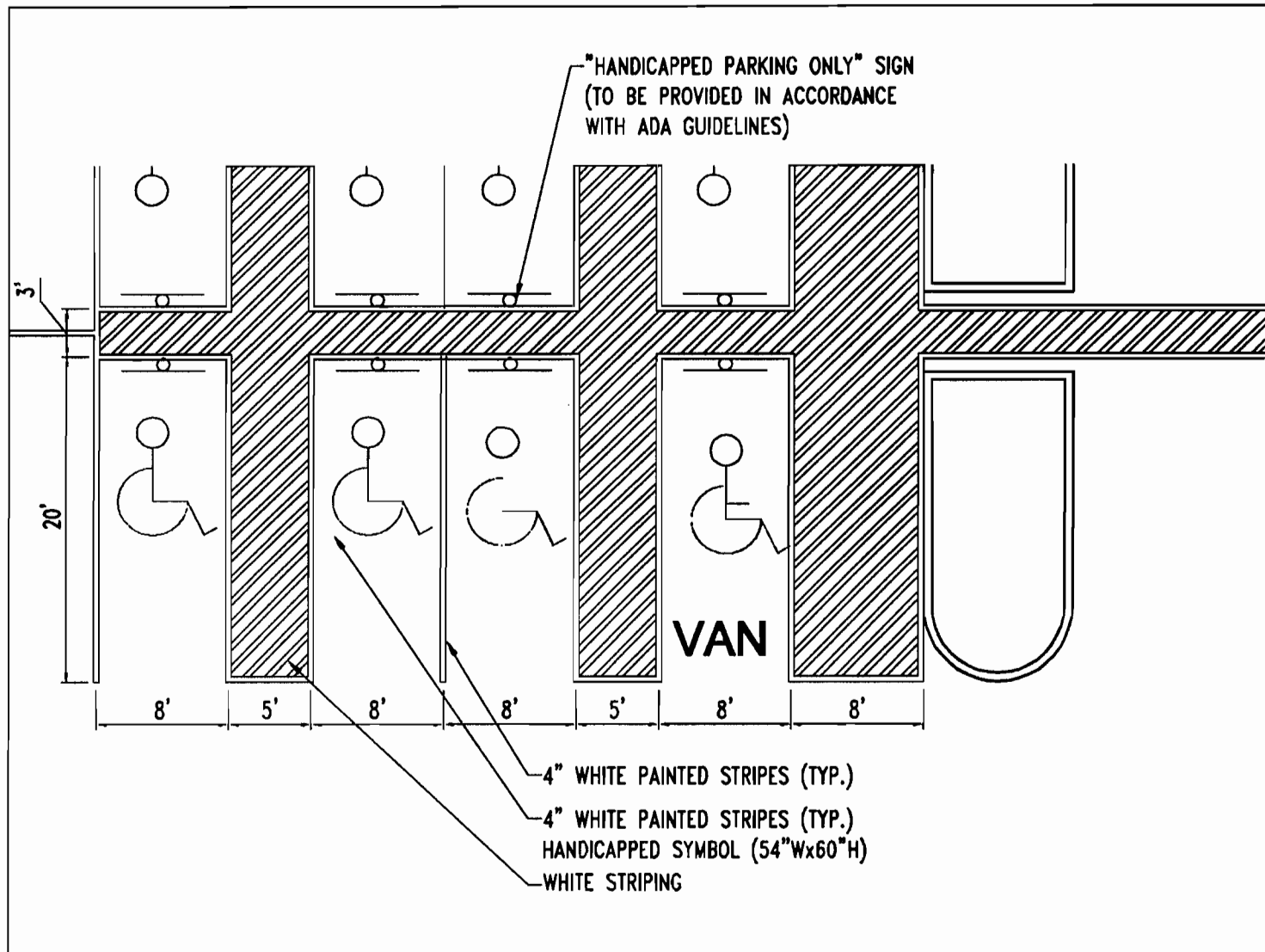
PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 (LOWES HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
 PARCEL P
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

BOHLER ENGINEERING, P.C.
 PROFESSIONAL ENGINEERING SERVICES
 22200 DAVIS DRIVE, SUITE 300 SPOTSWYLD, VIRGINIA, 20154
 CONTACT: DAVID B. NEMCEK
 (703) 708-9900 FAX: (703) 708-9501 www.behler.com

DESIGNED BY: DBN
 DRAWN BY: JWK
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: N.T.S.
 DRAWING NO.: 14 OF 33
 PROFESSIONAL ENGINEER NO. 21342

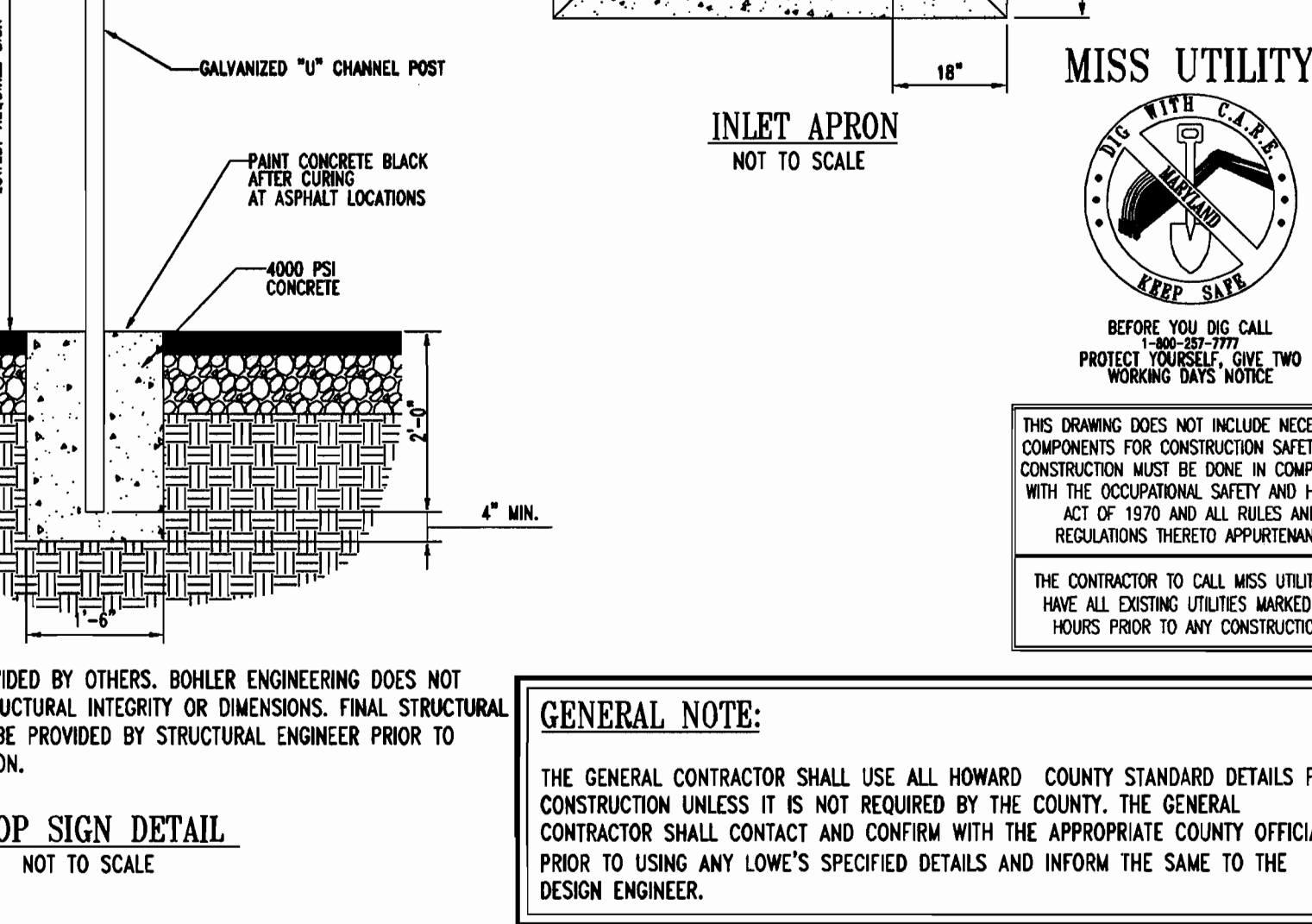
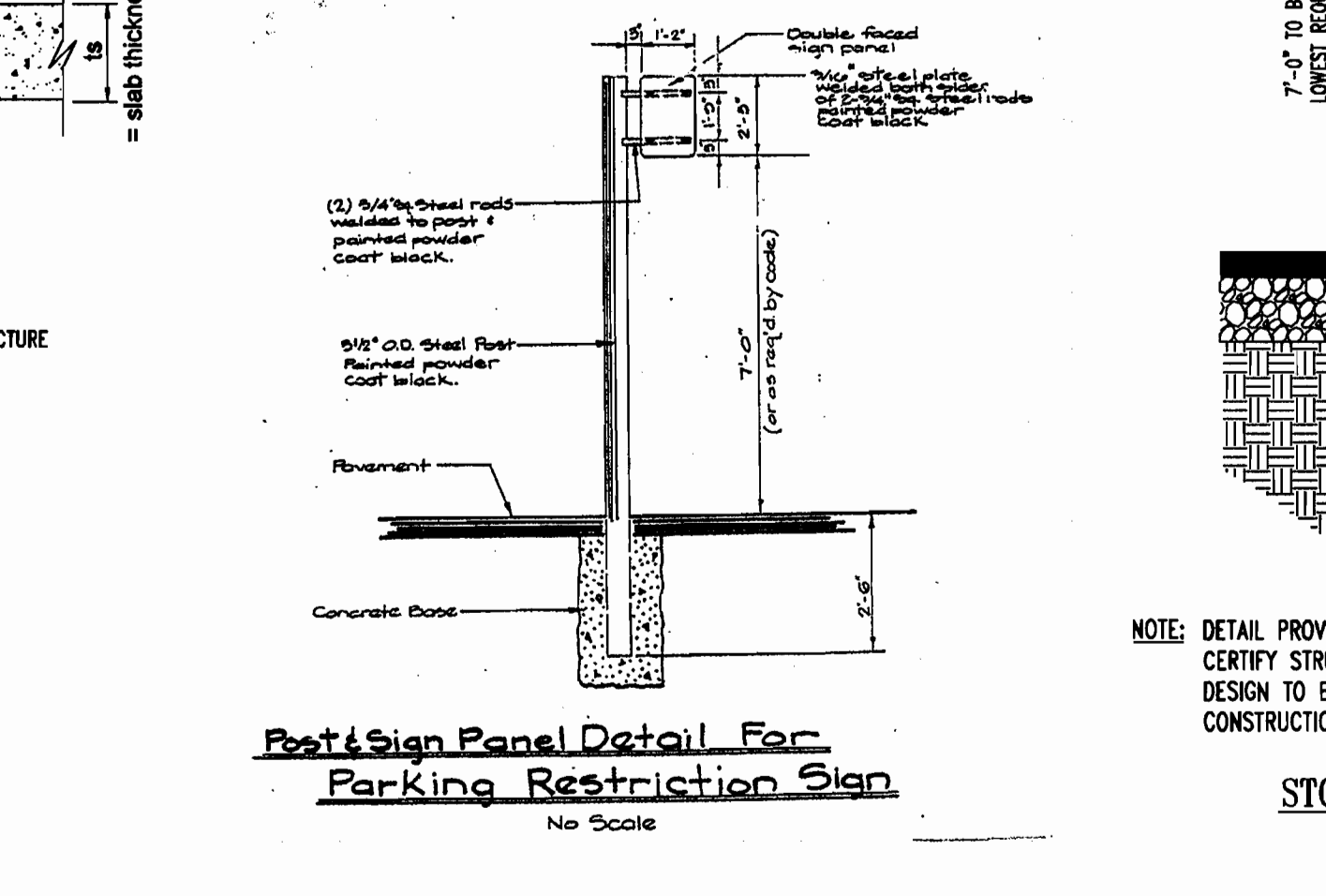
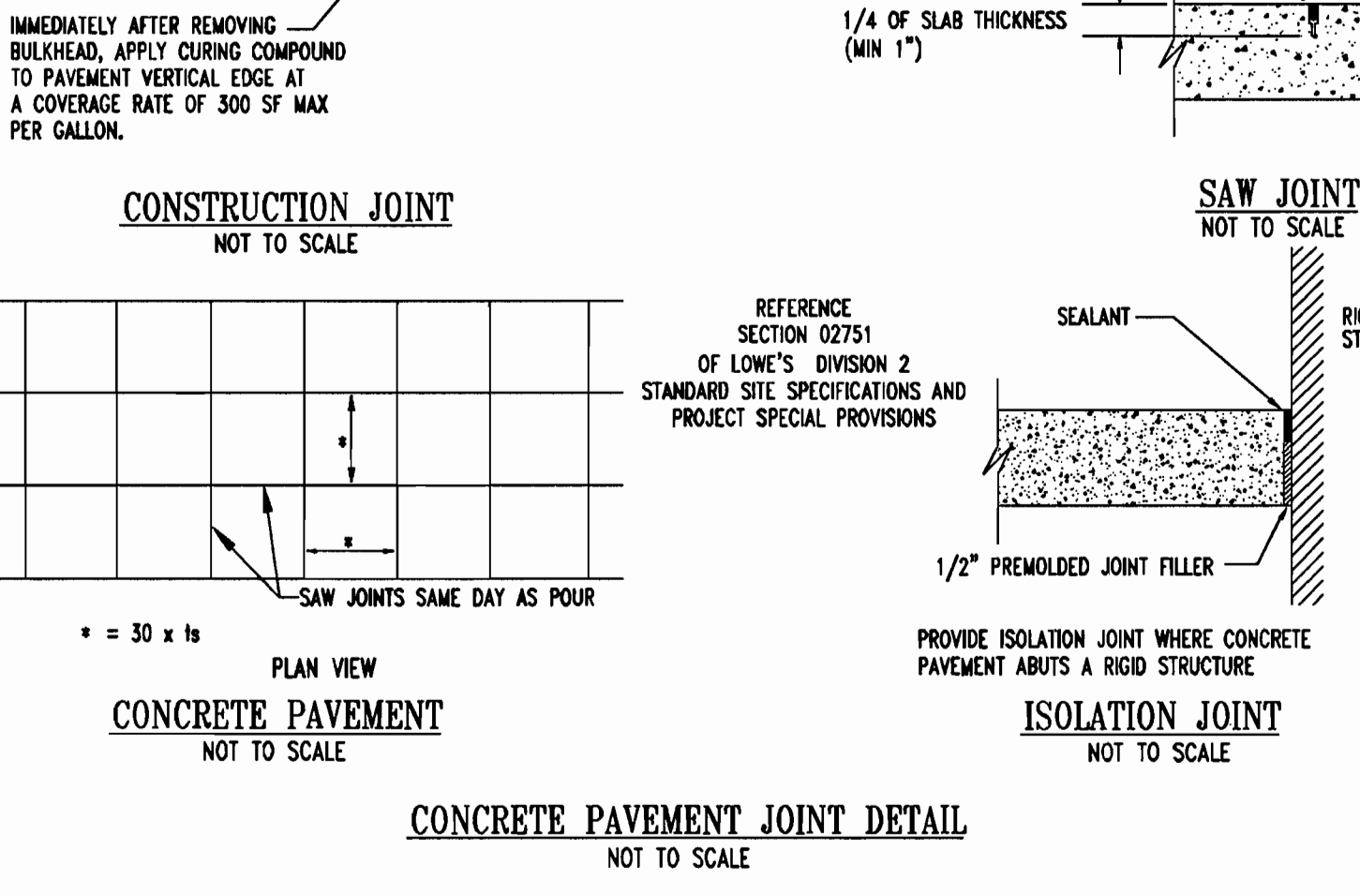
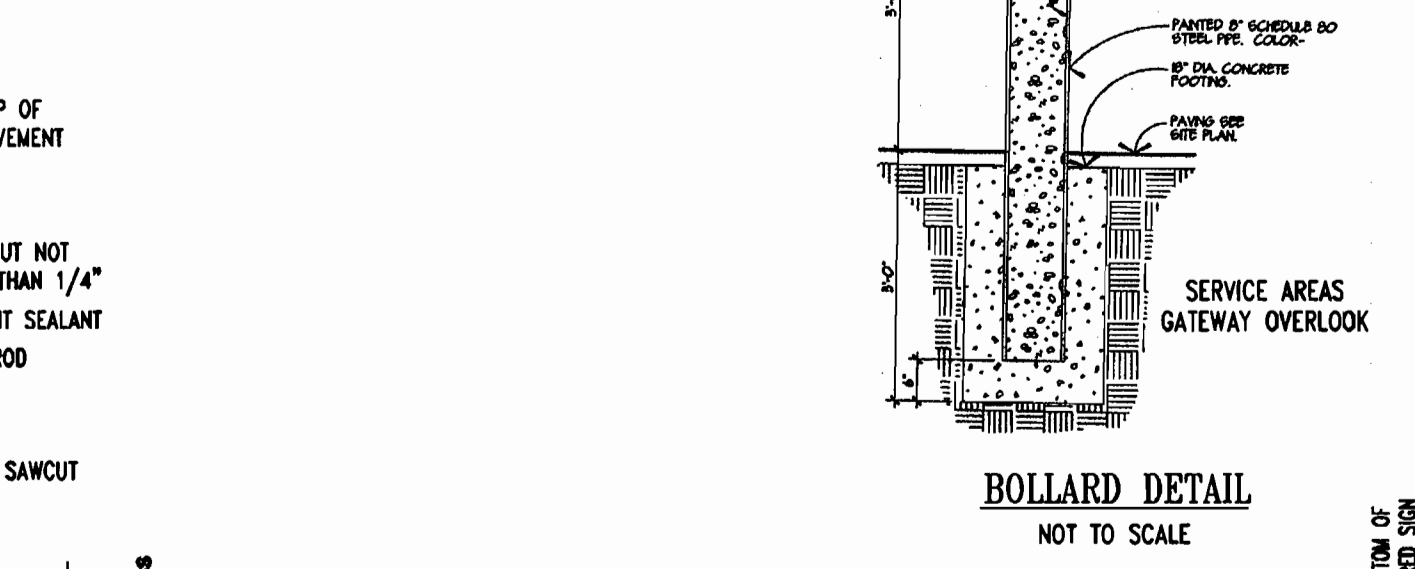
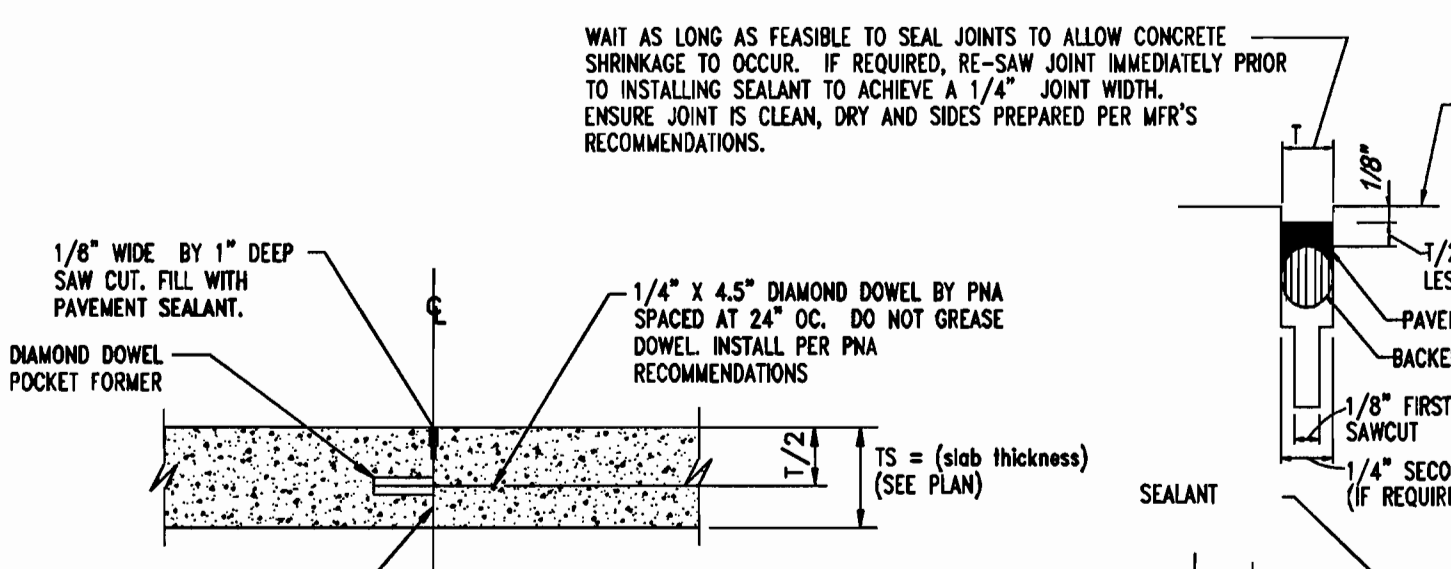
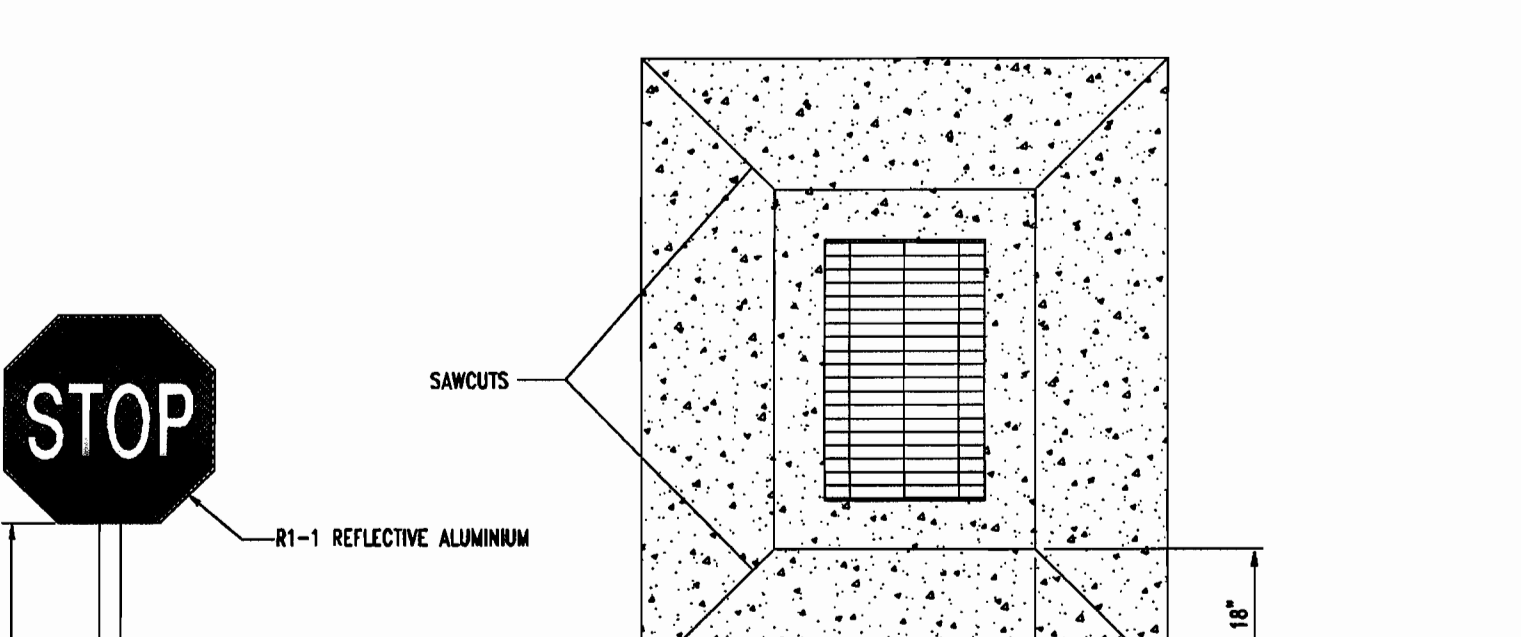
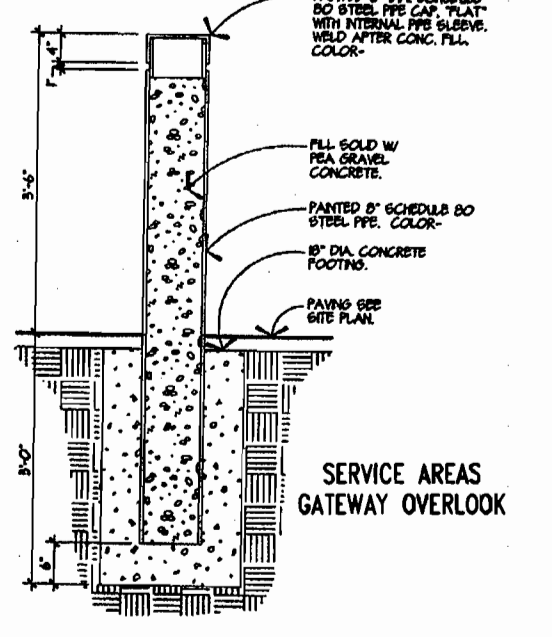
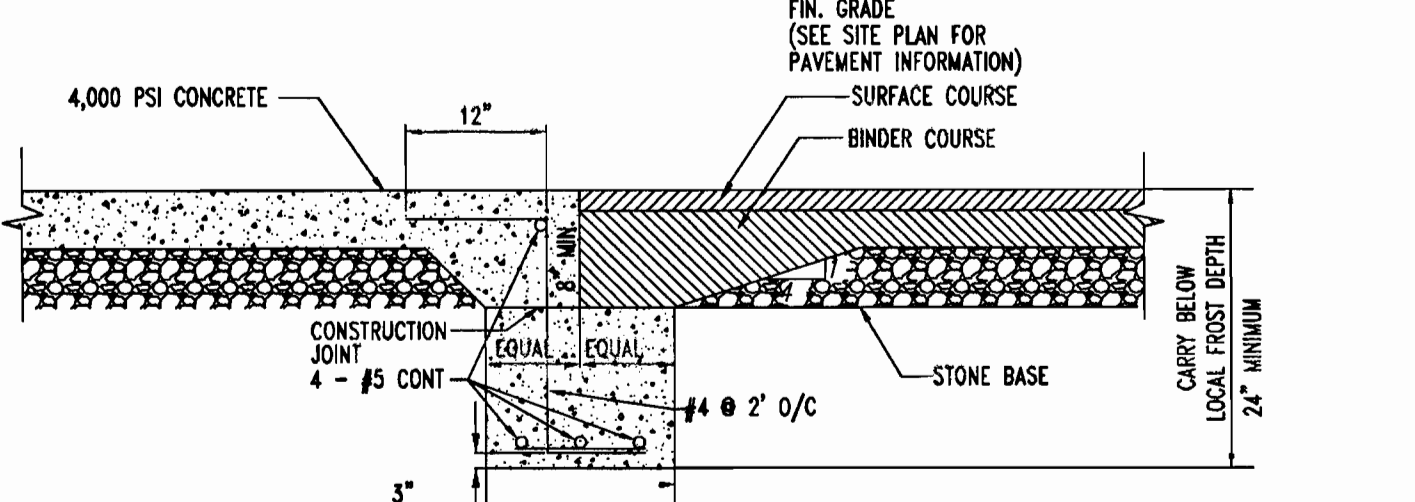
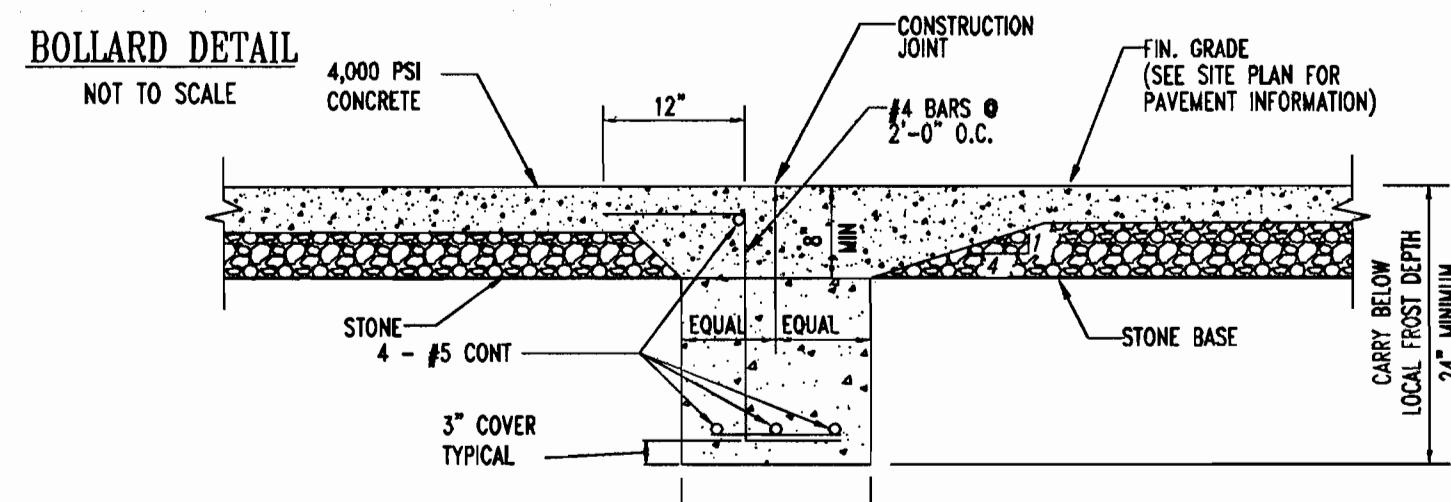
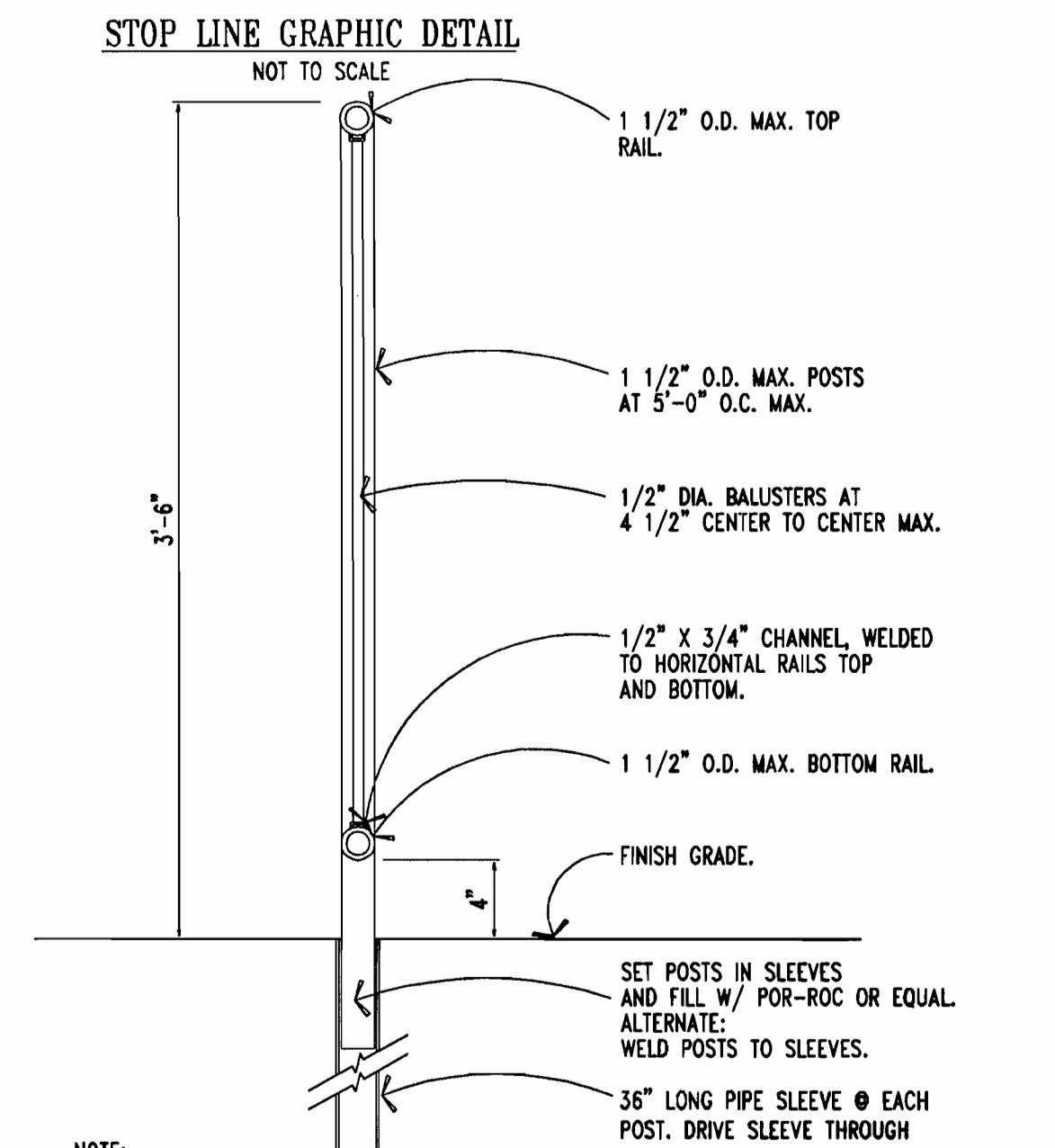
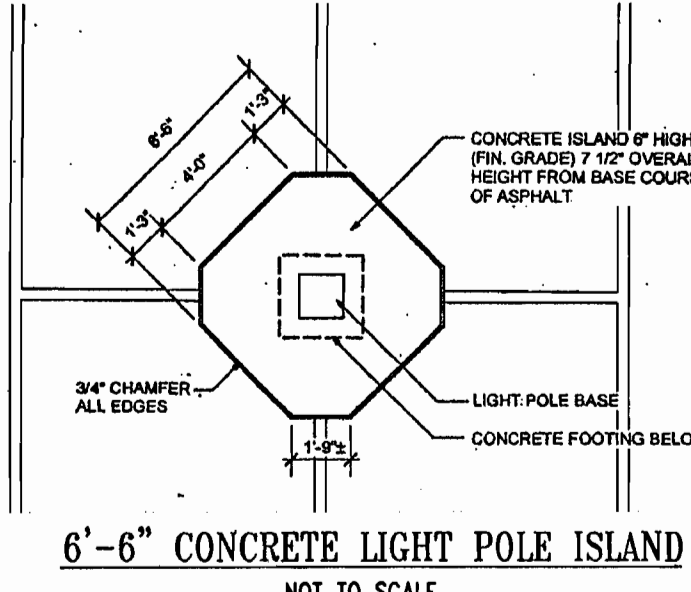
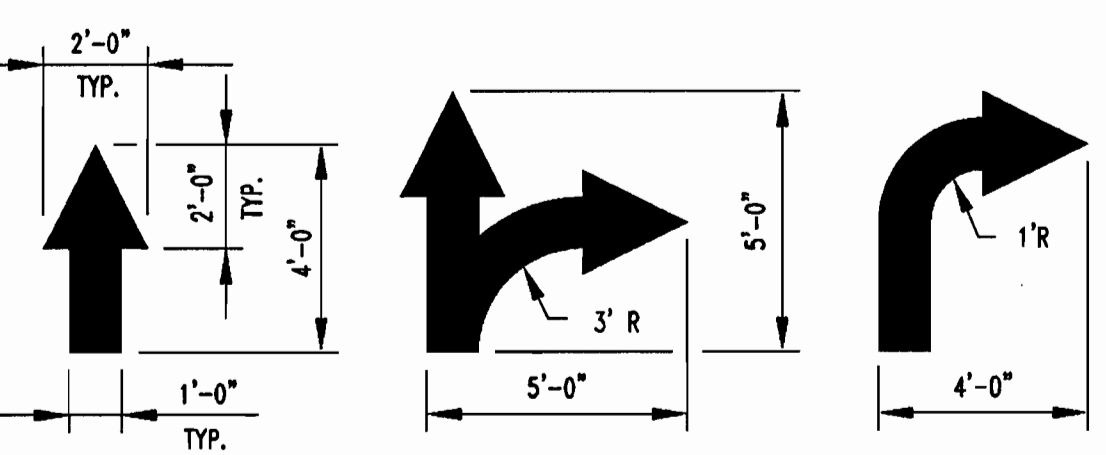
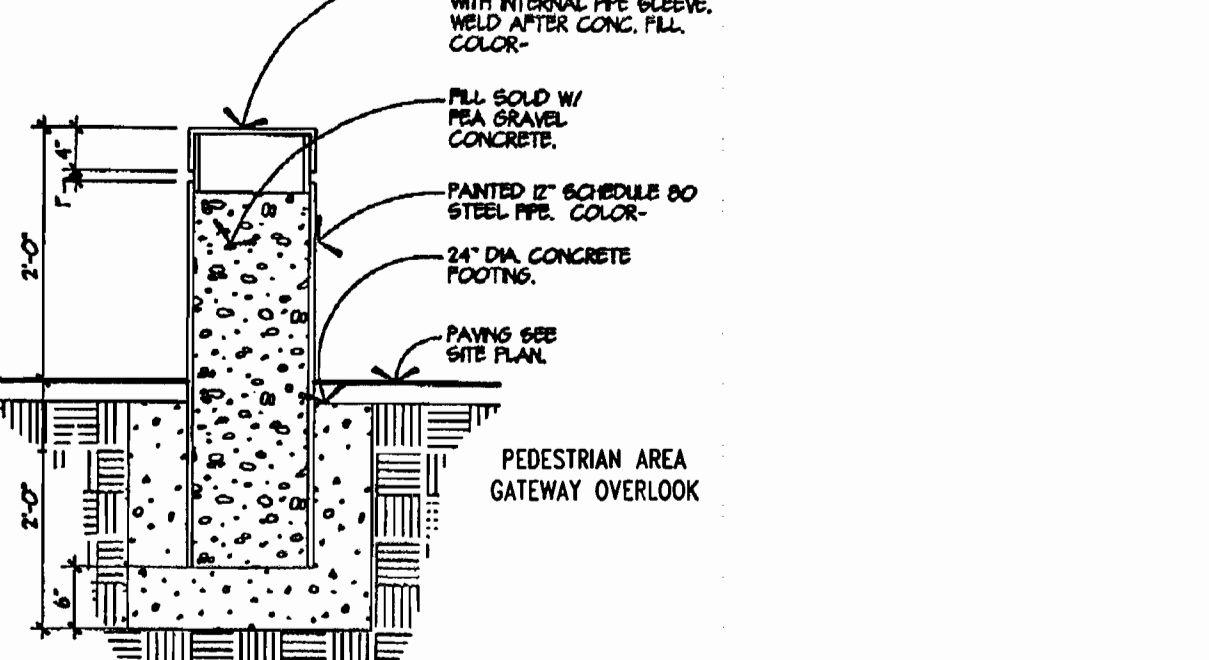
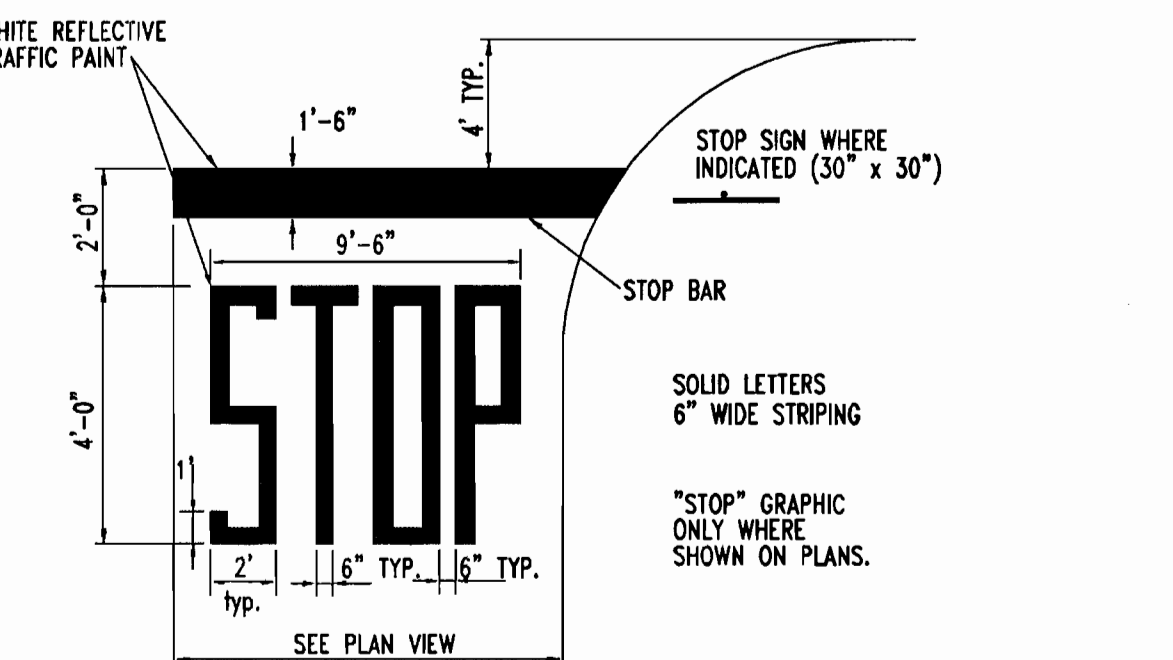


- BEDDING SHALL BE DUMPED CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR. LOCAL CODE PERMITTING WITH GEOTECHNICAL ENGINEER AND OWNER APPROVAL, NATIVE SOIL MAY BE USED FOR BEDDING PROVIDED IT MEETS THE EMBEDMENT AND BACKFILL MATERIALS IN TABLE 1 EXCLUDING CLASS IV-A.
- HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR. PEA GRAVEL SHALL NOT BE USED AS A HAUNCHING MATERIAL. CLASS III MATERIAL SHALL BE ALLOWED FOR RIGID PIPE COMPACTED AT 95% STANDARD PROCTOR.
- INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 90% STANDARD PROCTOR, OR CLASS III COMPACTED 95% STANDARD PROCTOR. CLASS I & II MATERIAL SHALL BE USED FOR FLEXIBLE PIPE WHEN FILL HEIGHTS EXCEED 8'.
- FINAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 90% STANDARD PROCTOR, OR CLASS III COMPACTED TO 95% STANDARD PROCTOR.
- FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
- ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321. (SEE TABLE 1)
- ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
- FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
- ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.
- DESIGN ENGINEER SHALL DESIGNATE ON THE PLANS WHERE WATER-TIGHT JOINTS ARE TO BE REQUIRED.
- REPLACE WET OR UNSUITABLE SOIL AS NECESSARY TO PROVIDE A SUITABLE BASE, AS DIRECTED BY GEOTECHNICAL ENGINEER OR OWNER.
- WHERE GROUND WATER IS PRESENT CLASS I-A MATERIAL SHALL BE WRAPPED WITH A NON-WOVEN GEO-TEXTILE, EXCLUDING BEDDING MATERIAL BETWEEN 4" & 6" THICK.
- CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR SOIL TYPE AND CLASSIFICATIONS FOR THIS PROJECT.
- CONTRACTOR SHALL REFER TO THE LATEST VERSION OF ASTM STANDARDS PRIOR TO CONSTRUCTION.

TABLE 1: CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

ASTM D 2321 MATERIAL CLASS	ASTM D 2487 USCS SOIL GROUP	MATERIAL TYPE	% PASSING			ATTERBERG LIMITS	
			1 1/2 IN.	NO. 4	NO. 200	LL	PI
IA	NONE	MANUFACTURED OPEN GRADED AGGREGATES	100 %	≤10 %	<5 %		NON PLASTIC
IB	NONE	MANUFACTURED DENSE GRADED AGGREGATES	100 %	≤50 %	<5 %		NON PLASTIC
II	GW	COARSE-GRAINED SOILS, CLEAN	100 %	≤50 % OF "COARSE FRACTION"	<5 %		NON PLASTIC
	GP			>50 % OF "COARSE FRACTION"			
	SP			>50 % OF "COARSE FRACTION"			
III	GM	COARSE-GRAINED SOILS W/ FINES	100 %	≤50 % OF "COARSE FRACTION"	12 % TO 50 %		<4 OR <"A" LINE
	GC			>50 % OF "COARSE FRACTION"			<7 OR >"A" LINE
	SM			>50 % OF "COARSE FRACTION"			>4 OR <"A" LINE
	SC			>50 % OF "COARSE FRACTION"			>7 OR >"A" LINE
IV-A	ML	FINE-GRAINED SOILS	100 %	100 %	>50 %	<50	<4 OR <"A" LINE >7 OR >"A" LINE

TRENCH AND BEDDING DETAILS



GENERAL NOTE:

THE GENERAL CONTRACTOR SHALL USE ALL HOWARD COUNTY STANDARD DETAILS FOR CONSTRUCTION UNLESS IT IS NOT REQUIRED BY THE COUNTY. THE GENERAL CONTRACTOR SHALL CONTACT AND CONFIRM WITH THE APPROPRIATE COUNTY OFFICIALS PRIOR TO USING ANY LOWE'S SPECIFIED DETAILS AND INFORM THE SAME TO THE DESIGN ENGINEER.

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
(LOWES HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SITE DETAILS

BOHLER ENGINEERING, P.C.

PROFESSIONAL ENGINEERING SERVICES
22630 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164
CONTRACTOR: DAVID B. WISNIEWSKI
(703) 708-8000 FAX: (703) 708-9501

DESIGNED BY: DBN
DRAWN BY: JWK
PROJECT NO.: SD43506
DATE: 7/12/06
SCALE: N.T.S.
DRAWING NO.: 15 OF 33

ADAM J. VOLANTH
PROFESSIONAL ENGINEER NO. 21342

APPROVED: DEPARTMENT OF PLANNING AND ZONING

APPROVED: CHIEF-DEVELOPMENT ENGINEERING DIVISION

APPROVED: CHIEF-DIVISION & LAND DEVELOPMENT

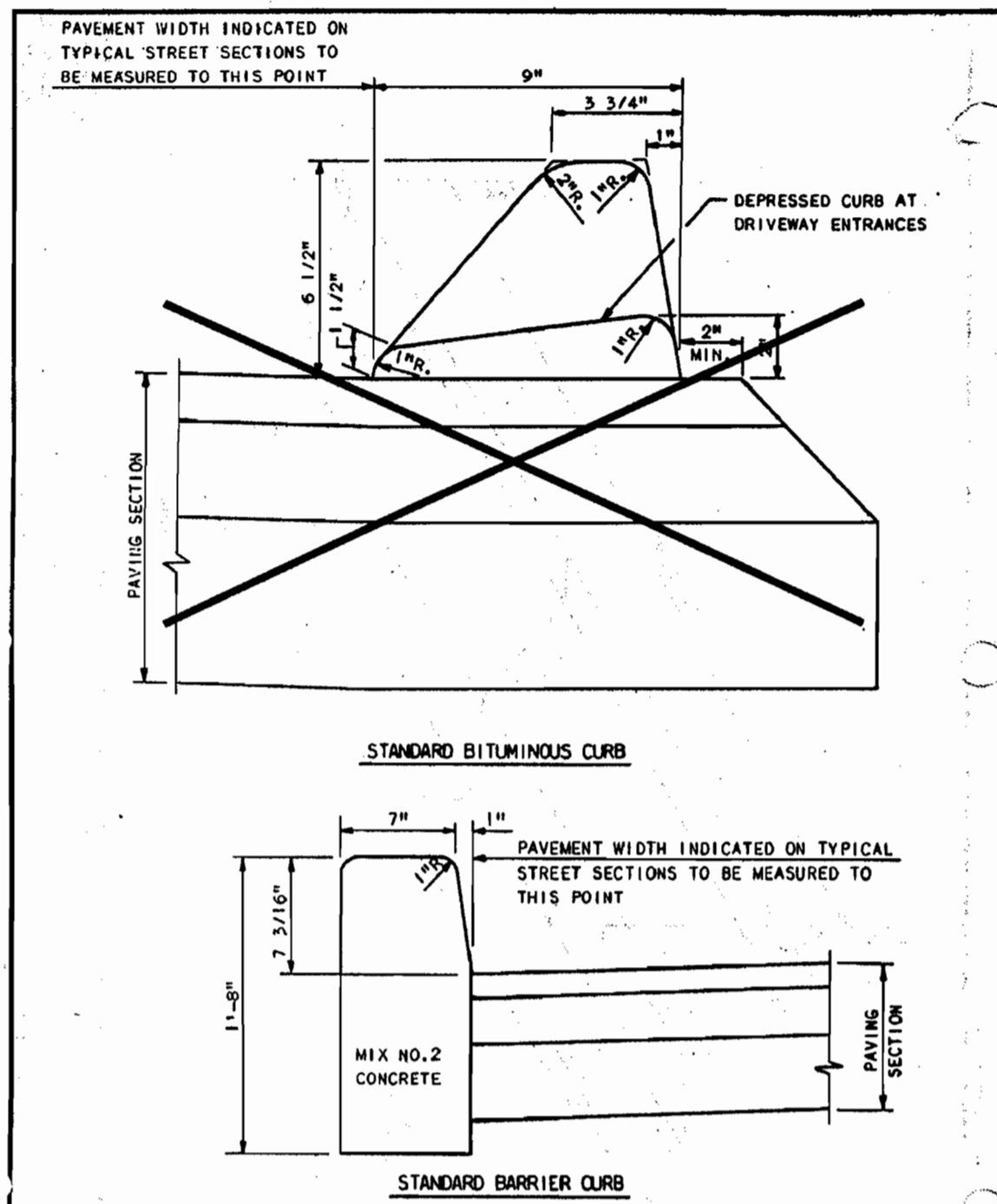
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

APPROVED: COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT

APPROVED PLANNING BOARD of HOWARD COUNTY

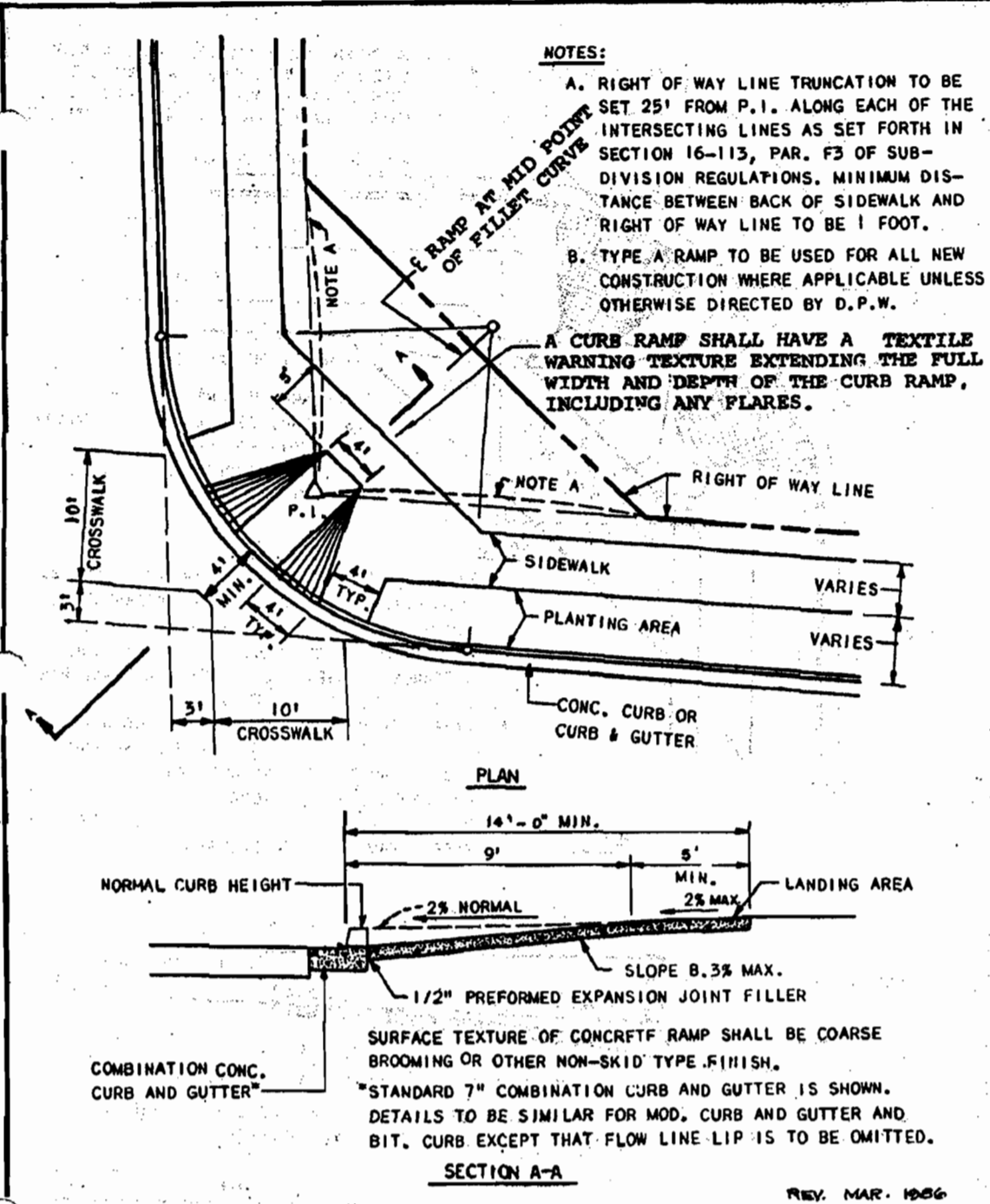
DATE: 8-31-06



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

CURBS

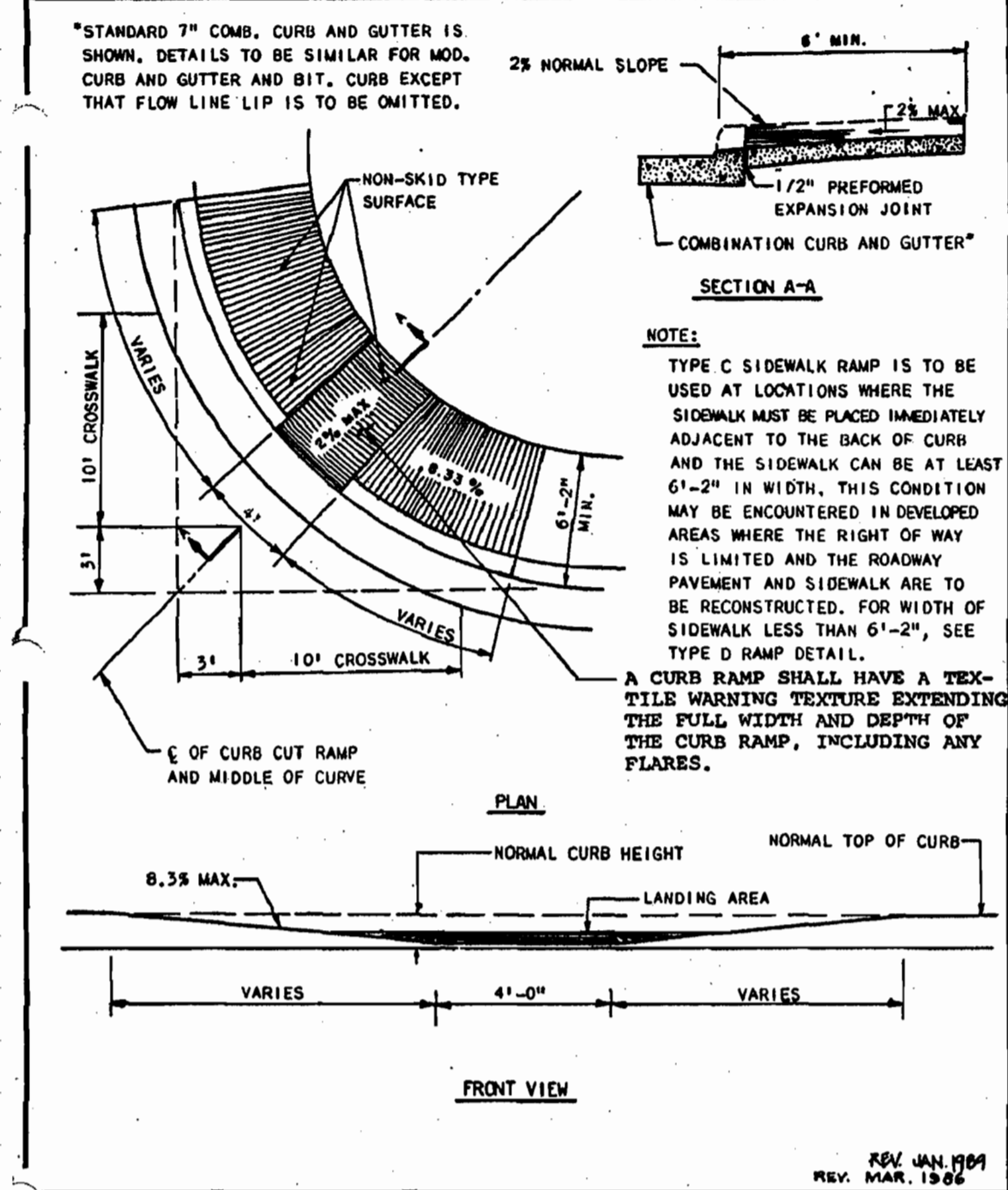
REV. MAR. 1986
DRAWN BY: M.T. BALLARD
CHECKED BY: J.L.S.
NO SCALE
R-3.03



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

**SIDEWALK RAMP
TYPE A**

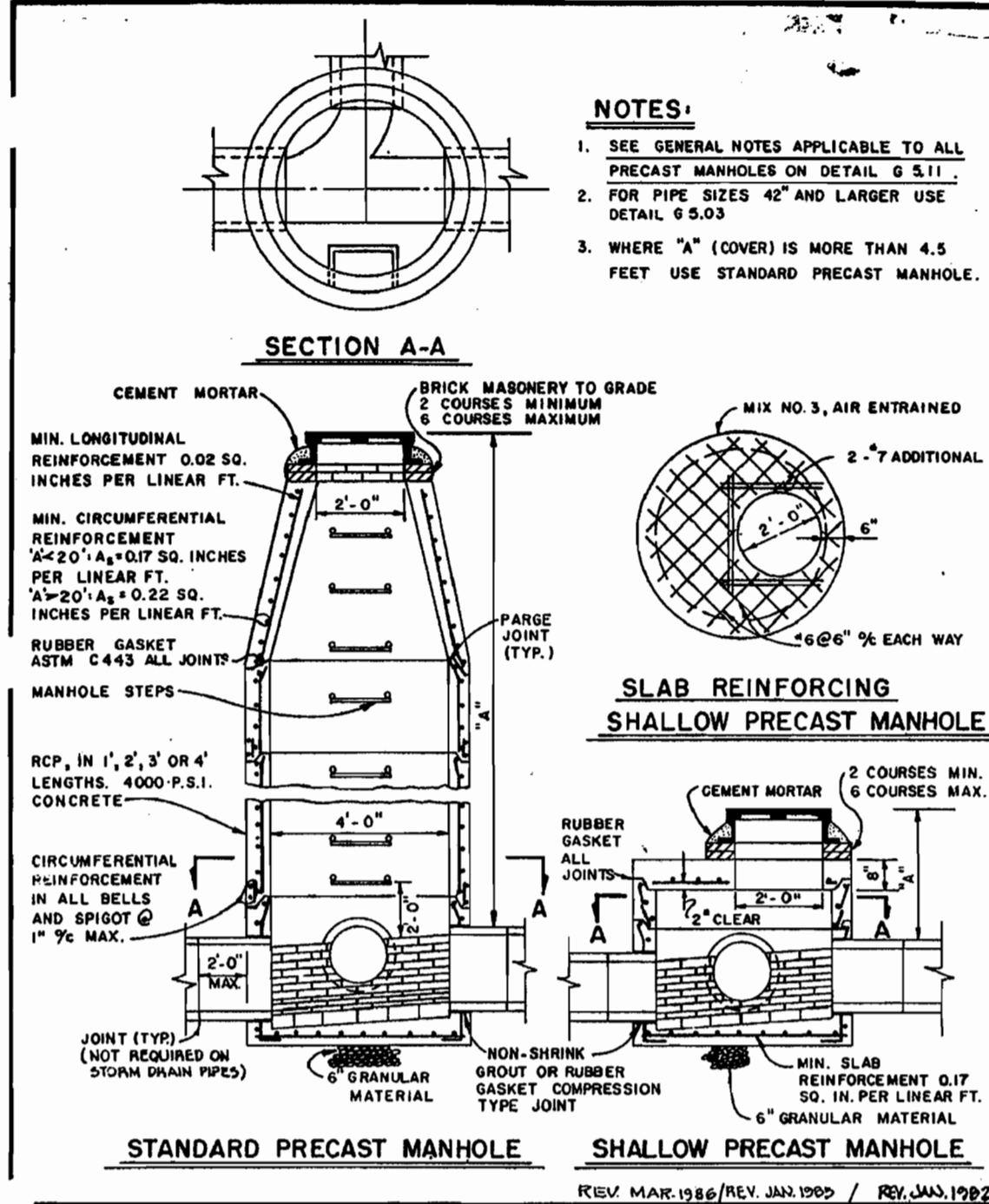
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CHECKED BY: J.L.S.
NO SCALE
R-4.01



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

**SIDEWALK RAMP
TYPE C**

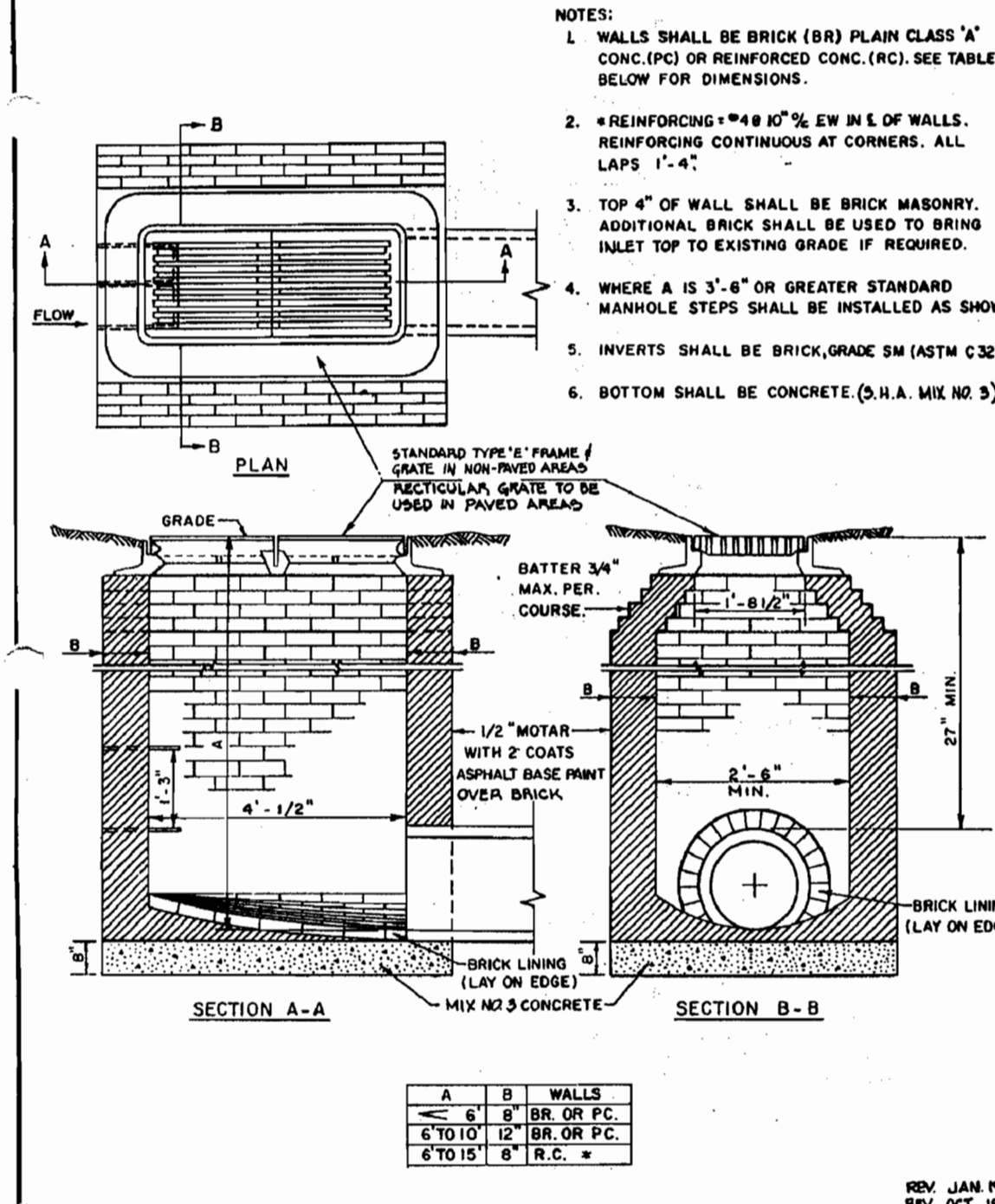
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CHECKED BY: J.L.S.
NO SCALE
R-4.03



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

**4'-0" STANDARD AND SHALLOW
PRECAST MANHOLE FOR USE
WITH 24" AND SMALLER PIPE**

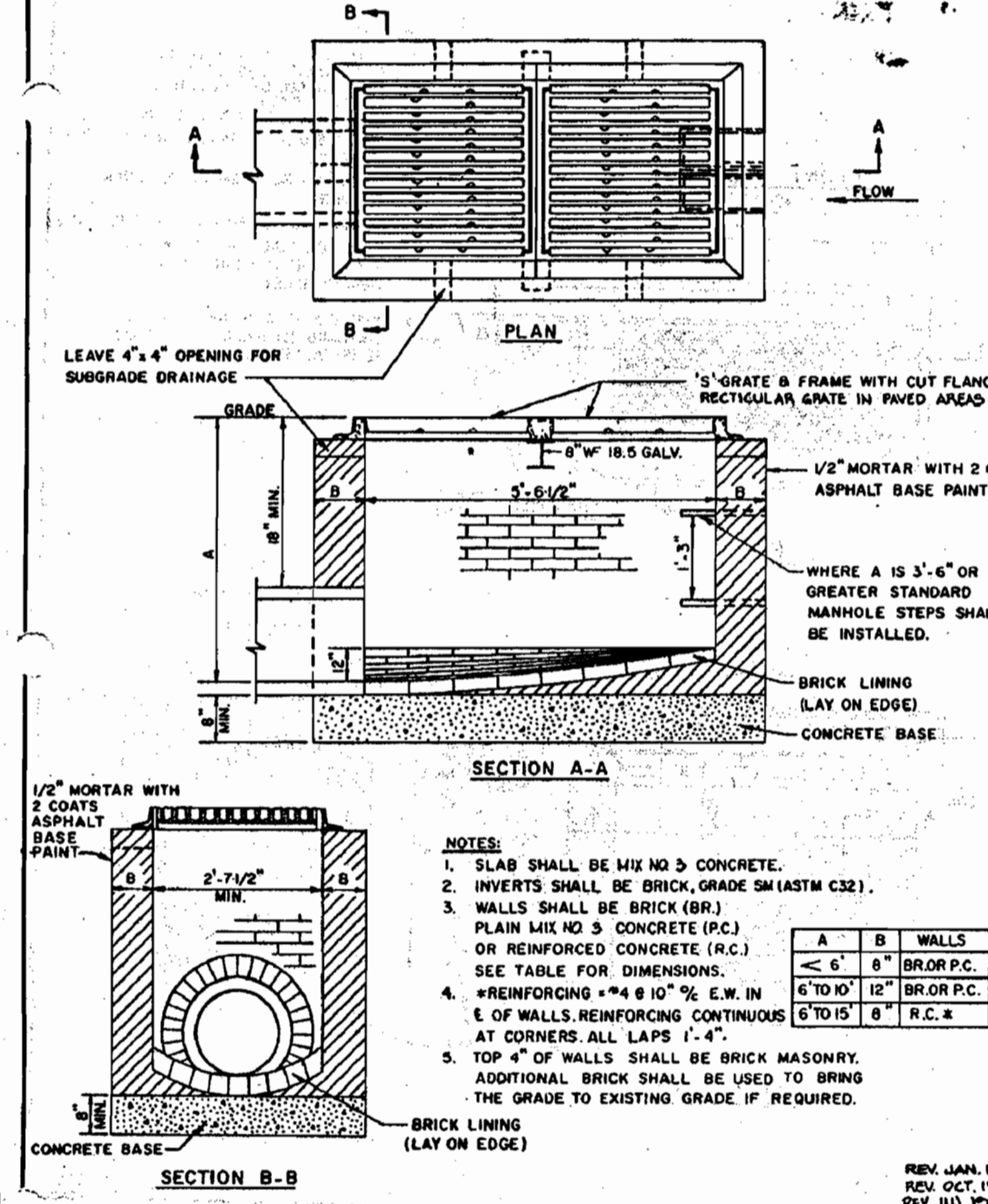
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DRAWN BY: M.T. BALLARD
CHECKED BY: J.L.S.
NO SCALE
G.5.12



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

TYPE 'E' INLET

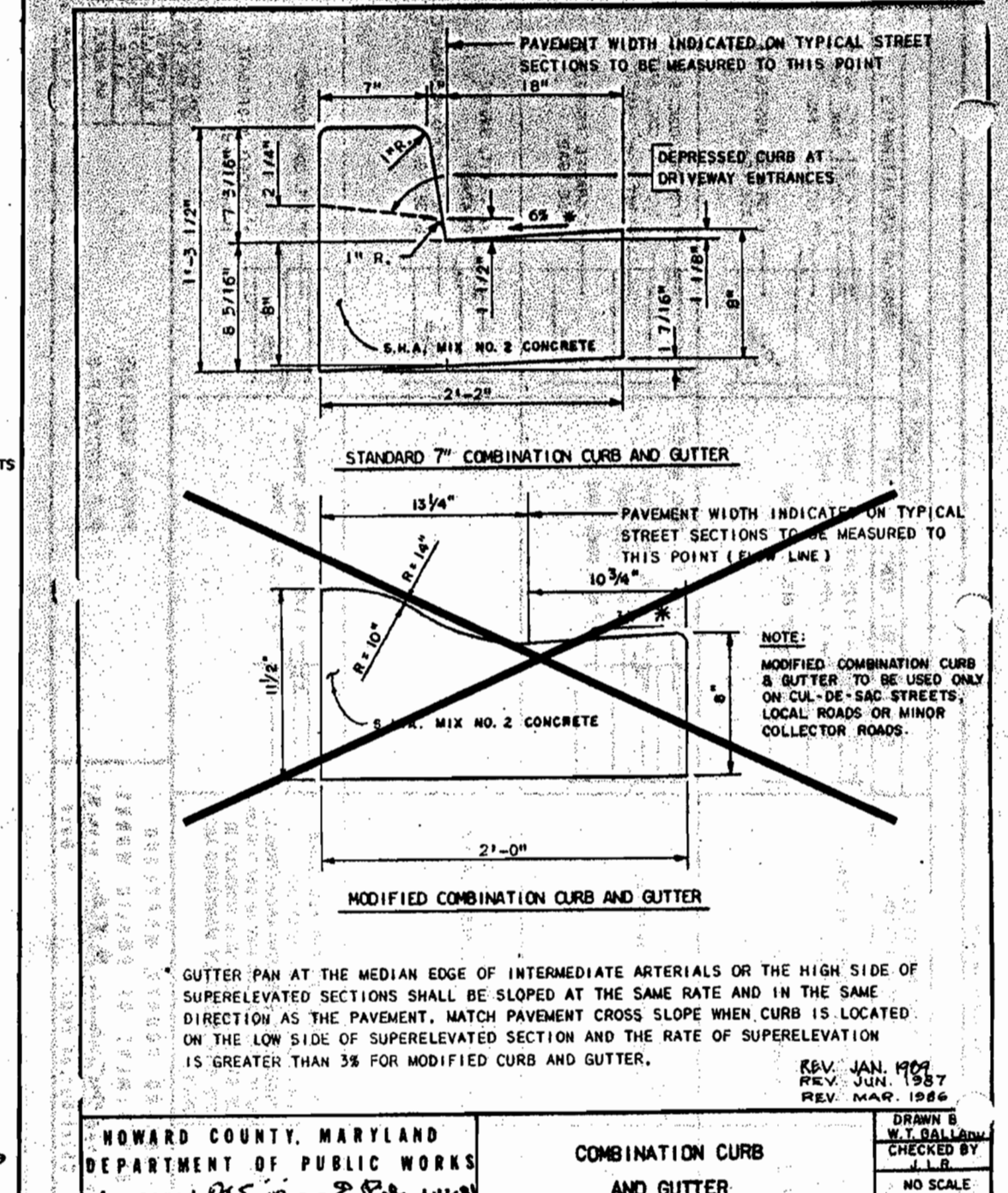
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REV. JUN. 1997
DRAWN BY: M.T. BALLARD
CHECKED BY: J.L.S.
NO SCALE
SD-4.21



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

DOUBLE TYPE 'S' INLET

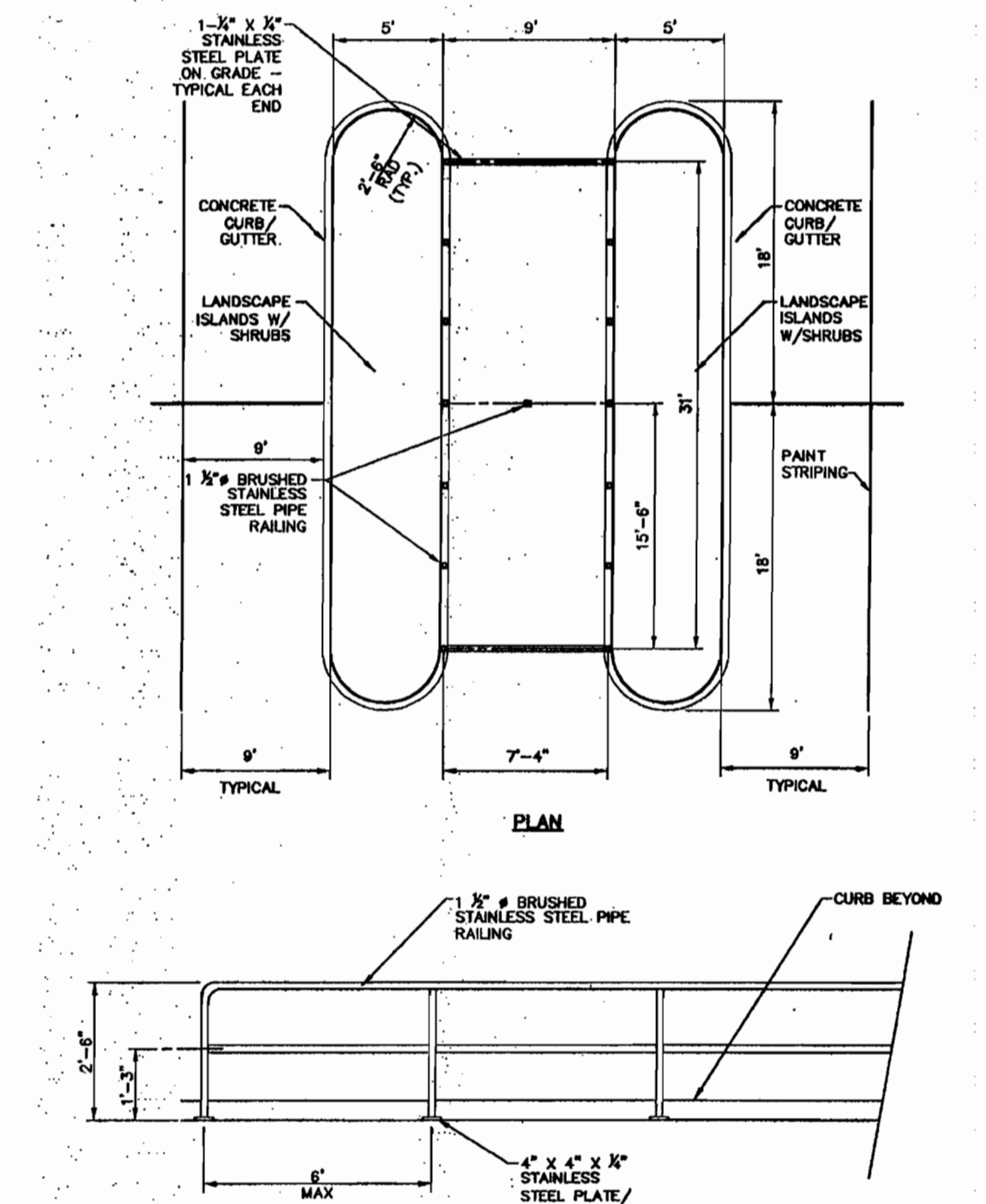
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REV. OCT. 1992
REV. JUN. 1997
DRAWN BY: M.T. BALLARD
CHECKED BY: J.L.S.
NO SCALE
SD-4.23



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

**COMBINATION CURB
AND GUTTER**

REV. JAN. 1989
REV. OCT. 1992
REV. JUN. 1997
DRAWN BY: M.T. BALLARD
CHECKED BY: J.L.S.
NO SCALE
R-3.01



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

CART CORRAL DETAIL

NOT TO SCALE

REV. JAN. 1989
REV. OCT. 1992
REV. JUN. 1997
DRAWN BY: M.T. BALLARD
CHECKED BY: J.L.S.
NO SCALE
R-3.01

PLANNING BOARD APPROVAL STAMP

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: 8-31-06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

MISS UTILITY

BEFORE YOU DIG, CALL
800-251-7777
PROTECT YOURSELF AND YOUR NEIGHBOR'S PROPERTY.
THE CONTRACTOR TO CALL MISS UTILITY TO
MARK ALL EXISTING UTILITIES MARKED 48
HOURS PRIOR TO ANY CONSTRUCTION.

BOHLER ENGINEERING, P.C.
* PROFESSIONAL ENGINEERING SERVICES *
* CONTACT: DAVID B. NEMCEK *
* (703) 709-8800 FAX: (703) 709-9801 *
DESIGNED BY: DBN
DRAWN BY: JWK
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: N.T.S.
DRAWING NO.: 16 OF 33
ADAM J. VOLANTH
PROFESSIONAL ENGINEER NO. 21542

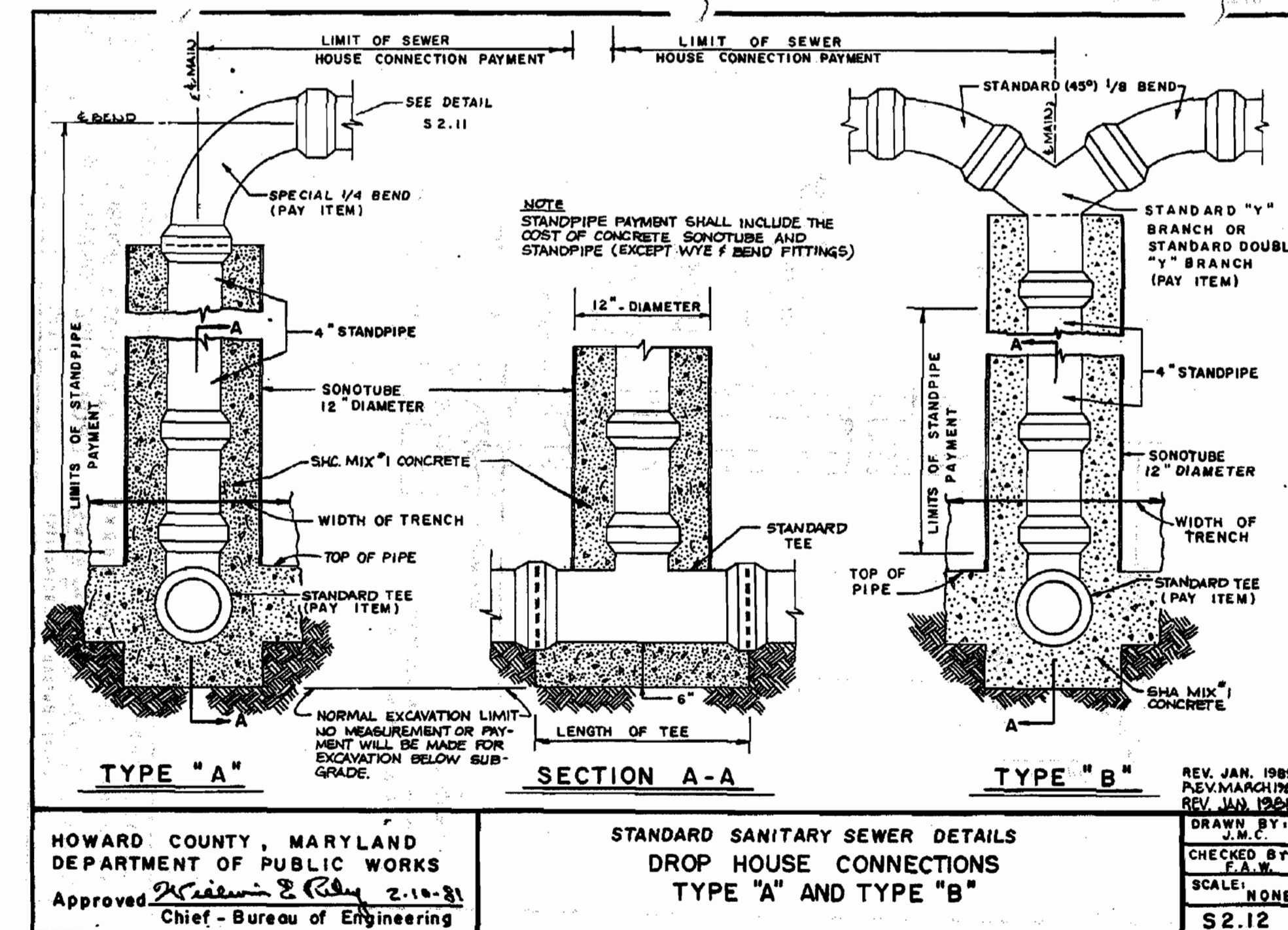
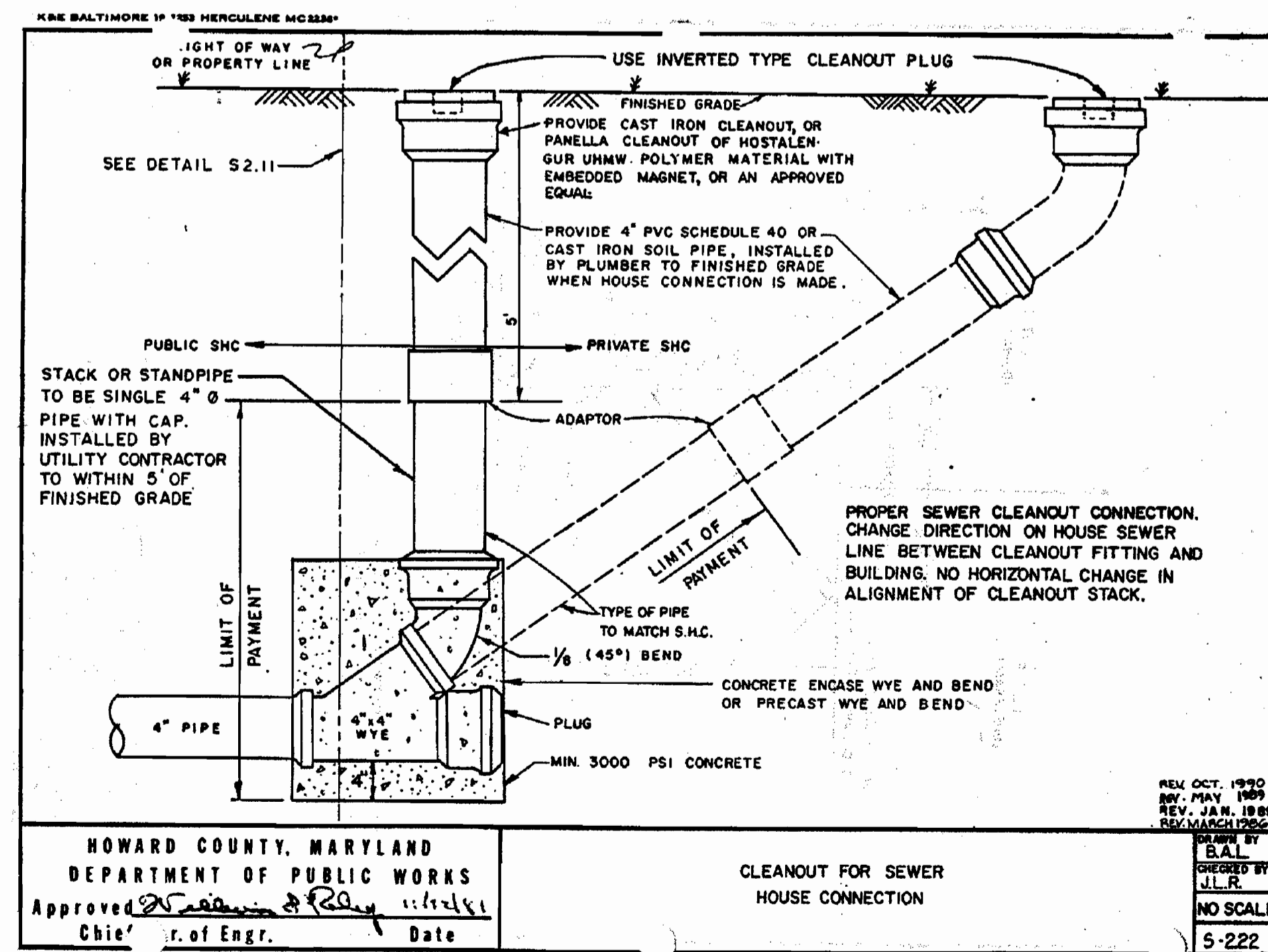
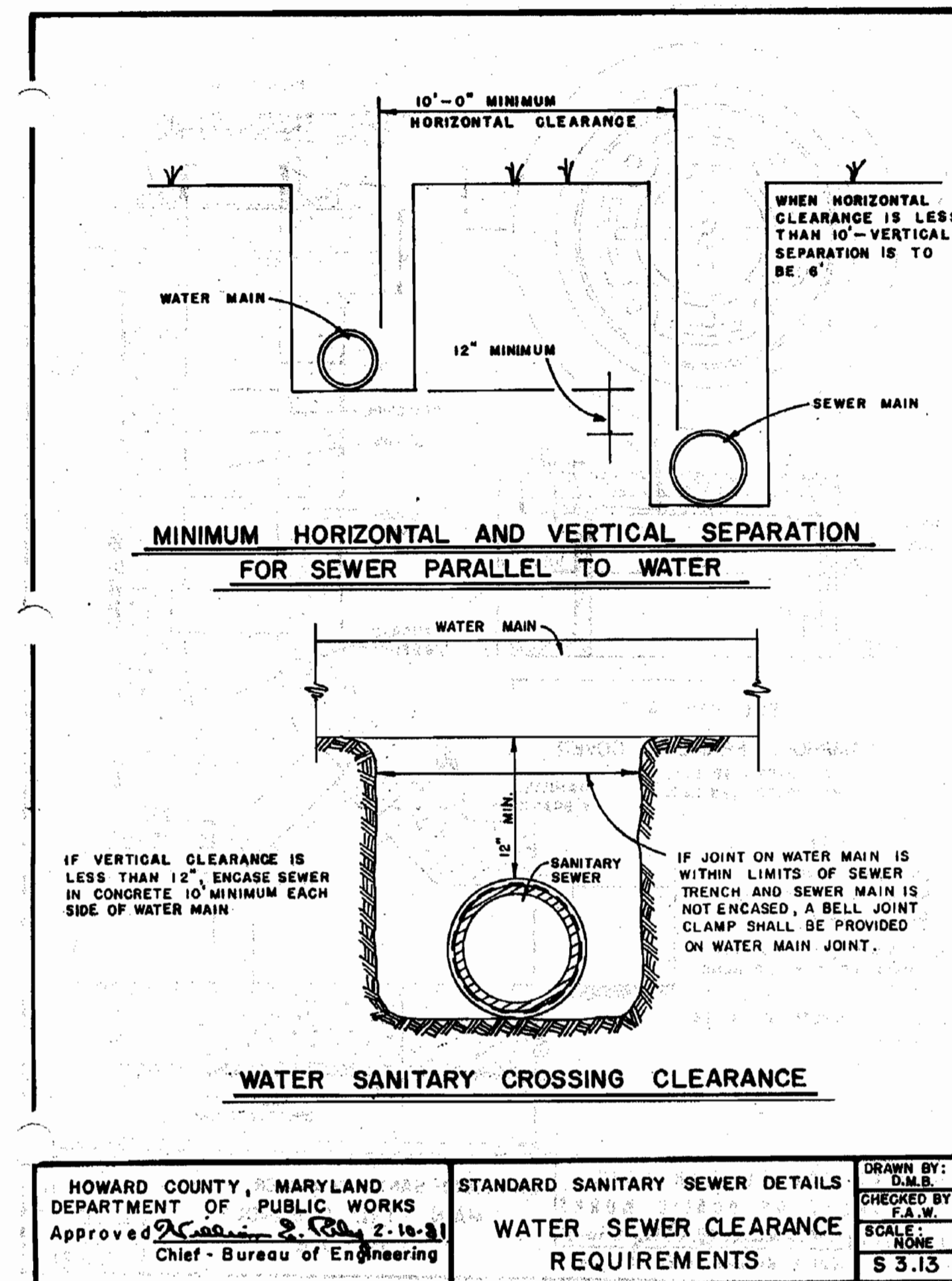
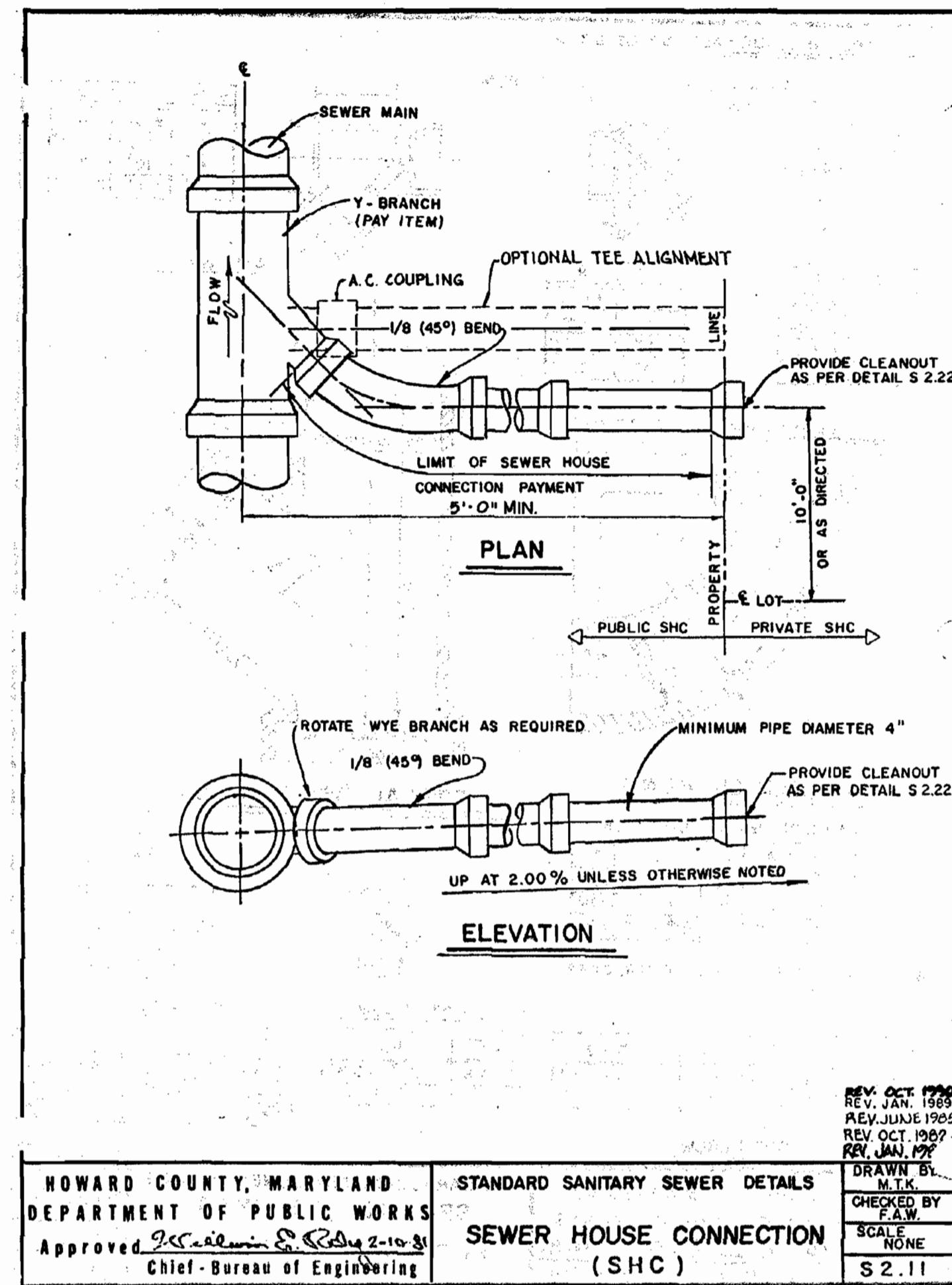
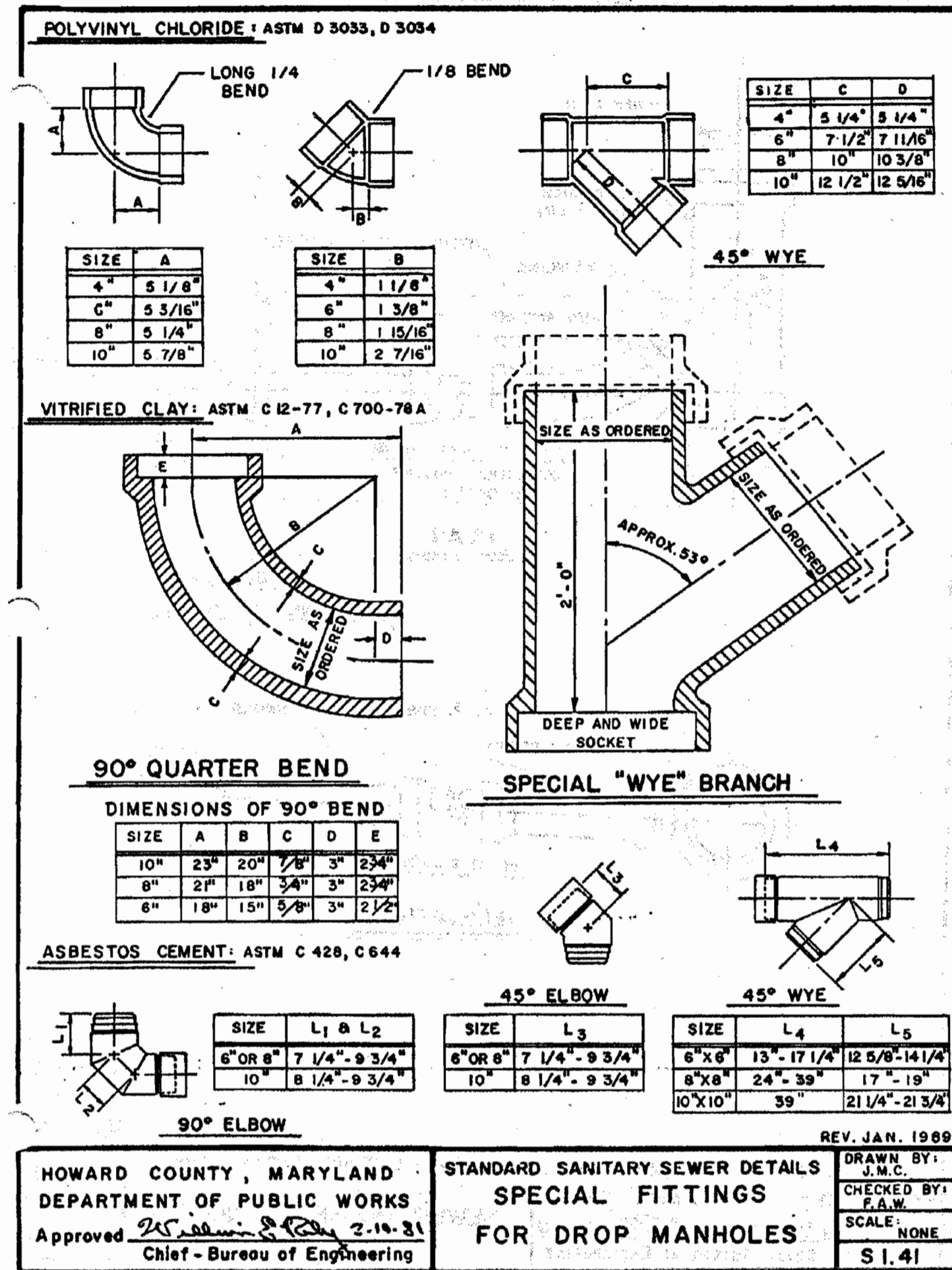
OWNER/DEVELOPER: HRO LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
(LOWES HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SITE DETAILS

16-10/27/2006 11:18:42 AM 16000000



GENERAL NOTE:
THE GENERAL CONTRACTOR SHALL USE ALL HOWARD COUNTY STANDARD DETAILS FOR CONSTRUCTION UNLESS IT IS NOT REQUIRED BY THE COUNTY. THE GENERAL CONTRACTOR SHALL CONTACT AND CONFIRM WITH THE APPROPRIATE COUNTY OFFICIALS PRIOR TO USING ANY LOWE'S SPECIFIED DETAILS AND INFORM THE SAME TO THE DESIGN ENGINEER.



REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE HOUSE BUILDING
10275 LITTLE PATENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: LOWE'S OF COLUMBIA, MD
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
(LOWE'S HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SANITARY SEWER DETAILS

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22550 DAVIS DRIVE, SUITE 800 STERLING, VIRGINIA 20164
CONTACT: DAVID B. NEWMARK
(703) 709-9500 FAX: (703) 709-9501

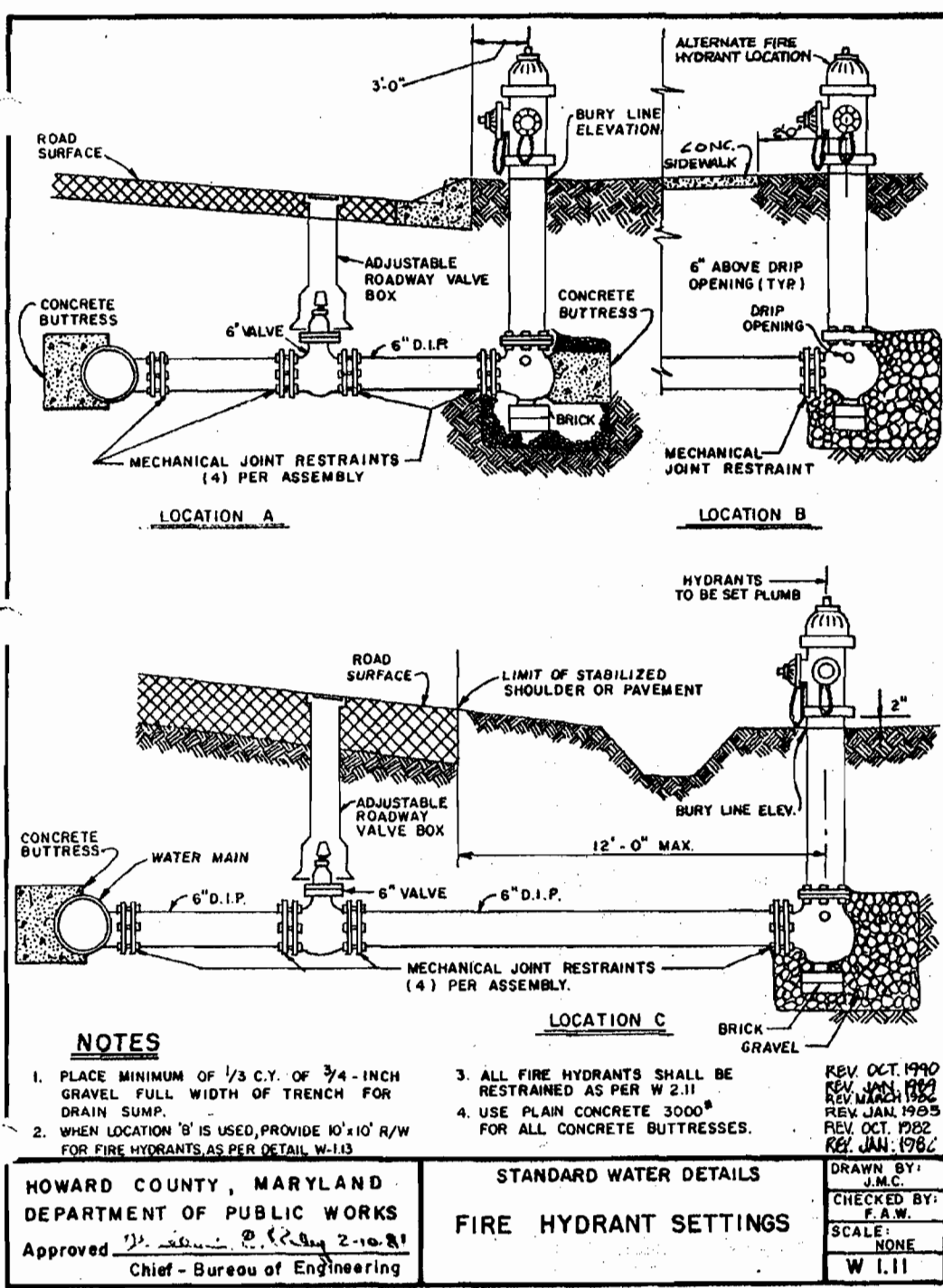
DESIGNED BY: DBN
DRAWN BY: JWK
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: N.T.S.
DRAWING NO.: 17 OF 33
ADAM J. VOLANTH
PROFESSIONAL ENGINEER NO. 21342

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 12/10/06
CHIEF - DEVELOPMENT ENGINEERING DIVISION
DATE: 12/10/06

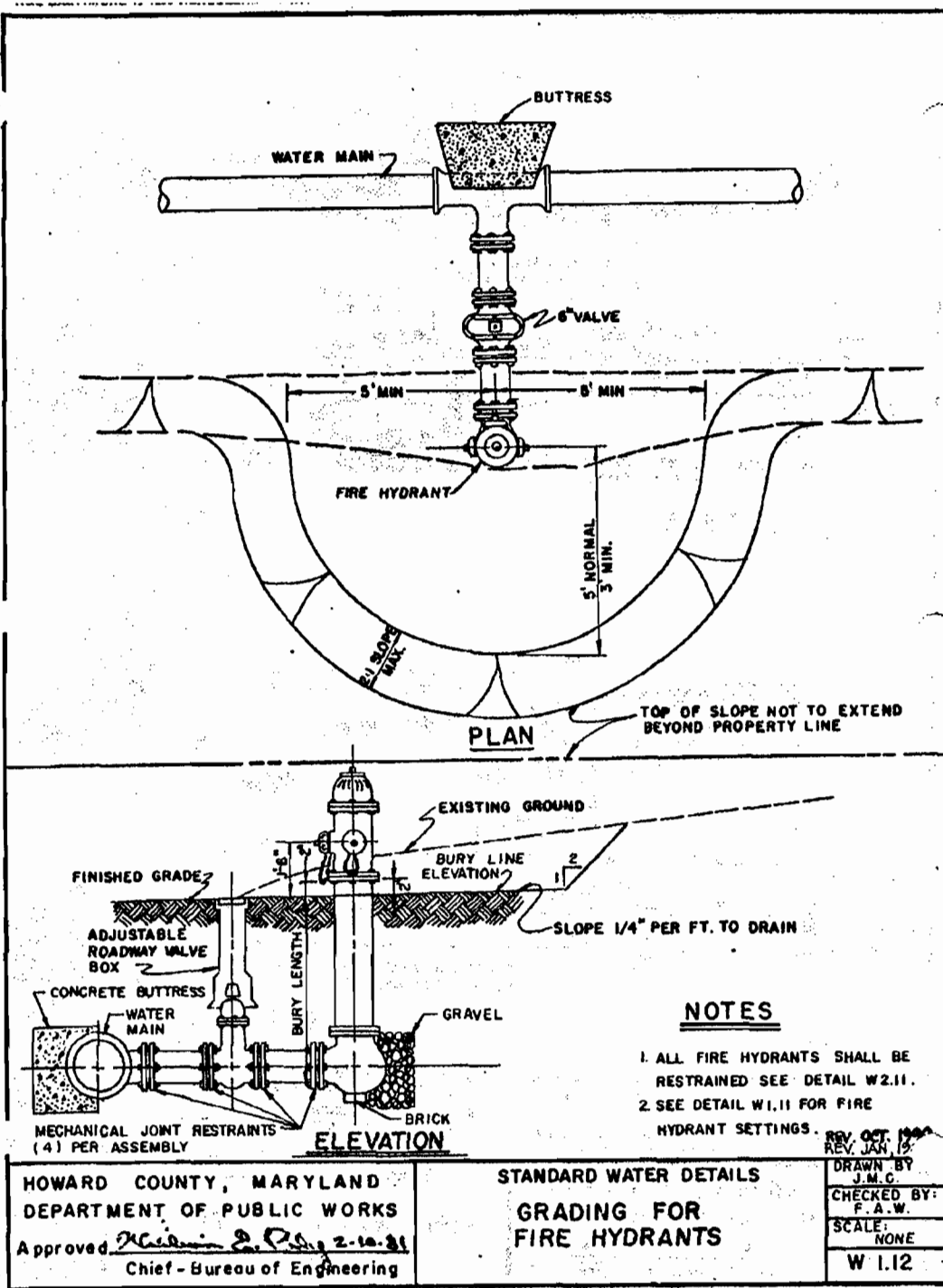
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
[Signature] 12/15/06
COUNTY HEALTH OFFICER
DATE: 12/15/06

8-31-06



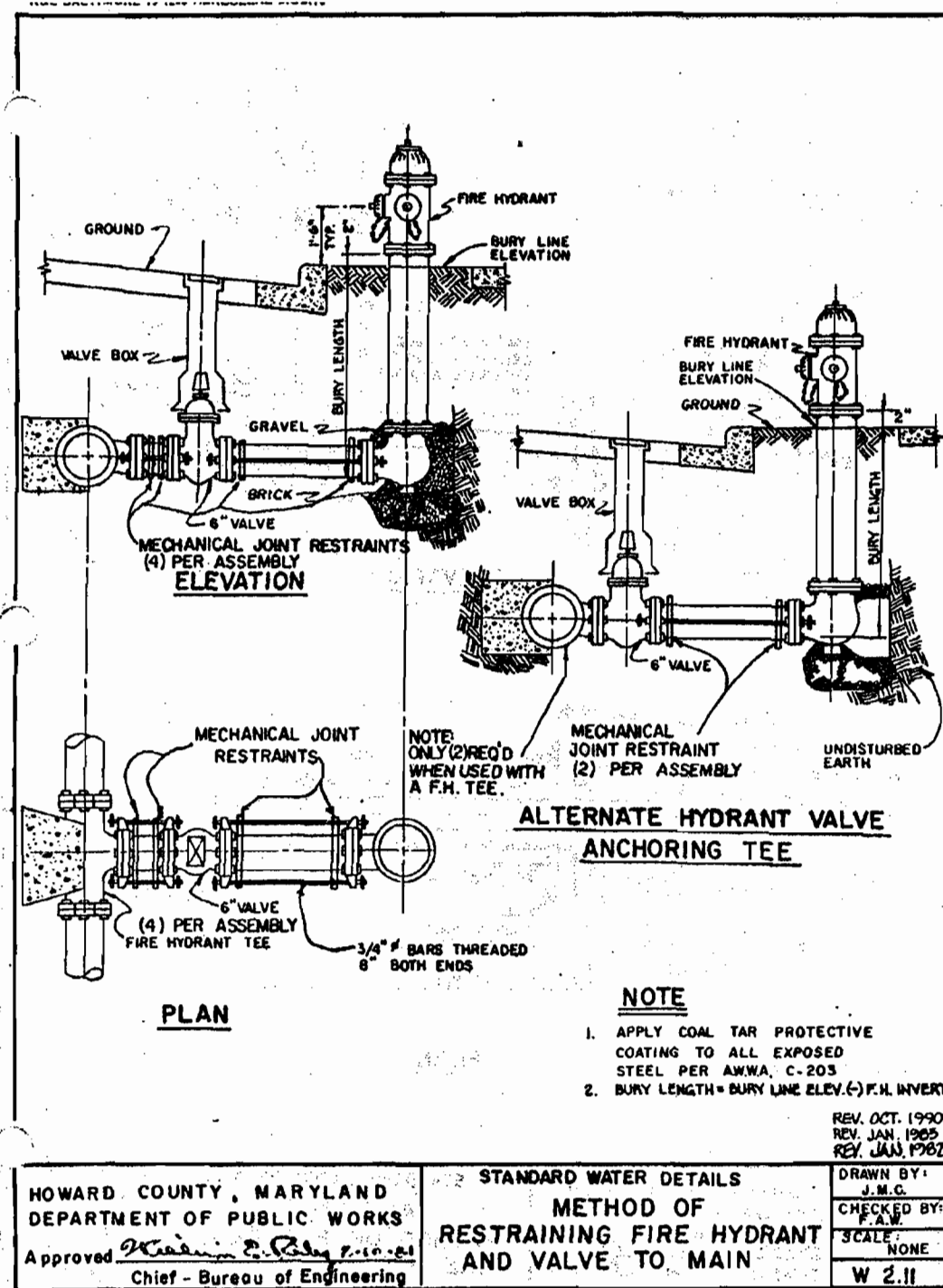
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
FIRE HYDRANT SETTINGS
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: 11/11



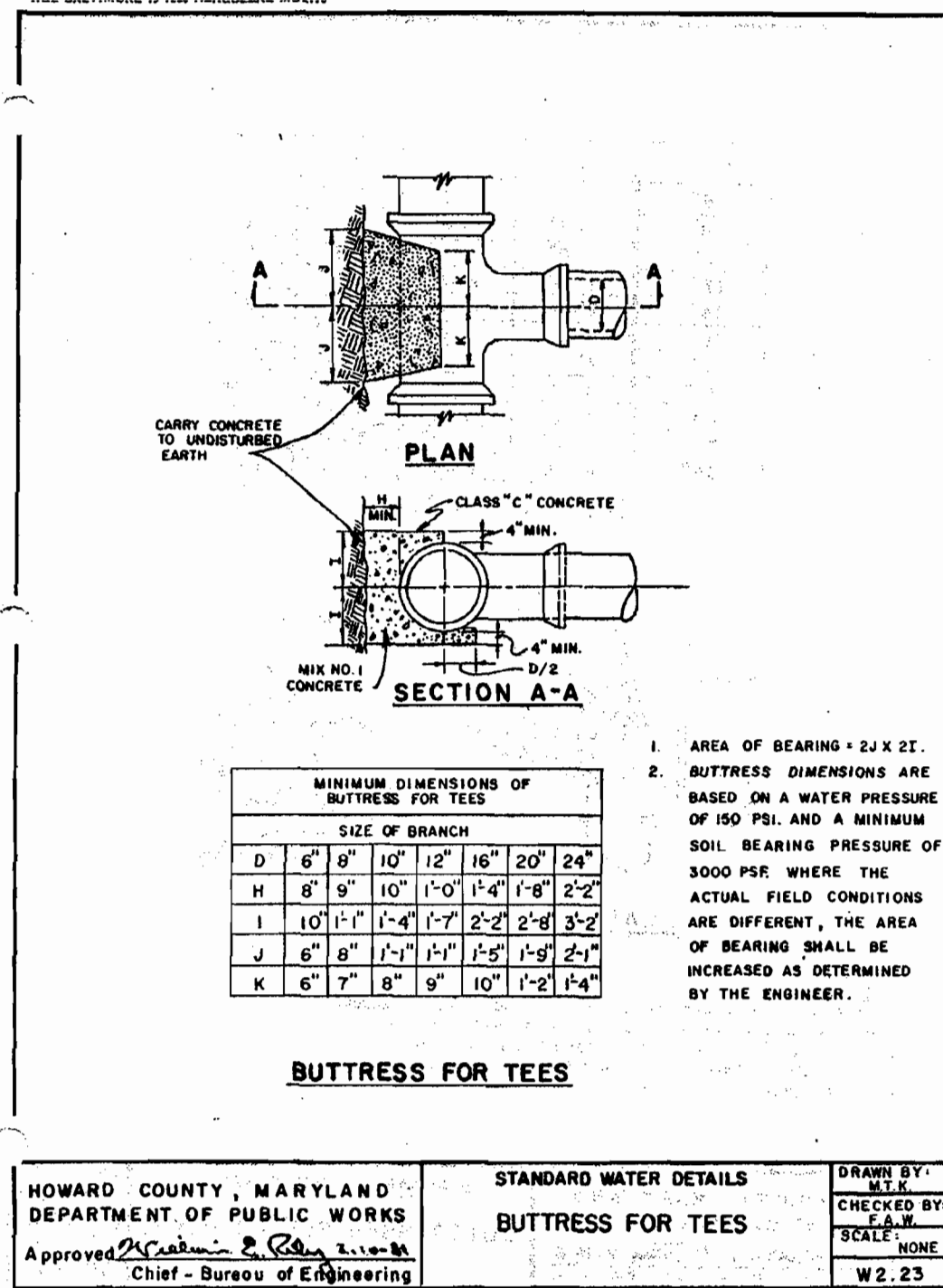
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
GRADING FOR FIRE HYDRANTS
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.1.12



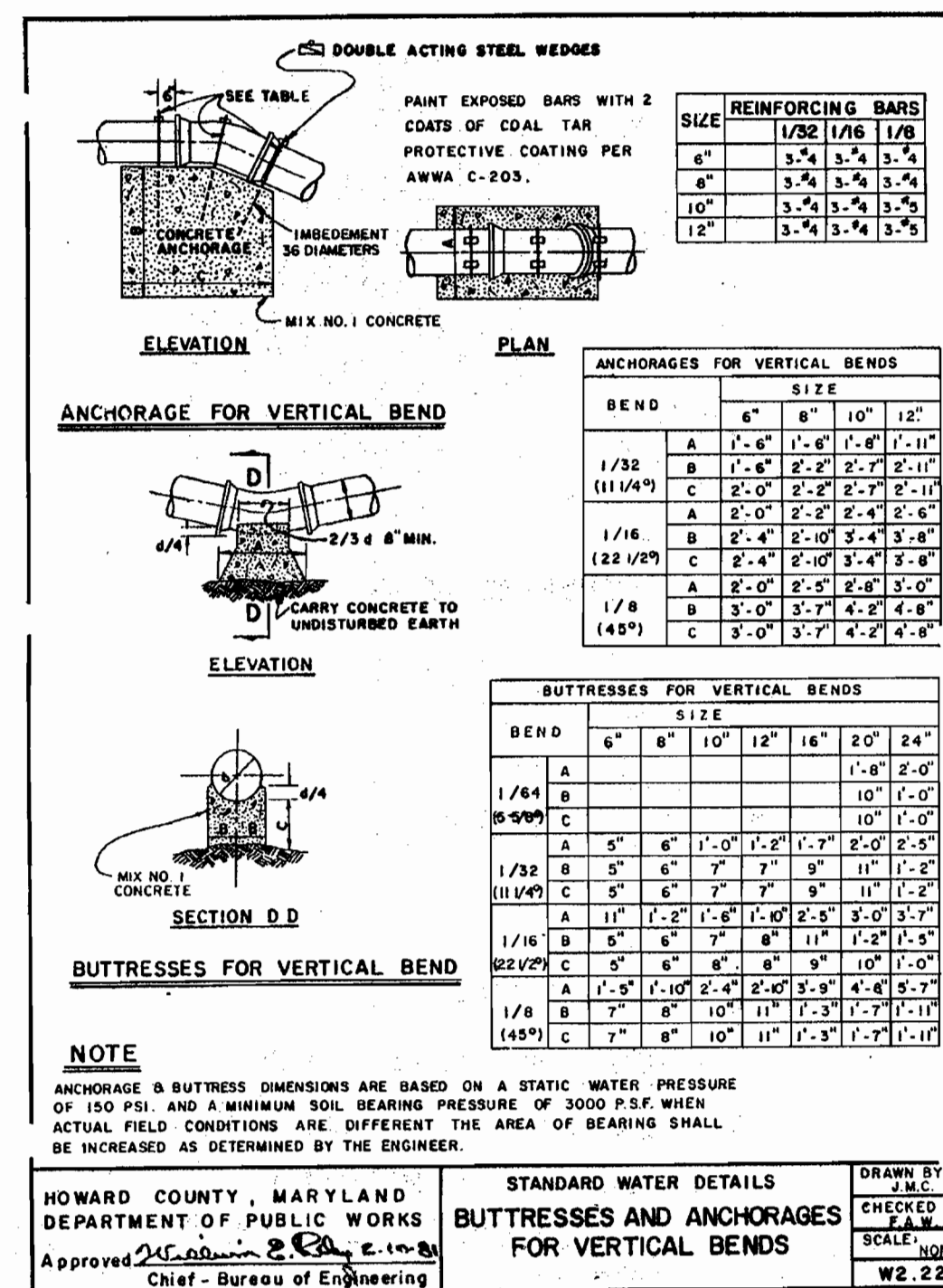
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
METHOD OF RESTRAINING FIRE HYDRANT AND VALVE TO MAIN
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.11



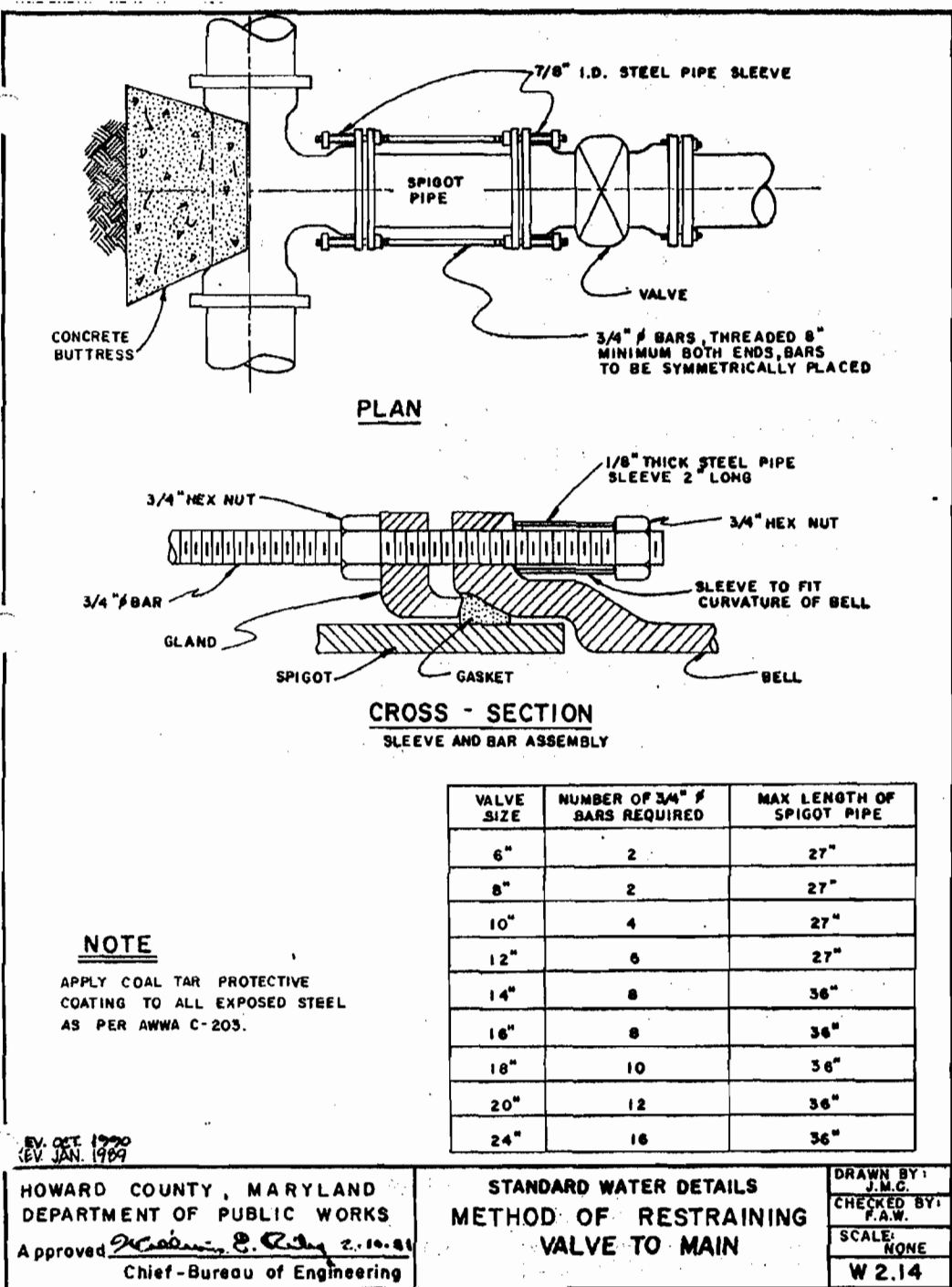
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
BUTTRESS FOR TEES
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.23



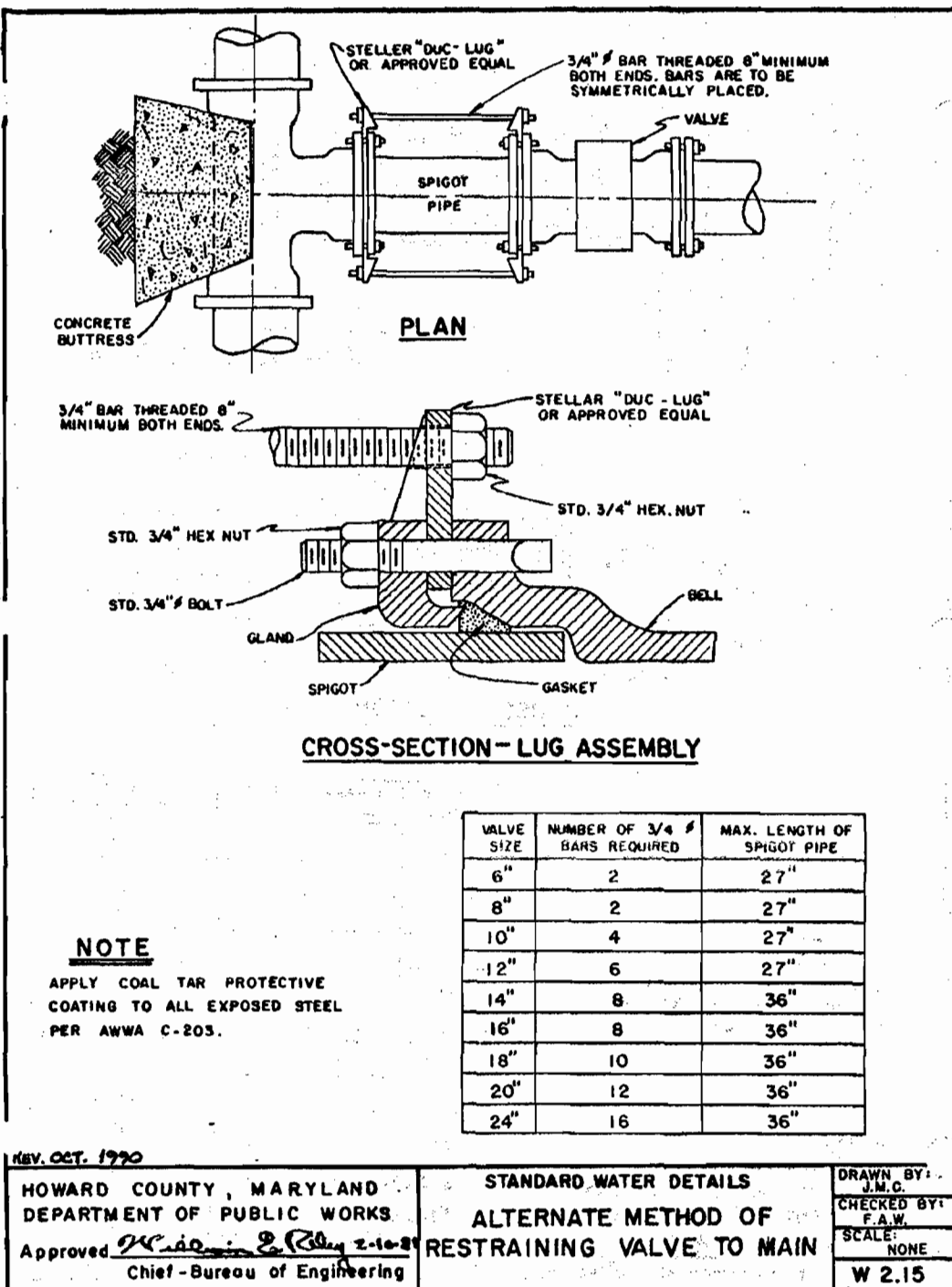
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
BUTTRESSES AND ANCHORAGES FOR VERTICAL BENDS
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.22



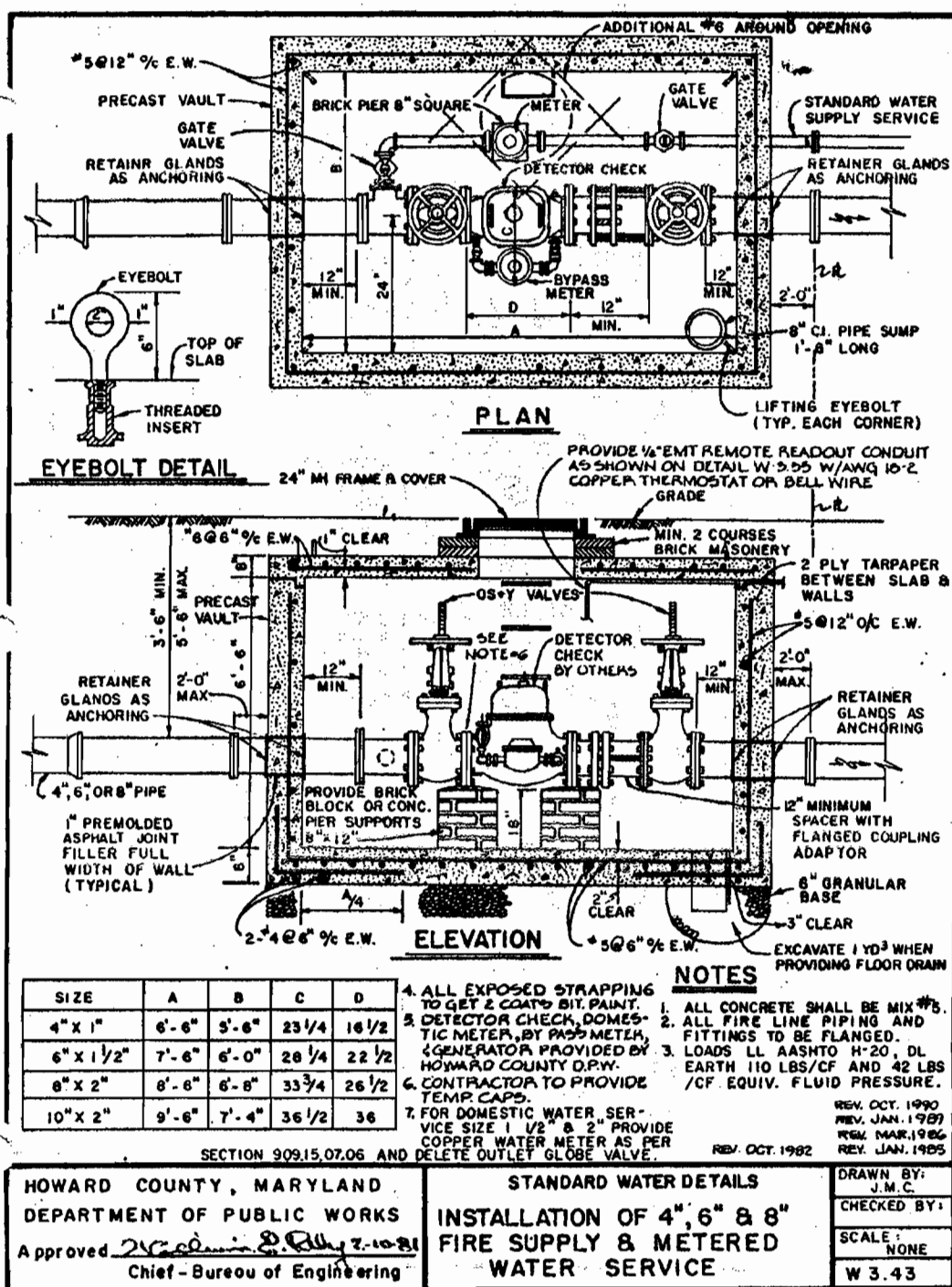
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
METHOD OF RESTRAINING VALVE TO MAIN
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.14



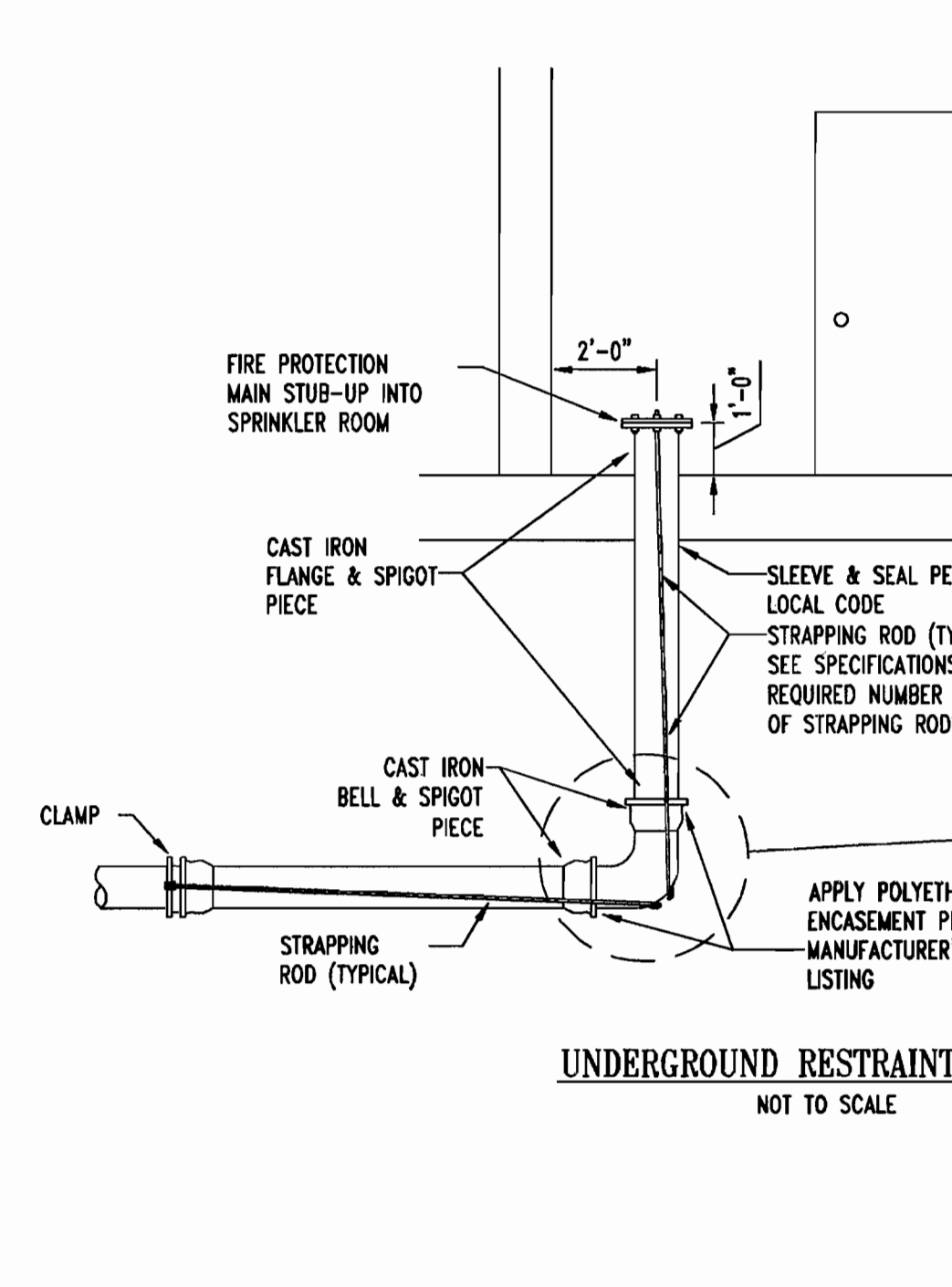
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
ALTERNATE METHOD OF RESTRAINING VALVE TO MAIN
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.15



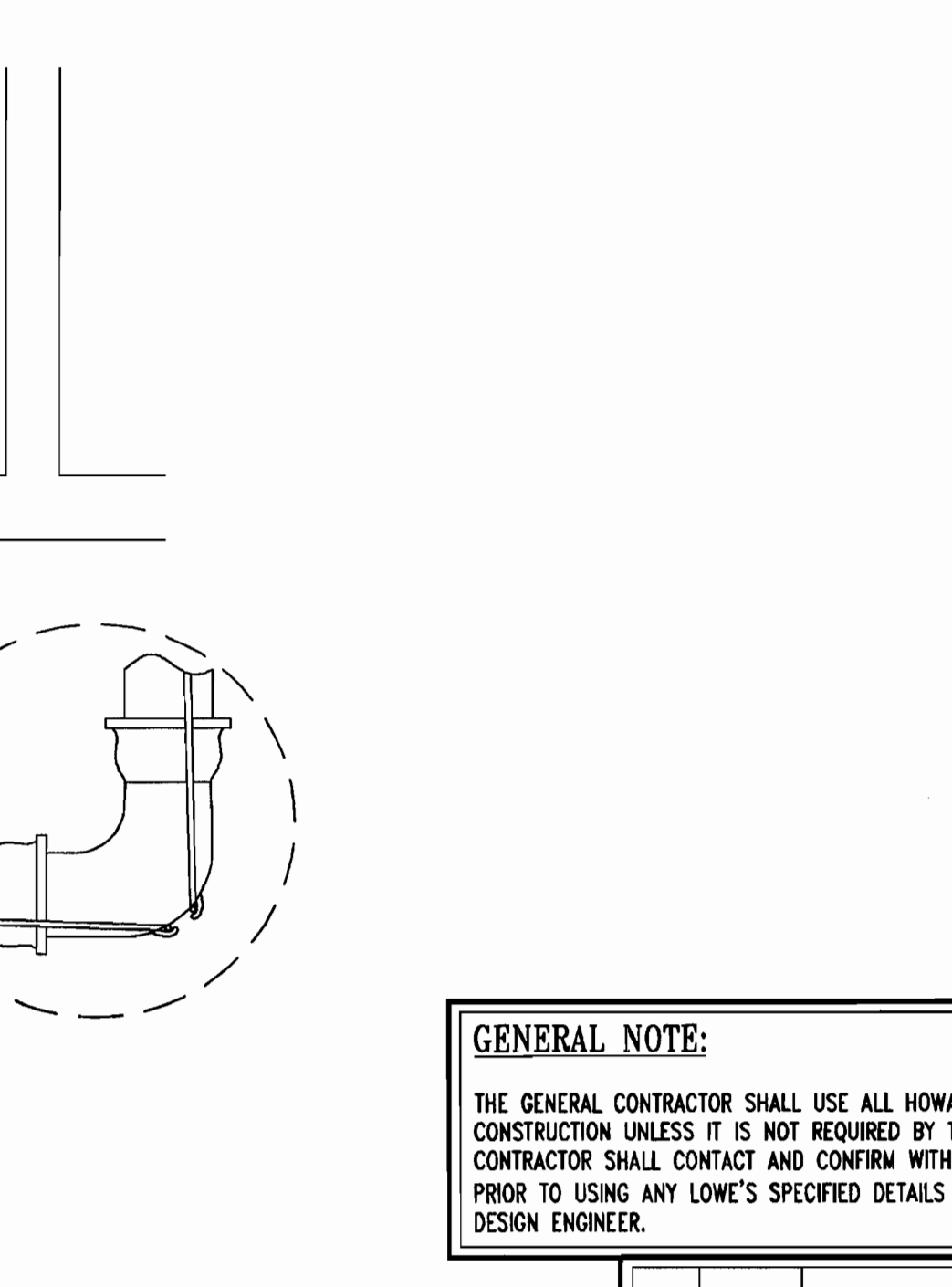
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
INSTALLATION OF 4" 6" 8" FIRE SUPPLY & METERED WATER SERVICE
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.3.4.3



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
UNDERGROUND RESTRAINT DETAIL
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.25



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
UNDERGROUND RESTRAINT DETAIL
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.25

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] DATE: 12/18/06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
[Signature] DATE: 12/18/06

APPROVED: *[Signature]* DATE: 8-31-06

DIA.	O	P	R	S
6"	1'-2"	1'-2"	1'-8"	6"
8"	1'-7"	1'-6"	1'-8"	6"
10"	1'-8"	2'-1"	1'-8"	6"
12"	2'-0"	2'-6"	1'-11"	7"
14"	2'-8"	2'-6"	1'-11"	9"
16"	2'-10"	3'-0"	2'-2"	10"
18"	3'-11"	3'-8"	2'-8"	12-0"
20"	3'-6"	3'-10"	2'-10"	1'-0"
24"	4'-8"	4'-0"	3'-0"	1'-2"
30"	5'-9"	5'-0"	3'-10"	1'-2"
36"	6'-10"	6'-0"	4'-10"	1'-2"

AREA OF BEARING = 2.0 X 2.0

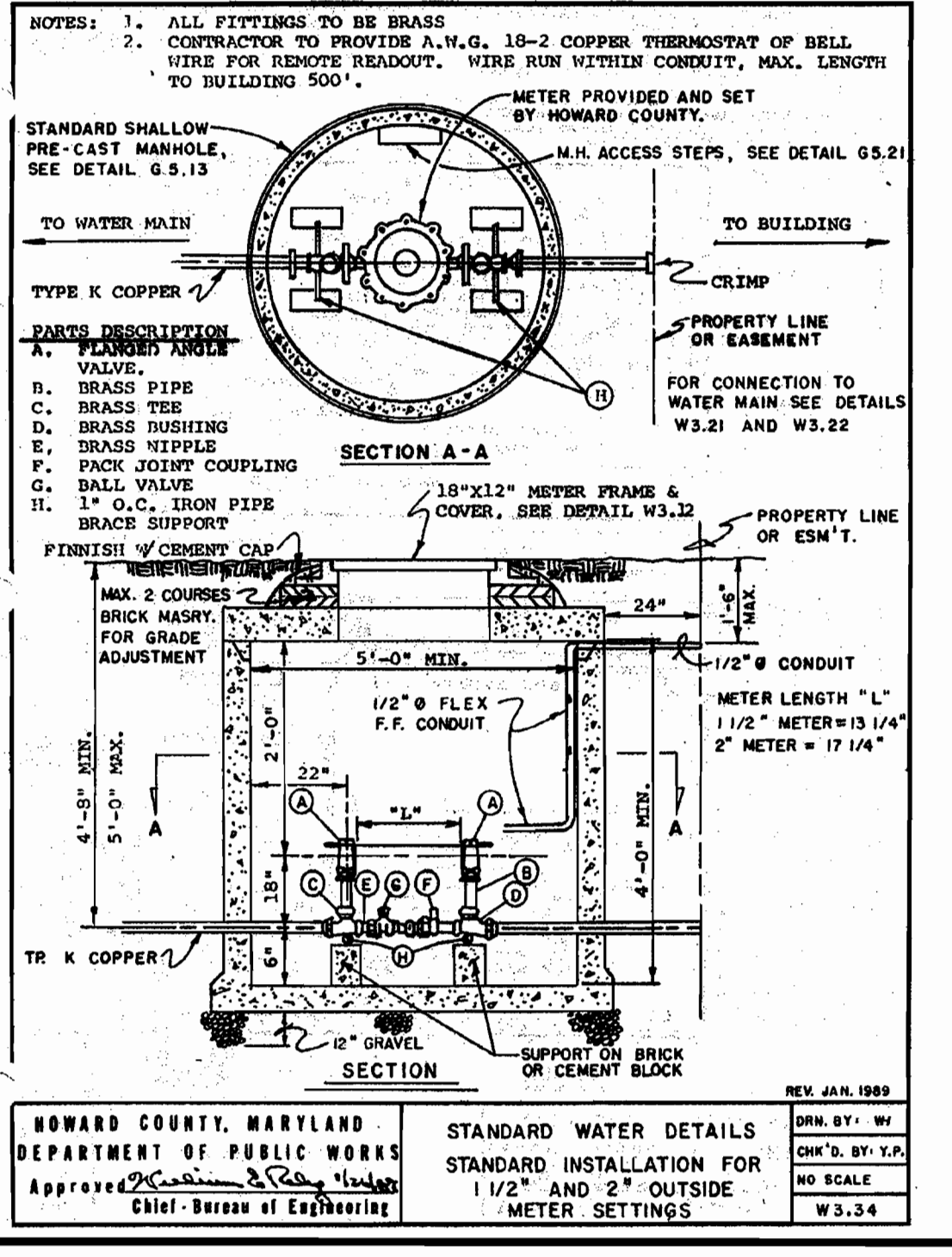
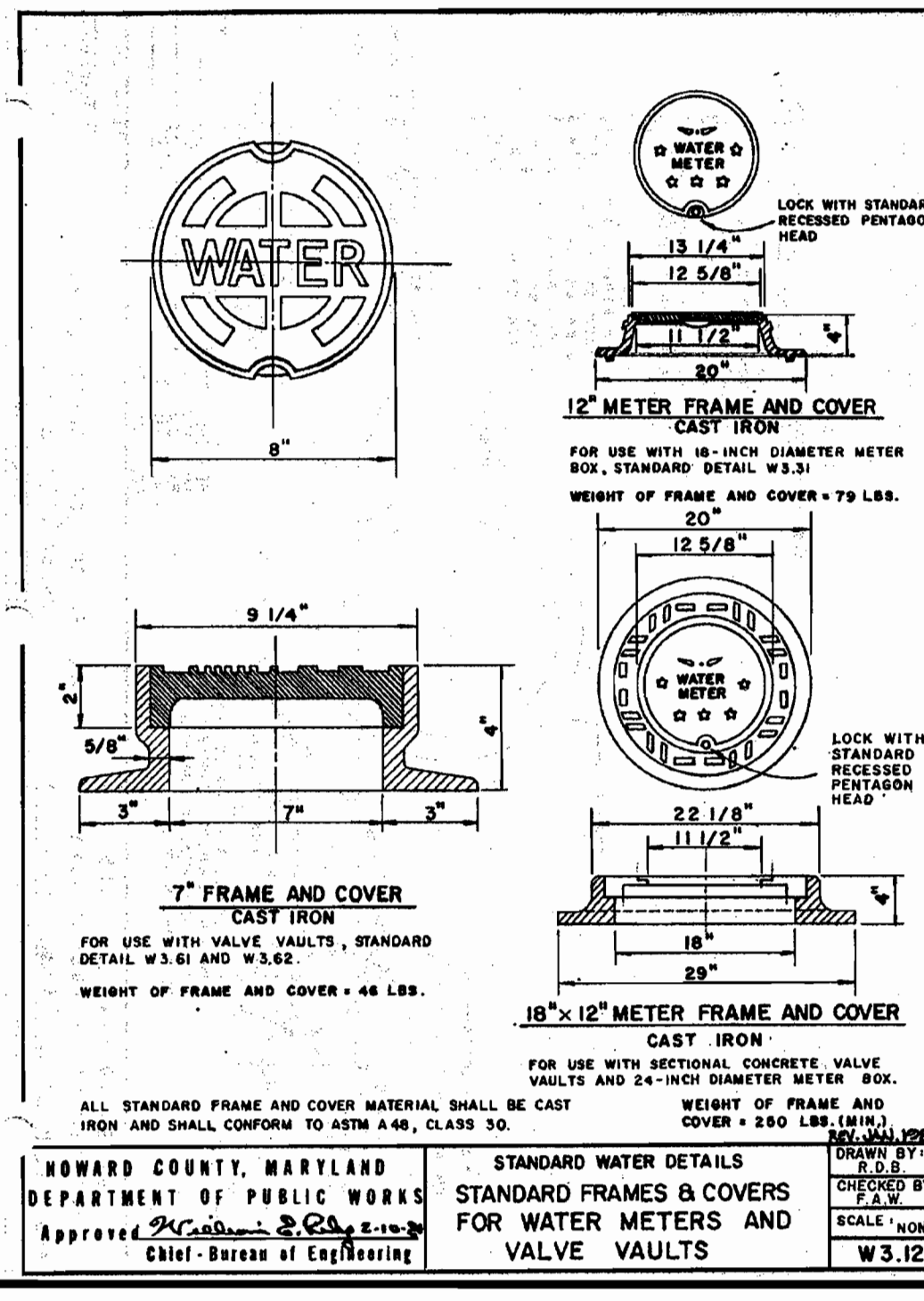
SECTION A-A

NOTE

BUTTRESS DIMENSIONS ARE BASED ON A STATIC WATER PRESSURE OF 150 PSI AND A MINIMUM SOIL BEARING PRESSURE OF 3000 PSF. WHEN ACTUAL FIELD CONDITIONS ARE DIFFERENT THE AREA OF BEARING SHALL BE INCREASED AS DETERMINED BY THE ENGINEER.

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
BUTTRESSES FOR 1/4 BENDS
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.2.24



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief - Bureau of Engineering

STANDARD WATER DETAILS
METER SETTINGS
DRAWN BY: J.E.C.
CHECKED BY: J.E.C.
SCALE: NONE
DATE: W.3.54

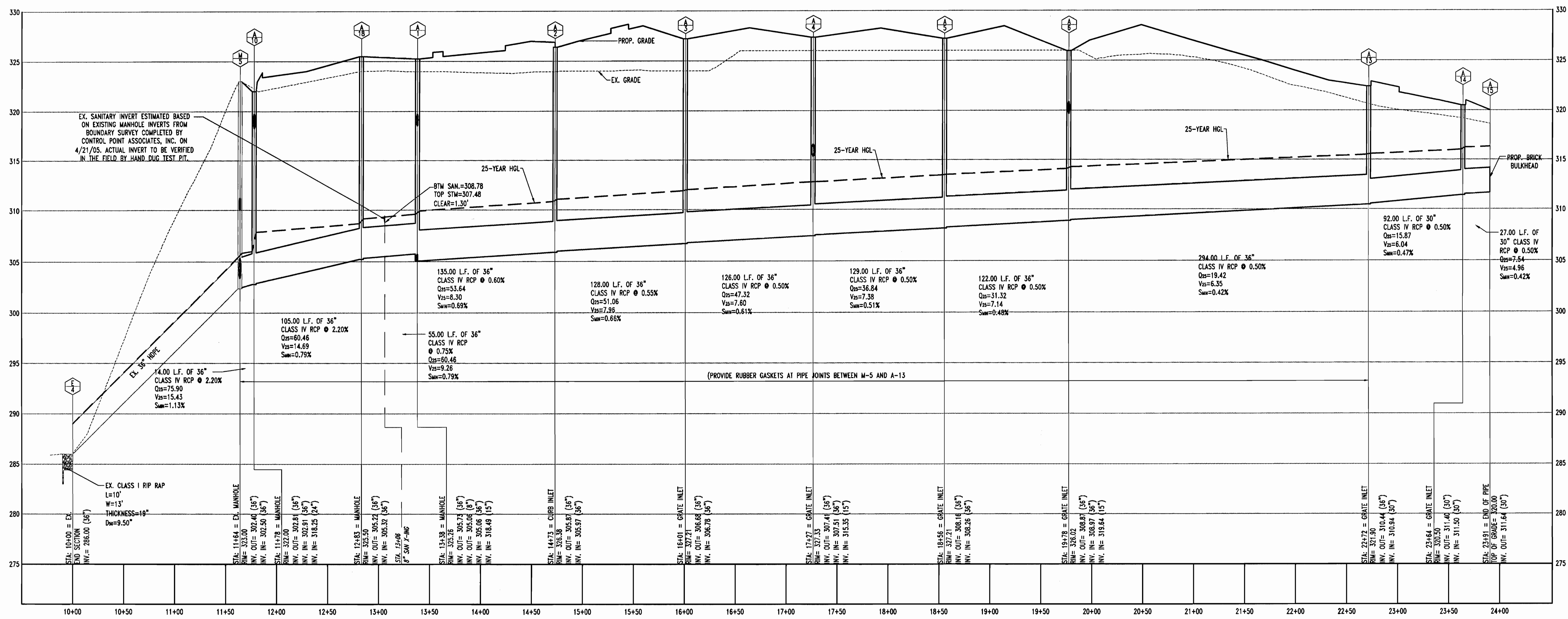
MISS UTILITY

BEFORE YOU DIG CALL 800-337-7777
PROTECT YOURSELF AND YOUR TWO WORKING DAYS NOTICE

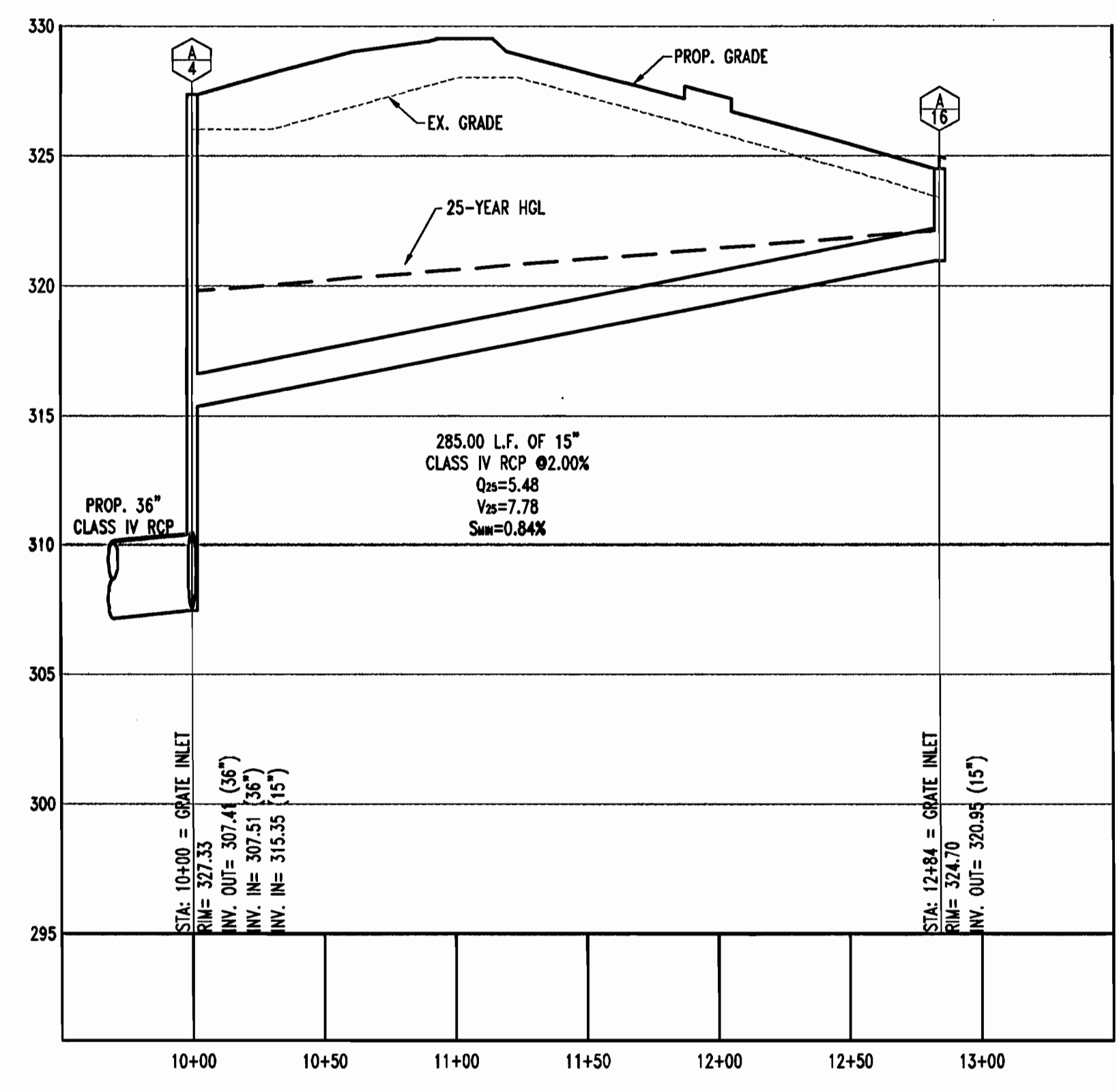
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPROPRIATE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

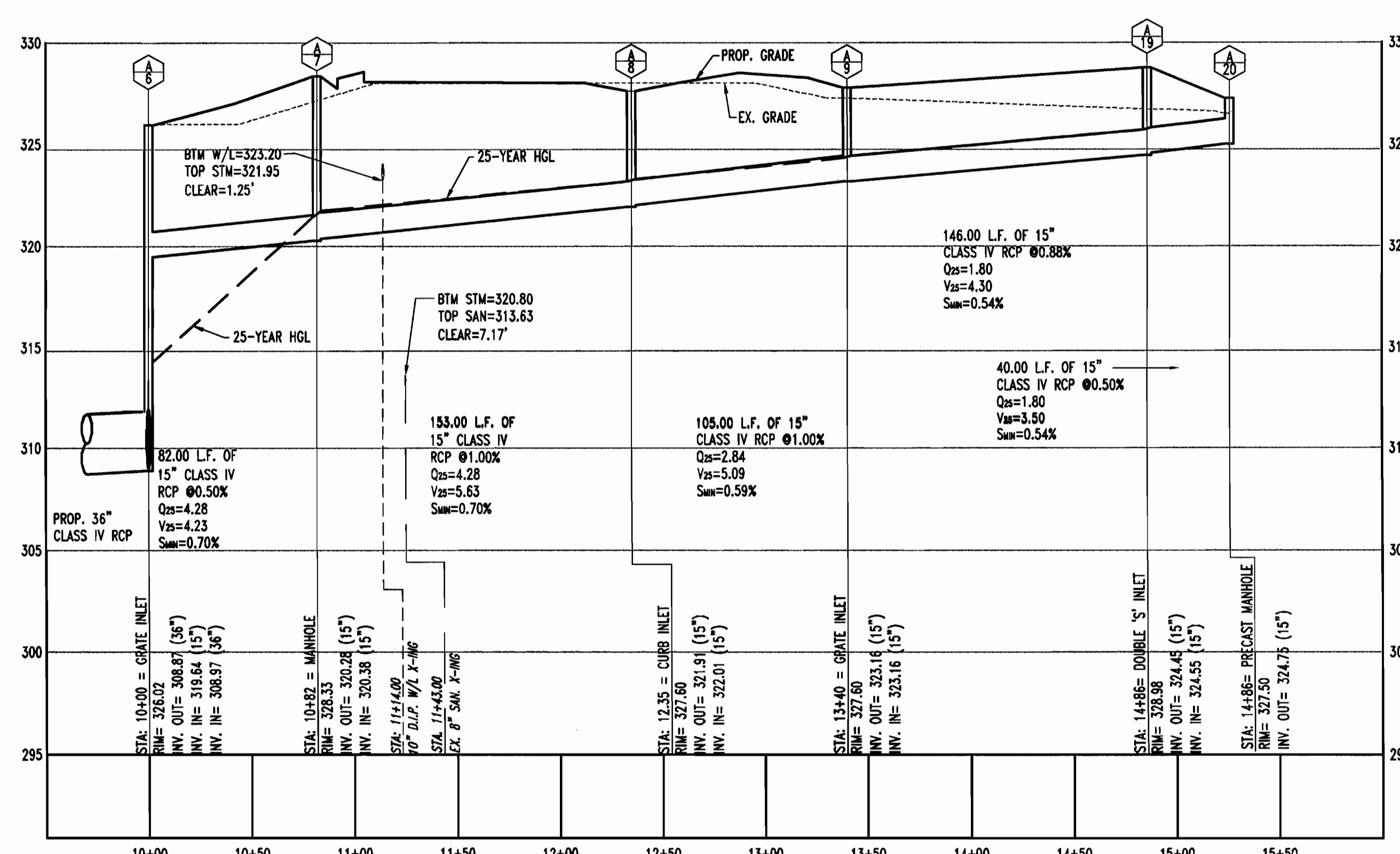
REV. JUL. 1999



PROPOSED STORM PROFILE
STR: E-4 TO A-15
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL



PROPOSED STORM PROFILE
STR: A-4 TO A-16
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL



PROPOSED STORM PROFILE
STR: A-6 TO A-9
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
GATEWAY OVERLOOK SHOPPING CENTER
LITTLE PATUXENT PARKWAY (MD RTE. 175)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 43 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORMDRAIN PROFILES

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22650 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA 20184
CONTACT: DAVID B. NEUBERGER
(703) 709-9500 FAX: (703) 709-9501 E: dneuber@bohlereng.com

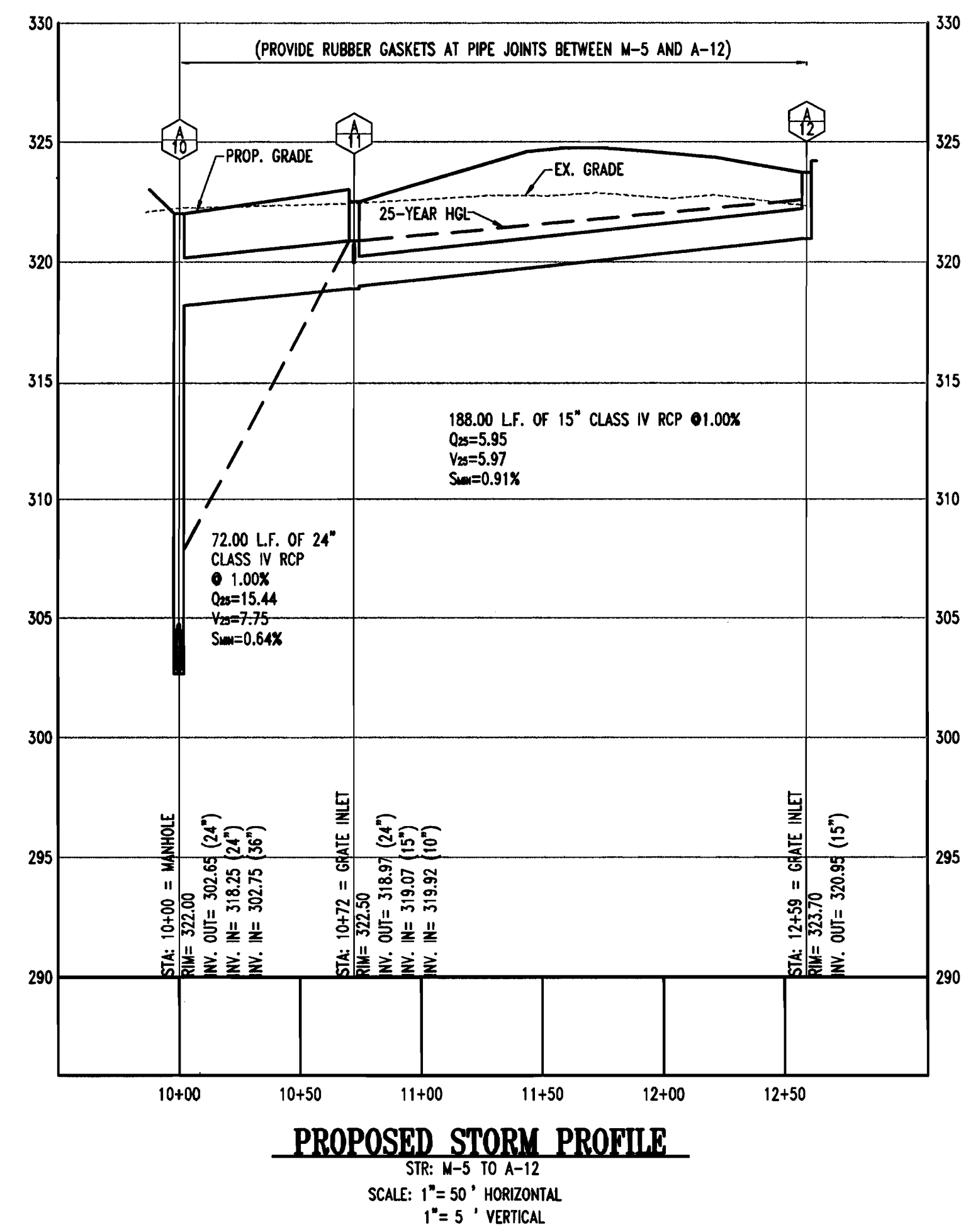
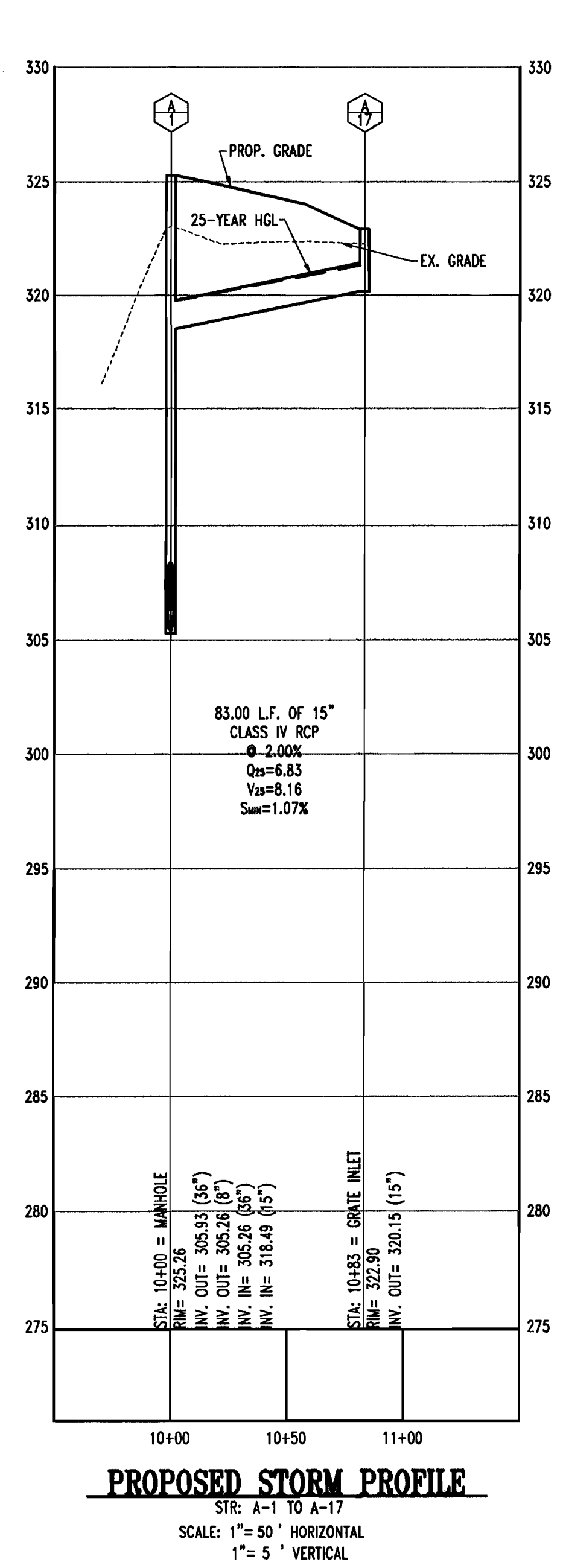
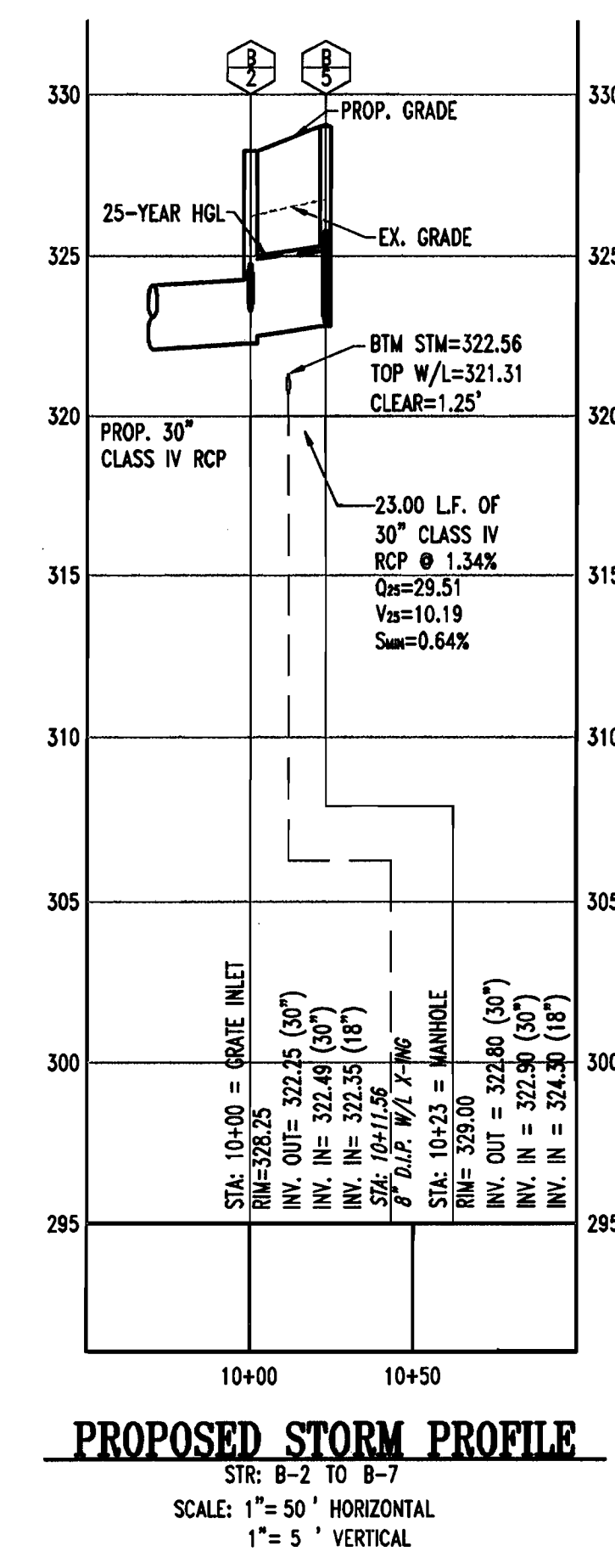
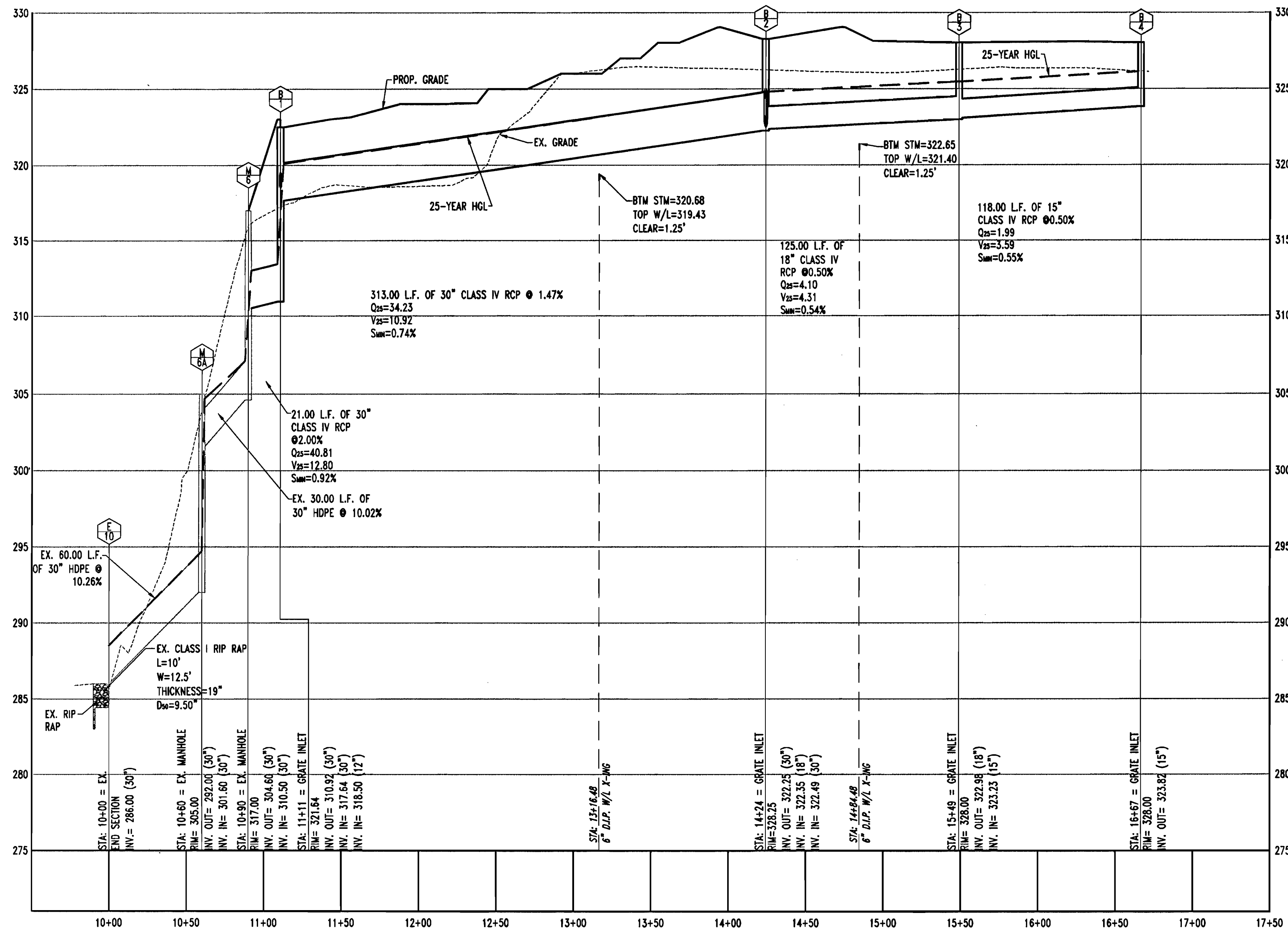
DESIGNED BY: DBN
DRAWN BY: MWM
PROJECT NO.: S043506
DATE: 05/12/2006
SCALE: 1" = 50'
DRAWING NO.: 19 OF 33
ADAM J. VOLANTH
PROFESSIONAL ENGINEER NO. 21342

PLANNING BOARD APPROVAL STAMP

APPROVED
PLANNING BOARD
HOWARD COUNTY
DATE: 8-31-06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF-DEVELOPMENT ENGINEERING DIVISION
DATE: 12/19/06
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
DATE: 12/18/06

DATE PLOTTED: 05/12/2006 11:20:20 AM, TUESDAY
 PLOT FILE: S:\PROJECTS\06\051206\SDP-06-010.dwg
 PLOT SCALE: 1" = 50' HORIZONTAL, 1" = 5' VERTICAL
 PLOT AREA: 21.00 x 33.00 INCHES
 PLOT DEVICE: HP DesignJet 2000
 PLOT STATUS: SUCCESS



PLANNING BOARD APPROVAL STAMP

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: 8-31-06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF-DEVELOPMENT ENGINEERING DIVISION
DATE: 12/19/06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT
DATE: 12/18/06

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

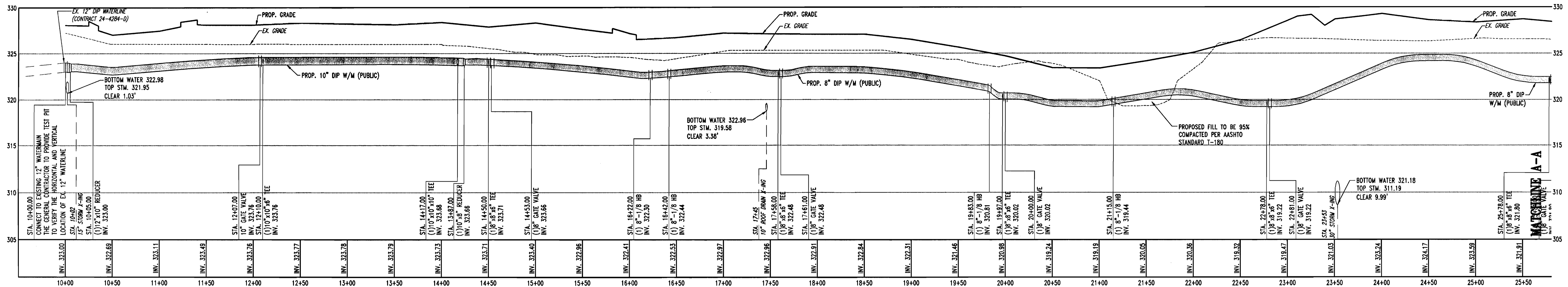
PROJECT: BENSON EAST, PARCEL P
GATEWAY OVERLOOK SHOPPING CENTER
LITTLE PATUXENT PARKWAY (MD RTE. 175)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 45 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

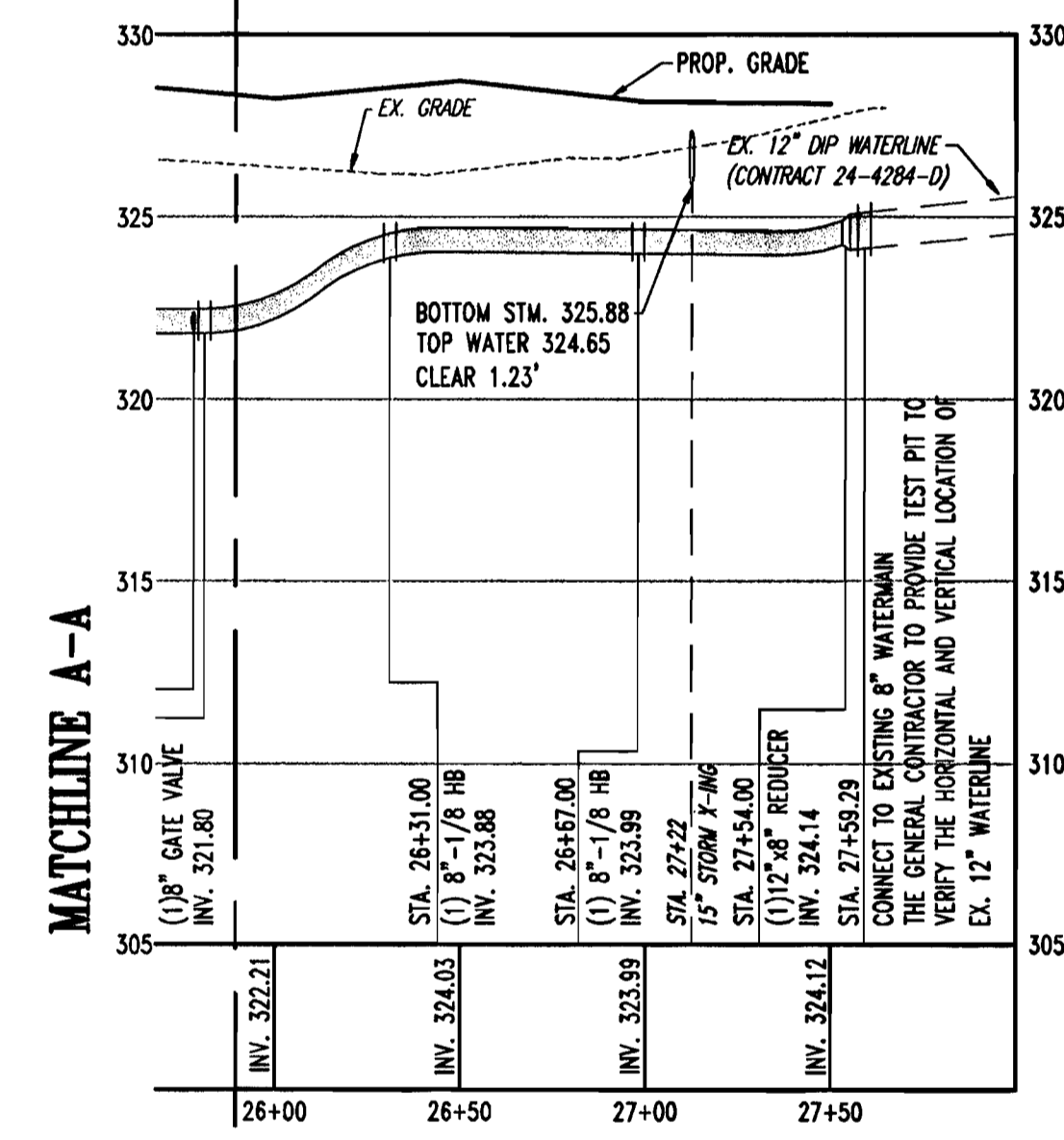
TITLE: STORMDRAIN PROFILES

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22630 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164
CONTACT: DAVID B. NEUBERGER
(703) 709-9500 FAX: (703) 709-9501 | WWW.BE-INC.COM

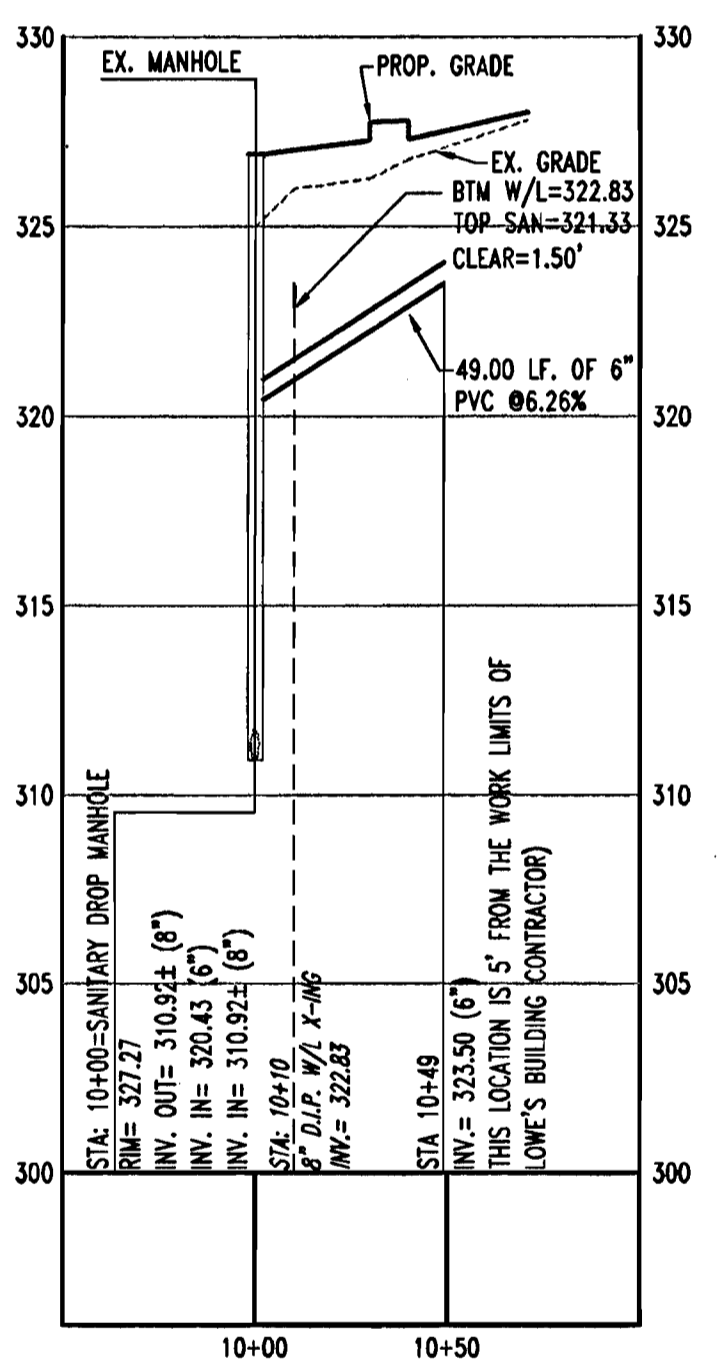
DESIGNED BY: DBM
DRAWN BY: MWM
PROJECT NO.: S043506
DATE: 05/12/2006
SCALE: 1"=50'
DRAWING NO.: 20 OF 33
ADAM J. VOLANTH
PROFESSIONAL ENGINEER NO. 21342



PROPOSED WATER MAIN PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



PROPOSED WATER MAIN PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



PROPOSED SHC PROFILE
 STR: 1 TO 5' FROM BUILDING
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL

PLANNING BOARD APPROVAL STAMP

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: **8-31-06**

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF-DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/19/05

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 COUNTY HEALTH OFFICER
 DATE: 12/18/06

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

PROJECT: BENSON EAST
 GATEWAY OVERLOOK SHOPPING CENTER
 LITTLE PATUXENT PARKWAY (MD RTE. 175)
 COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 43 GRID 1 & 2 ZONED NEW TOWN
 PARCEL P
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: WATER & SANITARY SEWER PROFILES

BOHLER ENGINEERING, P.C.
 * PROFESSIONAL ENGINEERING SERVICES *
 22850 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164 *
 CONTACT: DAVID B. NEUBCKER
 (703) 709-8500 FAX: (703) 709-9501

DESIGNED BY: DBN
 DRAWN BY: MWM
 PROJECT NO.: S043506
 DATE: 05/12/2006
 SCALE: 1" = 50'
 DRAWING NO.: 21 OF 33
 ADAM J. VOLANTH
 PROFESSIONAL ENGINEER NO. 21342

COMPLIANCE CHART:

SCHEDULE A - EDGE 1 PERIMETER LANDSCAPE EDGE - EAST PROPERTY LINE		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE:	A	NON-RESIDENTIAL TO NON-RESIDENTIAL
LINEAR FEET OF ROADWAY PERIMETER:	460 LF.	
CREDIT FOR EXISTING VEGETATION:	NO	
CREDIT FOR WALL, FENCE, OR BERM:	NO	
NUMBER OF PLANTS REQUIRED:		
SHADE TREE(S): 1:50	8	
EVERGREEN TREE(S):	0	
SHRUB(S):	0	
NUMBER OF PLANTS PROVIDED:		
SHADE TREE(S):	6	
EVERGREEN TREE(S):	0	
OTHER TREE(S): (2:1 SUBSTITUTION)	10	
SHRUB(S): (10:1 SUBSTITUTION)	0	
COMMENTS: FOUR (4) ORNAMENTAL TREES PROPOSED IN LIEU OF TWO (2) SHADE TREES.		
*% INDICATES PLANT MATERIAL UTILIZED TO FULFILL REQUIREMENT		

SCHEDULE A - EDGE 2 PERIMETER LANDSCAPE EDGE - NORTH PROPERTY LINE (LOADING AREA)		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE:	A	LOADING AREA TO NON-RESIDENTIAL
LINEAR FEET OF ROADWAY PERIMETER:	680 LF.	
CREDIT FOR EXISTING VEGETATION:	NO	
NUMBER OF PLANTS REQUIRED:		
SHADE TREE(S): 1:60	12	
EVERGREEN TREE(S):	0	
SHRUB(S):	0	
NUMBER OF PLANTS PROVIDED:		
SHADE TREE(S):	9	
EVERGREEN TREE(S):	64	
OTHER TREE(S): (2:1 SUBSTITUTION)	0	
SHRUB(S): (10:1 SUBSTITUTION)	0	
COMMENTS: TEN (10) EVERGREEN TREES PROPOSED IN LIEU OF FIVE (5) SHADE TREES.		
*% INDICATES PLANT MATERIAL UTILIZED TO FULFILL REQUIREMENT		

SCHEDULE A - EDGE 3 PERIMETER LANDSCAPE EDGE - SOUTH PROPERTY LINE		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE:	E	PARKING LOT
LINEAR FEET OF ROADWAY FRONTAGE:	918 LF.	
CREDIT FOR EXISTING VEGETATION:	NO	
CREDIT FOR WALL, FENCE, OR BERM:	NO	
NUMBER OF PLANTS REQUIRED:		
SHADE TREE(S): 1:40	23	
EVERGREEN TREE(S):	0	
SHRUB(S): 1:4	230	
NUMBER OF PLANTS PROVIDED:		
SHADE TREE(S):	8	
EVERGREEN TREE(S):	0	
OTHER TREE(S): (2:1 SUBSTITUTION)	36	
SHRUB(S): (10:1 SUBSTITUTION)	250	
COMMENTS: THIRTY-SIX (36) ORNAMENTAL TREES PROPOSED IN LIEU OF EIGHTEEN (18) SHADE TREES.		
*% INDICATES PLANT MATERIAL UTILIZED TO FULFILL REQUIREMENT		

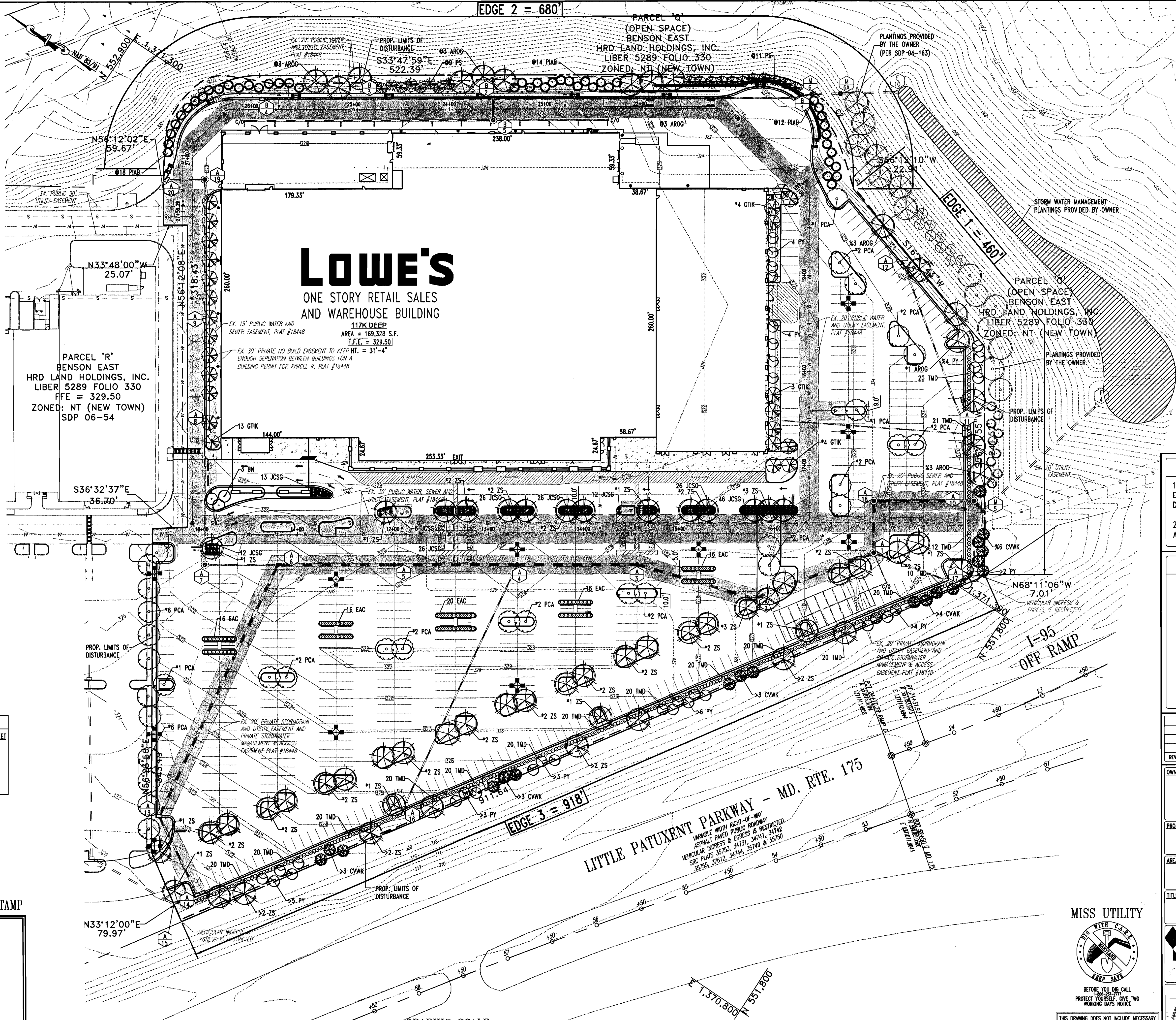
TABLE 1 PERIMETER LANDSCAPE TYPES - BASED ON ADJACENT LAND USE			
LANDSCAPE EDGE TYPE	LANDSCAPE CHARACTER	SHADE TREE(S)/LINEAR FEET	EVERGREEN TREE(S)/LINEAR FEET
A	LIGHT BUFFER	1:60	0
B	MODERATE BUFFER	1:50	1:40
C	HEAVY BUFFER	1:40	1:20
D	SCREEN	1:60	1:10
E	BUFFER - PARKING ADJ. TO ROADWAY	1:40	0

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES:	685 SPACES
NUMBER OF TREES REQUIRED: 1/20 SPACES	35 SHADE TREES
NUMBER OF TREES PROVIDED:	
SHADE TREE(S):	82 SHADE TREES
OTHER TREE(S): (2:1 SUBSTITUTION)	
*% INDICATES PLANT MATERIAL UTILIZED TO FULFILL REQUIREMENT	

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 12/11/06
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 [Signature] 12/19/06
 CHIEF DIVISION & LAND DEVELOPMENT
 [Signature] 12/20/06
 DIRECTOR
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 [Signature] 12/18/06
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

8-31-06



NOTE

1. REFER TO EASEMENT PLAN FOR ALL EXISTING EASEMENTS DESCRIPTIONS, WIDTHS, BEARINGS, AND DISTANCES.
2. REFER TO GENERAL NOTES SHEET FOR ANY APPLICABLE UTILITY NOTES.

BENCHMARK

GEODETIC SURVEY CONTROL #37GD
 N 553,237.204
 E 1,372,353.605
 ELEV. 290.931'
 LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL #37GC
 N 553,250.791
 E 1,370,946.348
 ELEV. 331.855'
 LOCATED ON THE SOUTH SIDE OF WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
 ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
 (LOWES HOME IMPROVEMENT)
 COLUMBIA, HOWARD COUNTY, MARYLAND

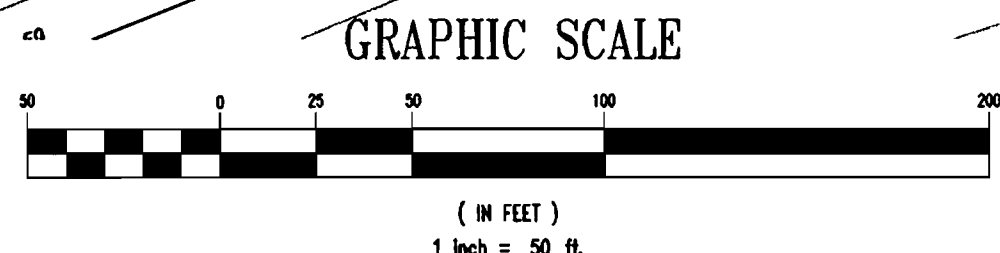
AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
 PARCEL P
 BENSON EAST
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN

BOHLER ENGINEERING, P.C.

* PROFESSIONAL ENGINEERING SERVICES *
 22850 DAVIS DRIVE, SUITE 200 STERLING, VIRGINIA, 20164 *
 CONTACT: DAVID B. NEWMARK
 (703) 708-8500 FAX: (703) 708-9501

DESIGNED BY: DBN
 DRAWN BY: MWM
 PROJECT NO.: S043506
 DATE: 7/12/06
 SCALE: 1"=50'
 DRAWING NO.: 22 OF 33
 ADAM J. VOLANTH
 PROFESSIONAL ENGINEER NO. 21542



FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$81,900.00 FOR 183 SHADE TREES, 64 EVERGREEN TREES AND 580 SHRUBS.

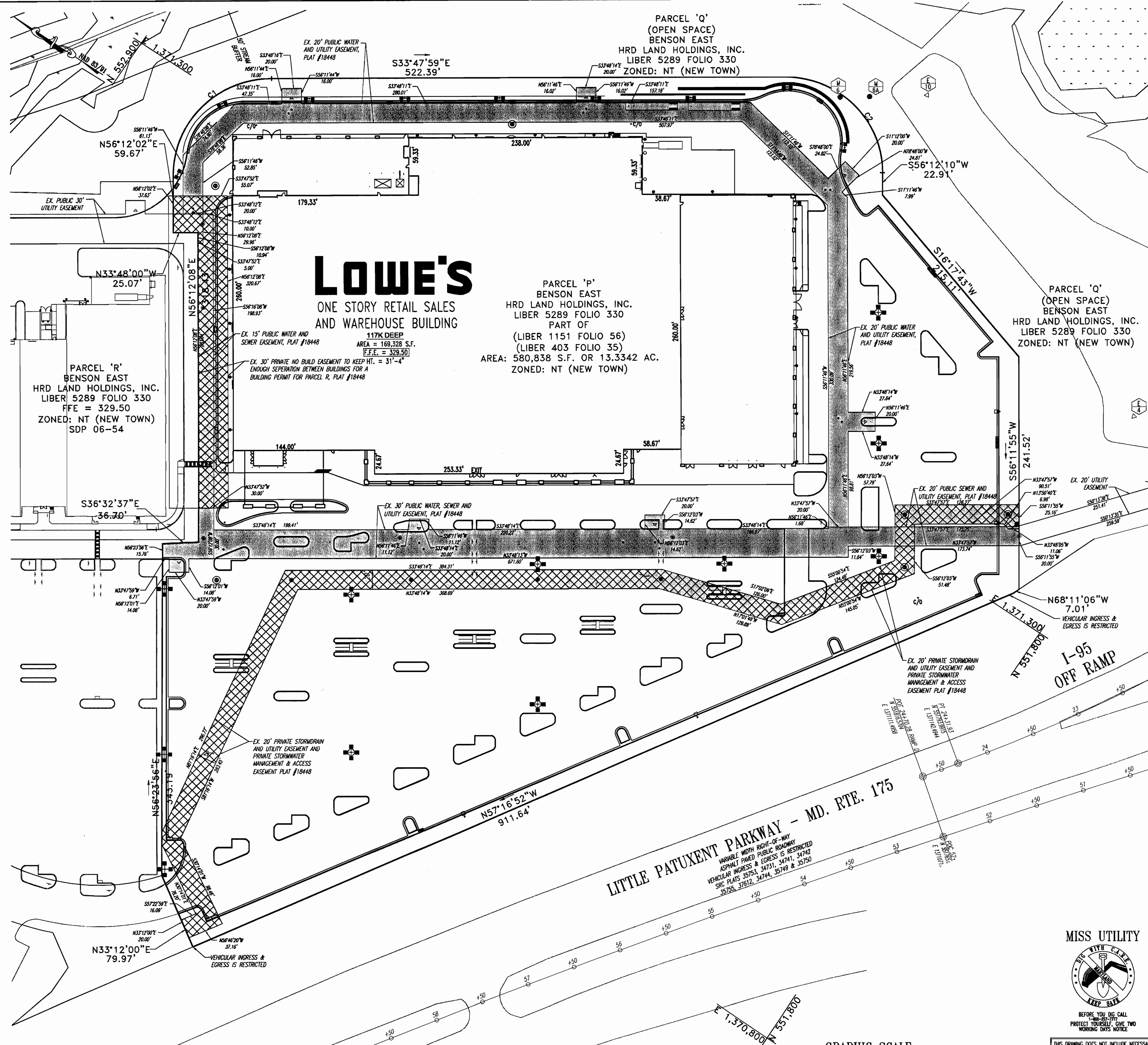
NOTE: MISS UTILITY HAS NOT MARKED THIS SITE. ONLY A BOUNDARY SURVEY HAS BEEN CONDUCTED BY CONTROL POINT ASSOCIATES, INC. FOR THIS SITE.

MISS UTILITY

BEFORE YOU DIG CALL
 800-368-5777
 PROTECT YOURSELF. GIVE TWO WORKING DAYS NOTICE.

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.



LOWE'S

ONE STORY RETAIL SALES AND WAREHOUSE BUILDING

PARCEL 'P'
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
PART OF
(LIBER 1151 FOLIO 56)
(LIBER 403 FOLIO 35)
AREA: 580,838 S.F. OR 13.3342 AC.
ZONED: NT (NEW TOWN)

PARCEL 'R'
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
FFFE = 329.50
ZONED: NT (NEW TOWN)
SDP 06-54

PARCEL 'Q'
(OPEN SPACE)
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
ZONED: NT (NEW TOWN)

LEGEND

- EX. PRIVATE EASEMENTS
- EX. PUBLIC EASEMENTS

REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
ONE STORY RETAIL SALES AND WAREHOUSE BUILDING
(LOWES HOME IMPROVEMENT)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 37 GRID 1 & 2 ZONED NEW TOWN
PARCEL P
BENSON EAST
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: EASEMENT PLAN

BOHLER ENGINEERING, P.C.

DESIGNED BY: DBN
DRAWN BY: JWK
PROJECT NO.: S043506
DATE: 7/12/06
SCALE: 1"=50'
DRAWING NO.: 24 OF 33
ADAM J. VOLANTH
PROFESSIONAL ENGINEER NO. 21342

PLANNING BOARD APPROVAL STAMP

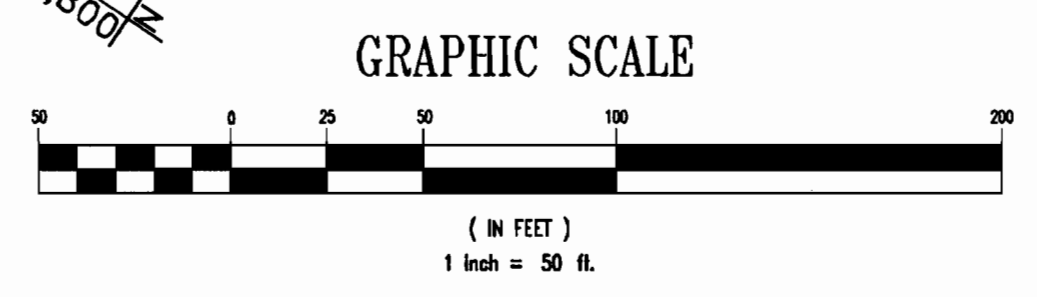
APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 8-31-06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'

THIS PLAN IS FOR INFORMATIONAL PURPOSES ONLY



MISS UTILITY



BEFORE YOU DIG CALL 1-800-485-5777
PROTECT YOURSELF, CALL TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.
THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 8-31-06

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

APPROVED: COUNTY HEALTH OFFICER
DATE: 12/18/06

NOTE:
SITE ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO SUBMIT THIS SHEET AND PHOTOMETRIC PLAN TO MANUFACTURER'S REPRESENTATIVE FOR VERIFICATION OF LABEL, FIXTURE MODEL NUMBER, AMP POLE MODEL NUMBER.

NOTE:
ONLY LITHONIA FIXTURES SHALL BE APPROVED FOR THIS SITE. (NO SUBSTITUTES ALLOWED)

NOTE:
MOUNTING HEIGHT, POLE LOCATIONS, AND DISTRIBUTION TYPES SPECIFIED BY VALLEY LIGHTING LLC.

NOTE:
EACH STAGE SHALL BE A PROGRAMMABLE OUTPUT OF THE NOVART BMS. EACH 2-POLE CIRCUIT SHALL HAVE A CONTRACTOR THAT IS CONTROLLED BY THE OUTPUT OF A STAGE AS INDICATED IN THIS SCHEDULE.

NOTE:
THE LIGHTING CONTROL SCHEDULE SHALL BE COORDINATED WITH POWERBOX SOLUTIONS TO ENSURE THAT LOWE'S IS ABLE TO STAGE THE QUANTITY AND LOCATION OF LIGHTS AS IS INDICATED IN THIS SCHEDULE.

GENERAL NOTES

1. THE SITE ELECTRICAL SUBCONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES, AND DRAINAGE SYSTEMS PRIOR TO COMMENCING ANY UNDERGROUND INSTALLATIONS.
2. THE INSTALLATION OF THE SITE LIGHTING SHALL COMPLY WITH THE APPLICABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND SHALL COMPLY WITH ALL OTHER STATE AND LOCAL CODES. THE SITE ELECTRICAL SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL INSPECTIONS, FEES, AND PERMITS REQUIRED TO COMPLETE THIS PROJECT.
3. ANY ITEMS INSTALLED THAT DO NOT MEET THE REQUIREMENTS OF THESE DRAWINGS SHALL BE REMEDIATED AT THE EXPENSE OF THE SITE ELECTRICAL SUBCONTRACTOR. ALL ELECTRICAL WORK ON THIS DRAWING SHALL BE INSTALLED BY THE SITE ELECTRICAL SUBCONTRACTOR.
4. THE SITE ELECTRICAL SUBCONTRACTOR SHALL COORDINATE THE INSTALLATION OF CONDUITS AND WIRE WITH THE BUILDING ELECTRICAL SUBCONTRACTOR. LOWE'S DESIRES THAT THE CONDUIT AND WIRE FROM THE BUILDING ELECTRICAL PANELS TO THE FIRST POLE(S) OR SIGN(S) TO BE INSTALLED AS A SINGLE PULL WITHOUT JUNCTION BOXES OR SPLICES.
5. NO WIRE SHALL BE INSTALLED PAR-WAY AND LEFT COILED ON THE GROUND SUCH THAT OTHERS ARE TO COMPLETE THE INSTALLATION. IF COORDINATION IS NOT POSSIBLE SUCH THAT A HOMERUN CONDUIT & WIRE CAN BE INSTALLED ALL THE WAY TO A PANEL THEN AN UNDERGROUND ELECTRICAL PULL BOX SHALL BE COORDINATED, FURNISHED AND INSTALLED AT NO ADDITIONAL EXPENSE TO LOWE'S. SITE ELECTRICAL CONTRACTOR SHALL PROVIDE AN ADDITIONAL 40 FEET (MINIMUM) OF CONDUCTORS WITHIN THE EXTERIOR JUNCTION BOX AT THE BUILDING FOOTING PENETRATION, IN A DIGITAL WITH EACH PHASE AND NEUTRAL CONDUCTOR PERMANENTLY LABELED BY ITS CORRESPONDING CIRCUIT NUMBER. THE SITE ELECTRICAL CONTRACTOR SHALL VERIFY THAT 40 FEET OF ADDITIONAL CONDUCTOR WILL BE ADEQUATE TO EXTEND FROM THE EXTERIOR JUNCTION BOX TO ELECTRICAL PANELS WITH 8' EXTRA CONDUCTOR TO EXTEND INTO EACH PANEL WITHOUT SPLICES. CONDUCTOR TAIL LENGTH MAY NEED TO BE LONGER, WITHOUT SPLICES. DEPENDING ON FINAL PLACEMENT OF THE EXTERIOR JUNCTION BOXES IN RELATION TO THE PANEL LOCATIONS. THE BUILDING ELECTRICAL CONTRACTOR SHALL INSTALL THE REQUIRED SIZE AND QUANTITY OF CONDUITS AS DESIGNATED ON SHEET E4 TO THESE JUNCTION BOXES. THE SITE ELECTRICAL CONTRACTOR SHALL ROUTE SITE LIGHTING CONDUCTOR DIGITALS FROM EXTERIOR JUNCTION BOXES INTO BUILDING ELECTRICAL PANELS WITHOUT SPLICES.
6. THE SITE LIGHTING SUB-CONTRACTOR SHALL INSTALL THE CONDUITS, PULL BOXES (IF REQUIRED) AND WIRE FOR THE SITE LIGHTING SYSTEM WITHIN THE BUILDING LIMITS LINE (AS DEFINED BY LOWE'S) AND ALIGN THE CONDUITS AND/OR JUNCTION BOXES WITH THE ELECTRICAL ROOMS FROM WHICH THEY WILL TIE INTO. COORDINATE THE REQUIRED LOCATION AND CIRCUITING OF SITE CONDUITS AND CIRCUITS WITH THE BUILDING ELECTRICAL SUB-CONTRACTOR.
7. THE PANEL AND CIRCUIT NUMBER FOR EVERY PHASE CONDUCTOR SHALL BE LABELED AT EVERY JUNCTION (i.e. "SLA-6,8" WOULD BE REQUIRED AT THE END OF EVERY CONDUCTOR AT EVERY JUNCTION BOX FOR THE PHASE WIRE COMING FROM PANEL "SLA" CIRCUIT NUMBERS "6,8".
8. SYMBOLS ON THIS DRAWING HAVE BEEN ENLARGED FOR LEGIBILITY THESE SYMBOLS ARE NOT TO SCALE.

KEY NOTES

1. SITE ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES & DRAINAGE BEFORE DRILLING POLE HOLES. (TYPICAL)
2. "NL" INDICATES THIS FIXTURE SHALL BE ON A NIGHT LIGHT (STAGE 1) CIRCUIT (TYPICAL). "NL" FIXTURES SHALL BE CIRCUITED TO A GEN-SET/FED PANEL SUCH AS LPB OR SLB.
3. "X,X" DESIGNATIONS, BY FIXTURES IN PLAN VIEW, INDICATE THE CIRCUITS FIXTURES ARE TO BE CONNECTED TO. (TYPICAL).
4. "FL" INDICATES THIS LUMINAIRE SHALL BE A FLOOD LIGHT FIXTURE. MOUNTING BRACKET FOR THIS FL FIXTURE SHALL BE MOUNTED AT HEIGHT DESIGNATED IN SITE LIGHTING FIXTURE SCHEDULE ABOVE BOTTOM OF POLE BASE. TYPICAL FOR ALL LIGHT POLES ALONG STOREFRONT.
5. EXTEND A 480/277V, 3Ø CIRCUIT TO LOWE'S ROAD, MONUMENT OR PYLON SIGN. INSTALL A 30A, 3Ø, NEMA 3R FUSIBLE DISC. SWITCH (3Ø) PHASE FUSED @ 20A). SIGN REQUIRES (3) 20A, 277V, 1Ø CIRCUITS. SITE SIGNS SHALL BE CIRCUITED TO A GEN-SET FED PANEL SUCH AS LPB OR SLB. (IF APPLICABLE). SEE GENERAL NOTE #.
6. PROVIDE PROTECTIVE GUARD POST AT DESIGNATED POLE BASES AS DENOTED ON PLAN. LOCATE AND CONSTRUCT GUARD POST AS SHOWN ON DETAIL ON THIS SHEET. (IF APPLICABLE).
7. SITE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH LIGHTING VENDOR TO ENSURE SINGLE FLOOD MOUNTING BRACKET IS SPECIFIED ON RIGHT OR LEFT ORIENTATION ON POLE, BASED ON PLAN VIEW, PRIOR TO ORDERING. (IF APPLICABLE)
8. SITE LIGHTING EXTERIOR JUNCTION BOXES SHALL BE "H-20" LOAD RATED. PROVIDE 13"x24"x12" DEEP "QUAZITE" PG1324BA12 BOX (QUANTITY (2) (STACKED)) WITH PG1324HA0029 LID, OR APPROVED EQUAL. DEEPER BOXES MAY BE REQUIRED IF THE CONDUIT ALIGNMENT IS AFFECTED BY OTHER UTILITIES. THE PULL BOX SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS WITH A CONCRETE COLLAR AND A MINIMUM OF 8" OF GRAVEL COMPACTED PER THE LOWE'S SITE WORK SPECIFICATIONS. SEE GENERAL NOTES 5 AND 6 FOR CONDUIT ROUTING REQUIREMENTS.
9. FIXTURES WITH ARROWS ARE DIRECTIONAL AND SHALL HAVE THE REFLECTORS FIELD ROTATED BY THE SITE ELECTRICAL SUBCONTRACTOR. ALIGN THE ARROWS ON THE REFLECTOR WITH THE DIRECTIONAL AIMING ARROWS INDICATED ON THESE DRAWINGS. REFER TO MANUFACTURER'S INSTRUCTIONS. THIS NOTE APPLIES TO ALL APPLICABLE FIXTURES THAT INCLUDE DIRECTIONAL AIMING ARROWS.

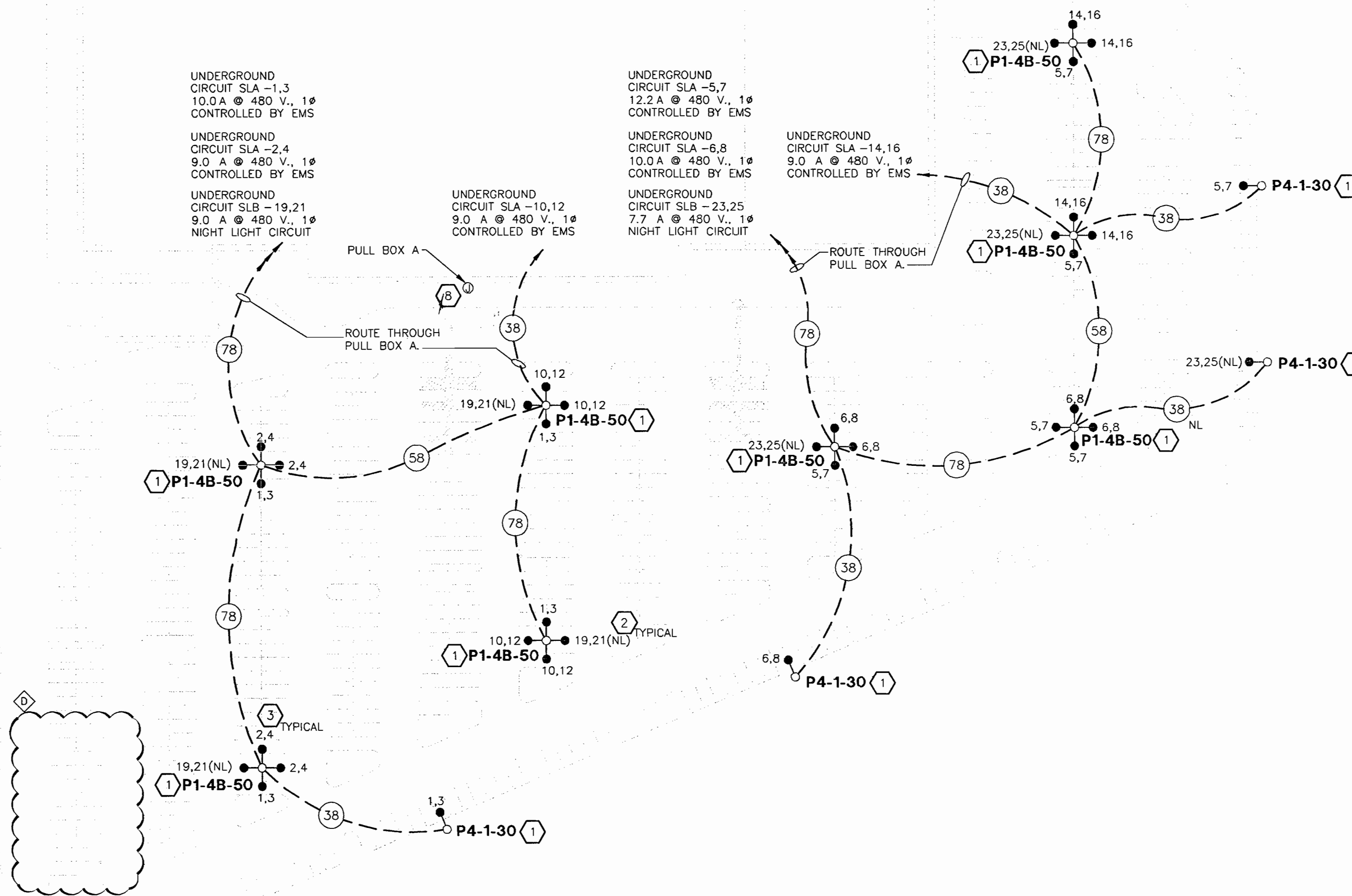
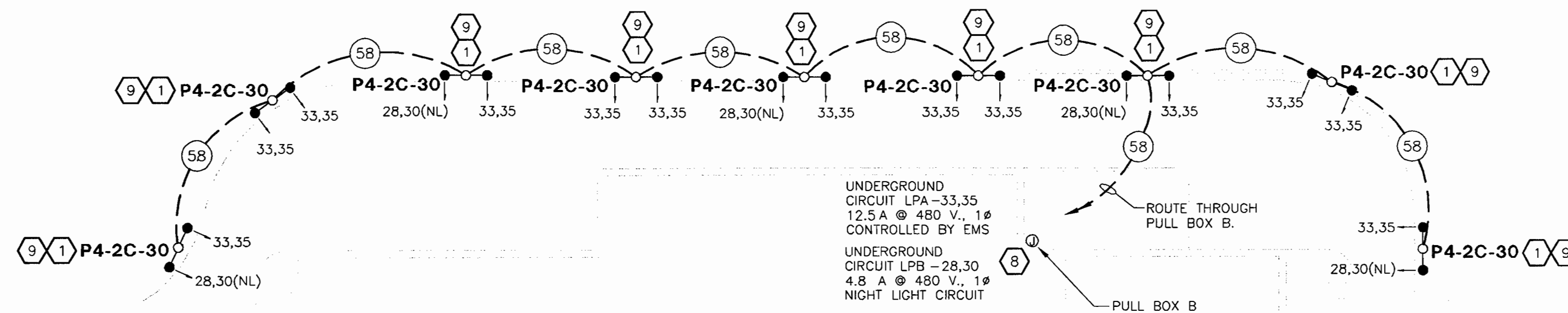
WIRE & CONDUIT SCHEDULE

- 38 — (2) #8 THWN AND (1) #8 THWN GROUND IN 1" CONDUIT
- 36 — (2) #6 THWN AND (1) #6 THWN GROUND IN 1" CONDUIT
- 48 — (3) #8 THWN AND (1) #8 THWN GROUND IN 1" CONDUIT
- 46 — (3) #6 THWN AND (1) #6 THWN GROUND IN 1-1/4" CONDUIT
- 58 — (4) #8 THWN AND (1) #8 THWN GROUND IN 1" CONDUIT
- 56 — (4) #6 THWN AND (1) #6 THWN GROUND IN 1-1/2" CONDUIT
- 68 — (5) #8 THWN AND (1) #8 THWN GROUND IN 1" CONDUIT
- 66 — (5) #6 THWN AND (1) #6 THWN GROUND IN 1-1/2" CONDUIT
- 78 — (6) #8 THWN AND (1) #8 THWN GROUND IN 1-1/4" CONDUIT
- 76 — (6) #6 THWN AND (1) #6 THWN GROUND IN 1-1/2" CONDUIT

NOTE: ANY SPARE CONDUITS SHALL BE STUBBED UP INTO AN ACCESSIBLE LOCATION PER LOWE'S PROJECT MANAGER FOR POSSIBLE FUTURE USE.

SITE LIGHT CONTROL SCHEDULE

1st STAGE (NL)	10.5 KW
LPB-28,30	2.4 KW
SLB-19,21	4.4 KW
SLB-23,25	3.7 KW
2nd STAGE	18.0 KW
SLA-2,4	4.4 KW
SLA-6,8	4.8 KW
SLA-10,12	4.4 KW
SLA-14,16	4.4 KW
3rd STAGE	16.8 KW
LPA-33,35	6.0 KW
SLA-1,3	4.8 KW
SLA-5,7	6.0 KW
TOTAL SITE LIGHT	45.3 KW



SCALE 1" = 60'-0"

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: 8-31-06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/11/06
CHIEF-DEVELOPMENT ENGINEERING DIVISION

12/19/06
CHIEF-DIVISION & LAND DEVELOPMENT

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
12/18/06
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

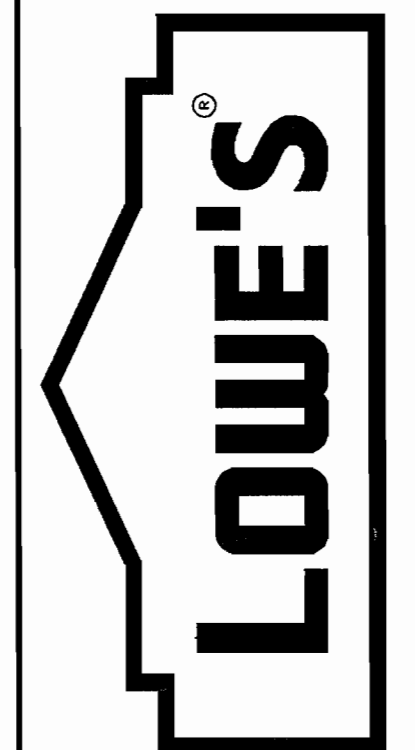
REVISIONS

DATE	DESCRIPTION
06.08.2006	SITE LIGHTING

PAGE NETWORKS
ENGINEERS & CONSULTANTS
320-B TENTH ST., N. WILKESBORO, NC 28659-1646
PHONE: 336-667-4223 FAX: 336-667-4332

LOWE'S HOME CENTERS, INC.
HWY. 268 EAST, EAST DOCK N.
WILKESBORO, NC 28669
336.658.4000 (V) 336.658.3257 (F)

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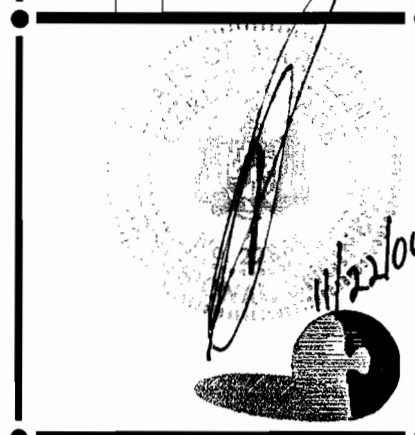


SITE LIGHTING PLAN & NOTES
LOWE'S OF COLUMBIA, MARYLAND
PROJECT No. 05345
DRAWN BY: DPK
CHECKED BY: CARP

ORIGINAL ISSUE DATE:
PERMIT SET ISSUE DATE:
CONSTRUCTION SET ISSUE DATE:
DRAWING NUMBER:

SITE LIGHTING FIXTURE SCHEDULE REVISOR TO REFLECT LOWE'S SITE LIGHTING ONLY.

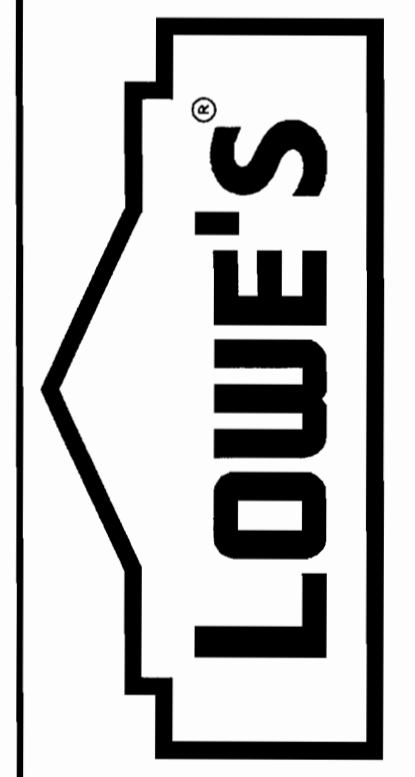
REVISIONS	
DATE	DESCRIPTION
02.07.2006	PLAN REVIEW



PAGE
ENGINEERS & CONSULTANTS
 320-B TENTH ST., N. WILKESBORO, NC 28659-1646
 PHONE: 336-667-4225 FAX: 336-667-4332

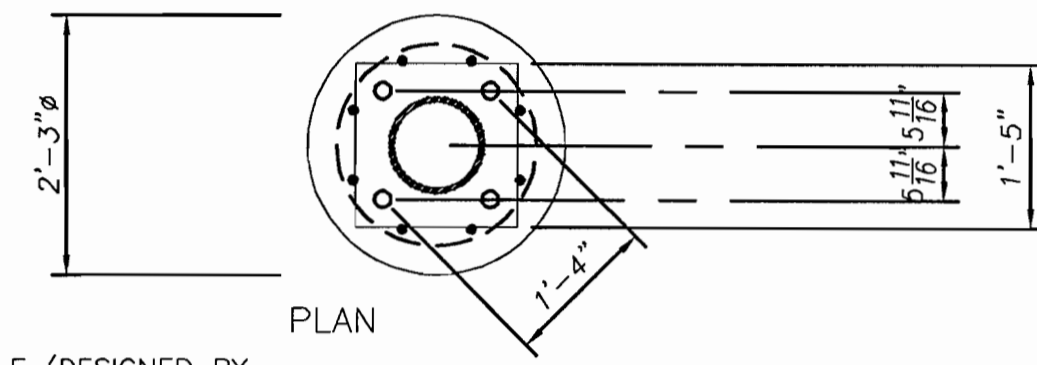
LOWE'S HOME CENTERS, INC.
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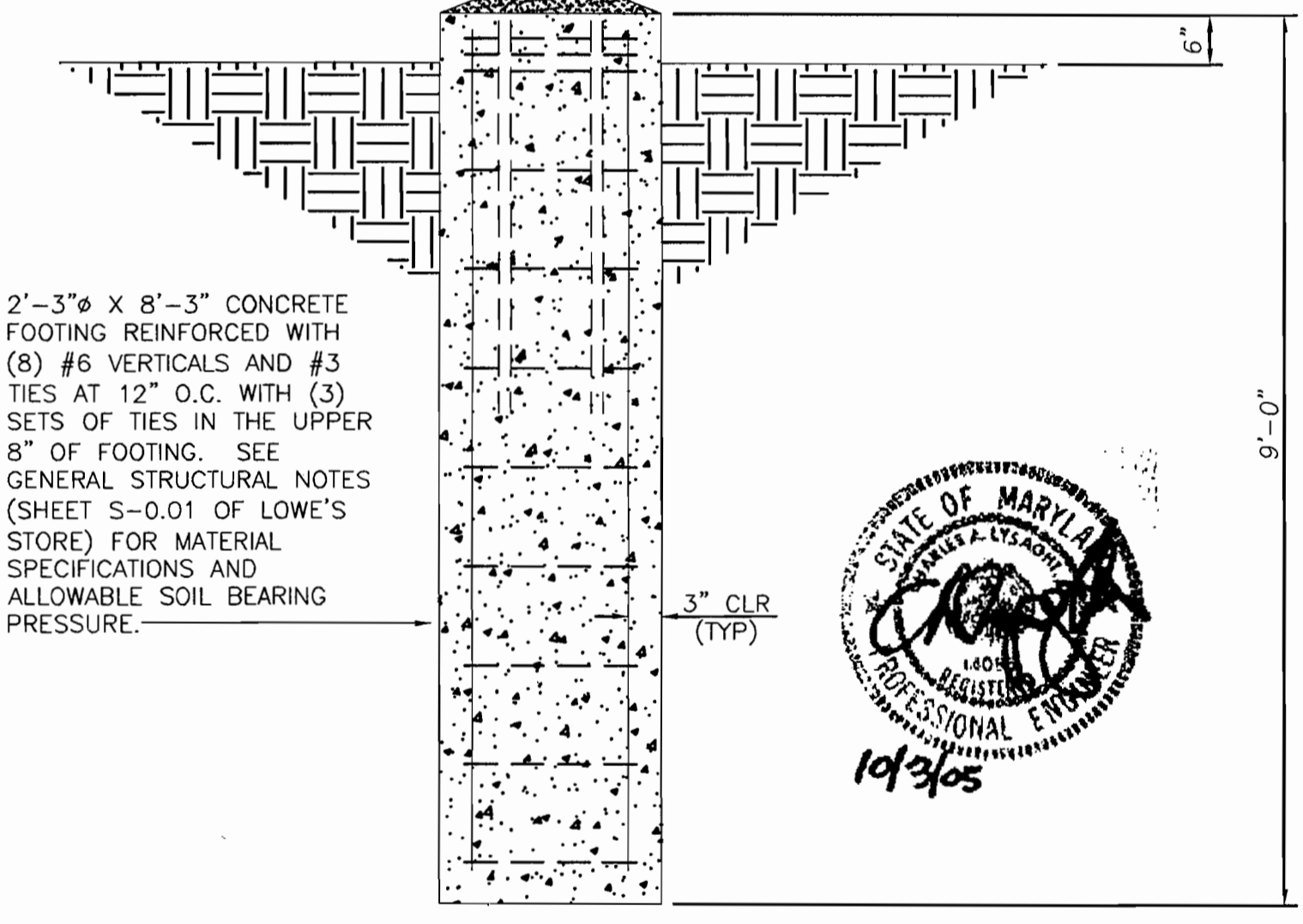


SITE LIGHTING SCHEDULE AND DETAILS
 LOWE'S OF COLUMBIA, MARYLAND
 PROJECT No: 05345
 DRAWN BY: DDK | CHECKED BY: CARP

APPROVED: DEPARTMENT OF PLANNING AND ZONING	12/11/06
CHIEF - DEVELOPMENT ENGINEERING DIVISION	DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.	12/19/06
CHIEF - DIVISION & LAND DEVELOPMENT	DATE
APPROVED: COUNTY HEALTH OFFICER	12/16/06
DIRECTOR	DATE
HOWARD COUNTY HEALTH DEPARTMENT	DATE



50' TALL POLE (DESIGNED BY OTHERS) FOR FOUR FIXTURES AT THE TOP WEIGHING 90# EACH WITH AN E.P.A. (EFFECTIVE PROJECTED AREA) = 8.8 SQUARE FEET TOTAL. POLE BASE PLATE AND ANCHOR BOLTS ARE ALSO DESIGNED BY OTHERS. (BASE PLATE GEOMETRY WAS PROVIDED BY TEAM LIGHTING.)



2'-3" X 8'-3" CONCRETE FOOTING REINFORCED WITH (8) #6 VERTICALS AND #3 TIES AT 12" O.C. WITH (3) SETS OF TIES IN THE UPPER 8" OF FOOTING. SEE GENERAL STRUCTURAL NOTES (SHEET S-0.01 OF LOWE'S STORE) FOR MATERIAL SPECIFICATIONS AND ALLOWABLE SOIL BEARING PRESSURE.

Luminaire Schedule		
Project: Benson East		
Qty	Label	Description
1	P1-2B-50	Emco ECA-232-3H-1000MH-480V-SC/PTF-3-EC23-DM2180-SC/KWI RTSP50-11.0-7-xx-3.5-BC
7	P1-4B-50	Emco ECA-234-QH-1000MH-480V-SC/PTF-3-EC23-DM4090-SC/KWI RTSP50-11.0-7-xx-3.5-BC
4	P4-1-30	Emco ECA-181-3H-400MH-480V-SC/PTF-3-EC18-DM1-SC/KWI RTSP30-8.0-11-xx-3.5-BC
9	P4-4C-30	Emco ECA-184-3H-400MH-480V-SC/PTF-3-EC18-DM4090-SC/KWI RTSP30-8.0-11-xx-3.5-BC

- NOTES:
- (1) VOLTAGES AND QUANTITIES TO BE CONFIRMED BY CONTRACTOR PRIOR TO ORDERING MATERIAL.
 - (2) ALL FIXTURES AND POLES EXCEPT TYPE P17-1-10 TO BE PAINTED TO MATCH SHERWIN WILLIAMS SW6255 "MORNING FOG".
 - (3) FIXTURES TO BE AIMED AND ORIENTED AS INDICATED ON DRAWING.
 - (4) EXACT PLACEMENT OF DECORATIVE FIXTURES TO BE COORDINATED WITH LANDSCAPE DRAWINGS.

2 SITE LIGHT FIXTURE SCHEDULE
 SCALE N.T.S.

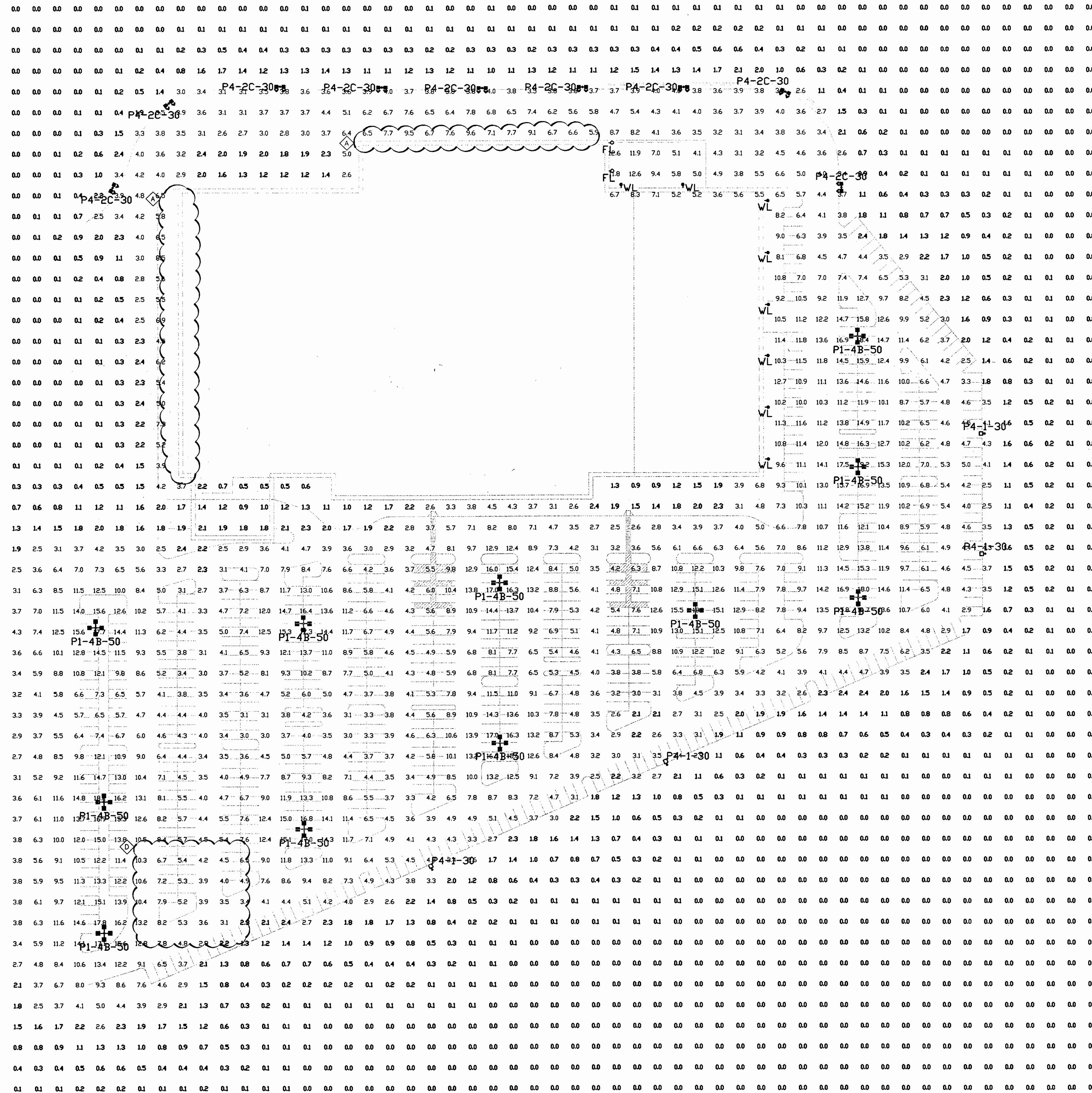
1 POLE BASE DETAIL
 SCALE 1" = 20'-0"

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE 8-31-06

Nov 22, 2006 - 1:13pm - USER: hkelley
 G:\Projects\Draw2005\BOLR\Columbia, MD\COMDSL2.dwg

NOTE:
THIS LIGHTING DESIGN IS BASED ON INFORMATION SUPPLIED BY OTHERS TO PAGE INTERWORKS, PA. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.

NOTE:
LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.



NOTE:
SITE LIGHTING REVISED TO REFLECT REMOVAL OF WALL-PACKS FROM AROUND THE BUILDING.

NOTE:
SITE LIGHTING PLAN REVISED TO REFLECT NEW PHOTOMETRIC PLAN.

- P1-4B-50**
 END LIGHTING ECA23-0H-1000MH
 1 lamp(s) CLEAR 1000MH PRORATED TO 1000 LUMENS
 1 luminaire per location, console file "ECFHMLIES"
 1 lamp(s) per luminaire, 10000 initial lumens per lamp
 Light Loss Factor = 0.750, watts per luminaire = 1000
 Outreach (from mounting axis to photometric center) = 36 in
 mounting height = 30 ft
 number locations = 11, number luminaires = 44
 for all locations = 47.5
- P4-2C-30**
 END LIGHTING ECA182-FH-400MH
 2 lamp(s) CLEAR 400MH PRORATED TO 36000 LUMENS
 2 luminaires per location, console file "ECFHMLIES"
 1 lamp(s) per luminaire, 36000 initial lumens per lamp
 Light Loss Factor = 0.750, watts per luminaire = 455
 number locations = 9, number luminaires = 18
 for all locations = 82
 Occurrences = 9 at mounting height 0 ft
- P4-1-30**
 END LIGHTING ECA182-FH-400MH
 1 lamp(s) CLEAR 400MH/HR PRORATED TO 1000 LUMENS
 console file "ECFHMLIES"
 1 luminaire per location, 36000 initial lumens per lamp
 Light Loss Factor = 0.750, watts per luminaire = 455
 Outreach (from mounting axis to photometric center) = 21 in
 mounting height = 30 ft
 number locations = 4, number luminaires = 4
 for all locations = 18
- WL**
 HUBBELL MD H5V400HFP8SL
 console file "H5V400HFP8SL"
 1 lamp(s) per luminaire, 36000 initial lumens per lamp
 Light Loss Factor = 0.750, watts per luminaire = 460
 Outreach (from mounting axis to photometric center) = 18 in
 at angle = 50 deg
 number locations = 17, number luminaires = 17
 for all locations = 7.8
 Occurrences = 17 at mounting height 20 ft
- FL**
 HUBBELL MD H5V400HFP8SL
 console file "H5V400HFP8SL"
 1 lamp(s) per luminaire, 36000 initial lumens per lamp
 Light Loss Factor = 0.750, watts per luminaire = 460
 Outreach (from mounting axis to photometric center) = 18 in
 at angle = 50 deg
 number locations = 2, number luminaires = 2
 for all locations = 0.9
 Average lit Factor these luminaires = 0.89
 Occurrences = 2 at mounting height 20 ft

NOTE:
LIGHTING DESIGN AND FIXTURES APPROVED BY LOWE'S AND CITY OF COLUMBIA, MD PER SRI C. APPANNABOYANNA OF BOHLER ENGINEERING, INC.

NOTE:
SITE LIGHTING REVISED TO REFLECT DEVELOPER COMMENTS PER MIKE GESELL.

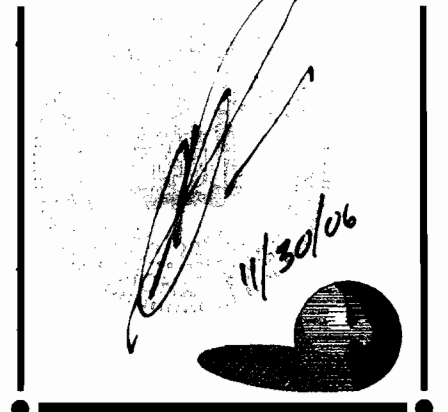
APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 8-31-06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 12/11/06
 CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 12/14/06
 CHIEF-DIVISION & LAND DEVELOPMENT DATE
[Signature] 12/20/06
 DIRECTOR DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
[Signature] 12/15/06
 COUNTY HEALTH OFFICER DATE
 HOWARD COUNTY HEALTH DEPARTMENT 12/15/06

1
SL3 SCALE 1"=60'-0"

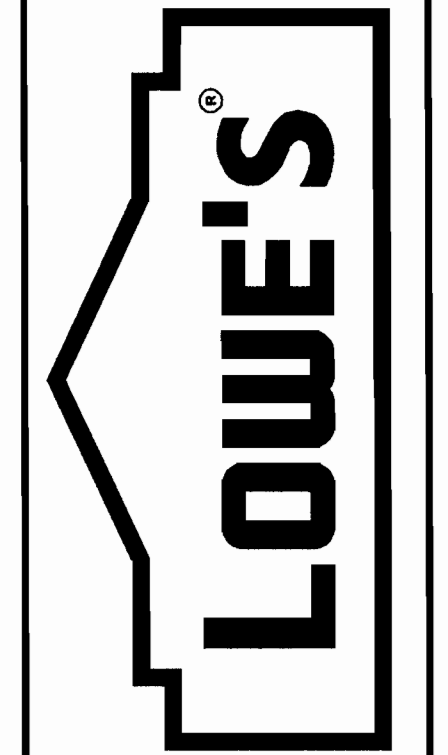
REVISIONS	
PRE-BID SET	POST-BID SET
DATE	DESCRIPTION
02.07.06	PLAN REVIEW
06.08.06	SITE LIGHTING
08.31.06	



PAGE INTERWORKS, P.A.
 ENGINEERS & CONSULTANTS
 320-B TENTH ST., N. WILKESBORO, NC 28659-1646
 PHONE: 336-667-4225 FAX: 336-667-4332

LOWE'S HOME CENTERS, INC.
 HWY. 268 EAST, EAST DOCK N.
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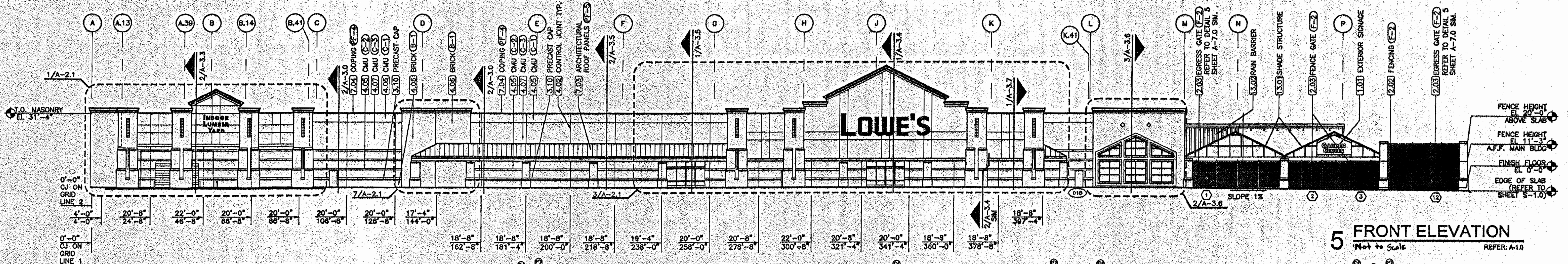
SITE LIGHTING PHOTOMETRIC PLAN
 LOWE'S OF COLUMBIA, MARYLAND
 PROJECT NO: 05345 CHECKED BY: DPK

ORIGINAL ISSUE DATE:
 PERMIT SET ISSUE DATE:
 CONSTRUCTION SET ISSUE DATE:
 DRAWING NUMBER:

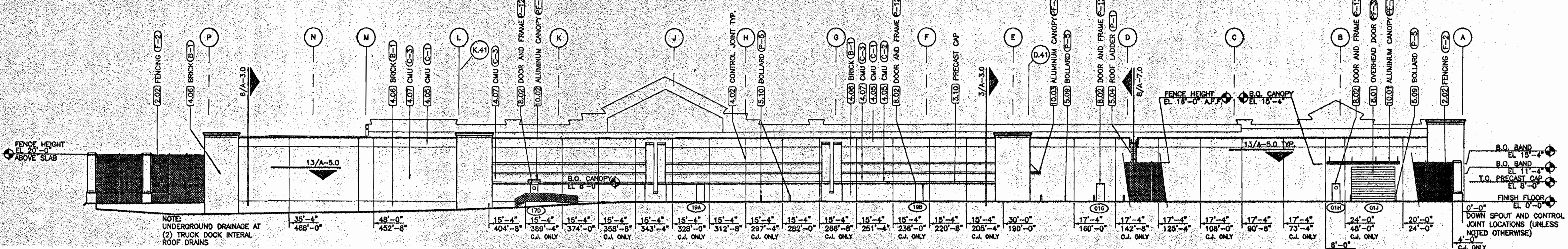
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE 12/18/06
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

PLANNING BOARD APPROVAL STAMP

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE 8-31-06



5 FRONT ELEVATION
 Not to Scale REF: A-10



4 REAR ELEVATION
 NOT TO SCALE REF: A-10

GENERAL NOTES

1. F.O.M.-FACE OF MASONRY
2. F.O.C.-FACE OF CURB
3. A.L.O.- ACTUAL MASONRY OPENING (CLEAR DISTANCE REQUIRED)
4. ALL DIMENSIONS TO FINISHED FACE OF WALL OR MATERIAL OR AS OTHERWISE NOTED.
5. REFER TO WALL TYPE LEGEND FOR WALL CONSTRUCTION.
6. A.F.F.- ABOVE FINISHED FLOOR (SALES FLOOR)
7. REFER TO SHEET A-6.0 FOR DOOR SCHEDULE
8. REFER TO SHEET A-7.0 FOR GATE SCHEDULE
9. REFER TO STRUCTURAL SHEETS FOR CONCRETE SLAB CONTROL JOINT INFORMATION
10. FOR LOCATION OF FIRE EXTINGUISHERS REFER TO FIRE PROTECTION SHEETS.
11. PROVIDE (2) 1/2" PIPE BOLLARDS AT GAS METER, IF REQUIRED, REFER TO SITE, STRUCTURAL, AND PLUMBING PLANS FOR LOCATION.
12. ALL UNOBSTRUCTED PATHS SHALL MEET ALL GUIDELINES FOR ACCESSIBILITY AND USE TO BE PAINTED OSHA YELLOW.
13. BRACE ALL STEEL STUDS ACCORDING TO MANUFACTURER'S LIMITING HEIGHT (L/240).
14. REFER TO SPECS AND FOUNDATION DETAILS FOR FENCES, SPACE POSTS TO AVOID FOOTINGS WHERE POSSIBLE.
15. NO CUP LARGER THAN 2" IS PERMITTED AT CHAIN LINK FENCES, GATES, ETC. MOUNT ALL SLIDING GATES ON OUTSIDE OF ENCLOSURE
17. EXT. CONTROL JOINTS SHOWN ON A-2.0.
18. ALL CMU HAVING EXTERIOR AND INTERIOR EXPOSURES, NOT GROUTED, SHOULD RECEIVE FOAM FILLED INSULATION.
19. AT CUSTOMER LOADING CANOPY AND GARDEN CENTER COVERED AREA, PAINT ALL EXPOSED METAL STEEL AND METAL ROOF DECKING WHITE UNLESS SPECIFIED OTHERWISE.
20. THE FINISH FLOOR HEIGHT, OR WHERE FINISH FLOOR IS REFERRED TO, IS THE TOP OF SLAB INSIDE THE PERIMETER OF THE BUILDING

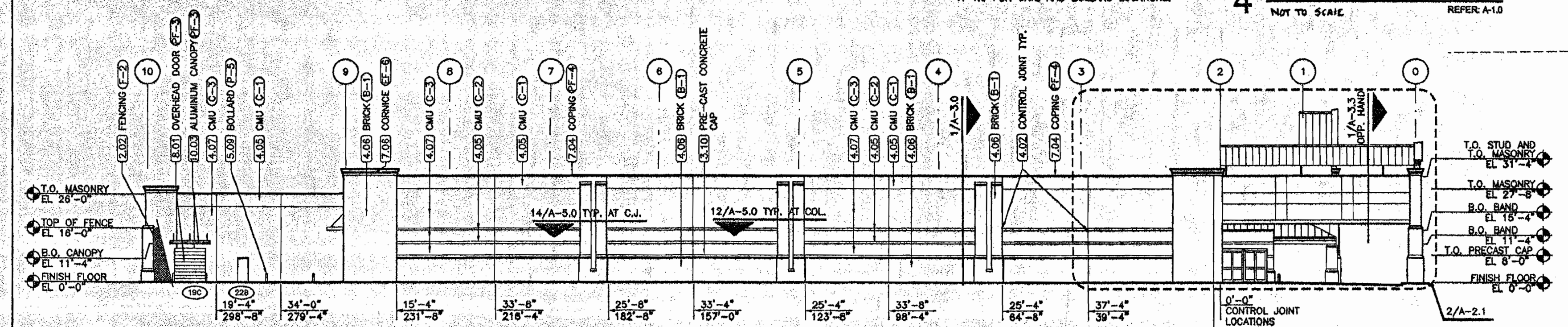
FINISH SCHEDULE

- | | |
|--|---|
| F-1 FACTORY BLACK VINYL COATED FAB. (CHAINLINK FABRIC) | G-1 MEDIUM BEIGE INTERIALLY COLORED SMOOTH FACE CMU |
| F-2 FACTORY BLACK POWDER COATED (SECURITY FABRIC) | G-2 BETCO #3194 INTERIALLY COLORED SMOOTH FACE CMU |
| P-1 LOWE'S LIGHT BEIGE (PAINT) | B-1 GLEN-GERY BRICK W23 |
| P-2 LOWE'S MEDIUM BEIGE (PAINT) | PF-1 SIERRA TAN OR EQUAL (PRE-FINISHED) |
| P-3 LOWE'S DARK BEIGE (PAINT) | PF-2 LOWE'S MEDIUM BEIGE (PRE-FINISHED) |
| P-4 LOWE'S RED (PAINT) | PF-3 MANUFACTURERS STANDARD WHITE |
| P-5 OSHA YELLOW (PAINT) | PF-4 SNOWDRIFT WHITE OR EQUAL (PRE-FINISHED) |
| P-6 MANUFACTURERS STANDARD BRIGHT WHITE (PAINT) | EF-5 LOWE'S BLUE (E.L.F.S.) |
| P-7 INTERIOR LOWE'S LIGHT GRAY (REFER TO SHEET A-2.2) | EF-1 LOWE'S LIGHT BRICK (E.L.F.S.) |
| P-8 INTERIOR LOWE'S MEDIUM BEIGE (E.L.F.S.) | EF-2 LOWE'S MEDIUM BRICK (E.L.F.S.) |
| P-9 INTERIOR LOWE'S BLUE (E.L.F.S.) | EF-3 LOWE'S BLUE (E.L.F.S.) |
| P-10 LOWE'S BLUE (PAINT) | EF-4 LOWE'S LIGHT TAN (E.L.F.S.) |
| P-11 PAINT TO MATCH BETCO #3157 | EF-5 LOWE'S DARK BEIGE (E.L.F.S.) |
| P-12 PAINT TO MATCH BRICK | EF-6 LOWE'S LIGHT TAN (E.L.F.S.) |
| NA NATURAL ANODIZED (ALUM.) | EF-7 LOWE'S WHITE (E.L.F.S.) |
| EF-7 PAINT TO MATCH BRICK | |
- NOTE: REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS. UNLESS SPECIFICALLY CALLED OUT, CONTACT MANUFACTURER FOR LOWE'S NATIONAL ACCOUNT COLOR FORMULAS.
 NOTE: GLEN-GERY BRICK AND BEICO BLOCK LOCAL SUPPLIER IS L AND L SUPPLY, CONTACT: JOHN PLYVAK, PHONE: 410-925-7300, EMAIL: JOHNPLYVAK@LBRICK.COM

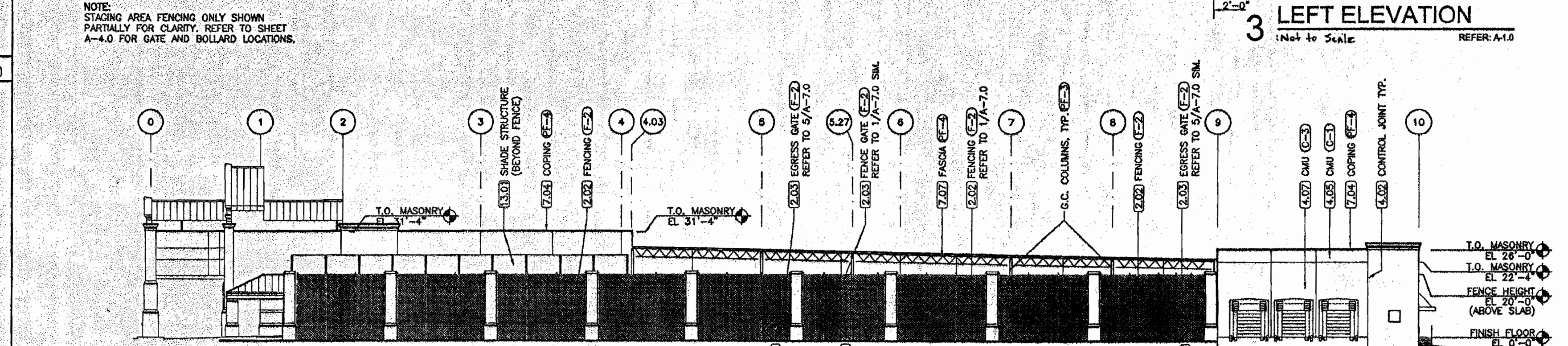
KEYNOTES

- 1.01 SIGNAGE - FURNISHED AND INSTALLED BY OWNER (LOWE'S), REFER TO SHEETS A-3.3 AND A-3.4 FOR BLOCKING LOCATIONS. HORIZONTAL POSITION OF SIGNAGE TO BE CENTERED ON BACKGROUND ELEMENT.
- 2.01 CHAINLINK FENCE WITH BLACK VINYL COATED FABRIC (REFER TO SHEET A-7.0 AND SPECIFICATION SECTION 02822).
- 2.02 ARMOR WEAVE FENCE FABRIC - PAYNE FENCE PRODUCTS (REFER TO SHEET A-7.0 AND SPECIFICATION SECTION 02822).
- 2.03 FENCE GATE (REFER TO SHEET A-7.0, FOR SIZE AND TYPE, AND SPECIFICATION SECTION 02822)
- 2.04 EXTERIOR TRENCH DRAIN (REFER TO DETAIL 11/S-3.0, SHEET P-1 AND P-3 AND SPECIFICATION SECTION 15431).
- 2.05 48" HIGH x 78" LONG GUARDRAIL/FENCE (REFER TO DETAIL 9/S-3.0)
- 2.06 INTERIOR TRENCH DRAIN (REFER TO DETAIL 11/S-3.0 (SIL), SHEET P-1 AND P-3 AND SPECIFICATION SECTION 15431).
- 3.01 CONCRETE RETAINING WALL WITH 6" HIGH CONCRETE CURB (REFER TO SHEETS S/1.0 AND S/3.0).
- 3.02 CONCRETE SIDEWALK.
- 3.03 TACTILE WARNING GROOVES IN CONCRETE (REFER TO SHEET S-3.0).
- 3.04 CONCRETE FILLED ISLAND (REFER TO STRUCTURAL AND CIVIL DRAWINGS).
- 3.06 CONCRETE TRANSFORMER PAD, VERIFY SIZE AND LOCATION PRIOR TO POURING (REFER TO SHEETS A-4.0 AND S-1.0).
- 3.06 CONCRETE GENERATOR PAD VERIFY SIZE AND LOCATION PRIOR TO POURING (REFER TO SHEET A-4.0 AND S-1.0).
- 3.07 CONCRETE SLAB ON GRADE (REFER TO STRUCTURAL DRAWINGS).
- 3.08 JOINT SEALANT OVER 1/2" EXPANSION JOINT FILLER (REFER TO SPECIFICATION SECTION 07920).
- 3.09 CONCRETE CONTROL JOINT (REFER TO SHEET S-3.0).
- 3.10 PRECAST CONCRETE CAP.
- 4.01 BUILDING EXPANSION JOINT.
- 4.02 MASONRY CONTROL JOINT, TYPICAL (REFER TO SHEETS A-6.0 AND S-3.0).
- 4.03 SINGLE SCORED SMOOTH FACE CMU.
- 4.04 SPLIT FACE CMU.
- 4.05 SMOOTH FACE CMU.
- 4.06 CLOSURE BRICK.
- 4.07 SINGLE SCORED SPLIT FACE CMU.
- 5.01 METAL DOWNSPOUTS, PAINTED.
- 5.02 METAL GUTTER, PAINTED.
- 5.03 STEEL TUBE, PAINTED.
- 5.04 ROOF ACCESS LADDER, PAINTED (REFER TO SHEET A-7.0).
- 5.05 FORKLIFT DAMAGE PREVENTION BARS - 16'-0" L. WITH BOTTOM AT 9'-6" A.F.F. (REFER TO SHEET A-2.2).
- 5.06 FORKLIFT DAMAGE PREVENTION BARS - 7'-0" L. WITH BOTTOM AT 9'-4" A.F.F. (REFER TO SHEET A-2.2).
- 5.07 FORKLIFT DAMAGE PREVENTION BARS - 16'-0" L. WITH BOTTOM AT 13'-6" A.F.F. (REFER TO SHEET A-2.2).
- 5.08 PROVIDE 4" PIPE BOLLARDS (REFER TO DETAIL 3/S-3.1) - NUMBER AND LOCATIONS PER ARCHITECTURAL PLANS AND DOOR DETAILS.
- 5.09 PROVIDE 6" PIPE BOLLARDS (REFER TO DETAIL 3/S-3.1) - NUMBER AND LOCATIONS PER ARCHITECTURAL PLANS AND DOOR DETAILS.
- 5.10 PROVIDE 6" PIPE BOLLARDS (REFER TO DETAIL 3/S-3.1) AT GAS METER. NUMBER AND LOCATION PER PLUMBING PLANS.

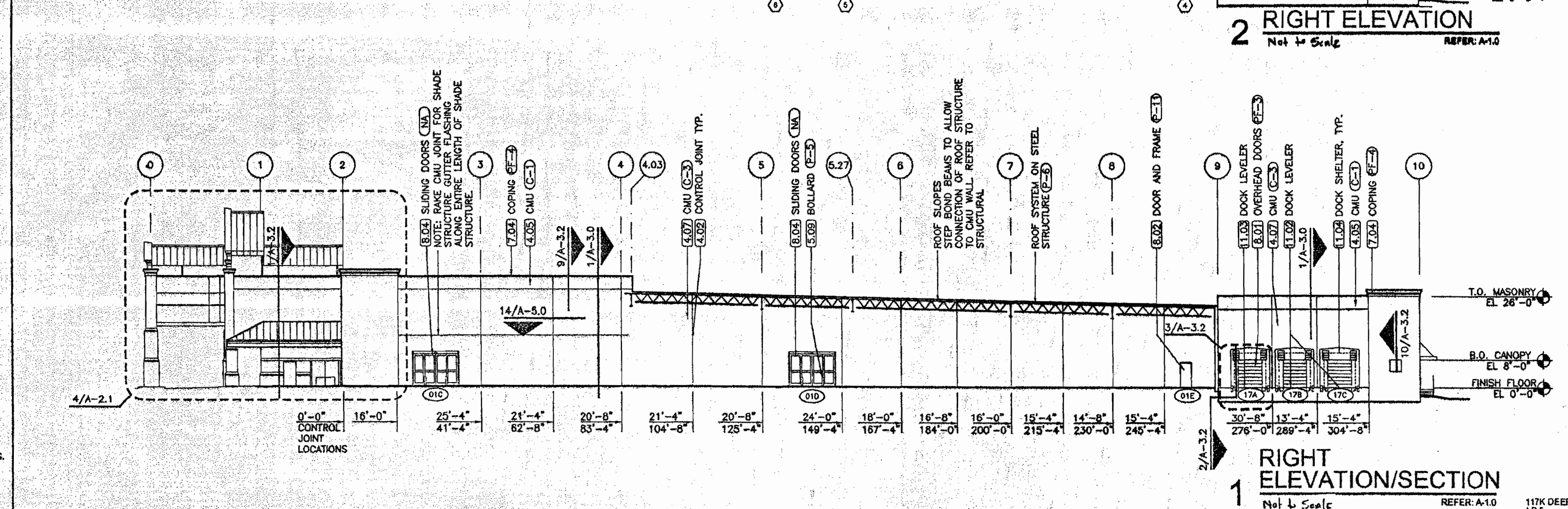
- 5.11 STEEL DOWNSPOUT COVER, PAINTED (REFER TO DETAIL 7/A-3.2)
- 6.01 CART GUARD - P.T. 2x10 STAINED LIGHT GRAY, MOUNTED 5" A.F.F. TO BOTTOM WITH 1/2" DIAMETER x 4" EXPANSION BOLTS (COUNTERSUNK) AT 36" O.C.
- 6.02 TELEPHONE BOARD - 4x8 SHEET PLYWOOD AT 4" A.F.F. WITH INTUMESCENT COATING ON ALL SIDES PRIOR TO INSTALLATION (REFER TO SPECIFICATION SECTION 07812).
- 7.01 ACRYLIC FINISH SYSTEM, BY E.I.F.S. MANUFACTURER, ON SMOOTH FACED CMU WITH FLUSH JOINTS.
- 7.02 EXTERIOR INSULATION AND FINISH SYSTEM (E.I.F.S.).
- 7.03 STANDING SEAM ARCHITECTURAL METAL ROOF PANEL.
- 7.04 PRE-FINISHED METAL COPING.
- 7.05 MEDALLION - E.I.F.S. (REFER TO SHEETS A-2.1, A-3.3, A-3.4 AND A-3.5)
- 7.06 CORNICE - E.I.F.S. WITH PRE-FINISHED METAL COPING (REFER TO SHEETS A-2.1, A-3.3, A-3.4 AND A-3.5)
- 7.07 PRE-FINISHED METAL FASCIA.
- 7.08 STANDING SEAM STRUCTURAL METAL ROOF PANEL.
- 7.09 60" x 72" DUAL GLAZED CURB MOUNTED PLASTIC SKYLIGHT.
- 8.01 OVERHEAD DOOR.
- 8.02 HOLLOW METAL DOOR AND FRAME TYPICAL, PAINTED.
- 8.03 ALUMINUM AND GLASS STOREFRONT SYSTEM.
- 8.04 AUTO-SLIDER DOOR (REFER TO SHEET A-6.0).
- 8.05 IMPACT DOOR (FACTORY FINISH), STEEL TUBE FRAME PAINTED.
- 9.01 UNOBSTRUCTED PATH, AS DIMENSIONED SHALL MEET ALL GUIDELINES FOR ACCESSIBILITY
- 9.02 12" HIGH LETTERS PAINTED WHITE.
- 10.01 ALUMINUM CANOPY - 30'-0"x5'-0" - MOUNT AT 15'-4" A.F.F. (REFER TO SPECIFICATION SECTION 10530).
- 10.02 ALUMINUM CANOPY - 5'-0"x5'-0" - MOUNT AT 8'-0" A.F.F. (REFER TO SPECIFICATION SECTION 10530).
- 10.03 ALUMINUM CANOPY - 12'-0"x5'-0" - MOUNT AT 11'-4" A.F.F. (REFER TO SPECIFICATION SECTION 10530).
- 11.01 TRASH COMPACTOR - FURNISHED AND INSTALLED BY OWNER (LOWE'S).
- 11.02 DOCK LEVELER - EDGE-OF-DOCK MOUNTED (REFER TO SPECIFICATION SECTION 11160).
- 11.03 DOCK LEVELER - PIT-MOUNTED (REFER TO SHEET A-3.2 AND SPECIFICATION SECTION 11160).
- 11.04 DOCK SHELTER (REFER TO SHEET A-3.2 AND SPECIFICATION SECTION 11160)
- 13.01 SHADE STRUCTURE - OPAL POLYCARBONATE PANELS OVER STRUCTURAL TUBING SYSTEM (REFER TO SPECIFICATION SECTION 13122).
- 13.02 RAIN BARRIER - PROVIDED AND INSTALLED BY SHADE STRUCTURE MANUFACTURER, DESIGNED BY SHADE STRUCTURE MANUFACTURER'S ENGINEER TO MEET ALL CODES AND STRUCTURAL REQUIREMENTS. CONSTRUCTED OF MATERIALS MATCHING ADJACENT SHADE STRUCTURE (E.G. POLYCARBONATE, STEEL TUBES, MEMBERS, FLASHING, ETC.) LOCATED AT REAR MOST SHADE STRUCTURE ROOF TRUSS CREATING WEATHER-PROOF BARRIER FROM SHADE STRUCTURE RIDGE LINE OVER TO MAIN BUILDING WALL AND FROM SHADE STRUCTURE ROOF LINE UP TO BOTTOM SIDE OF GARDEN CENTER COVERED AREA BAR JOIST TOP CHORD EXTENSIONS, WITH POLYCARBONATE ON BOTH SIDES OF BARRIER WALL.
- 13.03 RETRACTABLE SHADE FABRIC SYSTEM (REFER TO SPECIFICATIONS SECTION 13015)
- 16.01 EXTERIOR LIGHT FIXTURE WITH PERFORATED METAL COVER, REFER TO ELECTRICAL DRAWINGS.



3 LEFT ELEVATION
 Not to Scale REF: A-10



2 RIGHT ELEVATION
 Not to Scale REF: A-10

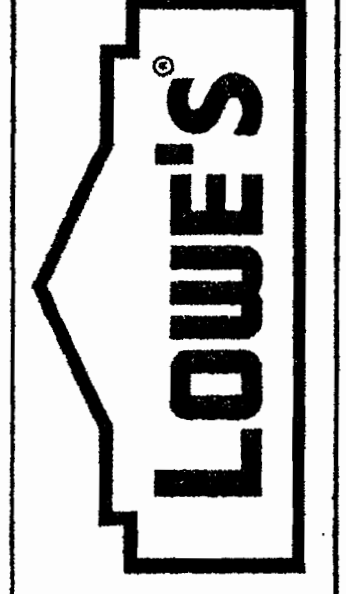


1 RIGHT ELEVATION/SECTION
 Not to Scale REF: A-10

DATE	DESCRIPTION

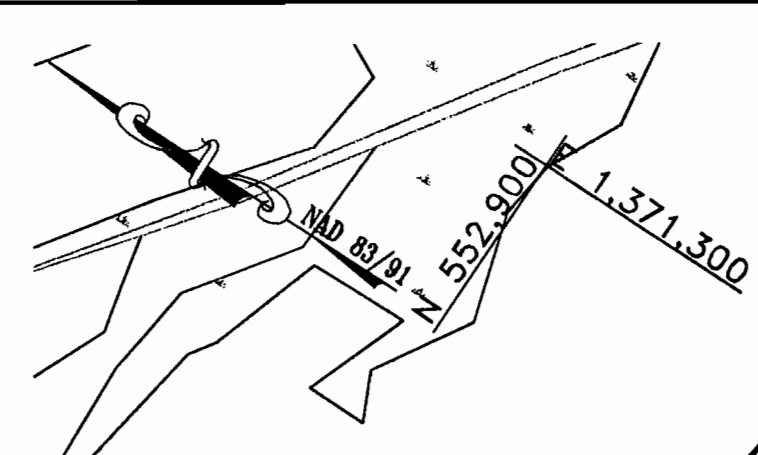
REVISIONS
 DATE DESCRIPTION

TRENT FERRELL
 ARCHITECT
 1313 KALMA ROAD
 KNOXVILLE, TENNESSEE
 37909
 866.608.1313 (P)
 336.668.4000 (V) 336.668.3287 (F)



EXTERIOR ELEVATIONS
 LOWE'S OF
 COLUMBIA, MD
 PROJECT NO.

CRITERIA
 ISSUE DATE: 09/28/05
 PERMIT SET
 ISSUE DATE: 08/28/05
 CONSTRUCTION SET
 ISSUE DATE:
 DRAWING NUMBER
 28 OF 33



PARCEL 'Q'
(OPEN SPACE)
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
ZONED: NT (NEW TOWN)

LOADING SPACE FOR USED
APPLIANCES & PALLET TRAILERS

LOWE'S
SALES AREA
ONE STORY RETAIL SALES
AND WAREHOUSE BUILDING

PARCEL 'P'
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
PART OF
(LIBER 1151 FOLIO 56)
(LIBER 403 FOLIO 35)
AREA: 580,838 S.F. OR 13.3342 AC.
ZONED: NT (NEW TOWN)

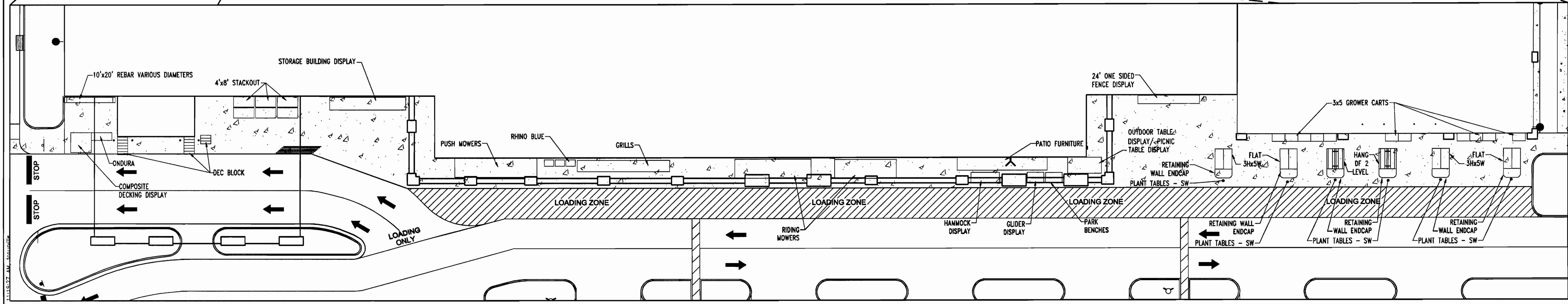
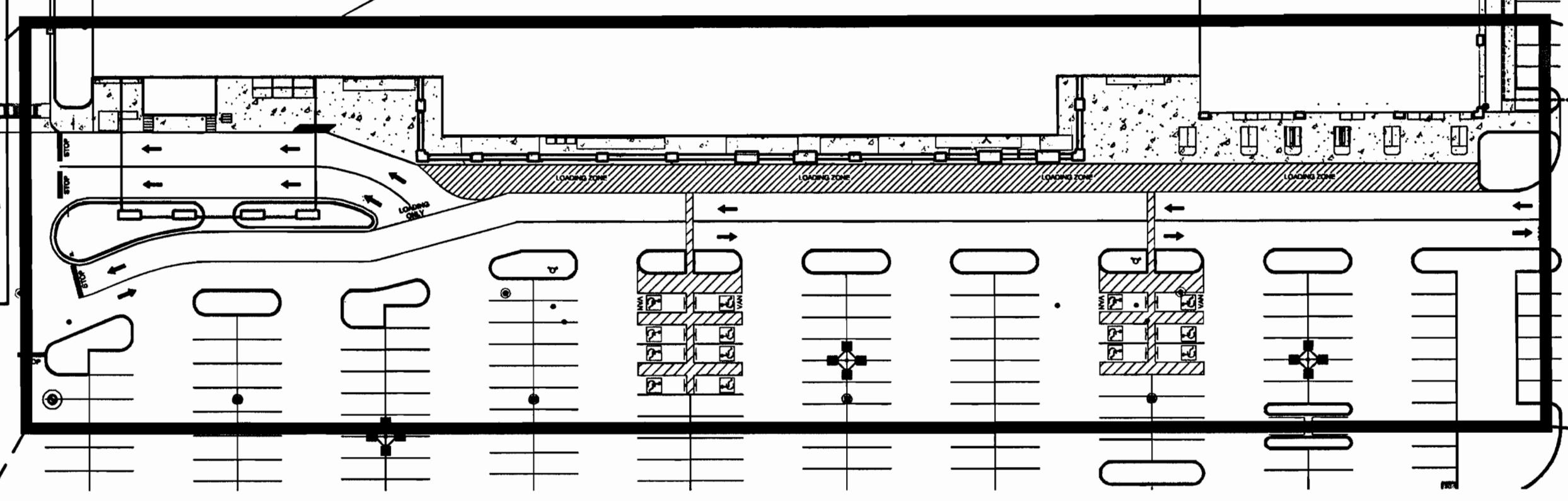
PARCEL 'Q'
(OPEN SPACE)
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
ZONED: NT (NEW TOWN)

PARCEL 'R'
BENSON EAST
HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
FFE = 329.50
ZONED: NT (NEW TOWN)
SDP 06-54

117K DEEP
AREA = 169,328 S.F.
F.F.E. = 329.50
HT. = 31'-4"

SEE INSERT 'A'

NOTE:
THIS PLAN PREPARED TO CHARACTERIZE AND PROVIDE GENERAL DESCRIPTION
OF LOWE'S INTENTION TO DISPLAY OUTDOOR MERCHANDISE AND DEPICT AREAS
FOR SAME AS WELL AS OUTDOOR STORAGE. THIS PLAN IS SUBJECT TO
CHANGE.



PLANNING BOARD APPROVAL STAMP

SEE INSERT 'A'
SCALE: 1"=20'

MISS UTILITY

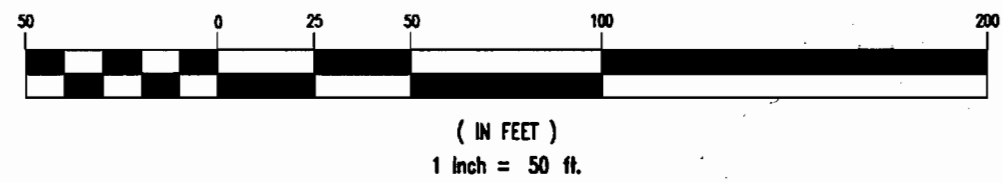


BEFORE YOU DIG, CALL
1-800-392-7777
PROTECT YOURSELF - GIVE TWO
WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY
COMPONENTS FOR CONSTRUCTION SAFETY. ALL
CONSTRUCTION MUST BE DONE IN
COMPLIANCE WITH THE OCCUPATIONAL SAFETY
AND HEALTH ACT OF 1970 AND ALL RULES
AND REGULATIONS THERE TO APPURTENANT.

THE CONTRACTOR TO CALL MISS UTILITY TO
HAVE ALL EXISTING UTILITIES MARKED 48
HOURS PRIOR TO ANY CONSTRUCTION.

GRAPHIC SCALE



REV.	DATE	DESCRIPTION	BY

OWNER/DEVELOPER: HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

PROJECT: BENSON EAST, PARCEL P
GATEWAY OVERLOOK SHOPPING CENTER
LITTLE PATUXENT PARKWAY (MD RTE. 175)
COLUMBIA, HOWARD COUNTY, MARYLAND

AREA: TAX MAP 45 GRID: 1 & 2 ZONED: NEW TOWN
PARCEL 1

TITLE: OUTDOOR DISPLAY/STORAGE
AREA PLAN

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22630 DAVIS DRIVE, SUITE 800 STERLING, VIRGINIA, 20164
CONTACT: DAVID B. BOHLER
(703) 709-9500 FAX: (703) 709-9501

DESIGNED BY: DBM
DRAWN BY: JWK
PROJECT NO.: S043508
DATE: 05/12/2006
SCALE: 1"=50'
DRAWING NO.: 29 OF 33
PROFESSIONAL ENGINEER NO. 21342

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/19/06
12/19/06

APPROVED: FOR PUBLIC WATER AND PUBLIC
SEWERAGE SYSTEMS.
12/19/06

APPROVED
8-31-06

DATE	REVISIONS

Turf Equipment & Supply Co.
 8015 Drury Run Road
 Jessup, Maryland 20794
 410.780.5575



LOWE'S OF COLUMBIA
 HOWARD COUNTY, MARYLAND

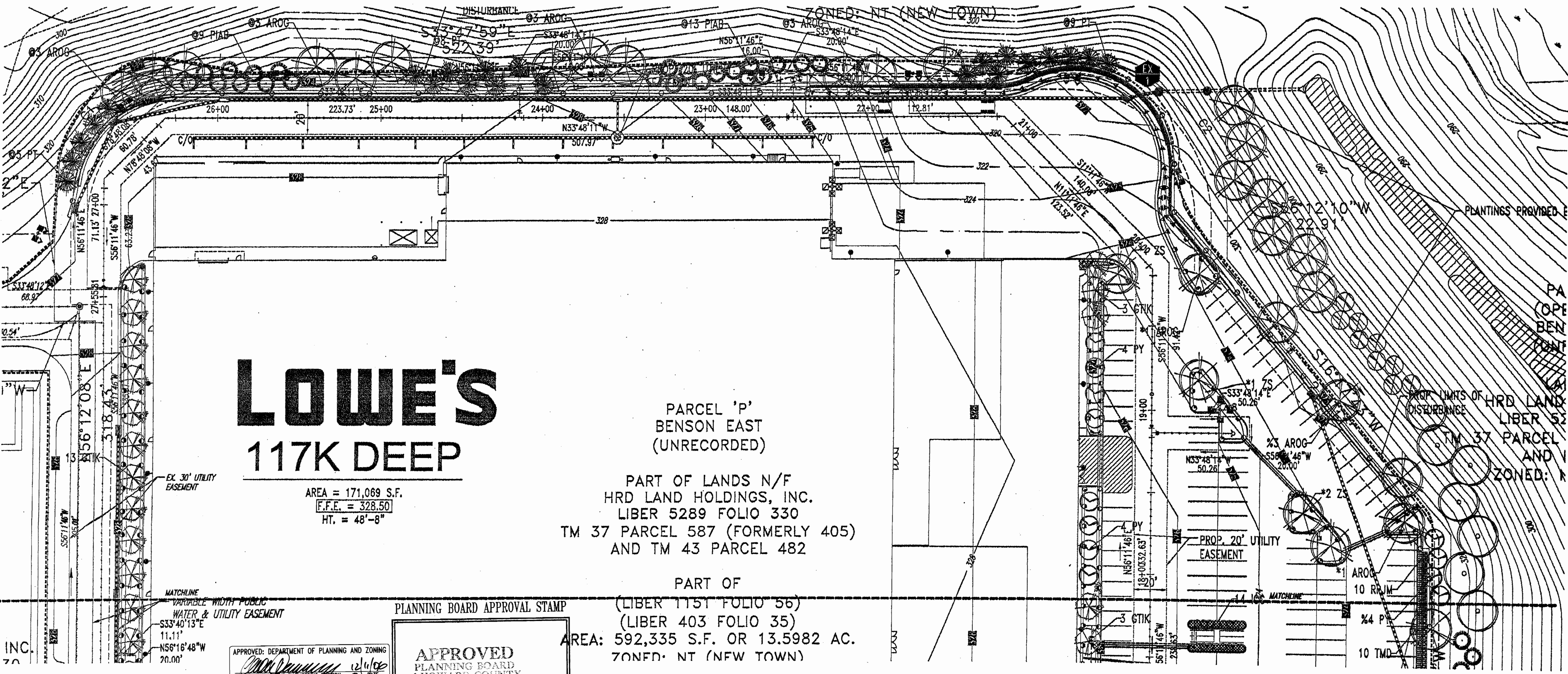
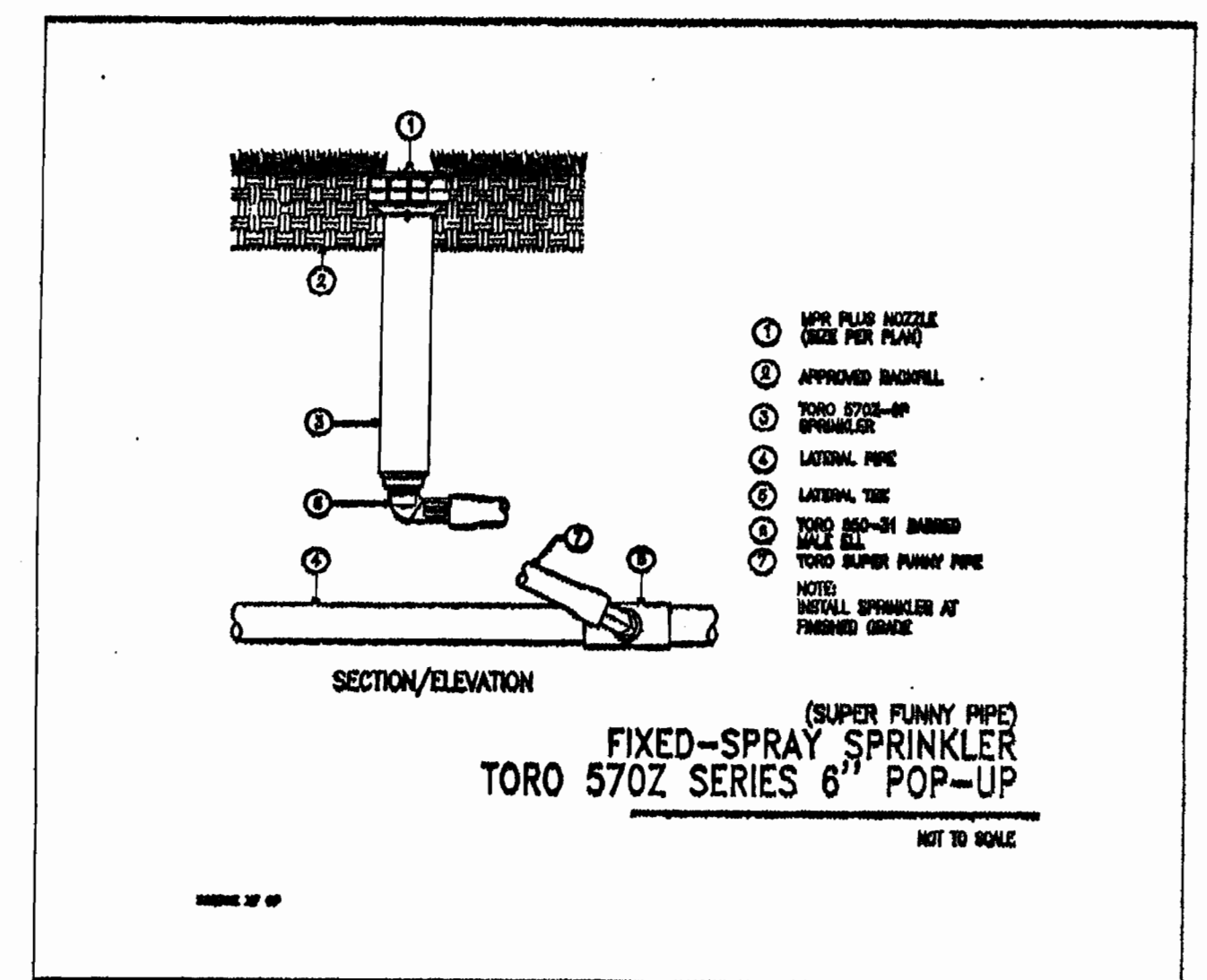
PROPOSED
 IRRIGATION
 DESIGN

SDP 06-10
 30

LEGEND

SYMBOL	PART NO.	DESCRIPTION
△	CO-M36	TORO CUSTOM COMMAND SERIES CONTROLLER, 36 STATION
□	RPS1000	IRRITROL WIRELESS RAIN/FREEZE SENSOR
○	P220-27-08	TORO P-220 SERIES P.R. VALVE, 1.5" FOR FLOWS OF 30-40 GPM
○	P220-27-04	TORO P-220 SERIES P.R. VALVE, 1" FOR FLOWS OF 0-30 GPM
○	DZK-EZF-1-M	TORO DRIP ZONE VALVE KIT, M.P., FOR FLOWS OF 0-20 GPM
○	DZK-EZF-1-L	TORO DRIP ZONE VALVE KIT, L.F., FOR FLOWS OF 0.25-8 GPM
○	TLCV6-18XX	NETAFIM TECHLINE CV DRIPPERLINE, 0.8 GPH, 18" DS
○	S8000K	TORO SUPER 800 SERIES SPRINKLER
○	MINS-4P	TORO MINI 8 SERIES SPRINKLER
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 15' MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 12' MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 10' MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 8' MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH SPECIALTY MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 17" TYAN NOZZLES
○	T-113-IRR-1	NIBCO 1" DRAIN VALVE - MINIMUM OF THREE (3) TO BE FIELD LOCATED AT THREE DIFFERENT LOW POINTS ALONG THE MAINLINE AND INSTALLED IN A 10" ROUND, PROPERLY SUMPED, VALVE BOX
○	SDR 21	BOILER DRAIN FOR WINTERIZATION
○	SDR 21	PVC Class 200 MAIN LINE, 2.5" UNLESS NOTED
○	SDR 21	PVC Class 200 LATERAL LINE 2" FOR FLOWS OF 35-40 GPM
○	SDR 21	PVC Class 200 LATERAL LINE 1.5" FOR FLOWS OF 15-35 GPM
○	SDR 21	PVC Class 200 LATERAL LINE 1" FOR FLOWS OF 0-15 GPM
○	SDR 21	SLEEVE - TWO TIMES THE SIZE OF THE PIPE
○	SDR 21	POINT OF CONNECTION - BY OTHERS WITH BACKFLOW PREVENTER - PER LOCAL CODE BY OTHERS

- IRRIGATION NOTES:**
1. Irrigation system designed for 40 GPM at 80 PSI downstream of the P.O.C. and approved backflow preventer. Contractor shall verify these parameters and notify owner's representative if they cannot be met.
 2. A booster pump shall be installed where the above conditions can not be met at the owner's expense.
 3. Irrigation system design drawing is diagrammatic in nature. Field adjustments may be necessary to accommodate for landscaping changes, planting beds or other obstructions.
 4. System to be installed per manufacturer's specifications.
 5. All mainline to be SDR 21 Class 200 PVC pipe sized as noted.
 6. Mainline and valves are shown in landscape areas for clarity only. Mainline and valves should be installed in planting bed or turf areas when possible.
 7. One air/relief valve and one automatic flush valve per 15 gpm of flow shall be installed for each drip zone in a manner recommended by Netafim.
 8. Control wires shall be no. 14 AWG or larger copper wire UL-approved for direct burial in ground. Common wire shall be no. 14 AWG or larger copper wire UL-approved for direct burial and white in color. Spare wires shall be blue in color. Two spare wires shall be run to the end of each mainline spur. All other control wires shall have a color other than white or blue.
 9. All field wires above grade or within structure to be installed in conduit per local code.
 10. All underground splices and connection of wiring to remote control valves to utilize JM water proof splice kits in appropriate size valve box.
 11. Depth of irrigation piping: 18" on mainline; 12" on laterals.
 12. Underground utilities to be verified before any installation begins.
 13. Controller to be grounded per manufacturer's specifications.
 14. Power to controller shall be provided by others.
 15. 570Z spray heads shall be as follows: 6P in lawn areas; 12P in ornamental plant beds. Super 800 sprinklers shall be high pop in ornamental plant beds and when installed on a steep sloped area. Sprinklers shall utilize shrub bodies and risers where plant material exceeds a height of 12".
 16. All sprinkler heads shall utilize funny pipe. Funny pipe shall not be longer than 4' under any head with only one head per funny pipe run.
 17. In order to maintain the integrity of the irrigation system, sprinklers, valves, and controllers, must be as specified. Alternate products will be considered at the discretion of the owner. Alternate product submittals must include a complete new system design by and Irrigation Association Certified Irrigation Designer (Commercial Option), installation details, product performance data, hydraulic data, and a list of product references.



PRELIMINARY IRRIGATION DESIGN
 NOT FOR CONSTRUCTION PURPOSES

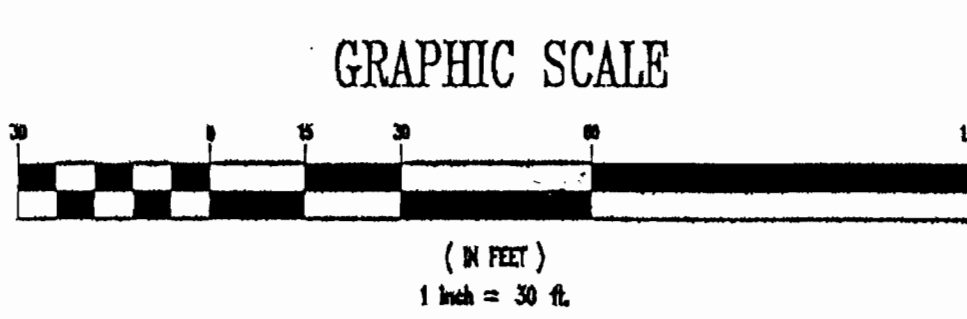
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 12/19/06

APPROVED: COUNTY HEALTH OFFICER
 DATE: 12/20/06

PLANNING BOARD APPROVAL STAMP

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 8-31-06

PART OF
 (LIBER 1151 FOLIO 56)
 (LIBER 403 FOLIO 35)
 AREA: 592,335 S.F. OR 13.5982 AC.
 ZONED: NT (NEW TOWN)

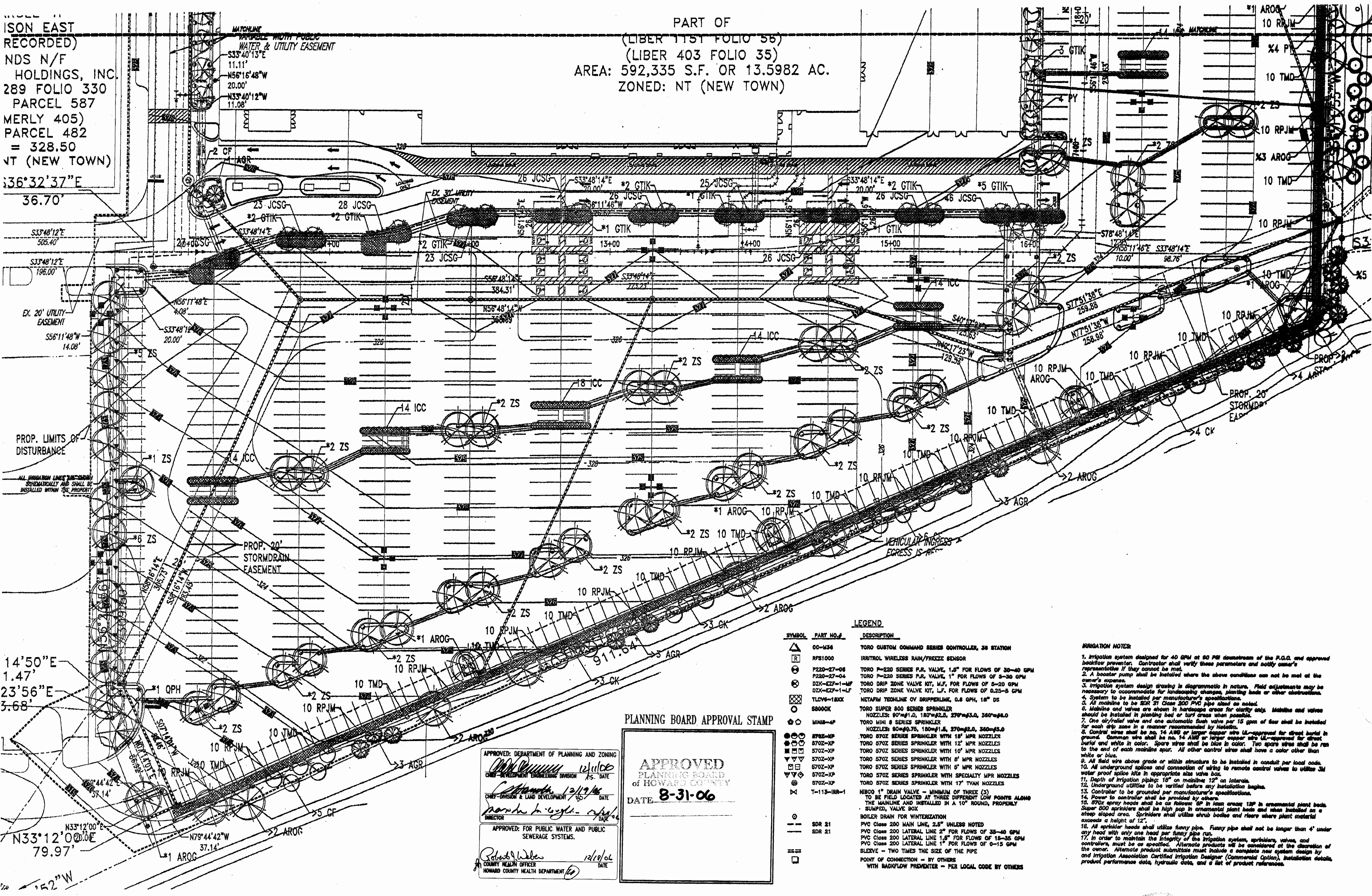


Designed for:
BOHLER ENGINEERING, P.C.

PROFESSIONAL ENGINEERING SERVICES
 22830 Davis Drive, Green Bay, Wisconsin, 54904
 CONTACT: DAVID H. NARANJO
 (920) 750-0000 Fax: (920) 750-0001 E: dnaranjo@bohlereng.com

SECTION EAST
 RECORDED
 NDS N/F
 HOLDINGS, INC.
 289 FOLIO 330
 PARCEL 587
 MERLY 405)
 PARCEL 482
 = 328.50
 NT (NEW TOWN)
 36°32'37"E
 36.70'

PART OF
 (LIBER 1151 FOLIO 55)
 (LIBER 403 FOLIO 35)
 AREA: 592,335 S.F. OR 13.5982 AC.
 ZONED: NT (NEW TOWN)



PROP. LIMITS OF
 DISTURBANCE

14°50'E
 1.47'
 23°56'E
 3.68'

N33°12'00"E
 79.97'

PLANNING BOARD APPROVAL STAMP

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 12/10/06

APPROVED: PLANNING BOARD OF HOWARD COUNTY
 DATE: 8-31-06

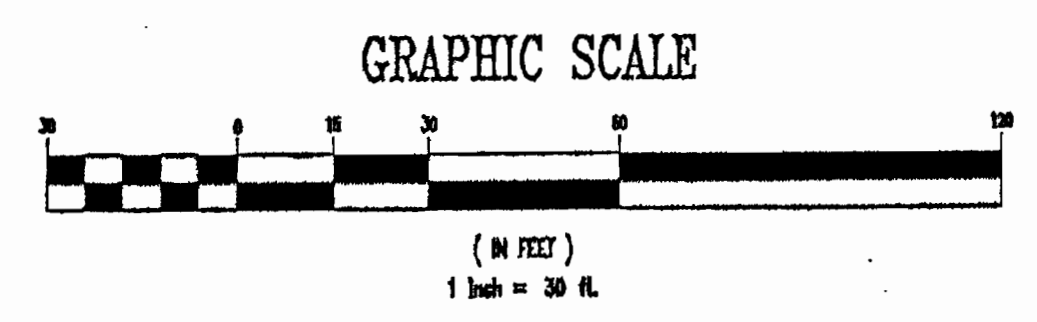
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 DATE: 12/10/06

LEGEND

SYMBOL	PART NO./#	DESCRIPTION
△	CC-156	TORO CUSTOM COMMAND SERIES CONTROLLER, 36 STATION
□	RFS1000	IRRITROL WIRELESS RAIN/FREEZE SENSOR
○	P220-27-08	TORO P-220 SERIES P.R. VALVE, 1.5" FOR FLOWS OF 30-40 GPM
○	P220-27-04	TORO P-220 SERIES P.R. VALVE, 1" FOR FLOWS OF 5-30 GPM
○	DZX-EZF-1-MF	TORO DRIP ZONE VALVE KIT, M.F., FOR FLOWS OF 5-20 GPM
○	DZX-EZF-1-LF	TORO DRIP ZONE VALVE KIT, L.F., FOR FLOWS OF 0.25-5 GPM
○	TLCV6-180X	NETAFIM TECHLINE OF DRIPPERLINE, 0.6 GPH, 18" DS
○	S800CK	TORO SUPER 800 SERIES SPRINKLER
○	MINUS-4P	TORO MINI 8 SERIES SPRINKLER
○	870Z-MP	TORO 870Z SERIES SPRINKLER WITH 18" MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 12" MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 10" MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 8" MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 6" MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 4" MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 3" MPR NOZZLES
○	870Z-XP	TORO 870Z SERIES SPRINKLER WITH 2" MPR NOZZLES
○	T-115-IRR-1	NIBCO 1" DRAIN VALVE - MINIMUM OF THREE (3) TO BE FIELD LOCATED AT THREE DIFFERENT LOW POINTS ALONG THE MAINLINE AND INSTALLED IN A 10" ROUND, PROPERLY SUMPED, VALVE BOX
○	SDR 21	BOILER DRAIN FOR WINTERIZATION
○	SDR 21	PVC Class 200 MAIN LINE, 2.5" UNLESS NOTED
○	SDR 21	PVC Class 200 LATERAL LINE 2" FOR FLOWS OF 35-40 GPM
○	SDR 21	PVC Class 200 LATERAL LINE 1.5" FOR FLOWS OF 15-35 GPM
○	SDR 21	PVC Class 200 LATERAL LINE 1" FOR FLOWS OF 0-15 GPM
○	SDR 21	SLEEVE - TWO TIMES THE SIZE OF THE PIPE
○	SDR 21	POINT OF CONNECTION - BY OTHERS WITH BACKFLOW PREVENTER - PER LOCAL CODE BY OTHERS

IRRIGATION NOTES:

1. Irrigation system designed for 40 GPM at 90 PSI downstream of the P.O.D. and approved backflow preventer. Contractor shall verify these parameters and notify owner's representative if they cannot be met.
2. A booster pump shall be installed where the above conditions can not be met at the owner's expense.
3. Irrigation system design drawing is diagrammatic in nature. Field adjustments may be necessary to accommodate for landscaping changes, planting beds or other obstructions.
4. System to be installed per manufacturer's specifications.
5. All mains to be SDR 21 Class 200 PVC pipe unless noted.
6. Mains and valves are shown in landscape areas for clarity only. Mains and valves should be installed in planting bed or turf areas when possible.
7. One air/relief valve and one automatic flush valve per 15 gpm of flow shall be installed for each drip zone in a manner recommended by Netfem.
8. Control wires shall be no. 14 AWG or larger copper wire UL-approved for direct burial in ground. Common wire shall be no. 14 AWG or larger copper wire UL-approved for direct burial and white in color. Spare wires shall be blue in color. Two spare wires shall be run to the end of each mainline spur. All other control wires shall have a color other than white or blue.
9. All field wire above grade or within structures to be installed in conduit per local code.
10. All underground splices and connection of wiring to remote control valves to utilize 3/4" water proof splice kits in appropriate size valve box.
11. Depth of irrigation piping: 18" on mainsline 12" on laterals.
12. Underground utilities to be verified before any installation begins.
13. Controller to be grounded per manufacturer's specifications.
14. Power to controller shall be provided by others.
15. Flow to controller shall be from ground or from ground 12" in ornamental plant beds. Super 800 sprinklers shall be high pop in ornamental plant beds and when installed on a steep sloped area. Sprinklers shall utilize shrub bodies and recess where plant material exceeds a height of 12".
16. All sprinkler heads shall utilize funny pipe. Funny pipe shall not be longer than 4' under any head with only one head per funny pipe run.
17. In order to maintain the integrity of the irrigation system, sprinklers, valves, and controllers must be as specified. Alternate products will be considered at the discretion of the owner. Alternate product submissions must include a complete new system design by the owner. Alternate product submissions must include a complete new system design by the owner. Alternate product submissions must include a complete new system design by the owner. Alternate product submissions must include a complete new system design by the owner.



PRELIMINARY IRRIGATION DESIGN
 NOT FOR CONSTRUCTION PURPOSES

DATE	REVISIONS

Turf Equipment & Supply Co.
 8015 Chantry Run Road
 Jessup, Maryland 20794
 410.799.8575



LOWE'S OF COLUMBIA
 HOWARD COUNTY, MARYLAND

PROPOSED IRRIGATION DESIGN

Designed for:

BOHLER ENGINEERING, P.C.

PROFESSIONAL ENGINEERING REGISTERED
 28830 Davis Drive, Suite 200, Beltsville, Maryland, 20814
 CONTACT: DAVID H. NILSEN
 (301) 768-0626 FAX: (301) 768-0624 E: dnilsen@bohlereng.com

GENERAL NOTES - SEGMENTAL RETAINING WALL

- THESE CONSTRUCTION DRAWINGS PROVIDE FOR THE USE OF FIVE DIFFERENT SEGMENTAL RETAINING WALL (SRW) UNITS AND FOUR DIFFERENT TYPES OF GEOGRID REINFORCEMENT. THE SRW UNITS AND GEOGRIDS SHALL BE PAIRED AS SPECIFIED HEREIN.
- AN INSPECTION ENGINEER SHALL BE DESIGNATED TO INSPECT WALL CONSTRUCTION IN ACCORDANCE WITH THESE REQUIREMENTS.
- THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF THE WALL AGAINST THE ADVERSE EFFECTS OF SURFACE WATER.

DEVIATIONS FROM SITE PLANS

THESE DESIGNS ARE BASED UPON SITE PLANS PERFORMED BY BOHLER ENGINEERING, INC. CHANGES OR DEVIATIONS FROM THESE SITE PLANS AFTER 11-19-05 INCLUDING GRADING, DRAINAGE, UTILITIES, OR SURCHARGE LOADS MAY AFFECT WALL DESIGN REQUIREMENTS. WALL ENGINEER SHALL BE NOTIFIED OF ANY CHANGES TO OR DEVIATIONS FROM THE SITE PLAN SO AN ASSESSMENT OF WALL DESIGN REQUIREMENTS CAN BE MADE.

SRW UNIT QUANTITY ESTIMATES

THE ESTIMATED SRW AND CAP UNIT FACE AREAS ARE:

WALL	SRW UNIT AREA	CAP AREA
A	1,093 SQ FT	73 SQ FT

CONSTRUCTION AND INSPECTION REQUIREMENTS

1.0 GENERAL

1.1 CONSTRUCTION AND INSPECTION OF THE SRW SHALL BE PERFORMED IN ACCORDANCE WITH THESE CONSTRUCTION AND INSPECTION REQUIREMENTS.

2.0 CONTRACTOR QUALIFICATIONS

2.1 THE WALL CONTRACTOR SHALL DEMONSTRATE SUCCESSFUL CONSTRUCTION OF AT LEAST 150,000 SQUARE FEET OF A SPECIFIED RETAINING WALL SYSTEM AND AT LEAST FIVE WALLS WHICH ARE 10 FEET IN HEIGHT OR GREATER.

2.2 SUCCESSFUL SRW CONSTRUCTION SHALL BE DEMONSTRATED BY DOCUMENTATION OF REFERENCED PROJECTS, WHICH INCLUDES PROJECT NAME, LOCATION DATES OF CONSTRUCTION, TYPE OF SRW SYSTEM, TOTAL FACE AREA, MAXIMUM WALL HEIGHT, AND NAME AND PHONE NUMBER OF OWNER AND GENERAL CONTRACTOR.

2.3 DOCUMENTED REFERENCES SHALL BE PROVIDED TO THE OWNER AND TO THE WALL DESIGN ENGINEER BEFORE WALL CONSTRUCTION BEGINS.

3.0 MATERIALS

3.1 REINFORCED FILL SOIL

3.1.1 SOIL INSTALLED WITHIN THE REINFORCED SOIL ZONE SHALL SATISFY THE FOLLOWING CRITERIA:

SIEVE SIZE	% PASSING
2 INCH	100
NO. 4	20-100
NO. 40	0-80
NO. 200	0-35

MINIMUM $\psi = 30'$
PI < 20

3.1.2 THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPLY OF SOIL SAMPLES AND THE PERFORMANCE OF LABORATORY TESTS AS REQUIRED BY THE INSPECTION ENGINEER TO CONFIRM THAT SOIL INSTALLED IN THE REINFORCED ZONE SATISFIES THE REQUIREMENTS OF SECTION 3.1.1.

3.1.3 THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTATION OF APPROVAL BY THE INSPECTION ENGINEER OF SOIL WHICH IS INSTALLED IN THE REINFORCED ZONE.

3.1.4 SOIL INSTALLED IN THE REINFORCED ZONE SHALL BE FREE OF MUCK, ROOTS, FROZEN MATERIAL, AND CONSTRUCTION DEBRIS.

3.2. RETAINED SOIL ZONE - SOIL IN THE RETAINED ZONE OF WALL SHALL EXHIBIT $\psi = 30'$. THE RETAINED ZONE EXTENDS 30 FEET BEHIND THE WALL FACE.

3.3 INSITU SOIL

3.3.1 IN SITU SOIL IN THE FOUNDATION ZONE OF WALL IS ASSUMED TO EXHIBIT $\psi = 32'$.

3.2.3 THE INSPECTION ENGINEER SHALL VERIFY THAT THE SHEAR STRENGTH ASSUMED FOR INSITU SOIL IS ADEQUATELY CONSERVATIVE. IF IT IS NOT, STOP WORK AND NOTIFY WALL DESIGN ENGINEER.

3.3 SRW SYSTEM AND GEOGRID REINFORCEMENT - THE RETAINING WALL SHALL BE CONSTRUCTED USING ONE OF THE FOLLOWING SRW SYSTEMS AND GEOGRID COMBINATIONS:

ANCHOR DIAMOND PRO SRW UNITS WITH MIRAFI 3XT, HUESKER FORTRAC 35, OR STRATASYSTEMS STRATAGRID 200 GEOGRID
KEYSTONE COMPAC SRW UNITS WITH MIRAFI 3XT, HUESKER FORTRAC 35, OR STRATASYSTEMS STRATAGRID 200 GEOGRID
ROCKWOOD 6" CLASSIC SRW UNITS WITH MIRAFI 3XT, HUESKER FORTRAC 35, OR STRATASYSTEMS STRATAGRID 200 GEOGRID
VERSA-LOK SQUARE FOOT SRW UNITS WITH MIRAFI 3XT, HUESKER FORTRAC 35, OR STRATASYSTEMS STRATAGRID 200 GEOGRID
TENSAR MESA STANDARD SRW UNITS WITH TENSAR STYLE MESA 2 GEOGRID

3.4 GEOTEXTILE FILTER

3.4.1 TYPE A GEOTEXTILE - TYPE A GEOTEXTILE FILTER SHALL COMPRISE NEEDLEPUNCHED NONWOVEN POLYPROPYLENE MATERIAL AND EXHIBIT THE FOLLOWING:

PROPERTY	STANDARD	VALUE
SURVIVABILITY	AASHTO M288-00	CLASS 2
PERMITTIVITY	ASTM D 4491	0.1/SEC MIN AVG ROLL VALUE
AOS	ASTM D 4751	0.22mm MAX AVG ROLL VALUE

PRE-APPROVED MATERIALS INCLUDE PROPEX 4553, MIRAFI 160N AND SYNTHETIC INDUSTRIES GEOTEX 801.

3.4.2 TYPE B GEOTEXTILE - TYPE B GEOTEXTILE FILTER SHALL COMPRISE NEEDLEPUNCHED NONWOVEN POLYPROPYLENE MATERIAL AND EXHIBIT THE FOLLOWING:

PROPERTY	STANDARD	VALUE
SURVIVABILITY	AASHTO M288-00	CLASS 1
PERMITTIVITY	ASTM D 4491	0.1/SEC MIN AVG ROLL VALUE
AOS	ASTM D 4751	0.2mm MAX AVG ROLL VALUE

PRE-APPROVED MATERIALS INCLUDE PROPEX 4553, MIRAFI 160N AND SYNTHETIC INDUSTRIES GEOTEX 801.

3.5 DRAINAGE COMPOSITE - THE DRAINAGE COMPOSITE SHALL COMPRISE A GEOTEXTILE LAMINATED TO BOTH SIDES OF A GEONET CORE. THE DRAINAGE COMPOSITE SHALL EXHIBIT THE FOLLOWING:

PROPERTY	STANDARD	VALUE (MIN AVG ROLL VALUE)
TRANSMISSIVITY	ASTM D 4716-00	0.48 GAL/MBUFT UNDER GRADIENT OF 0.1 AND NORMAL PRESSURE OF 10,000 PSF
PLY ADHESION	GRI GC-7	1.0 LB/N
WIDTH		2 FT TO 6 FT

3.5.1 DRAINAGE COMPOSITE FILTER - THE DRAINAGE COMPOSITE FILTER SHALL COMPRISE TYPE A GEOTEXTILE.

3.5.2 DRAINAGE COMPOSITE CORE - THE DRAINAGE COMPOSITE GEONET CORE SHALL EXHIBIT THE FOLLOWING:

PROPERTY	STANDARD	VALUE (MIN AVG ROLL VALUE)
THICKNESS	ASTM D 5199	200 MIL
TENSILE STRENGTH	ASTM D 5035	45 LB/IN (MACHINE DIRECTION)

3.6 TURF REINFORCEMENT MAT (TRM) - THE TRM SHALL COMPRISE SYNTHETIC INDUSTRIES LANDLOK TRM 450 OR NORTH AMERICAN GREEN C350.

3.7 DRAINAGE AGGREGATE - DRAINAGE AGGREGATE SHALL SATISFY ASTM C33 CRITERIA FOR NO. 57 STONE.

3.8 LEVELING PAD - THE LEVELING PAD SHALL BE CONSTRUCTED USING EITHER GRAVEL OR UNREINFORCED CONCRETE.

3.8.1 IF GRAVEL IS USED TO CONSTRUCT THE LEVELING PAD, IT SHALL SATISFY ASTM C33 CRITERIA FOR GW OR GP.

3.8.2 IF UNREINFORCED CONCRETE IS USED TO CONSTRUCT THE LEVELING PAD, IT SHALL EXHIBIT A 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI.

3.9 DRAIN PIPE - DRAIN PIPE SHALL COMPRISE 4-INCH-DIAMETER SLOTTED PVC OR HDPE PIPE.

4.0 EXCAVATION AND FOUNDATION PREPARATION

4.1 THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. EXCAVATIONS SHALL CONFORM TO OSHA REQUIREMENTS AND SHALL BE PERFORMED UNDER THE SUPERVISION OF THE INSPECTION ENGINEER.

4.2 EXCAVATIONS AT THE BACK OF THE REINFORCED ZONE SHALL BE BENCH-CUT AS DIRECTED BY THE INSPECTION ENGINEER.

4.3 THE COST OF OVER-EXCAVATION SHALL NOT BE COMPENSATED AND REPLACEMENT WITH MATERIAL MEETING THE REQUIREMENTS OF THE REINFORCED FILL SHALL BE REQUIRED AT THE CONTRACTOR'S EXPENSE. DISTURBANCE OF SOIL OUTSIDE THE LINES OF EXCAVATION SHALL BE AVOIDED.

4.4 BEFORE WALL CONSTRUCTION BEGINS, THE CONTRACTOR SHALL CLEAR AND GRUB THE REINFORCED SOIL ZONE AND REMOVE TOP SOIL, BRUSH, FROZEN SOIL, AND ORGANIC MATERIAL. THE CONTRACTOR SHALL ALSO REMOVE ALL FOUNDATION SOIL DESIGNATED BY THE INSPECTION ENGINEER AS UNSUITABLE AND REPLACE IT WITH SOIL DESIGNATED BY THE INSPECTION ENGINEER AS SUITABLE AND COMPACT IT TO PROJECT SPECIFICATIONS.

4.5 FOUNDATION AND RETAINED SOIL SHALL BE INSPECTED BY THE INSPECTION ENGINEER TO INSURE THAT THE ACTUAL SOIL STRENGTH MEETS OR EXCEEDS THAT ASSUMED BY THE WALL DESIGN ENGINEER.

5.0 LEVELING PAD PREPARATION

5.1 THE LEVELING PAD MAY BE CONSTRUCTED WITH UNREINFORCED CONCRETE OR GRAVEL THAT MEETS THE CRITERIA IN PARAGRAPH 3.8.

5.2 THE LEVELING PAD SHALL BE AT LEAST 24 INCHES WIDE AND 6 INCHES THICK.

5.3 THE LEVELING PAD SHALL BE CONSTRUCTED SO AS TO PROVIDE A LEVEL, HARD SURFACE UPON WHICH TO PLACE THE FIRST COURSE OF SRW UNITS.

5.4 IF GRAVEL IS USED TO CONSTRUCT THE LEVELING PAD, IT SHALL BE COMPACTED WITH A MINIMUM OF THREE PASSES OF A VIBRATORY SLED AND TO THE SATISFACTION OF THE INSPECTION ENGINEER.

5.5 THE LEVELING PAD SHALL BE PREPARED TO INSURE COMPLETE CONTACT BETWEEN THE PAD AND THE FIRST COURSE OF SRW UNITS.

6.0 WALL ERECTION

6.1 THE WALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SRW MANUFACTURER'S RECOMMENDATIONS AND THESE REQUIREMENTS. WHERE CONFLICTS EXIST, THESE REQUIREMENTS SHALL PREVAIL.

6.2 INSTALL THE SLOTTED DRAIN PIPE, DRAINAGE BLANKET, AND CHIMNEY DRAIN AS SHOWN ON THE CONSTRUCTION DETAILS. CONNECT TO OUTLET PIPES SPACED AT INTERVALS OF 25 FEET. CUT SRW UNITS AS SHOWN FOR OUTLET PIPE PENETRATION. CHIMNEY DRAIN STRIPS SHALL BE REGULARLY SPACED TO PROVIDE 35 PERCENT COVERAGE.

6.3 INSTALL GEOSYNTHETIC REINFORCEMENT AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE WALL PLAN.

6.4 INSTALL DRAINAGE AGGREGATE, CORE FILL, AND REINFORCED SOIL EVERY COURSE OF SRW UNITS. NO MORE THAN ONE COURSE OF SRW UNITS MAY BE STACKED BEFORE DRAINAGE AGGREGATE, CORE FILL, AND REINFORCED SOIL IS INSTALLED.

6.5 COMPACT SOIL IN REINFORCED ZONE IN ACCORDANCE WITH THE REQUIREMENTS OF PARAGRAPH 7.

6.6 REINFORCEMENT PANELS SHALL BE CONTINUOUS. SEAMS OR CONNECTIONS ARE NOT PERMITTED. ADJACENT PANELS SHALL BE ABUTTED. 100 PERCENT REINFORCEMENT COVERAGE IS REQUIRED.

6.7 PANELS OF GEOSYNTHETIC REINFORCEMENT SHALL BE TENSIONED SUCH THAT ALL FOLDS AND WRINKLES ARE REMOVED BEFORE REINFORCED SOIL IS PLACED. PANELS SHALL BE STAKED OR ANCHORED AS NECESSARY TO MAINTAIN TAUT CONDITION.

6.8 WALL CONTRACTOR AND INSPECTION ENGINEER SHALL VERIFY THAT GEOSYNTHETIC REINFORCEMENT TYPE CORRESPONDS TO THE TYPE SHOWN ON THE WALL PLAN BEFORE THE REINFORCEMENT IS INSTALLED.

6.9 GEOSYNTHETIC REINFORCEMENT PANELS INSTALLED AT WALL CORNERS AND RADII MAY OVERLAP. OVERLAPPING PANELS SHALL BE SEPARATED BY AT LEAST 6 INCHES OF COMPACTED SOIL.

6.10 GEOSYNTHETIC REINFORCEMENT LENGTH IS MEASURED FROM THE WALL FACE.

6.11 TRACKED VEHICLES MAY NOT OPERATE ON GEOSYNTHETIC REINFORCEMENT WITH LESS THAN 6 INCHES OF COMPACTED SOIL BETWEEN THE REINFORCEMENT AND THE TRACKS. TURNING OF TRACKED VEHICLE SHALL BE MINIMIZED TO PREVENT DAMAGE AND DISTURBANCE TO THE REINFORCEMENT.

6.12 RUBBER TIRE VEHICLES MAY OPERATE DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT AT SPEEDS LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

6.13 CONNECT GEOGRID TO SRW UNIT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THESE DRAWINGS.

6.14 INSTALL CAP UNITS AT ELEVATIONS SHOWN ON THESE DRAWINGS AND IN ACCORDANCE WITH THE SRW MANUFACTURER'S RECOMMENDATIONS.

7.0 SOIL COMPACTION AND INSPECTION

7.1 THE INSPECTION ENGINEER SHALL INSPECT AND DOCUMENT COMPACTION OF SOIL IN THE REINFORCED SOIL ZONE IN ACCORDANCE WITH THESE REQUIREMENTS. INSPECTION RECORDS SHALL DOCUMENT THE REQUIRED MINIMUM DRY UNIT WEIGHT, ACTUAL DRY UNIT WEIGHT, ALLOWABLE MOISTURE CONTENT, ACTUAL MOISTURE CONTENT, TEST LOCATION (I.E. STATION NUMBER) AND ELEVATION, AND PASS OR FAIL ASSESSMENT.

7.2 COMPACTION DENSITY AND MOISTURE CONTENT REQUIREMENTS - SOIL IN THE REINFORCED ZONE SHALL BE COMPACTED TO WITHIN 98 PERCENT OF ITS MAXIMUM DRY DENSITY AND WITHIN 2 PERCENT OF ITS OPTIMUM WATER CONTENT AS MEASURED IN ACCORDANCE WITH ASTM D 886 (STANDARD PROCTOR METHOD).

7.3 SOIL SHALL BE INSTALLED IN COMPACTED LIFTS NO GREATER THAN 6 INCHES AND NO LESS THAN 6 INCHES IN THICKNESS.

7.4 HEAVY (I.E. RIDE-ON) COMPACTION EQUIPMENT OR OTHER HEAVY CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED WITH 4 FEET OF THE WALL FACE.

7.5 WITHIN 4 FEET OF THE WALL FACE, ONLY HAND-OPERATED (I.E. WALK-BEHIND) COMPACTION EQUIPMENT MAY BE USED.

7.6 THE COMPACTION DENSITY AND MOISTURE CONTENT OF THE SOIL IN THE REINFORCED ZONE SHALL BE TESTED IN ACCORDANCE WITH THE FOLLOWING:

7.6.1 AT LEAST ONCE PER EVERY 1000 SQUARE FEET IN PLAN AREA PER 8-INCH-THICK VERTICAL-LIFT.

7.6.2 AT LEAST ONCE PER EVERY 2 FEET VERTICAL OF WALL ERECTION.

7.7 IN THE ABSENCE OF THE OWNER'S REQUIREMENTS FOR MORE STRINGENT COMPACTION SPECIFICATIONS, FILL SOIL INSTALLED IN SLOPES ABOVE OR BELOW THE WALL SHALL BE COMPACTED TO WITHIN 95 PERCENT OF ITS MAXIMUM DRY DENSITY AND TO WITHIN 2 PERCENT OF ITS OPTIMUM WATER CONTENT AS MEASURED IN ACCORDANCE WITH ASTM D 886 (STANDARD PROCTOR METHOD).

8.0 DRAINAGE AND EROSION PROTECTION

8.1 AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL GRADE THE SURFACE OF THE LAST LIFT OF REINFORCED SOIL AWAY FROM THE WALL FACE AND COMPACT.

8.2 DURING SITE CONSTRUCTION, THE WALL SHALL BE PROTECTED FROM SURFACE WATER AT ALL TIMES BY THE USE OF BERMS, DIVERSION DITCHES, TEMPORARY DRAINS AND ALL OTHER MEANS THAT ARE REQUIRED.

8.3 WATER SHALL NOT BE PERMITTED TO POND BEHIND THE WALL.

8.4 ALL SLOPE ABOVE AND BELOW THE WALL SHALL BE VEGETATED AND PROTECTED FROM EROSION AS SOON AS POSSIBLE FOLLOWING THEIR CONSTRUCTION.

9.0 WALL DESIGN

9.1 DESIGN PARAMETERS

FS SLIDING = 1.5
FS BEARING = 2.0
FS PULLOUT = 1.5
FS CONNECTION = 1.5
FS MATERIAL UNCERTAINTY = 1.5
FS OVERSTRESS = 1.0
FS GLOBAL AND COMPOUND = 1.35

9.2 EXTERNAL LOADING - LIVE LOAD (TRAFFIC) 280 PSF, DEAD LOAD = 800 PSF (SCREEN WALL)

9.3 THIS DESIGN IS BASED ON A GEOTECHNICAL INVESTIGATION PERFORMED BY WHITSTONE ASSOCIATES, INC.

10.0 ENGINEER INSPECTION

10.1 THE INSPECTION ENGINEER SHALL INSPECT CONSTRUCTION OF THE WALL FOR CONFORMANCE TO THE WALL PLANS AND THESE CONSTRUCTION REQUIREMENTS.

10.2 THE ENGINEER SHALL CONFIRM THAT THE SOIL PROPERTIES USED FOR THIS DESIGN ARE ADEQUATELY CONSERVATIVE AFTER INSPECTION OF ACTUAL REINFORCED, RETAINED, AND FOUNDATION SOIL.

10.3 INSPECTION SHALL BE PERFORMED BY AN INDIVIDUAL EXPERIENCED WITH SRW CONSTRUCTION.

10.4 INSPECTION SHALL INCLUDE FOUNDATION AND RETAINED SOIL EVALUATION, FILL PLACEMENT AND COMPACTION, AND SRW AND GEOSYNTHETIC REINFORCEMENT INSTALLATION.

10.5 THE INSPECTION ENGINEER SHALL NOTIFY THE WALL CONTRACTOR OF DEFICIENCIES AND BE PROVIDED THE OPPORTUNITY TO REPAIR. IF REPAIR IS NOT EFFECTED, THEN NOTIFY THE OWNER.

10.6 INSPECTION RESULTS SHALL BE DOCUMENTED.

10.7 THE INSPECTION ENGINEER IS RESPONSIBLE FOR READING AND UNDERSTANDING THESE DRAWINGS AND SPECIFICATIONS. HE SHALL BE IN POSSESSION OF A COMPLETE SET OF THESE DRAWINGS WHEN PERFORMING INSPECTION DUTIES ON SITE.

REVISIONS

PRELIM SET
ISSUE DATE
POST NO SET
ISSUE DATE

DATE DESCRIPTION

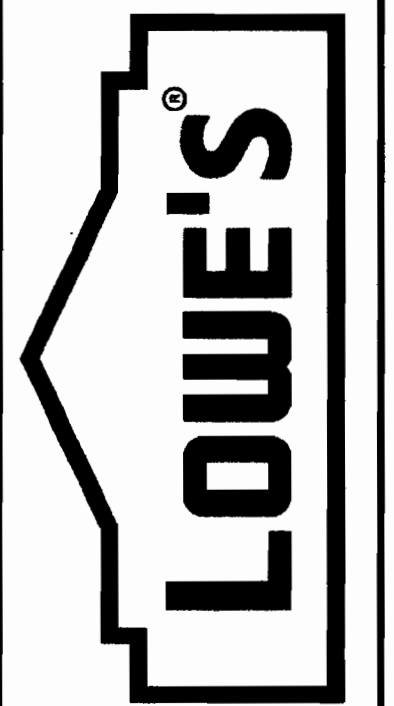
DATE	DESCRIPTION



R.J. VALENTINE, P.E.
Consulting Engineer
6214-B Old Franconia Road
Alexandria, Virginia 22310
Tel. 703-924-0663 Fx. 703-924-0662

LOWE'S HOME CENTERS, INC.
HWY. 288 EAST, EAST DOCK
N. WILKESBORO, NC 28699

336.658.4000 (V) 336.658.3257 (F)
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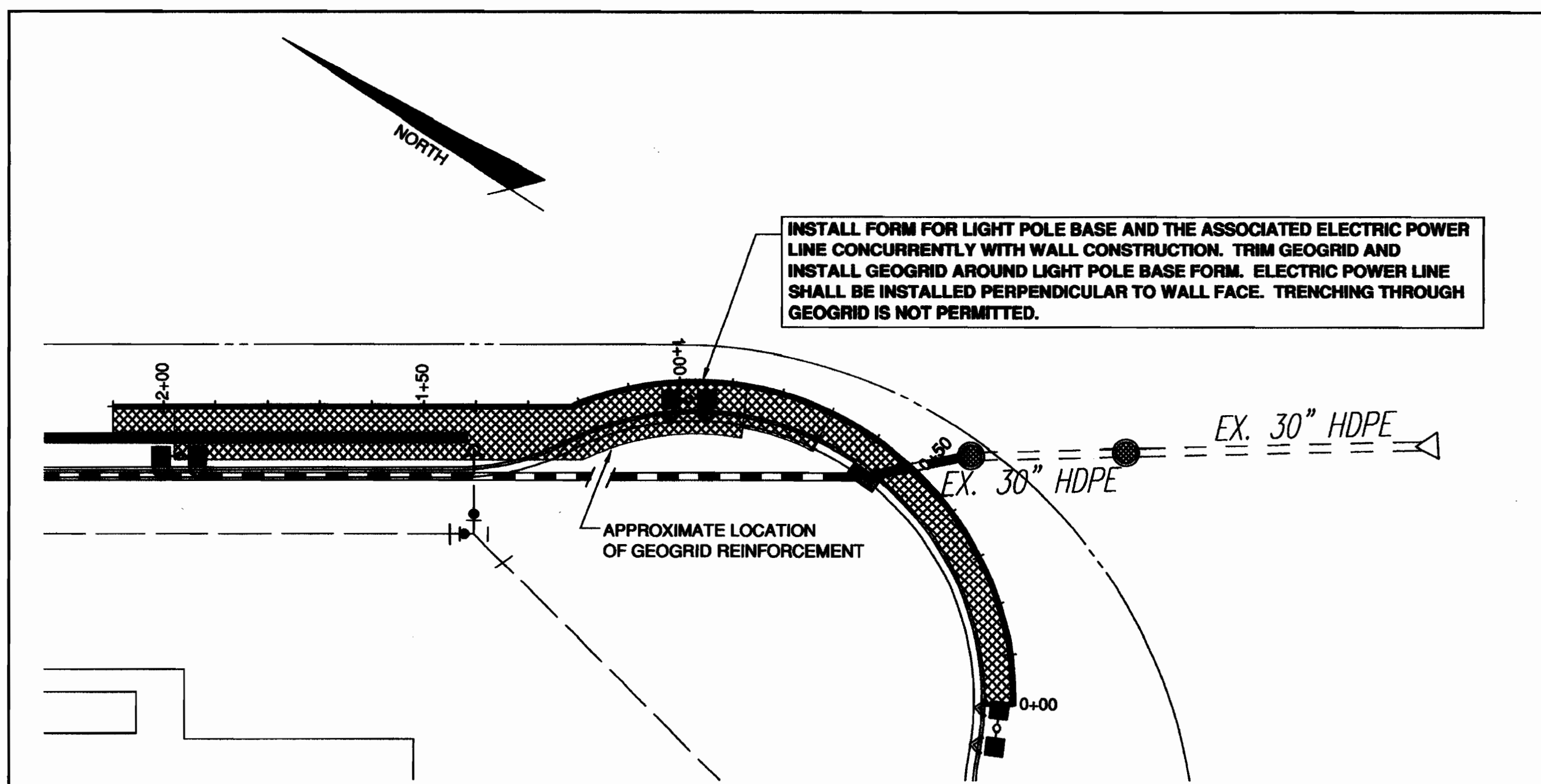


RETAINING WALL
LOWE'S OF COLUMBIA
COLUMBIA, MD
PROJECT NO. 5048
DRAWN BY: R.V. (CHECKED BY: R.V.)

ORIGINAL ISSUE DATE: 11/18/05
PERMIT SET ISSUE DATE:
CONSTRUCTION SET ISSUE DATE:
DRAWING NUMBER:

32 of 33

SDP 06-10



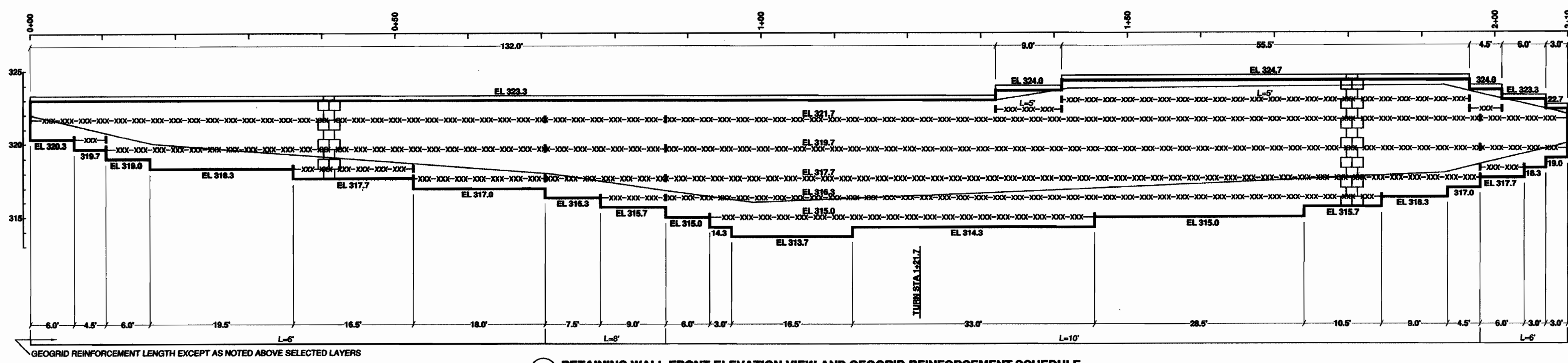
1 PLAN VIEW OF RETAINING WALL
SCALE: 1" = 20'
MODIFIED FROM DRAWING BY BOHLER ENGINEERING, INC.
REFER TO ORIGINAL PLANS FOR ALL SITE INFORMATION

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: 8-31-06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/16/05
DATE
APPROVED: 12/16/05
DATE
DIRECTOR: 12/16/05
DATE

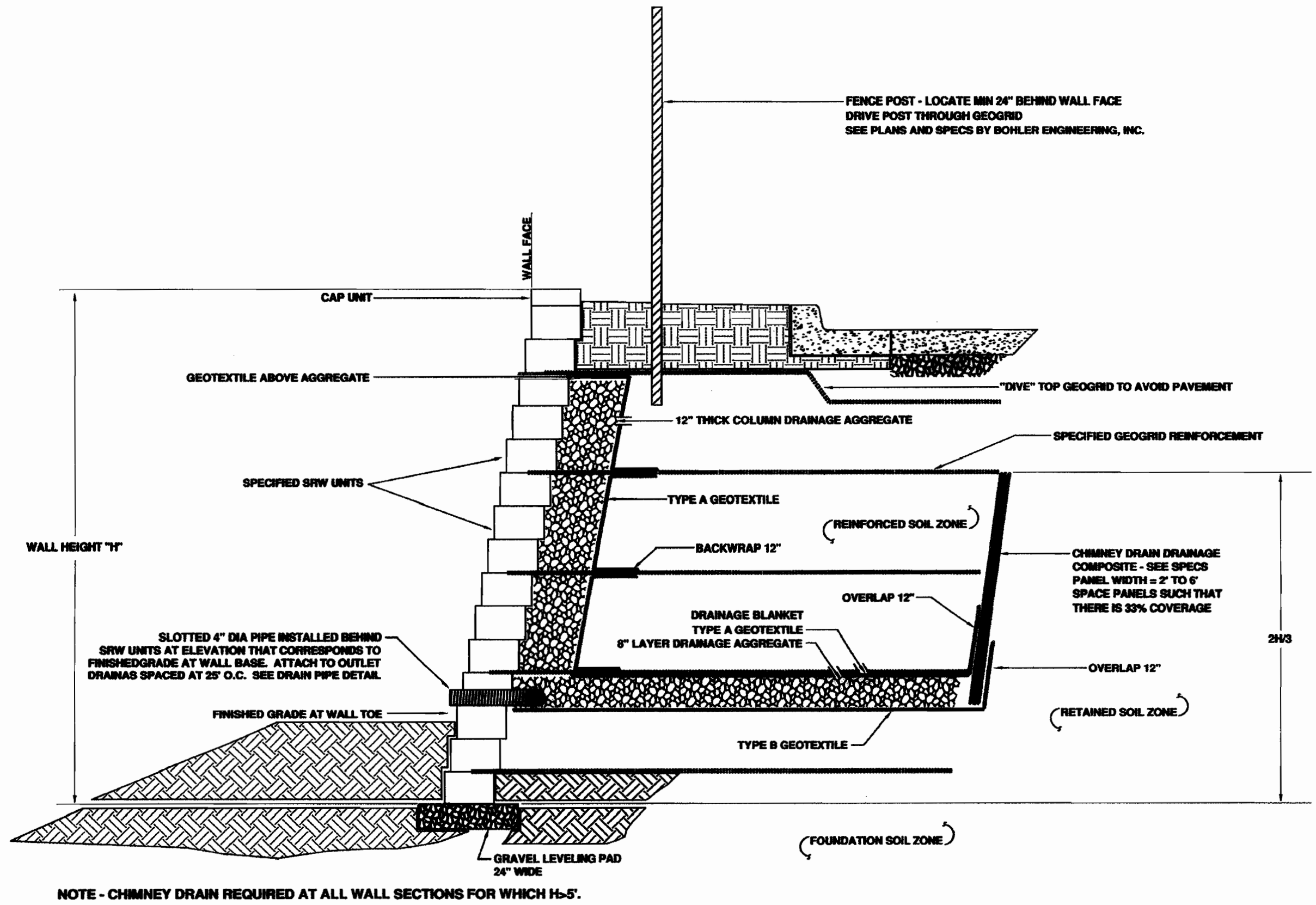
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
12/16/05
DATE
COUNTY HEALTH OFFICER: RJD
HOWARD COUNTY HEALTH DEPARTMENT

SDP 06-10

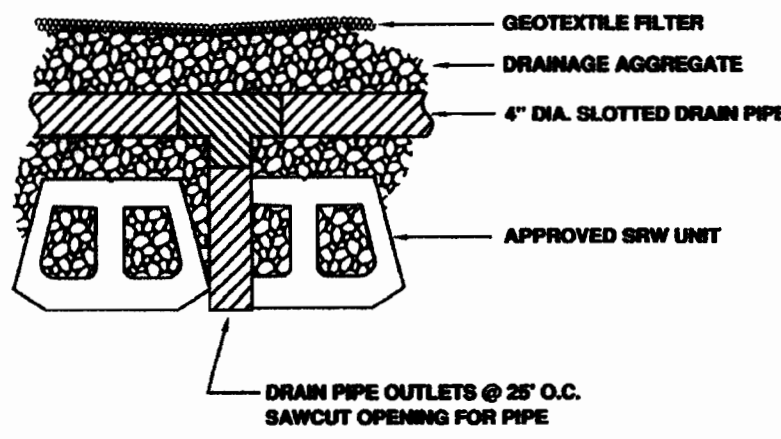


1 RETAINING WALL FRONT ELEVATION VIEW AND GEOGRID REINFORCEMENT SCHEDULE
 HORIZONTAL SCALE: 1" = 10' VERTICAL SCALE: 1" = 5'

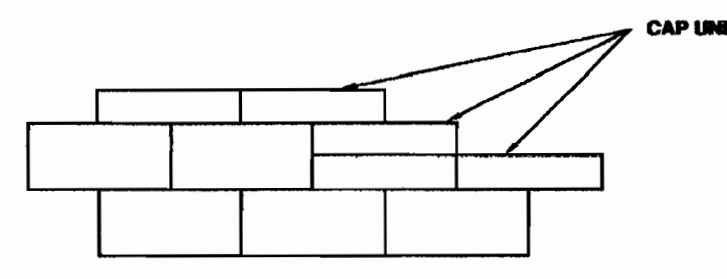
LEGEND	CONSTRUCTION NOTES
SRW UNITS ILLUSTRATED FOR ELEVATION REFERENCE	1. THE GENERAL CONTRACTOR SHALL PROTECT THE WALL FROM SURFACE WATER AT ALL TIMES BY THE USE OF BERMS, DIVERSION DITCHES AND ALL OTHER MEANS THAT ARE REQUIRED.
TOP OF WALL (CAP) ELEVATION CAP UNITS FINISHED GRADE PROFILE EL. XXXX BOTTOM OF WALL ELEVATION TOP OF LEVELING PAD	2. A GRAVEL DRAINAGE BLANKET IS REQUIRED AT ALL SECTIONS OF WALL. A CHIMNEY DRAIN IS REQUIRED AT ALL SECTIONS OF WALL WITH A TOTAL HEIGHT GREATER THAN 5'. SEE DETAIL.
GEOSYNTHETIC REINFORCEMENT MIRAFIX 3217, FORTRAC 25, STRATAGRID 200, OR MESA 2	3. FILL SOIL INSTALLED IN THE REINFORCED AND RETAINED ZONES AT WALL SHALL EXHIBIT THE PHYSICAL PROPERTIES SPECIFIED AT SHEET RW1.
TERMINATION OF REINFORCEMENT OR CHANGE IN EMBEDMENT LENGTH	4. BASED ON THE REPORT OF GEOTECHNICAL INVESTIGATION, INSITU SOIL AT WALL FOUNDATION ZONE IS ASSUMED TO EXHIBIT $\phi = 32^\circ$. THE INSPECTION ENGINEER SHALL VERIFY THAT THIS ASSUMED SHEAR STRENGTH IS ADEQUATELY CONSERVATIVE. IF IT IS NOT, STOP WORK AND CONTACT WALL DESIGN ENGINEER.
REINFORCEMENT EMBEDMENT LENGTH MEASURED FROM WALL FACE L = 10'	5. THE WALL APPLIES A MAXIMUM BEARING PRESSURE OF 2000 PSF.



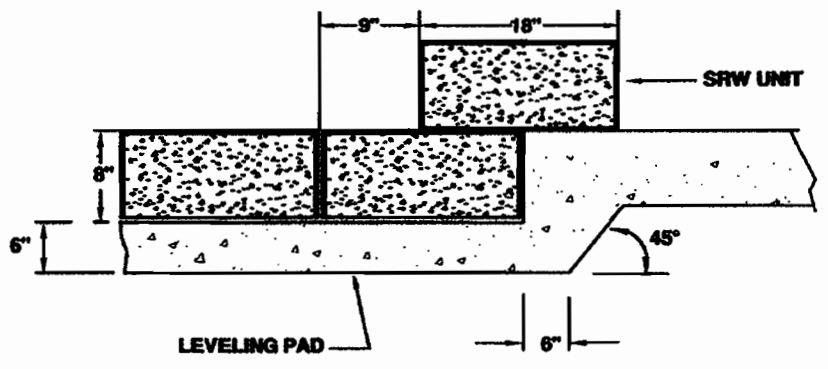
5 TYPICAL SRW CROSS SECTION
NOT TO SCALE



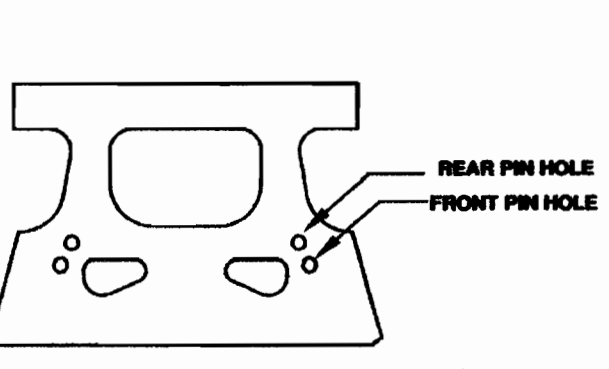
2 DRAIN PIPE DETAIL
NOT TO SCALE



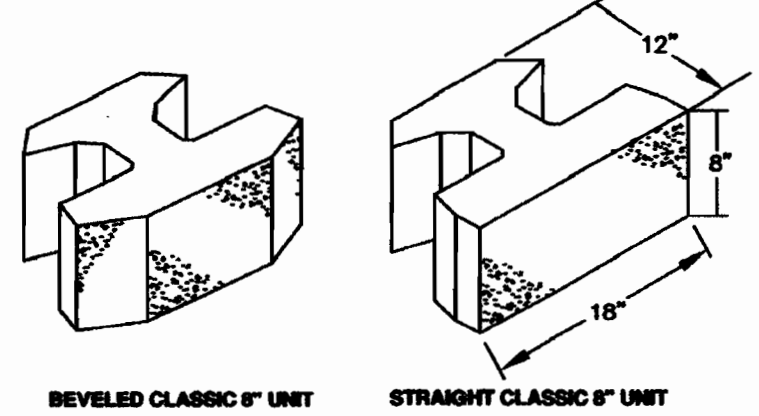
3 CAP UNIT DETAIL
NOT TO SCALE



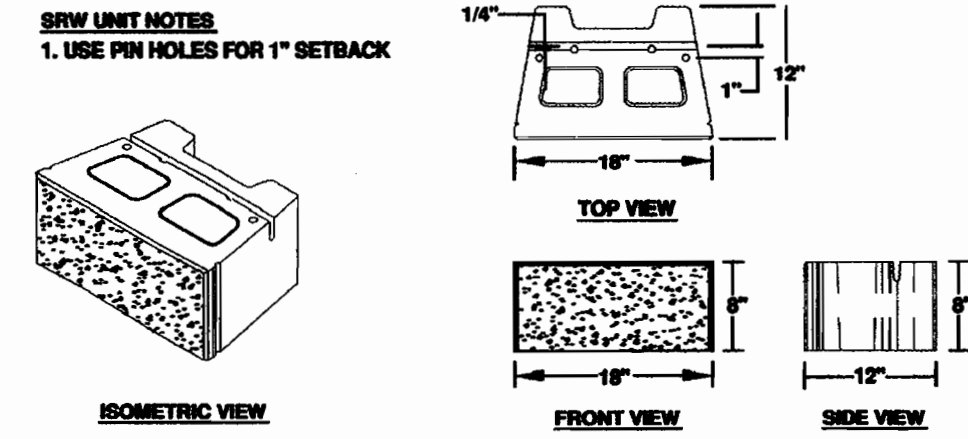
4 TYPICAL LEVELING PAD STEP DETAIL
NOT TO SCALE



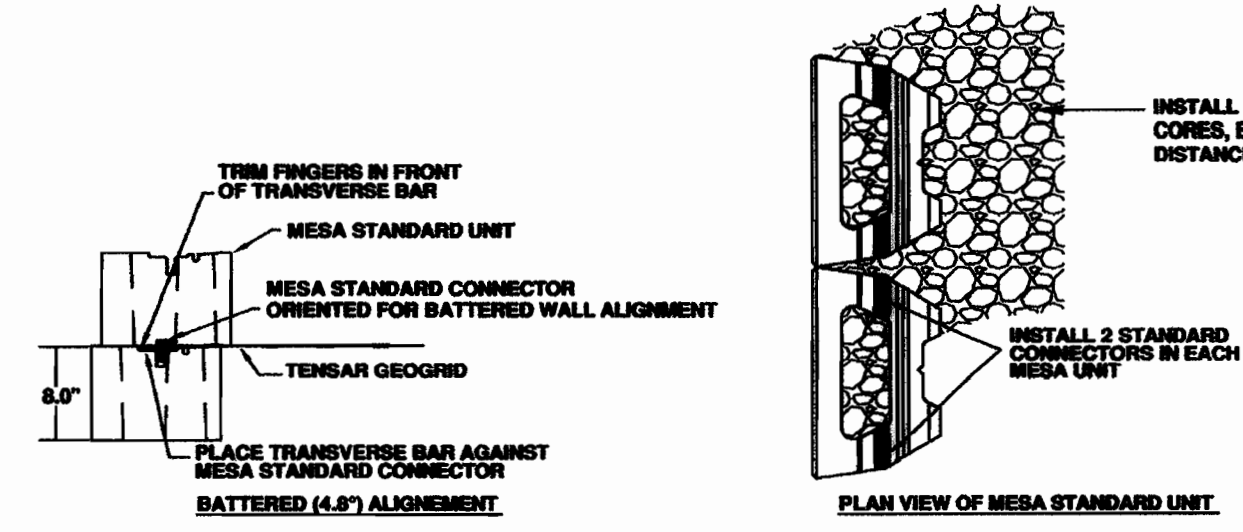
6 KEYSTONE COMPAC SRW UNITS
NOT TO SCALE



7 ROCKWOOD SRW UNIT
NOT TO SCALE



8 VERSA-LOK SQUARE FOOT UNIT
NOT TO SCALE



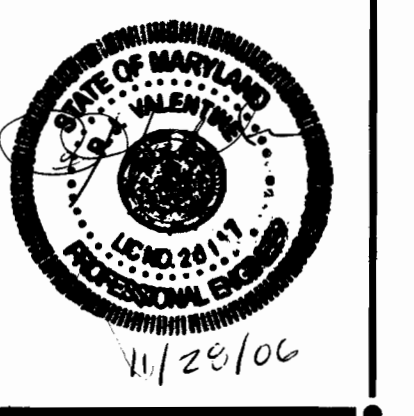
9 MESA STANDARD UNIT AND GEOGRID CONNECTION DETAILS
NOT TO SCALE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: 8-31-06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF-DEVELOPMENT ENGINEERING DIVISION 15 DATE
 CHIEF-DIVISION & LAND DEVELOPMENT 88 DATE
 DIRECTOR DATE

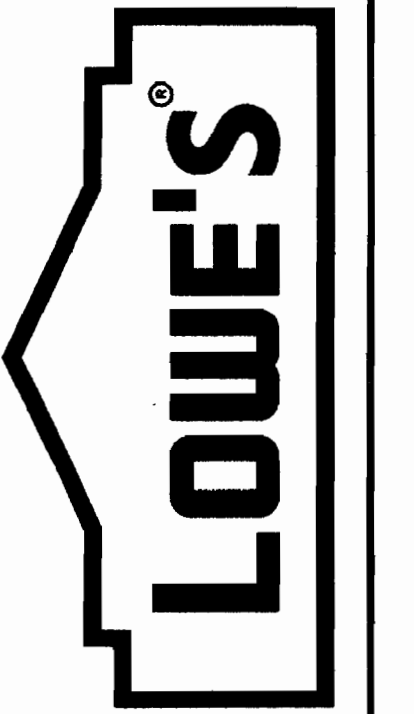
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 COUNTY HEALTH OFFICER DATE
 HOWARD COUNTY HEALTH DEPARTMENT 12/15/06

REVISIONS	
DATE	DESCRIPTION



R.J. VALENTINE, P.E.
 Consulting Engineer
 6214-B Old Franconia Road
 Alexandria, Virginia 22310
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LOWE'S HOME CENTERS, INC.
 HWY. 268 EAST, EAST DOCK
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RETAINING WALL
 LOWE'S OF:
 COLUMBIA
 COLUMBIA, MD
 PROJECT No. 5046
 DRAWN BY: R.A.V. CHECKED BY: R.A.V.

ORIGINAL ISSUE DATE: 11/16/05
 PERMIT SET ISSUE DATE:
 CONSTRUCTION SET ISSUE DATE:
 DRAWING NUMBER: