

VICINITY MAP 1"=2000'

**BENCHMARKS** NAD83/11 & NAVD83 IN USE.  
 #5113 ALSO KNOWN AS R-125 N65 PID: JVO620 ELEV: 123.961 BRASS DISC ON BRIDGE ABUTMENT ON US-1 0.5 MI. NORTHEAST OF RT-100.  
 #5114 ALSO KNOWN AS N/A N65 PID: N/A ELEV: 170.156 LIGHT POLE BOLT AT END OF RAMP FROM I-100 TO US-1 5BL.

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**PERMIT INFORMATION CHART**

Subdivision Name TROY HILL CORPORATE CENTER PH. 1IB	Section/Area TROY PARK	Lot/Parcel A-21/A-22
Fig. # of Plat 171 & 181	Grid # 17 & 18	Zoning M-1
Plat No. 1810	Survey Code 400	Water Code 2152200
Map No. 51	Elect. Dist. 2	Census Tract 6012.02

**PARKING TABULATION**

a. REQUIRED:	30 SPACES PER FIELD X 2 FIELDS	100 SPACES REQUIRED
b. PROVIDED:	THREE PARKING LOTS	146 SPACES PROVIDED (INCLUDING 8 ACCESSIBLE SPACES)
c. EXCESS PROVIDED:		46 SPACES

**SITE ANALYSIS DATA CHART**

a. Total Project Area:	101.84 AC +/- 4,438,403 SF
b. Limit of Submission:	47.82 AC +/- 2,083,486 SF
c. Limit of Disturbed Area:	34.48 AC +/- 1,519,744 SF
d. Present Zoning Designation:	M-1
e. Proposed Use for Site and Structures:	See tabulation to the left
f. Parking Spaces Required:	See tabulation to the left
g. Floodplain Within Limit of Submission:	1.85 AC +/-

**PURPOSE**  
 THESE PLANS ARE PREPARED TO SUPPORT THE PHASE I CONSTRUCTION AT TROY PARK. THE CONSTRUCTION INCLUDES MASS GRADING OF THE SITE, ENTRANCE DRIVE CONSTRUCTION AND ASSOCIATED STORMWATER MANAGEMENT FACILITIES, TWO SEGMENTAL BLOCK RETAINING WALLS, TWO SYNTHETIC TURF FIELDS, THREE PARKING LOTS AND ASSOCIATED STORMWATER MANAGEMENT FACILITIES.

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director  
 Chief, Development Engineering Division  
 Chief, Division of Land Development

ADDRESS / PERMIT INFORMATION  
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**SITE RESOURCES**  
 Comprehensive Land Planning & Site Design Services  
 1415 Annetville Pike • Poolesville, Maryland 21131  
 (410) 883-3388 • Fax (410) 883-3389

DES: KPR	SRI 1	ADD RETAINING WALLS & REVISE GRADING	9/18/13
DRN: AM	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
CHK: AFE			
DATE: 08/12/12	BY NO.	REVISION	DATE

COVER SHEET  
 600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE 1IB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND  
 SHEET 1 OF 64  
 SDP-11-003



**GENERAL NOTES** (THESE NOTES PERTAIN TO ALL CIVIL DRAWINGS)

- All construction shall be in accordance with the latest standards and specifications of Howard County, latest ADA accessibility guidelines and MSHA standards and specifications if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1800 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-TTTT at least 48 hours prior to any excavation work being done.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Maryland Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt. All sign posts used for traffic control signs installed the County Right-of-Way (including Recreation & Parks ROW) shall be mounted on a 2" galvanized steel, perforated, "Quick Pinch" type, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (12 gauge) - 3' long. A galvanized steel pole cap shall be mounted on top of each post.
- All plan dimensions are to face of curb unless otherwise noted.
- The existing topography was obtained from an aerial survey with 1 foot contour intervals on March 31, 2004 performed by Axis Geospatial, LLC. Additional topography shown taken from Howard County GIS.
- The coordinates shown herein are based on NAD 83 coordinate values of SHA Flat #56101 and the Flats of Survey for Parcels 371 and 345 prepared by the Howard County Department of Public Works.
- Water connection will be made at 12" public line in Mansion Lane (Contract 14-3873-D).
- Sewer connection will be made at 8" public line in Mansion Lane (Contract 14-3873-D).
- Stormwater Management will be provided by environmental site design (ESD) practices, including Micro-retention, Bioswales and Non Rooftop Disconnection. The facilities are to be publicly maintained.
- Existing utilities are based on surveys performed by Shanberger and Lane and Howard County GIS, the contractor must determine the exact location of utilities by digging test pits, by hand, at all utility crossings prior to construction.
- The floodplains shown on this site are based on the FEMA National Flood Insurance Program, Flood Insurance Rate Map, Howard County, Maryland, Panel 35 of 45, Map Number 240044 0025B (Dated Dec. 4, 1985) however there is a Floodplain Easement shown on this plan from Plat #1511, Dated Dec. 27, 2001 by Patton, Harris, Rust and Associates.
- There are streams and stream buffers located on this site as shown on the plan. The wetlands shown on this site were field located by Shanberger and Lane Dated April 23, 2010 and delineated in the field by Eco-Science Professionals Inc.
- A traffic study was conducted by The Traffic Group. Approved by DED 08/24/2010. The study was conducted for a proposed tennis center that is no longer part of this program.
- An AFPO Test was conducted by The Traffic Group. Approved by DED 08/24/2010. The test was conducted for a proposed tennis center that is no longer part of this program.
- No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the wetlands, streams or their buffers, forest conservation easement areas and 100 year floodplain except as approved by DPZ per NP-10-173.
- All exterior light fixtures shall be oriented to direct light downward on-site, away from adjoining properties and public roads in accordance with the requirements of Section 154 of the Howard County Zoning Regulations. Light trespass onto adjoining residential use properties shall be limited to 0.5 foot candles and no foot candle requirement for adjoining non-residential uses.
- There are no cemeteries or grave sites on the subject property.
- This project is subject to the amended fifth edition of the Subdivision and Land Development Regulations and the Zoning Regulations as amended under council bill #45-2003. Development or construction must comply with setback and buffer regulations in effect at the time of submission of the Site Development Plan, waiver petition application or building/grading permit.
- All utilities constructed within fill material must be installed in accordance with AASHTO-1180.
- ABBREVIATIONS:
 

PROP	Proposed*	DIP	Ductile Iron Pipe
EX	Existing	PVC	Polyvinyl Chloride Pipe
BIT	Bituminous	HDFE	High Density Polyethylene Pipe
CNC	Concrete	CMP	Corrugated Metal Pipe
MH	Manhole	RCP	Reinforced Concrete Pipe
SD	Storm Drain	C46	Concrete Curb & Gutter
I	Inlet	INV	Invert Elevation
SAN	Sanitary Sewer	FF	Finished Floor Elevation
FH	Fire Hydrant	BF	Basement Floor Elevation
TC	Top of Curb	BC	Bottom of Curb
TS	Top of Step	BS	Bottom of Step
TM	Top of Wall	BM	Bottom of Wall
PC	Point of Curvature	PS	Parking Space
FT	Point of Tangency	HC	Handicapped Parking Space
PI	Point of Intersection	TYP	Typical

\*Proposed means work included in the base contract unless accompanied by the phrases "N.C." or "By Others."

22. The subject property is zoned M-1 per the 2004 comprehensive zoning plan. Revision #2 is subject to the Comprehensive Zoning Plan effective 10/6/2015.

23. No wetlands, wetland buffers, streams, stream buffers, floodplain easement and/or steep slopes 25% or greater of 20,000 sq ft contiguous are proposed to be disturbed as part of this project except for the road widening improvement to the emergency access road as approved under NP-10-173.

24. All spot elevations are at finish / bottom of curb unless otherwise mentioned.

25. Developer shall be responsible for any damage to the public right-of-way.

26. This plan has been prepared in accordance with Section 16.124 of the Howard County Code and the Landscape Manual. Financial surety is not required for this project because this is a County Capital Project.

27. Retaining Wall General Notes  
a) Retaining walls shall only be constructed under the observation of a Registered Professional Engineer and a (NICET, NACEI or equivalent) certified soils technician.

- The required bearing pressure beneath the footing of the wall shall be verified in the field by a certified soils technician. Testing documentation shall be provided to the Howard County Inspector prior to the start of construction. The required test procedure shall be the Dynamic Cone Penetrometer Test ASTM STP-944.
- The suitability of fill material shall be confirmed by the onsite soils technician. Each eight (8) inch lift shall be compacted to a minimum of 95% Standard Proctor Density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
- For "CRITICAL" walls, one soil boring shall be required every 100' along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector prior to the start of construction.

28. EXISTING INFORMATION AND CONDITIONS NOT GUARANTEED, VERIFY AND TEST FIT EXISTING UTILITIES: The correctness and completeness of the information showing existing conditions is not guaranteed. Before beginning construction, the Contractor shall perform the following tasks:

- Notify Miss Utility at 1-800-257-TTTT, and make sure they complete the marking of utilities within the limits of construction at least 48 hours prior to installing sediment control measures. Maintain all markings throughout construction. The Contractor shall also include in his bid price marking of on-site utilities that might not be marked by Miss Utility; the contractor shall either mark these on-site utilities himself or by subcontracting with a private on-site utility location company.
- Verify the general accuracy of the existing conditions shown on the site drawings by visual inspection of the surface of the site and all existing structures, paving and utility appurtenances visible thereon;
- With regard to the structures & appurtenances observed as required per item (b) above, determine the type, size, location and elevation of all those existing utilities (including but not limited to all storm drains, sanitary lines, water lines, gas lines, steam lines, electric lines, telephone lines, and communication ducts, and all manholes, inlets, clean-outs, valves, handholes, etc. related thereto) within the limits of construction in order to: (i) avoid damaging or disrupting service, and (ii) to coordinate and facilitate construction of proposed utilities and other improvements. In addition to the Contractor's visual observation and the utility marking (as required above), the contractor shall schedule and complete Test Pitting of all existing utilities (for the purposes set forth above) and shall do so in a timely manner in order to allow time for analysis and redesign by Site Resources and/or other consultants, without delaying the project schedule.
- Immediately report to Site Resources, Inc. the results of steps (a), (b) and (c) which might indicate any discrepancy between actual conditions and those shown on the plan, and any potential conflicts between proposed improvements and existing condition.

**Test pitting defined:** For the purposes of this contract, excavation of utility trenches does not constitute test pitting. Test pitting is a separate operation completed at least seven days before utility installation is scheduled to begin. Test pitting means excavation to expose existing utilities in two situations: (i) where proposed improvements cross existing utilities (pipes, lines, structures, appurtenances) and; (ii) where proposed utilities are designed to connect to existing utilities. Test pitting includes recording the type, size, location and elevation of the exposed utilities, and taping and mailing the record to Site Resources, Inc. and the Owner. The record may be a legible hand-written field sketch.

29. EXISTING AND PROPOSED GAS LINES, ELECTRIC LINES, TELEPHONE LINES, COMMUNICATION LINES AND OTHER UTILITIES: Existing and proposed gas lines, steam lines, electric lines, telephone lines, communication ducts and other such utilities are NOT part of the scope of work shown on these site plans and Site Resources, Inc. has no responsibility for design, specification or installation of said utilities. To the extent that some or all of such utilities (whether existing or proposed) appear on the site drawings, the correctness and completeness of the information showing these utilities is not guaranteed.

30. COORDINATION BETWEEN PROPOSED UTILITIES: The contractor shall adjust the location and elevation of proposed gas lines, electric lines, telephone lines, communication lines, and water lines as needed to construct the proposed storm drains and sanitary sewer with minimum clearances. Coordinate with the Mechanical/Electrical Drawings and Specifications and appropriate utility company.

31. RELOCATION OF EXISTING UTILITIES: In the event that the location or elevation of existing underground electric lines and phone lines conflict with proposed storm drains, sanitary sewer lines or water lines, the contractor shall, with the permission of the owner and without an extra cost to the project, adjust these lines to permit installation of the new utilities. In the event that any other utility is relocated to accommodate a new utility, said relocation shall be an extra cost to the project, subject to the terms and conditions of the construction contract.

32. UTILITIES TO REMAIN OPERATIONAL, ADJUSTMENT FOR FINAL GRADE: All existing utilities shall be retained unless marked otherwise. Existing utilities not to be removed are to remain operational at all times. Existing utilities to be replaced or relocated shall remain in service until replaced or relocated utilities are operational. All existing utility appurtenances shall be adjusted for final grade.

33. UTILITY TRENCHING, BACKFILL AND COMPACTION: All trenching for sanitary sewer, storm drains and water mains shall be done in accordance with the Howard County Standard Specifications and Details for Construction.

34. UTILITY CERTIFICATION: The Contractor shall have a professional engineer registered in the State of Maryland certify, on a form provided by the Owner, that all proposed storm drains, sanitary sewers and water lines shown herein were installed in accordance with these plans and Howard County specifications. If said Certification is not possible because the utilities were not installed in accordance with these plans and Howard County specifications, then the Owner has the option of waiving, in writing, this Certification, in whole or part. If the Owner does not elect to waive the Certification, the Contractor shall adjust and, if necessary, reconstruct the utilities to bring them in conformance with these plans and Howard County specifications.

35. UTILITY CAPPING AND PROTECTION: All building connections shall be capped at upstream end, 5 feet from proposed buildings, caissons or column footings or as noted, and shall be protected by providing three stakes (the height being a minimum of 18 inches above proposed grade) with high visibility flagging around the capped end of the utility.

36. PROPOSED PRIVATE WATER LINES: Proposed water lines shall have a minimum of 4'-0" cover from finished grade, 1'-0" clearance from storm drains and 1'-0" clearance from sanitary sewers, unless otherwise noted on the plans. All water lines shall be high-density polyethylene unless otherwise noted on the plans.

37. PROPOSED STORM DRAINS: All storm drains 12 inches and larger shall be class IV reinforced circular concrete pipe (RCCP) unless indicated otherwise on these construction drawings.

38. PROPOSED PRIVATE SANITARY SEWERS: All pipe and fittings for sanitary house connection shall be polyvinyl chloride (PVC) meeting material requirements of ASTM D2034, (SDR-35). Joints shall be elastomeric gasketed.

39. STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS: Unless otherwise noted or detailed on the drawings, all construction shall follow the latest Howard County Standard Specifications and Details for Construction.

40. SEDIMENT CONTROL: The contractor shall coordinate installation of all utilities to avoid construction problems/conflicts with sediment and erosion control measures. Any disturbance to sediment and erosion control measures shall be repaired at the end of each working day. Contractor shall, without extra cost to the project, repair and maintain existing sediment control devices until all areas within limits of construction are stabilized. With the approval of sediment control inspector, all sediment control devices shall be removed and areas restored and stabilized. All sediment control measures referred to on these plans shall be in accordance with the publication entitled 1994 Maryland Standards and Specifications For Soil Erosion and Sediment Control.

41. DISTURBED AREAS: All areas disturbed by the contractor during or prior to construction, not designated to receive paving, mulch or solid soil shall be fine graded, seeded and mulched in accordance with the permanent seeding notes and specifications shown on the Sediment Control drawings.

42. REPAIR AND REPLACEMENT OF DAMAGE CAUSED BY CONTRACTOR AND SUBCONTRACTORS: In the event that the contractor or any of its subcontractors damage any existing curb, gutter, paving, utilities, sidewalks, trees, shrubs, lawns, or any other existing conditions (not indicated to be demolished), or any newly installed proposed improvement, the general contractor shall repair and replace said damage to owner's satisfaction, at general contractor's sole cost and expense.

43. BENCHMARKS: See Grading and Sediment Control Plan.

44. ELEVATION AND LABELING: All spot grade elevations in roadways and parking lots are for bottom of curb unless otherwise noted. Elevations on hard surfaces (roads, walks, walls, steps, manholes, etc.) are labeled to the hundredth of a foot (e.g. 245.45). Elevations on proposed lawn and planting areas are labeled to the tenth of a foot (e.g. 245.5).

45. DIMENSIONS: Unless otherwise noted on the drawing, all dimensions shown on the site drawings follow these conventions:

- dimensions to a building or retaining wall are to the face of the wall;
- dimensions to a curb are to the face (not the back) of the curb;
- dimensions to a fence are to the centerline of the fence;
- dimensions for sidewalks abutting a curb are from the face of curb to the back edge of the walk;
- dimensions for other sidewalks or open paving sections are measured to the edge of paving;
- dimensions to a manhole, inlet, cleanout, pipe bend, valve, fire hydrant or other utility appurtenance are to the center of the structure;
- dimensions for steps are to the outer edge of the staircase and the nose of the top or bottom step;
- layout of sediment control measures and plant material shall be scaled.

46. GRADINGS: It is the intent of the grading design to achieve positive drainage and aesthetically pleasing vertical curves and lines. Transitions between existing and proposed pavement shall be smooth and joints flush. Unless otherwise expressly noted on the plan (by arrow with the percent slope labeled), all proposed bituminous paving shall have a slope of at least 2 percent and all concrete shall have a minimum slope of 1.5 percent in the direction indicated by proposed contours. Unpaved areas shall have a minimum slope of 2 percent and a maximum slope of 2:1. Final grading shall achieve positive surface drainage away from buildings and toward drainage facilities (swales, gutters, inlets, etc.).

47. COMPACTION: All earth fill material under slabs, footings and paved areas shall be placed in 8" loose layers and compacted to 95% of maximum dry density at optimum moisture content as determined by ASTM D 698. All other fill shall be compacted to 90%.

48. HEADINGS: The headings contained in these General Notes are for the convenience of the reader only and shall not limit the responsibility of the Contractor. It shall be distinctly understood that failure to mention specifically any work which would normally be required to complete the project shall not relieve the Contractor from completing such work.

49. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES): It is the contractor's responsibility to implement all the provisions and requirements of the NPDES permit. The permit has been applied for by the Owner, but no land disturbance is permitted until the NPDES permit has been issued.

50. The public right of way for Mansion Lane from approximately 0+50 to 11+00 to be abandoned in accordance with County Council of Howard County, Maryland resolution number 122-2010, approved on 10/28/10.

51. This project is subject to the waiver petition NP-10-173 approved 7/06/10 for the following:

- Section 16.116(a)(2)(iv) - requires that grading, removal of vegetative cover and trees, paving and new structures shall not be permitted within 50 feet of a perennial streambank buffer in non-residential zoning districts. The waiver is to allow minimal disturbance to a culvert emergency access road improvements to widen an existing road with a culvert extension to provide a second means of emergency access from the county park to UJ Route 1.
- Section 16.1202(a)(2) - requires the submission of a Forest Conservation Plan for approval for the entire project as part of the Site Development Plan submission. The waiver is to allow the forest conservation requirements for this project to be reviewed in phases rather than under one submission for the entire county park.
- Section 16.1204(d)(8) - requires the recording of a plat of Forest Conservation Easement (FCE) for the entire project along with the establishment of Forest Conservation Easements with the forest conservation plan. The waiver is to allow for the temporary deferral for submission and recording of the plat of fee until the last phase of development for the county park.
- Section 16.1205(a)(1) and (10) - requires that priority on-site retention of state champion trees, trees 75% of the diameter of state champion trees, trees 30" in diameter or larger and specimen trees be left undisturbed during the grading and construction process. The waiver is to allow for the removal of 4 specimen trees within phase 1 of the county park project.

52. A Forest Conservation Easement will be established to fulfill the requirements of Section 16.1200 of the Howard County Code and the Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easements, however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed. Development on Lots A21 & A22 are exempt from the Forest Conservation Act as they are part of the Troy Hill Corporate Center which is a planned business park of at least 75 acres which received approval prior to 12/31/92 in accordance with Section 16.1202 (b)(1)(v) of the Howard County Code. A Forest Conservation obligation for Phase 1 of 17.4 acres will be met with 3.5 acres of on-site retention and 14 acres of on-site reforestation. Of the 14.1 acres of reforestation, 1.6 acres will be completed in Phase 1 with the remaining 12.5 acres will be planted with future phases of the development.

53. In accordance with Section 12B.10 of the Zoning regulations, setbacks from lot lines internal to a development are not required when two or more continuous lots or parcels are treated as a single lot for development purposes.

54. Historic Troy Mansion and associated grounds, MHT #44, will not be disturbed under Phase 1.

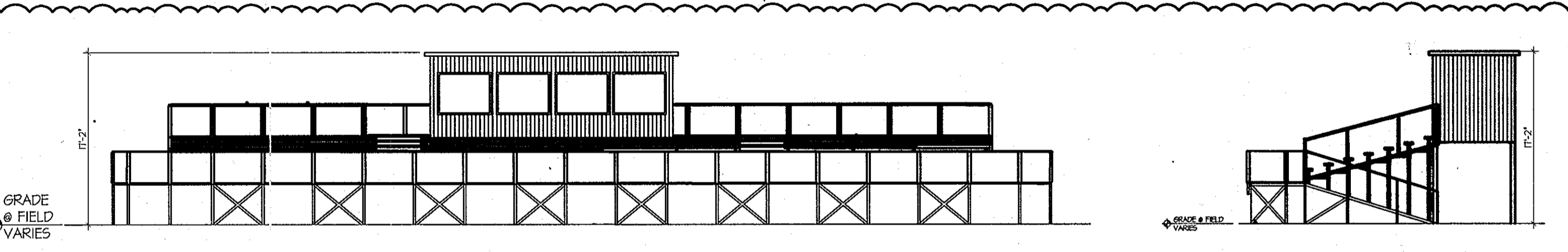
55. Troy Mansion and its grounds are listed on the Howard County Historic Sites Inventory as HO-44. This plan came to the Historic District Commission on April 1, 2010 for Advisory Comments.

56. A waiver to allow mass grading of the site prior to SDP approval was applied for on 04/15/10. The waiver NP-11-038 was approved on 10/08/10 subject to the following conditions:

- Approval from the Howard Soil Conservation District and the Department of Inspections, Licenses and Permits is required for the associated grading plan prior to the issuance of any required permits.
- The limit of disturbance and grading permit shall not exceed the limits as shown on the waiver plan exhibit submitted with this waiver request.
- The developer must continue processing SDP-11-003 to its completion of signature approval and meet all applicable processing deadlines. If the SDP is voided or withdrawn for any reason, the developer will be required to address the forest conservation obligation requirements for the limit of disturbance indicated for this site under the grading plan and grading permit application.
- The grading shown on the exhibit is temporary and shall be stabilized in accordance with the latest Sediment and Erosion Control standards and specifications.
- Final grading and development shall be approved in accordance with SDP-11-003 which will design the final stormwater management requirements for the final design conditions.

57. The Howard County Council adopted Resolution 122-2010, which closes an approximately 1.6 mile part of Mansion Lane. It was adopted on 10/28/10.

58. The Howard County Council adopted a Variance Request Resolution which allows proposed field 5-3 to extend into the structure and use setback adjacent to Route 100. COUNCIL RESOLUTION NO. 16-8-2013 TO ABOLISH 50' STRUCTURE & USE SETBACK TO 25' FOR FIELD 5-3 AND RELATED FENCE.



**BLEACHER AND PRESS BOX ELEVATIONS**

**ASSOCIATED PROJECT REVIEW FILE NUMBERS**

S-90-005, P-40-23, F-41-24, F-46-136, F-48-164, NP-46-41, F-00-103, F-02-44, ECP-10-008 Plans associated with Troy Hill Corporate Center and Mansion Lane.  
NP-10-173 Troy Park waiver for road crossing stream, removal of specimen trees, adjust Forest Conservation review, postpone Forest Conservation easements, and setback from right-of-way.  
NP-11-038 Troy Park waiver to allow mass grading of the site prior to approval of the SDP.

**LIGHTING FIXTURE SCHEDULE**

SYMBOL	TYPE	DESCRIPTION	LAMPS		MAX PL	MOUNTING	MANU / MODEL No. (OR APPROVED EQUAL)
			VOLTS	NO.			
—	STREET	PENDANT FIXTURE MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM.	-	1	HPS VAPOR	250	40' POLE
▲	SPORTS FIELD		-	12	METAL HALIDE	1500	70' POLE
⊙	PARKING		-	1	LED	-	30' POLE

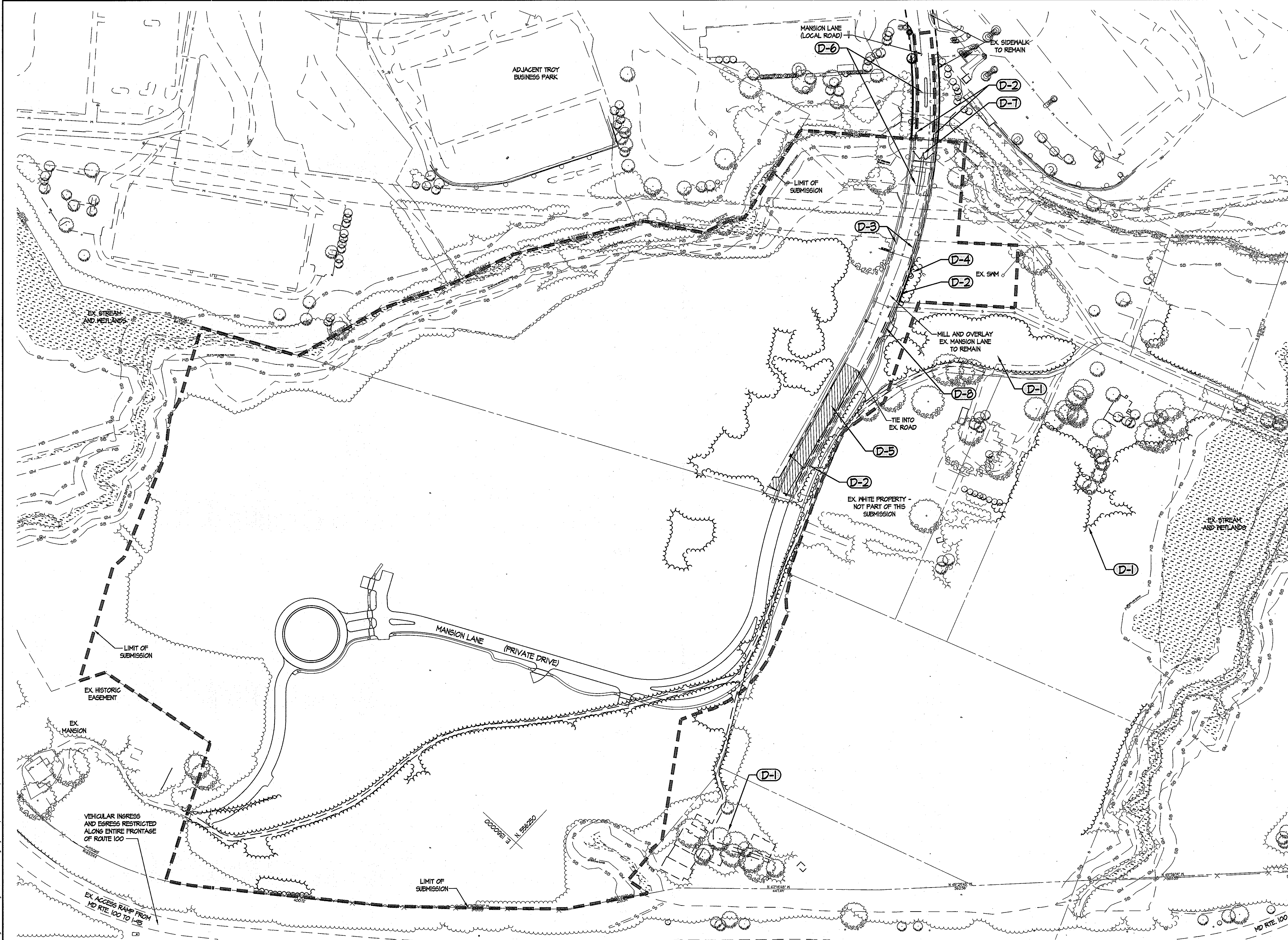
NOTE: ALL EXTERIOR LIGHTING SHALL COMPLY WITH THE REQUIREMENTS FOUND IN SECTION 154.0 OF HOWARD COUNTY ZONING REGULATIONS.

**EXISTING VEGETATIVE COMMUNITIES**

The site is largely covered by successional forest approximately 20-40 years of age. The condition of most of this stand is fair with many invasive species and dense vine cover. There is a small stand containing some mature, larger trees outside of the developed area adjacent to R3.100.

<p>APPROVED: DEPARTMENT OF PLANNING &amp; ZONING</p> <p><i>Michael A. Gough</i> DIRECTOR</p> <p><i>Chris Edwards</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION</p> <p><i>Victor L. ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT</p>	<p>ADDRESS / PERMIT INFORMATION</p> <p>PARCEL 341, 342, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000</p>	<p>DES: KPR</p> <p>SRI: 2</p> <p>ADD SPORTS FIELDS &amp; PARKING LOTS</p> <p>11/26/13</p>	<p>DRN: AM</p> <p>CHK: AFE</p> <p>DATE: 08/12/12</p>	<p>BY: NO.</p> <p>REVISION</p> <p>DATE: 600' SCALE MAP NO. 51</p> <p>BLOCK NO. 16</p>	<p>SITE NOTES</p>	<p>SCALE: AS SHOWN</p> <p>CO.02</p> <p>SHEET 2 OF 64</p>
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**LEGEND** (THIS LEGEND APPLIES TO SHEETS C1.00 ONLY)

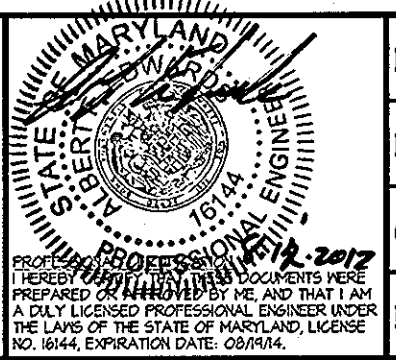
- PROPERTY LINE
- EXISTING TREELINE TO REMAIN
- EXISTING TREELINE TO BE REMOVED
- ☀ EXISTING TREES TO REMAIN
- ☀ EXISTING TREES TO BE REMOVED
- ⊗ EXISTING SHRUBS TO REMAIN
- ⊗ EXISTING SHRUBS TO BE REMOVED
- EXISTING WALK TO REMAIN
- EXISTING ROAD TO REMAIN
- EXISTING PAVING TO BE REMOVED
- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- EXISTING GUARDRAIL TO REMAIN
- EXISTING GUARDRAIL TO BE REMOVED
- EXISTING BUILDING TO REMAIN
- EXISTING BUILDING TO BE REMOVED
- EXISTING WETLANDS
- WETLAND BUFFER
- EXISTING STREAM
- EXISTING STREAM BUFFER
- LIMIT OF SUBMISSION

**DEMOLITION NOTES:** (THESE NOTES APPLY TO SHEET C1.00 ONLY)

- D-1** DEMOLITION WORK SHOWN OUTSIDE OF LIMIT OF SUBMISSION IS NOT INCLUDED IN THIS CONTRACT.
- D-2** DEMOLISH AND REMOVE APPROX. 600' OF EXISTING CONCRETE WALK.
- D-3** SAWCUT AND REMOVE APPROX. 20' L.F. OF CONCRETE CURB AND GUTTER FOR CURB RAMPS.
- D-4** REMOVE AND RELOCATE PORTION OF EXISTING GUARDRAIL TO BEHIND PROPOSED WALK - GUARD RAIL - SEE MSHA STANDARD DETAIL 605.23-02 AND 605.27.
- D-5** DEMOLISH AND REMOVE APPROX. 325' L.F. OF ASPHALT ROAD, CONCRETE CURB AND GUTTER BEGINNING AT STA. 7+75.56.
- D-6** SAW CUT AND REMOVE ASPHALT PAVING AND BASE MATERIAL FOR PROPOSED LANDSCAPE ISLANDS.
- D-7** REMOVE EXISTING METAL SWING GATE.
- D-8** SAWCUT AND REMOVE APPROX. 74' L.F. OF CONCRETE CURB AND GUTTER.

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paul H. Long* 2/1/13  
 DIRECTOR DATE  
*John P. ...* 1/31/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Ketsh ...* 2/01/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL: 595, 545, 542, 594, 195, 193 LOT A-21, 199 LOT A-22  
 ADDRESS: 6400 MANSION LANE  
 L571 / F44, L0585 / F351, L2205 / F340, L5789 / F420,  
 L5841 / F118, L4823 / F481, L4855 / F490, L4895 / F410  
 GRID IT F. 18 ZONE: N41 TAX MAP NO. 57  
 2ND ELECTION DISTRICT: CENSUS TRACT 8022.02  
 WATER CODE: 400, SEWER CODE: 252200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 312-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 312-2100



DES: KFR					
DRN: AM					
CHK: AFE					
DATE: 08/12/12	BY	NO.	REVISION	DATE	

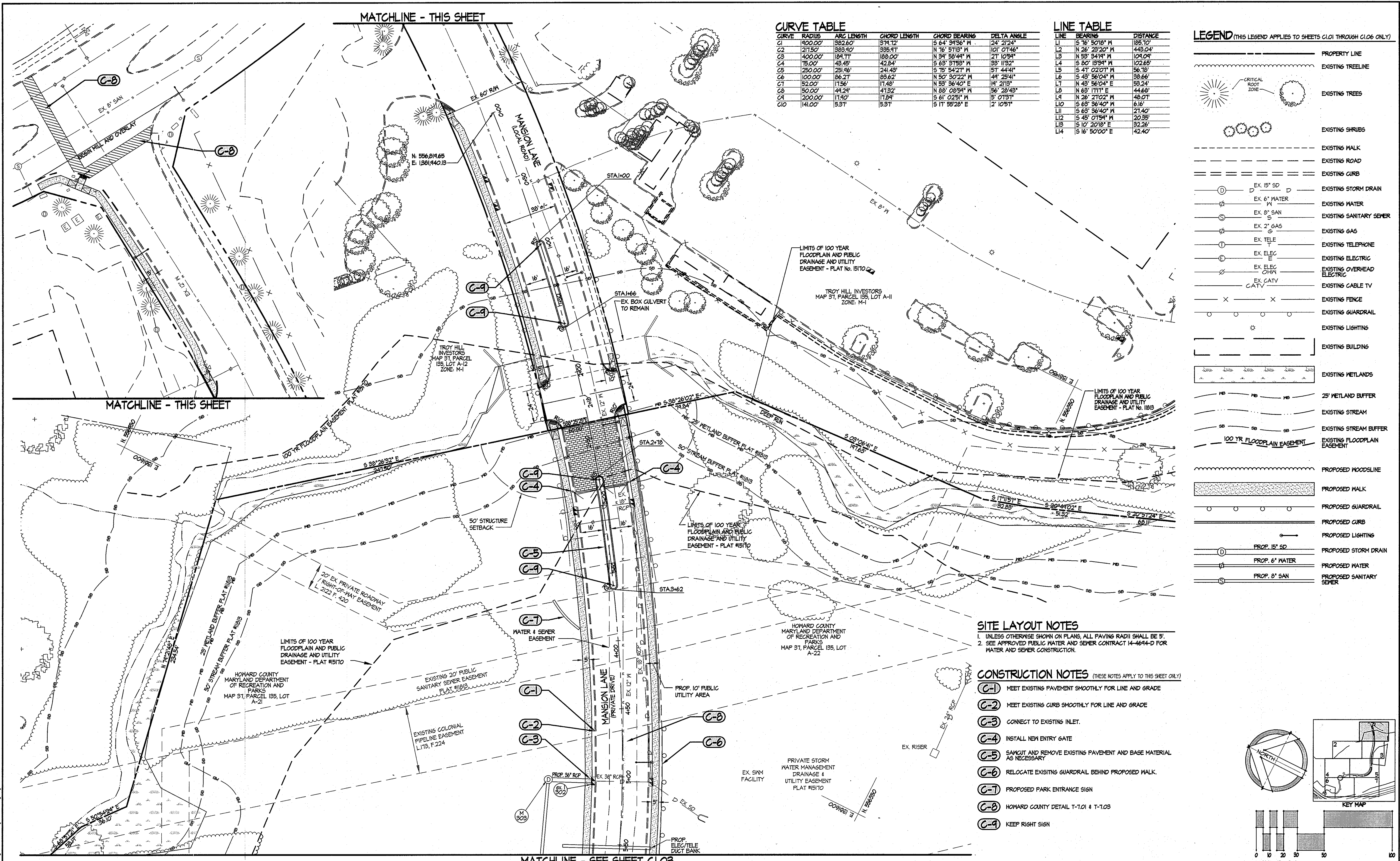
**OVERALL SITE LAYOUT & DEMOLITION PLAN**  
 600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SCALE: 1"=100'  
 C1.00  
 SHEET 3 OF 64

Z:\010022-Troy Park Phase One\Site Plan\010022-Troy Park Phase One\Overall.dwg-Loggall Sep 18, 2012 02:08pm a.m.





**CURVE TABLE**

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	100.00'	382.20'	374.72'	S 64° 39'36" W	24° 21'24"
C2	217.50'	388.90'	335.91'	N 76° 51'18" W	101° 07'46"
C3	400.00'	184.71'	188.00'	N 34° 58'44" W	21° 10'54"
C4	75.00'	43.45'	42.84'	S 63° 37'58" W	33° 11'32"
C5	250.00'	251.96'	241.43'	S 75° 54'21" W	51° 44'41"
C6	100.00'	86.21'	85.62'	N 50° 30'22" W	44° 25'41"
C7	52.00'	17.56'	17.48'	N 53° 36'40" E	14° 21'15"
C8	50.00'	44.24'	47.92'	N 63° 03'54" W	56° 28'43"
C9	200.00'	17.40'	17.84'	S 61° 02'51" W	5° 07'31"
C10	141.00'	5.37'	5.37'	S 17° 55'28" E	2° 10'51"

**LINE TABLE**

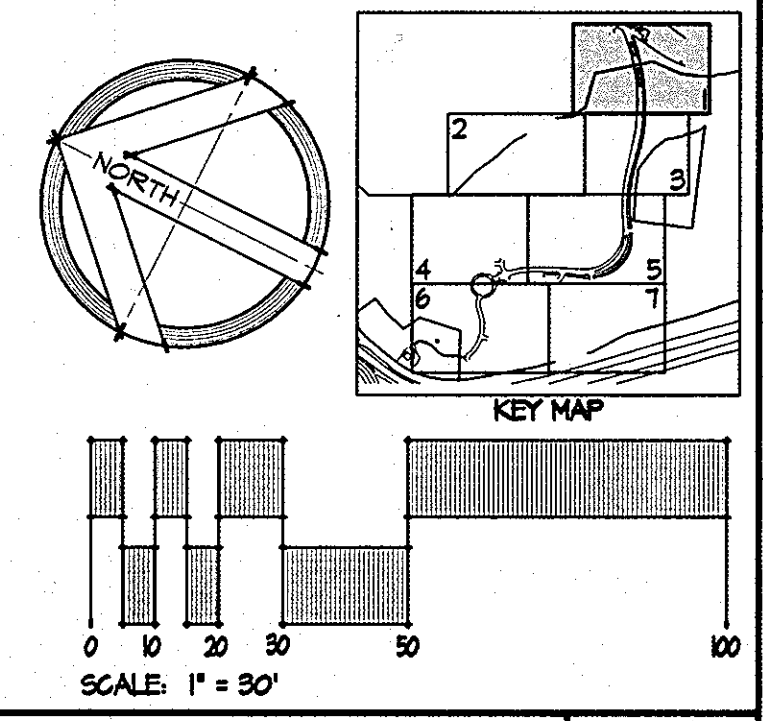
LINE	BEARING	DISTANCE
L1	S 76° 50'18" W	185.70'
L2	N 26° 28'20" W	443.04'
L3	N 53° 34'14" W	104.04'
L4	S 80° 13'34" W	102.65'
L5	S 41° 02'07" W	56.78'
L6	S 43° 56'04" W	38.66'
L7	N 43° 56'04" E	35.24'
L8	N 63° 11'11" E	44.68'
L9	N 26° 21'02" W	48.07'
L10	S 63° 36'40" W	6.16'
L11	S 63° 36'40" W	21.40'
L12	S 45° 07'54" W	20.35'
L13	S 10° 20'18" E	32.26'
L14	S 16° 50'00" E	42.40'

- LEGEND** (THIS LEGEND APPLIES TO SHEETS C1.01 THROUGH C1.06 ONLY)
- PROPERTY LINE
  - EXISTING TREELINE
  - EXISTING TREES
  - EXISTING SHRUBS
  - EXISTING WALK
  - EXISTING ROAD
  - EXISTING CURB
  - EXISTING STORM DRAIN
  - EXISTING WATER
  - EXISTING SANITARY SEWER
  - EXISTING GAS
  - EXISTING TELEPHONE
  - EXISTING ELECTRIC
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING CABLE TV
  - EXISTING FENCE
  - EXISTING GUARDRAIL
  - EXISTING LIGHTING
  - EXISTING BUILDING
  - EXISTING WETLANDS
  - 25' WETLAND BUFFER
  - EXISTING STREAM
  - EXISTING STREAM BUFFER
  - EXISTING FLOODPLAIN EASEMENT
  - PROPOSED WOODLINE
  - PROPOSED WALK
  - PROPOSED GUARDRAIL
  - PROPOSED CURB
  - PROPOSED LIGHTING
  - PROPOSED STORM DRAIN
  - PROPOSED WATER
  - PROPOSED SANITARY SEWER

**SITE LAYOUT NOTES**

- UNLESS OTHERWISE SHOWN ON PLANS, ALL PAVING RADII SHALL BE 5'.
- SEE APPROVED PUBLIC WATER AND SEWER CONTRACT 14-4644-D FOR WATER AND SEWER CONSTRUCTION.

- CONSTRUCTION NOTES** (THESE NOTES APPLY TO THIS SHEET ONLY)
- C-1** MEET EXISTING PAVEMENT SMOOTHLY FOR LINE AND GRADE
  - C-2** MEET EXISTING CURB SMOOTHLY FOR LINE AND GRADE
  - C-3** CONNECT TO EXISTING INLET.
  - C-4** INSTALL NEW ENTRY GATE
  - C-5** SAWCUT AND REMOVE EXISTING PAVEMENT AND BASE MATERIAL AS NECESSARY
  - C-6** RELOCATE EXISTING GUARDRAIL BEHIND PROPOSED WALK.
  - C-7** PROPOSED PARK ENTRANCE SIGN
  - C-8** HOWARD COUNTY DETAIL T-1.01 & T-1.03
  - C-9** KEEP RIGHT SIGN



APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: *[Signature]* 2/4/18  
 Chief Development Engineering Division: *[Signature]* 1/31/15  
 Chief, Division of Land Development: *[Signature]* 4/1/13

ADDRESS / PERMIT INFORMATION  
 PARCEL: 301, 302, 303, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 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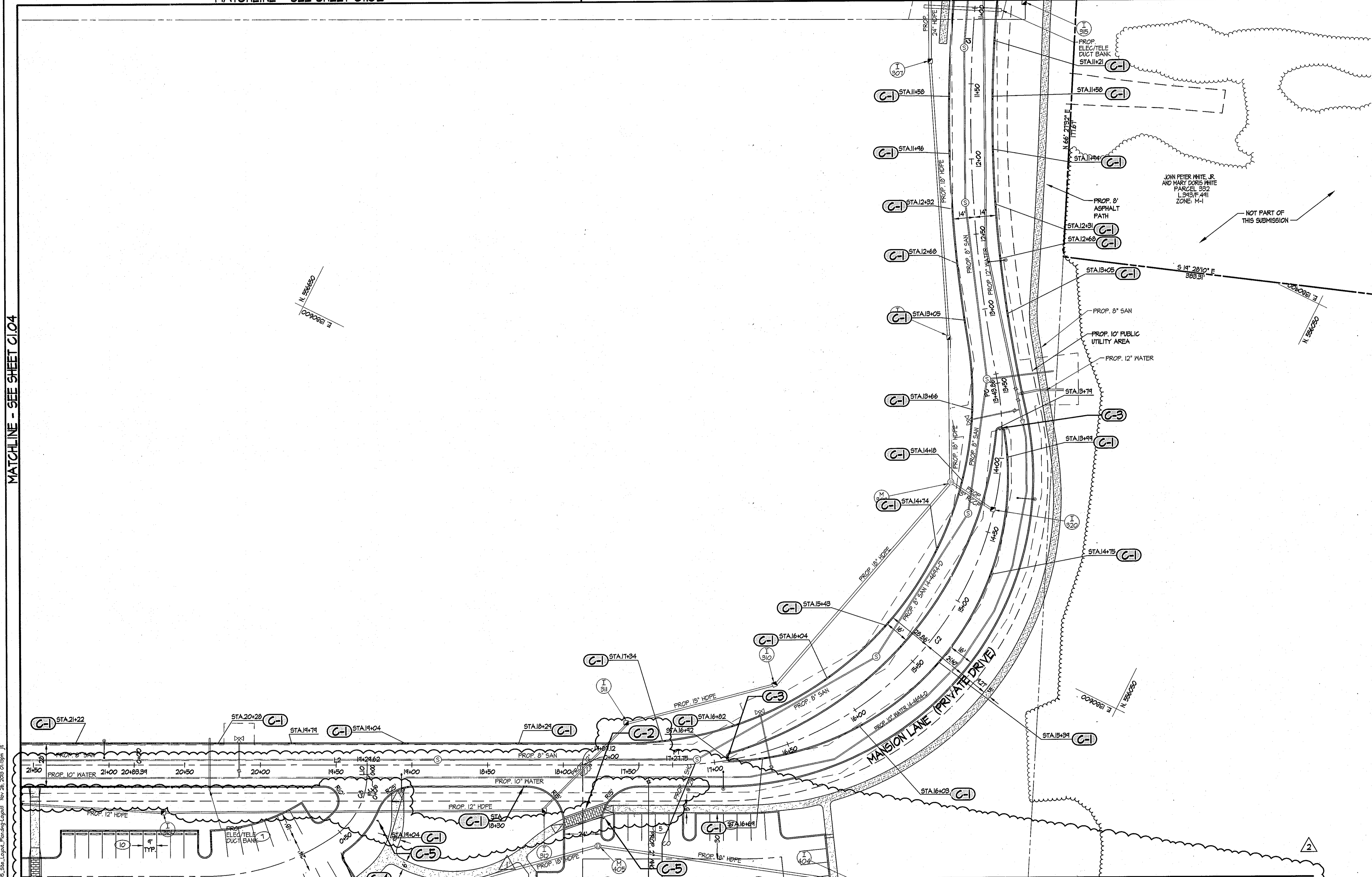




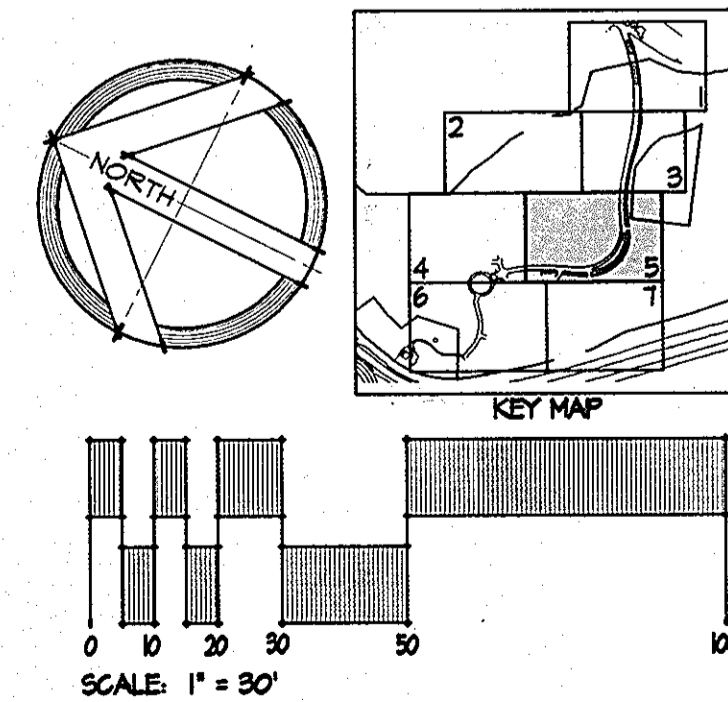
MATCHLINE - SEE SHEET C1.02

MATCHLINE - SEE SHEET C1.03

MATCHLINE - SEE SHEET C1.04



- CONSTRUCTION NOTES**  
(THESE NOTES APPLY TO THIS SHEET ONLY)
- C-1 CURB CUT SEE DETAIL #8 ON SHEET C2.01
  - C-2 HOWARD COUNTY DETAIL T-1.01 & T-1.03
  - C-3 KEEP RIGHT SIGN
  - C-4 HOWARD COUNTY DETAIL R-5.01 (6' WOOD POST TO BE TREATED FOR IN-GROUND USE)
  - C-5 STOP SIGN



MATCHLINE - SEE SHEET C4.06

MATCHLINE - SEE SHEET C1.07

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: *Chris Edwards* DATE: 12/12/12  
 Chief, Development Engineering Division  
 Chief, Division of Land Development

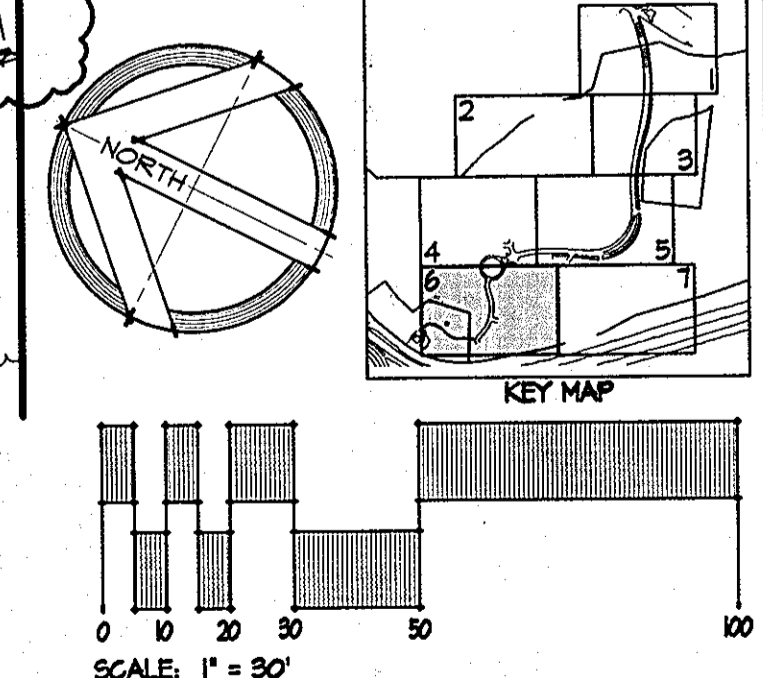
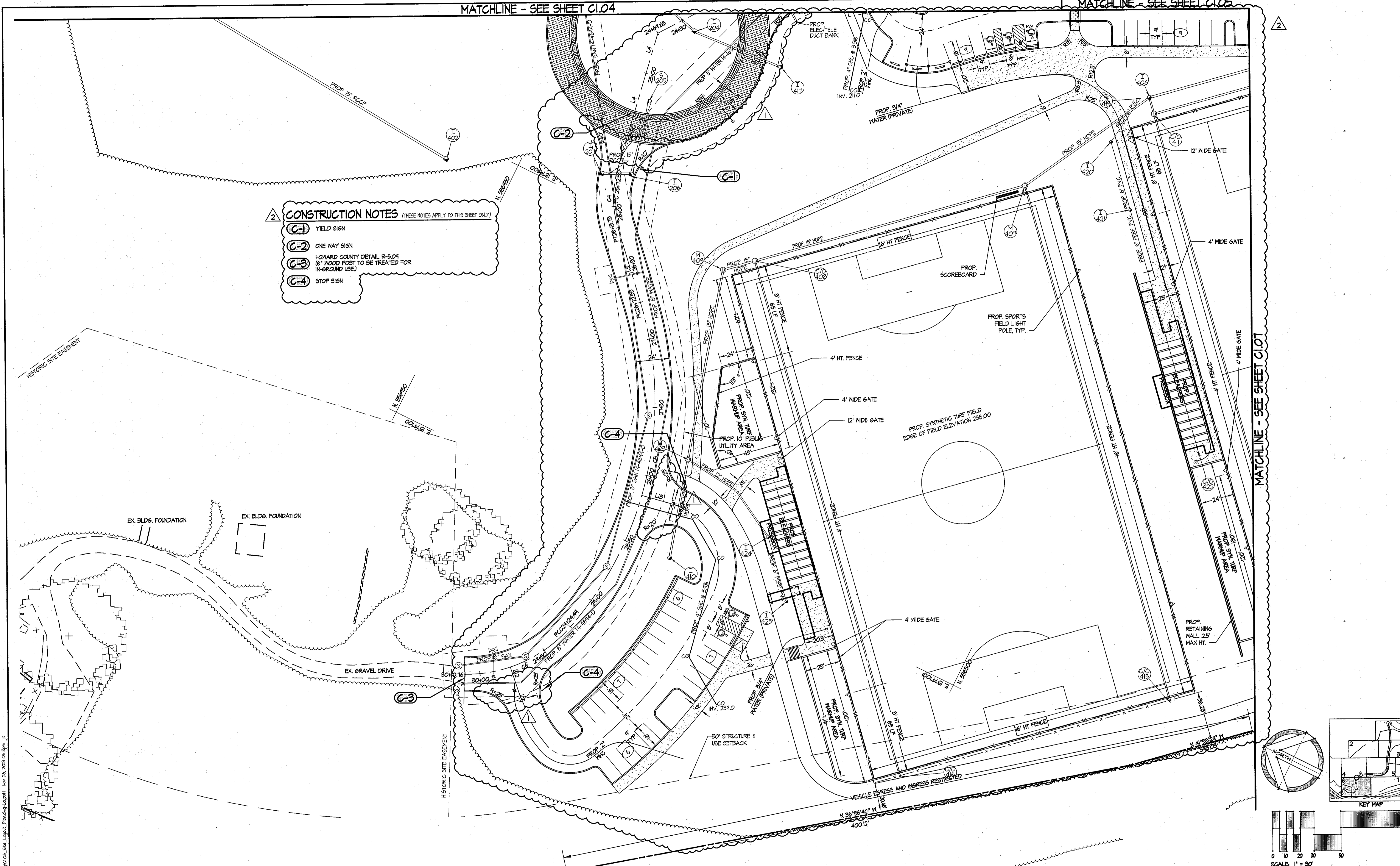
ADDRESS / PERMIT INFORMATION  
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MATCHLINE - SEE SHEET C1.04

MATCHLINE - SEE SHEET C1.05

- CONSTRUCTION NOTES** (THESE NOTES APPLY TO THIS SHEET ONLY)
- C-1** YIELD SIGN
  - C-2** ONE WAY SIGN
  - C-3** HOWARD COUNTY DETAIL R-5.04 (6" WOOD POST TO BE TREATED FOR IN-GROUND USE)
  - C-4** STOP SIGN



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark A. Angle* 12/13/13  
 DIRECTOR DATE  
*Chad Edmondson* 12/13/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Kristen Leland* 12/13/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL 561, 548, 542, 536, 150, 185, 195 LOT A-21, 195 LOT A-22  
 ADDRESS: 6400 HANSON LANE  
 LOTS: F1A, L2205 / F351, L2206 / F340, L5183 / F600,  
 L584 / F178, L4933 / F451, L493 / F680, L6155 / F1, 640  
 GRID 11 & 13, ZONE: M4, TAX MAP NO. 31  
 2ND ELECTION DISTRICT, GENES TRACT 6022.02  
 WATER CODE: 600, SEWER CODE: 292200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 312-2100  
 FAX: (410) 312-2100

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 1415 Jamiesville Pike • Pikesville, Maryland 21111  
 (410) 855-5338 • Fax (410) 855-5339

DES: JLT	GRI: 2	ADD SPORTS FIELDS & PARKING LOTS	1/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY: NO.	REVISION	DATE

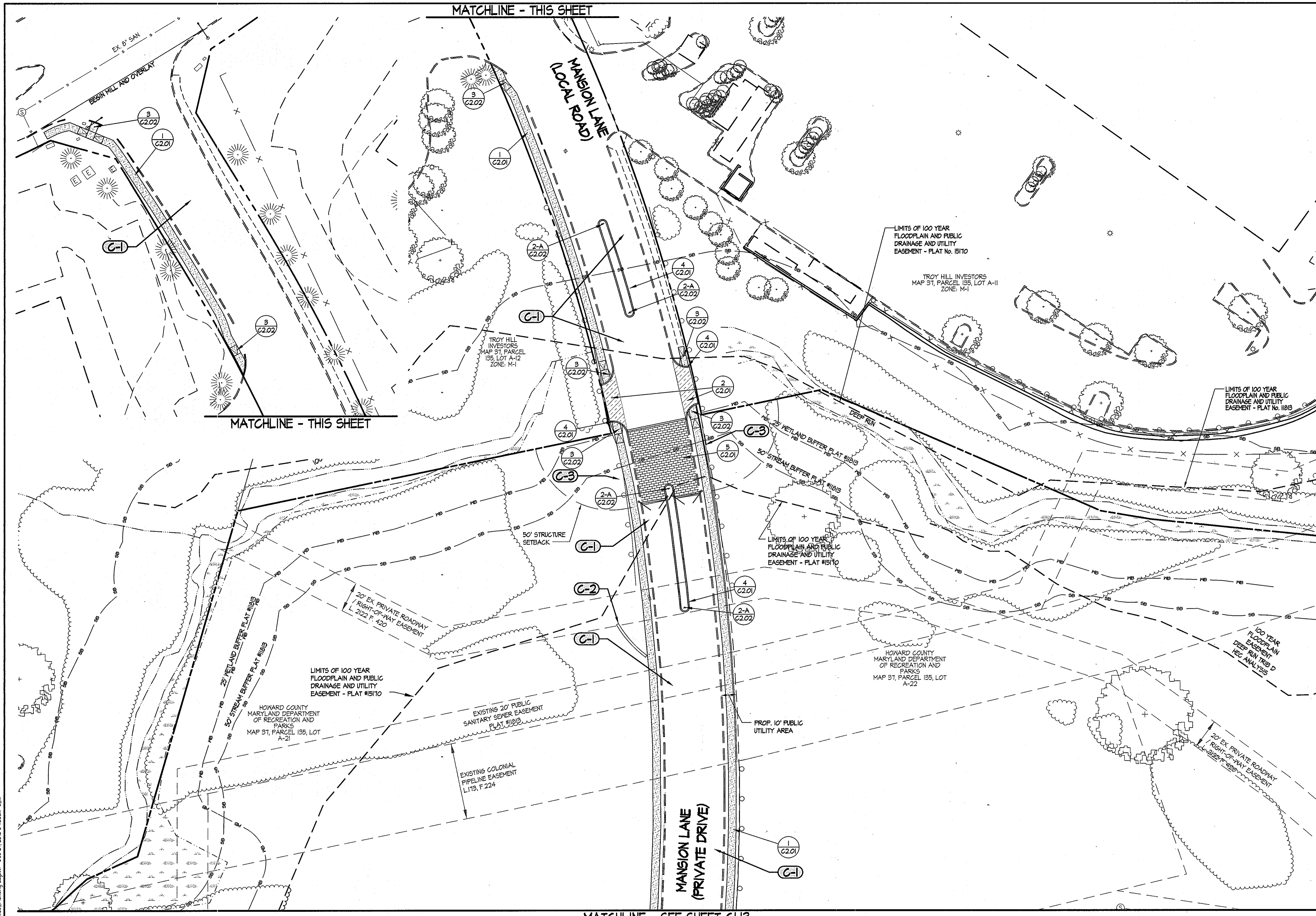
**SITE LAYOUT PLAN**  
 600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1"=30'  
**C1.06**  
 SHEET 9 OF 64  
 SDP-11-003







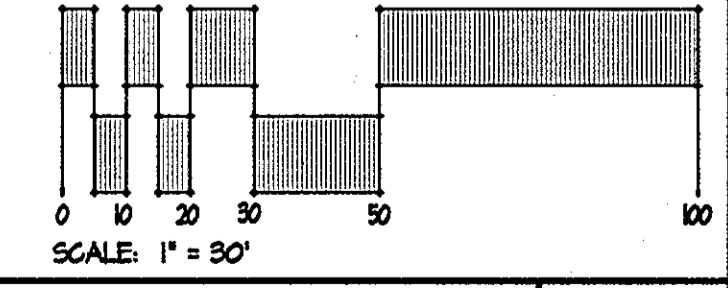
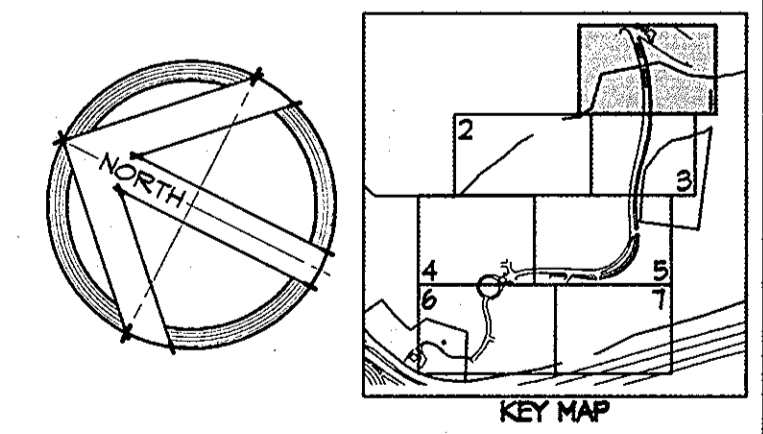


**LEGEND** (THIS LEGEND APPLIES TO SHEETS C1.II THROUGH C1.II ONLY)

- PROPERTY LINE
- EXISTING TREELINE
- EXISTING ROAD
- EXISTING CURB
- EXISTING STORM DRAIN
- EXISTING GUARDRAIL
- EXISTING LIGHTING
- EXISTING BUILDING
- EXISTING WETLANDS
- 25' WETLAND BUFFER
- EXISTING STREAM
- EXISTING STREAM BUFFER
- 100 YR FLOODPLAIN EASEMENT
- PROPOSED WOODSLINE
- PROPOSED WALK
- PROPOSED GROSSWALK SPECIALTY PAVING
- PROPOSED INTERMEDIATE DUTY BITUMINOUS PAVING
- PROPOSED HEAVY DUTY BITUMINOUS PAVING
- PROPOSED HEAVY DUTY CONCRETE PAVING
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- DETAIL REFERENCE
- PROPOSED CURB
- PROPOSED SIGN

**CONSTRUCTION NOTES:**  
THESE NOTES APPLY TO SHEET C1.II ONLY

- C-1 BEGIN MILL AND OVERLAY WITH 1 1/2" (2.5mm) SUPERPAVE AT STA. 4+35 AS SHOWN ON F-00-130.
- C-2 PROP. PARK ENTRANCE SIGN
- C-3 PROP. W-BEAM GUARDRAIL, SEE STATE HIGHWAY ADMINISTRATION STANDARD DETAIL 605.23



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*David A. Coyle* 2/14/13  
 DIRECTOR DATE  
*John J. ...* 1/31/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*W. ...* 2/01/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCELS: 361, 345, 342, 338, 192, 195, 193 LOT A-21, 195 LOT A-22  
 ADDRESS: 4650 MANSION LANE  
 L171 / F.44, L1255 / F.571, L12205 / F.340, L1518 / F.600,  
 L1534 / F.118, L4933 / F.451, L4653 / F.640, L4195 / F. 640  
 3RD FLOOR / F.18, ZONE: M-1, TAX MAP NO. 37  
 2ND ELECTION DISTRICT, GEN. TRACT 4012.02  
 WATER CODE: 400, SEWER CODE: 252200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 313-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 313-2100

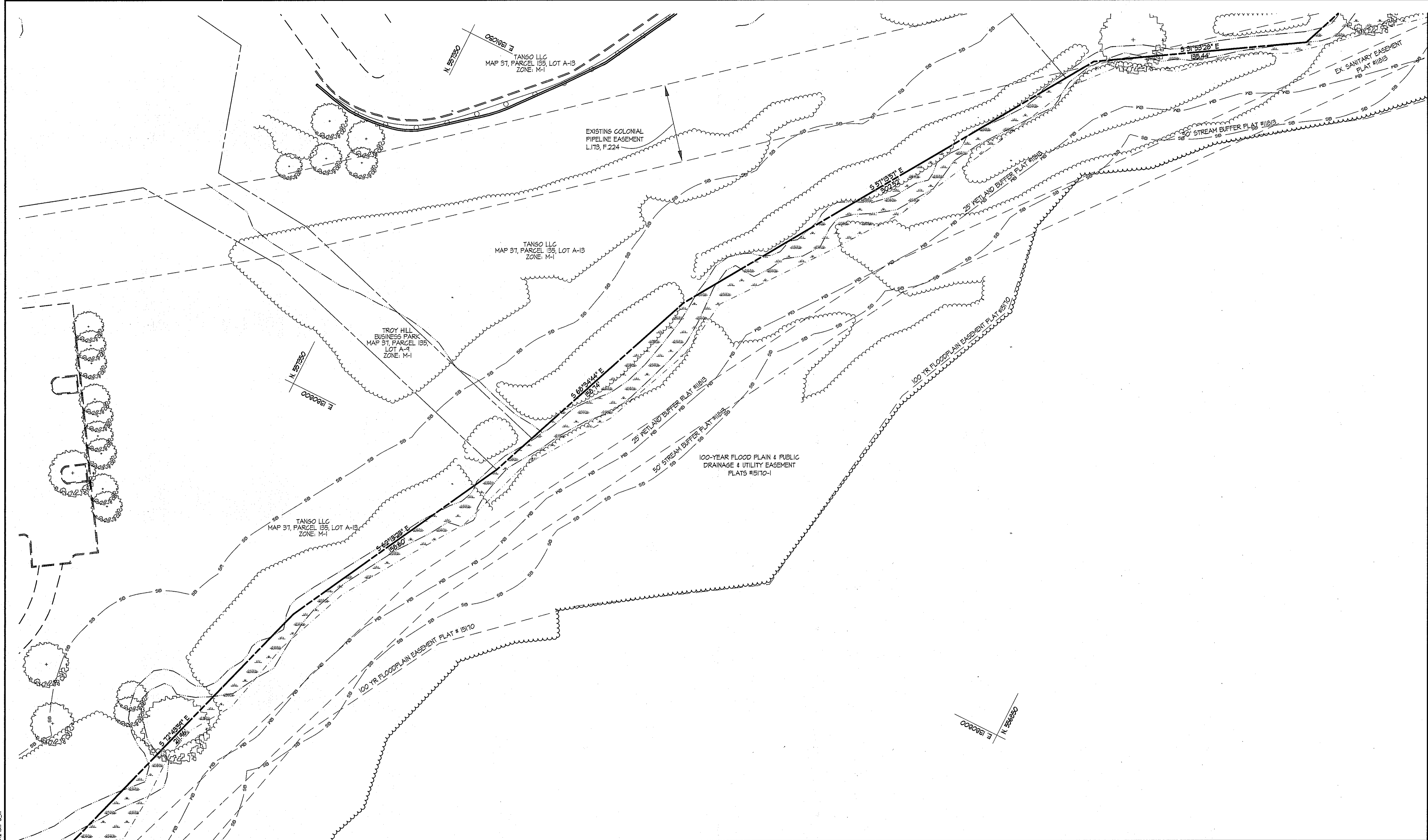
**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 14155 Arvertin Pike • Pikesville, Maryland 21111  
 (410) 663-3388 • fax (410) 663-3389

DES: KPR					
DRN: CMF					
CHK: AFE					
DATE: 08/12/12	BY: NO.	REVISION	DATE	600' SCALE MAP NO. 51	BLOCK NO. 16

**DETAIL REFERENCE PLAN**

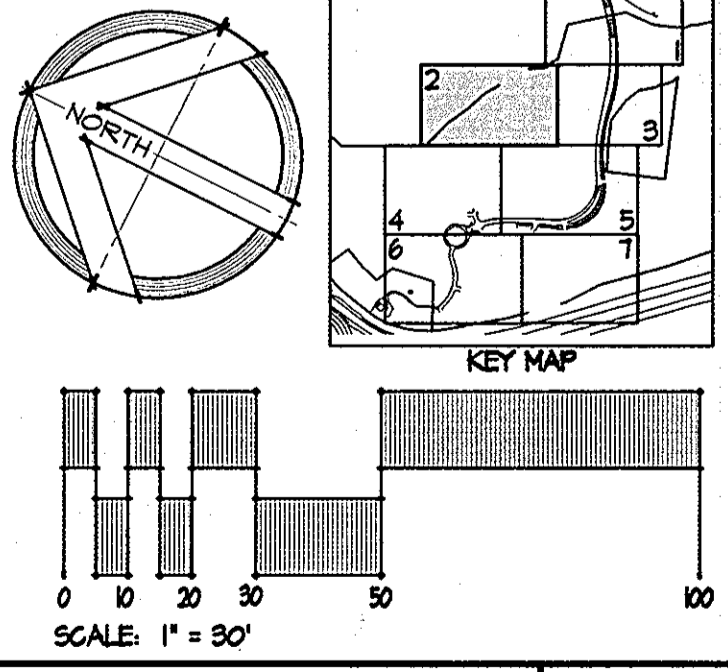
**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 30'  
 C1.II  
 SHEET 10 OF 64  
 SDP-II-003





MATCHLINE - SEE SHEET C1.15

MATCHLINE - SEE SHEET C1.14



Z:\010022-Troy Park Phase 1 Site Planning\C1.12 Detail Reference Plan.dwg - Plot Date: 2/20/13 10:27am & m

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*David A. Loyce* 2/14/13  
 DIRECTOR DATE  
*[Signature]* 1/31/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*[Signature]* 2/01/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCEL 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 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2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 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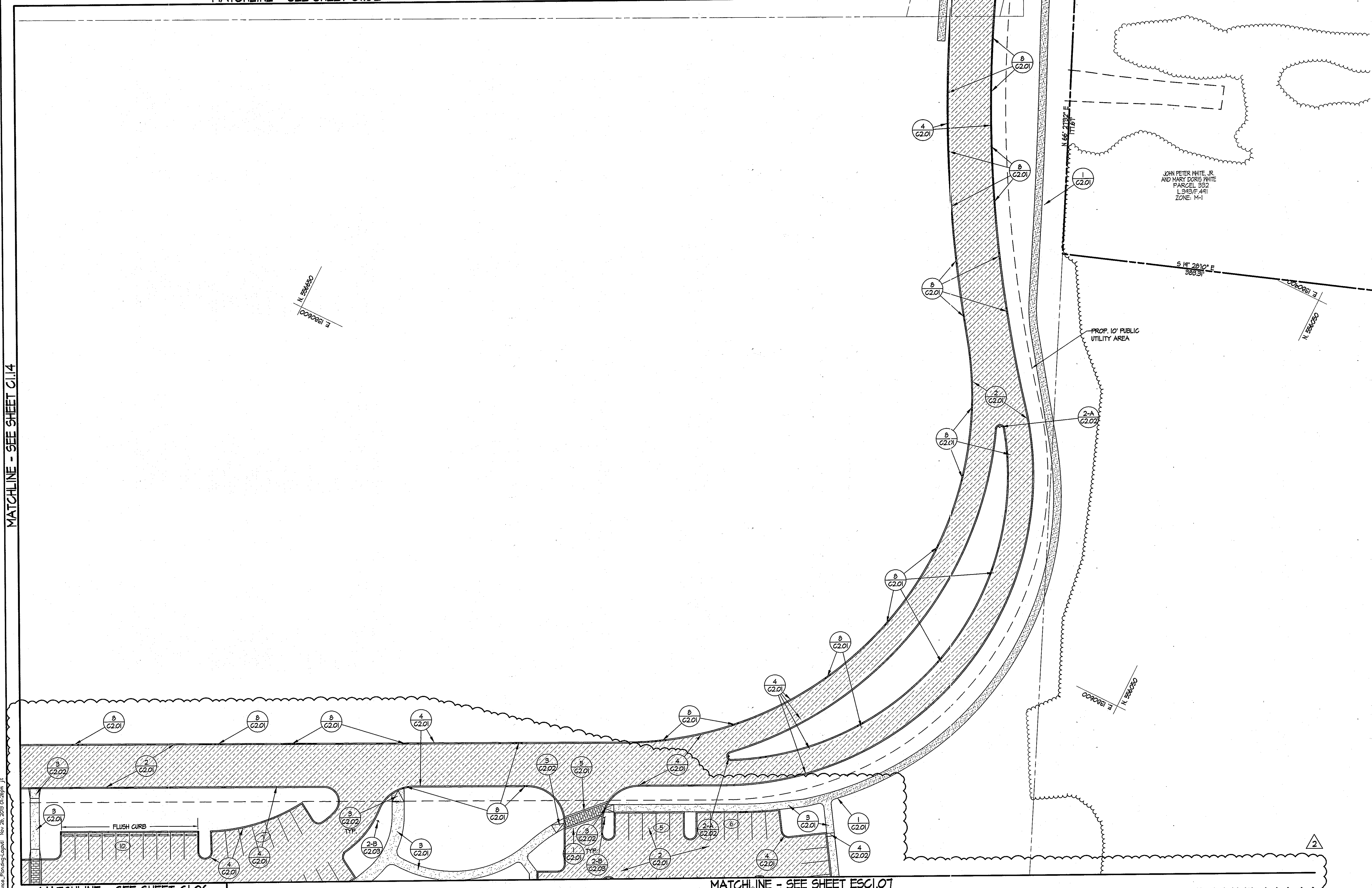




MATCHLINE - SEE SHEET C1.02

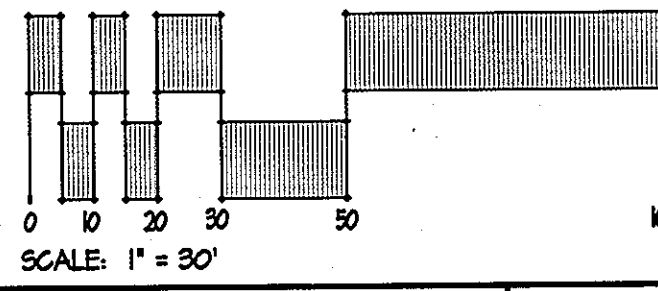
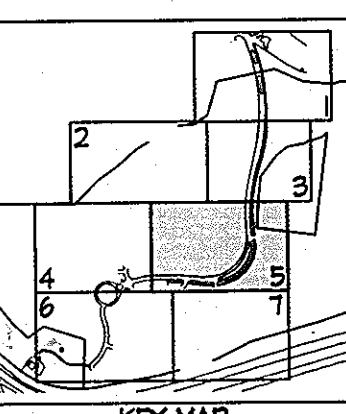
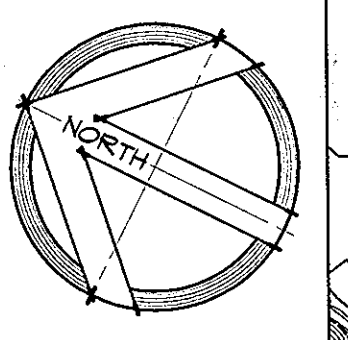
MATCHLINE - SEE SHEET C1.03

MATCHLINE - SEE SHEET C1.14



JOHN PETER WHITE JR.  
AND MARY DORIS WHITE  
PARCEL 332  
L 343/F 441  
ZONE: M-1

PROP. 10' PUBLIC  
UTILITY AREA



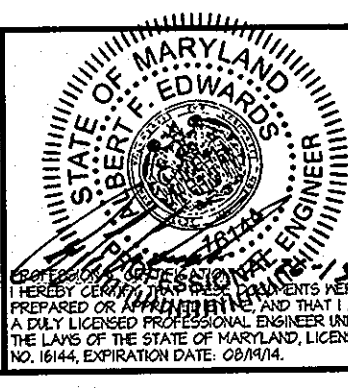
MATCHLINE - SEE SHEET C1.06

MATCHLINE - SEE SHEET ESC1.07

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Chris Edwards* 12/13/13 DATE  
 DIRECTOR  
*Neil S. Edwards* 12-13-13 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCEL 561 548 542 536; 100 105 106 LOT A-21, 105 LOT A-22  
 ADDRESS: 6400 HANSON LANE  
 L 571 / F 416, L 2559 / F 351, L 2209 / F 340, L 5183 / F 600,  
 L 584 / F 10, L 459 / F 431, L 623 / F 610, L 685 / F 640  
 6601 11 10, ZONE: M-1, TAX MAP NO. 31  
 2ND ELECTION DISTRICT, GENESIS TRACT 601202  
 WATER CODE: 460, SEWER CODE: 392200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 312-2100

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 14315 Jermolville Pike • Plover, Maryland 21111  
 (410) 883-3388 • Fax (410) 883-3389



DES: JLT			
DRN: CMF			
CHK: AFE			
DATE: 08/12/12	BY: NO.	REVISION	DATE
		2 ADD SPORTS FIELDS & PARKING LOTS	12/6/13

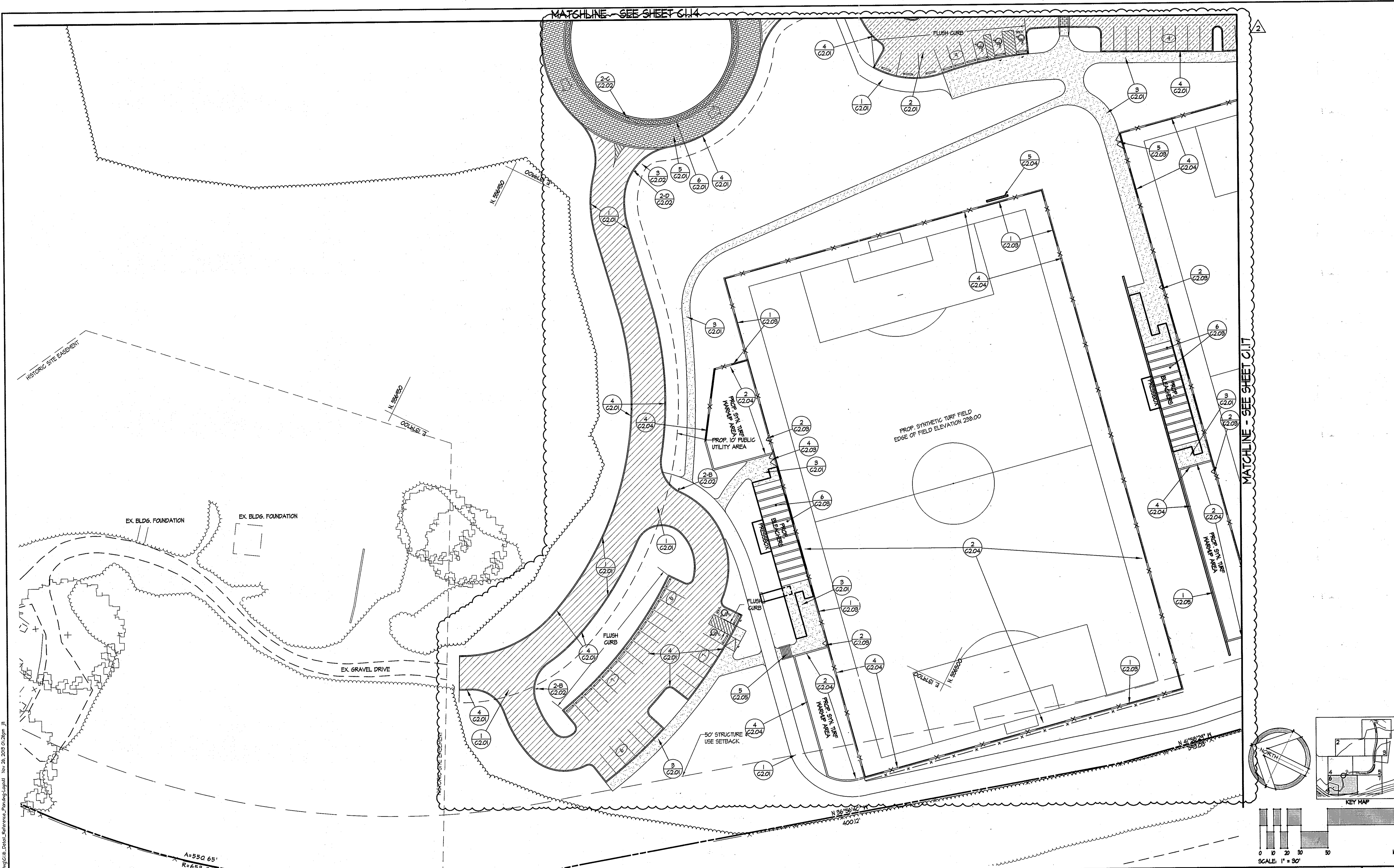
DETAIL REFERENCE PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND

SCALE: 1"=30'  
 C1.15  
 SHEET 14 OF 64  
 SDP-11-003

T:\10\0222\Troy Park Phase 1 Site Plan\DWG\C1.15 Detail Reference Plan.dwg, 12/13/13 11:11 AM





APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Handwritten signature*  
 DIRECTOR  
 DATE: 12/11/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 12-11-13

CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 12-11-13

ADDRESS / PERMIT INFORMATION  
 PARCEL 561 545 542 536; HQ 185 185 LOT A-21, 185 LOT A-22  
 ADDRESS: 1400 MANSION LANE  
 LST1 / F44, L12205 / F351, L12205 / F340, L5185 / F400,  
 L584 / F18, L485 / F481, L483 / F480, L485 / F480  
 GRID 11.4 18, ZONE: HQ, TAX MAP NO. 31  
 2ND ELECTION DISTRICT: GENES TRACT 602.02  
 WATER CODE: 600, SEWER CODE: 302.01

OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 382-2100

DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 382-2100

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services

14365 Jermolville Pike • Flobitz, Maryland 21111  
 (410) 685-3008 • Fax (410) 685-3009

DES: JLT	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
DRN: CMF			
CHK: AFE			
DATE: 08/12/12	BY NO.	REVISION	DATE

DETAIL REFERENCE PLAN

600' SCALE MAP NO. 51 BLOCK NO. 16

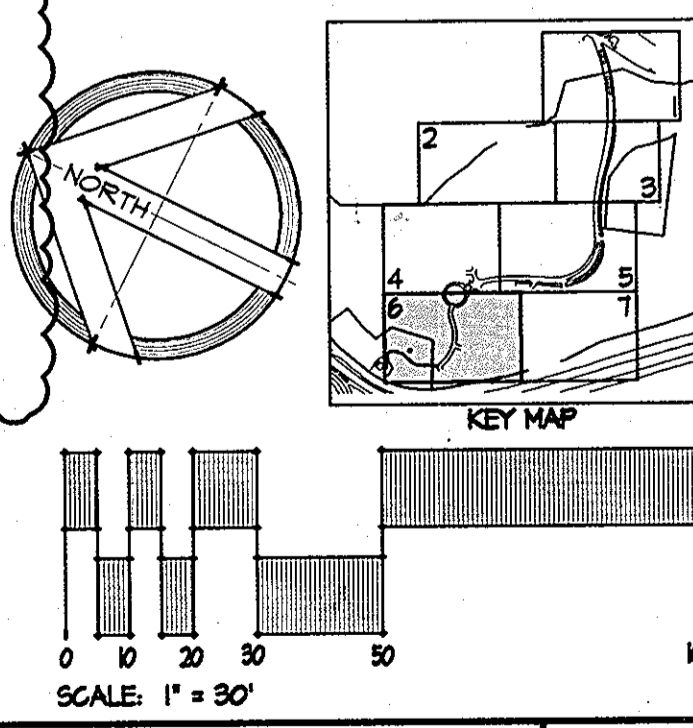
**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3457

HOWARD COUNTY, MARYLAND

SCALE: 1" = 30'

C1.16  
 SHEET 15 OF 64  
 SDP-II-003

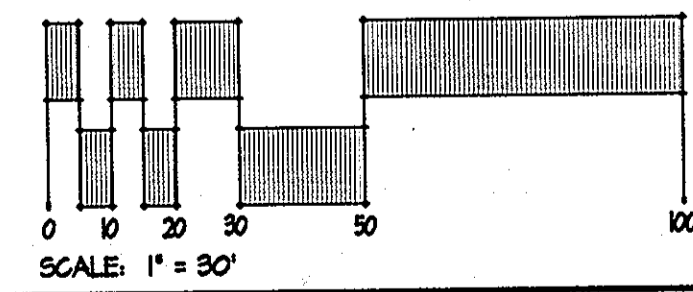
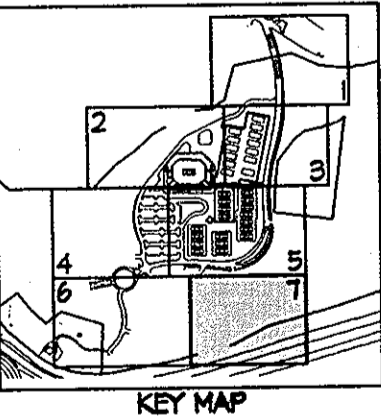
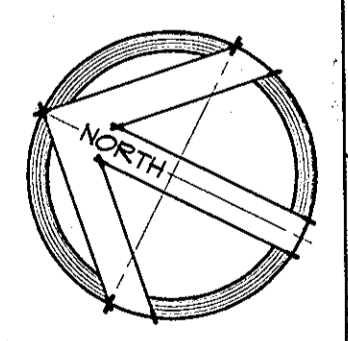
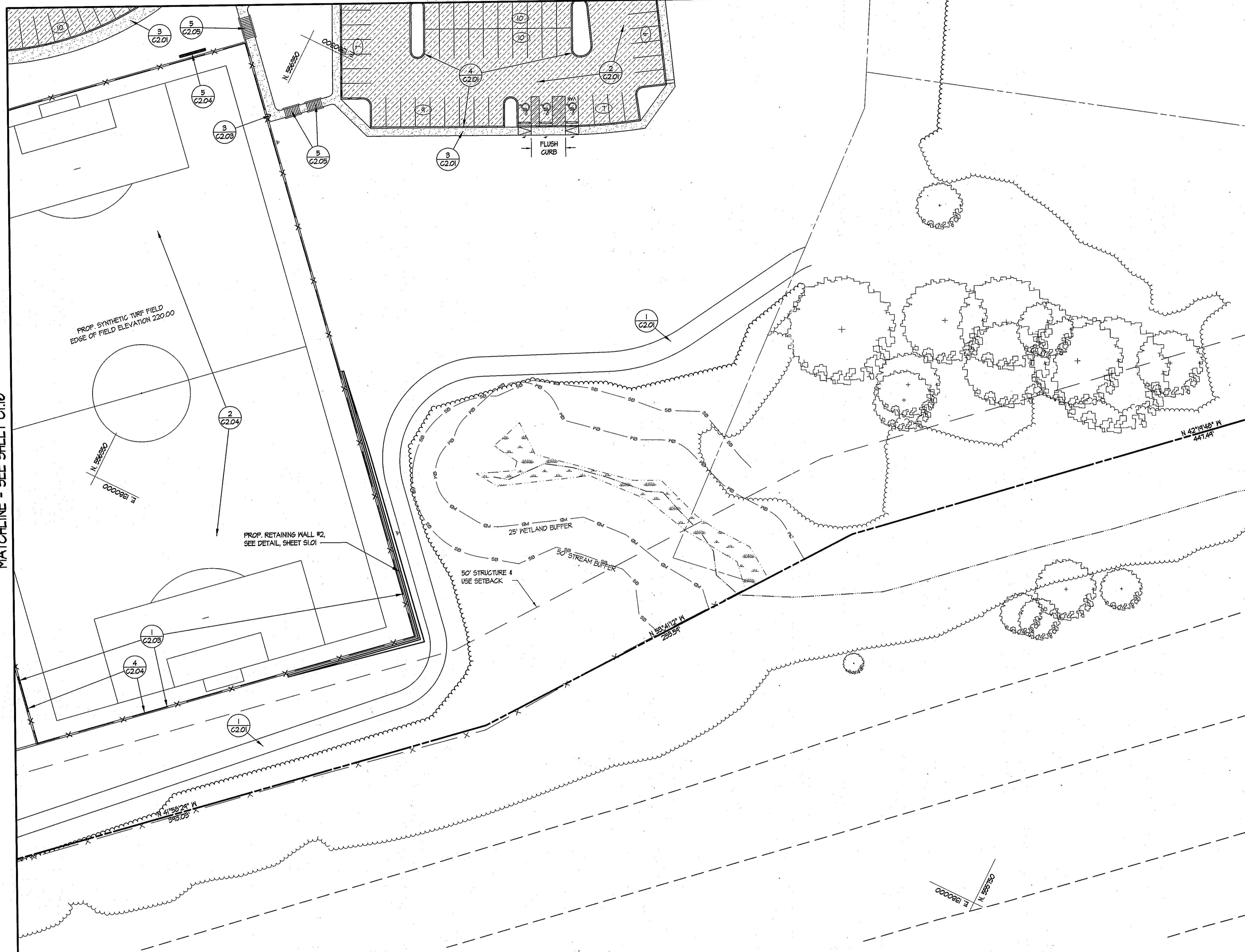


T:\010022-Troy Park Phase I Site Plan\010022-Troy Park Phase I Site Plan\Reference Plans\010022-Troy Park Phase I Site Plan.dwg, Nov 26, 2013 01:23pm, 11



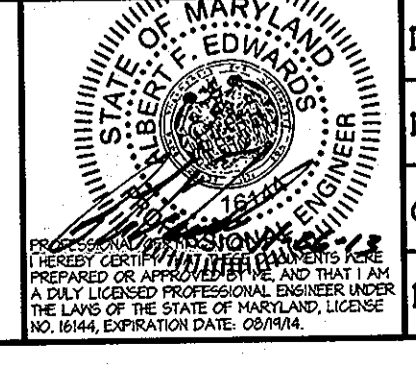
MATCHLINE - SEE SHEET C1.15

MATCHLINE - SEE SHEET C1.16



APPROVED: DEPARTMENT OF PLANNING & ZONING  
 DIRECTOR: *Mark Lough* 12/13/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT: *W. J. ...* 12/12/13

ADDRESS / PERMIT INFORMATION  
 PARCEL 561, 545, 542, 536, 142, 135, 130 LOT A-21, 135 LOT A-22  
 ADDRESS: 4500 HANSON LANE  
 L577 / F.414, L12205 / F.521, L12205 / F.540, L5103 / F.600,  
 L5241 / F.710, L4493 / F.431, L6155 / F.540, L6155 / F.540  
 GRID IT 110, 228E, 141, TAX MAP NO. 31  
 2nd ELECTION DISTRICT, GEORGE TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 252202  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 388-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 388-2100

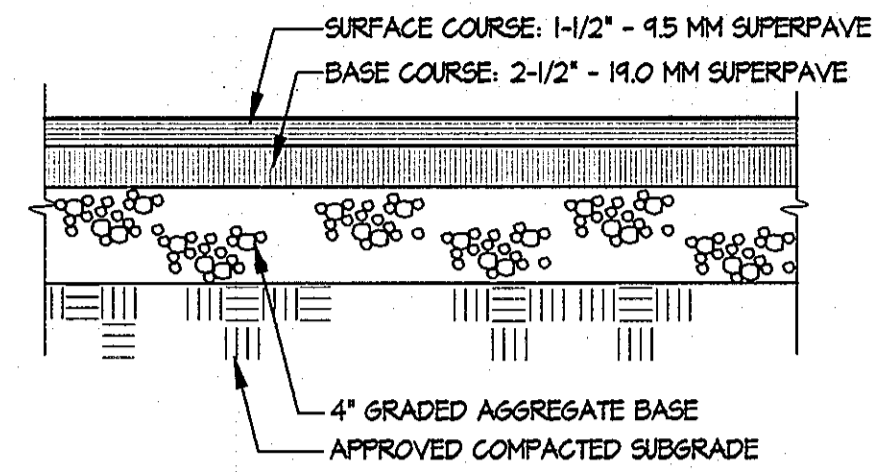


DES: JLT	SRI: 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY: NO.	REVISION	DATE

600' SCALE MAP NO. 51 BLOCK NO. 16  
 DETAIL REFERENCE PLAN

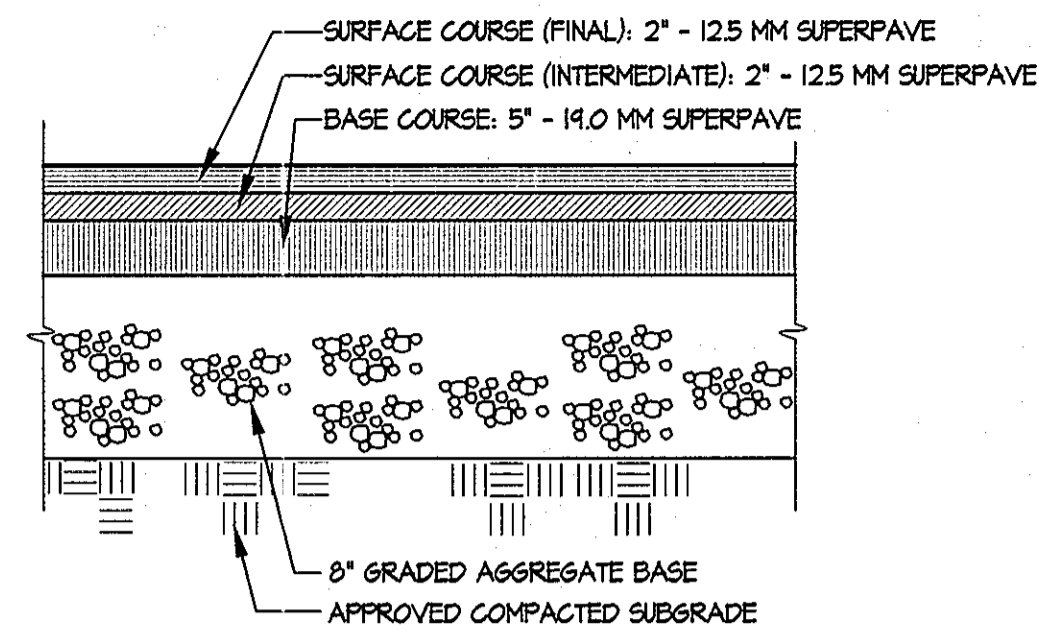
TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SCALE: 1"=30'  
 C1.17  
 SHEET 15A OF 64  
 SDR-11-003



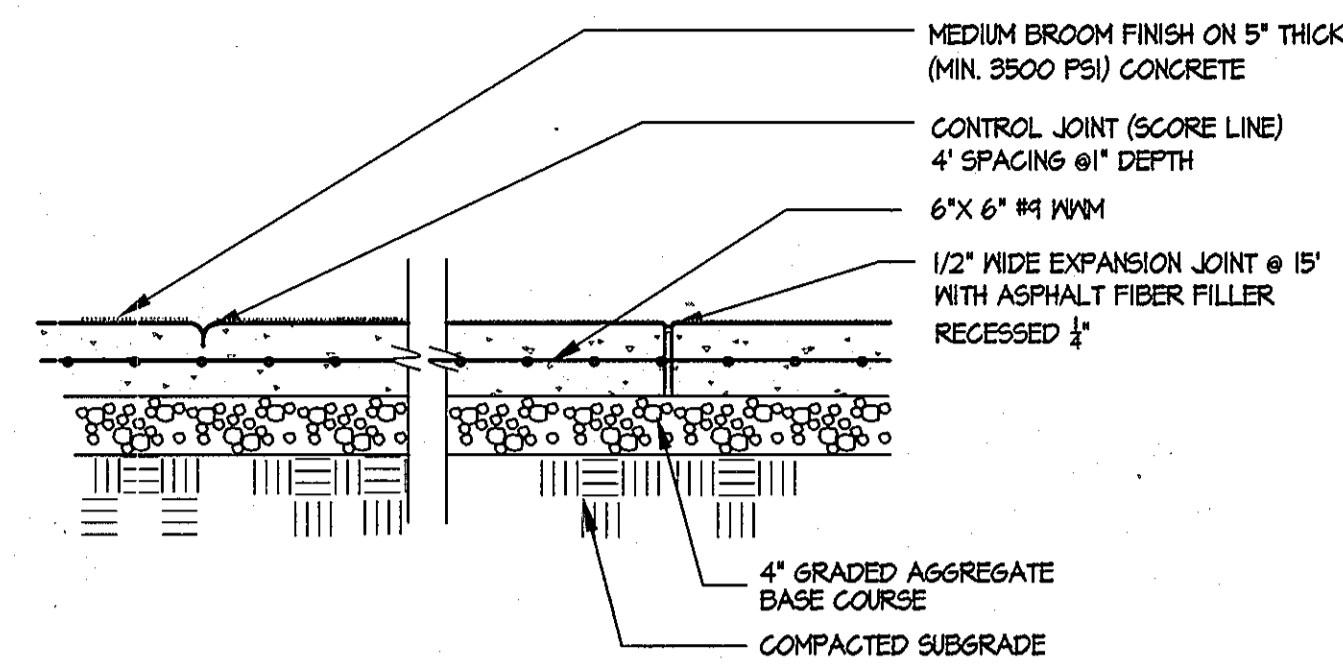
- NOTES:**
1. A REPRESENTATIVE FROM THE ON-SITE GEO-TECHNICAL ENGINEER SHALL OBSERVE AND TEST ANY COMPACTED FILL TO BE USED FOR PAVEMENT SUPPORT, AND OBSERVE ANY PROOFROLLING OPERATIONS OF PAVEMENT SUBGRADES.
  2. THE GRADED AGGREGATE BASE COURSE CAN BE OMITTED IF THE SUBGRADE CONSISTS OF LIME/CEMENT-MODIFIED SOILS PER THE GEO-TECHNICAL REPORT.

**1 LIGHT-DUTY BITUMINOUS PAVEMENT**  
NOT TO SCALE



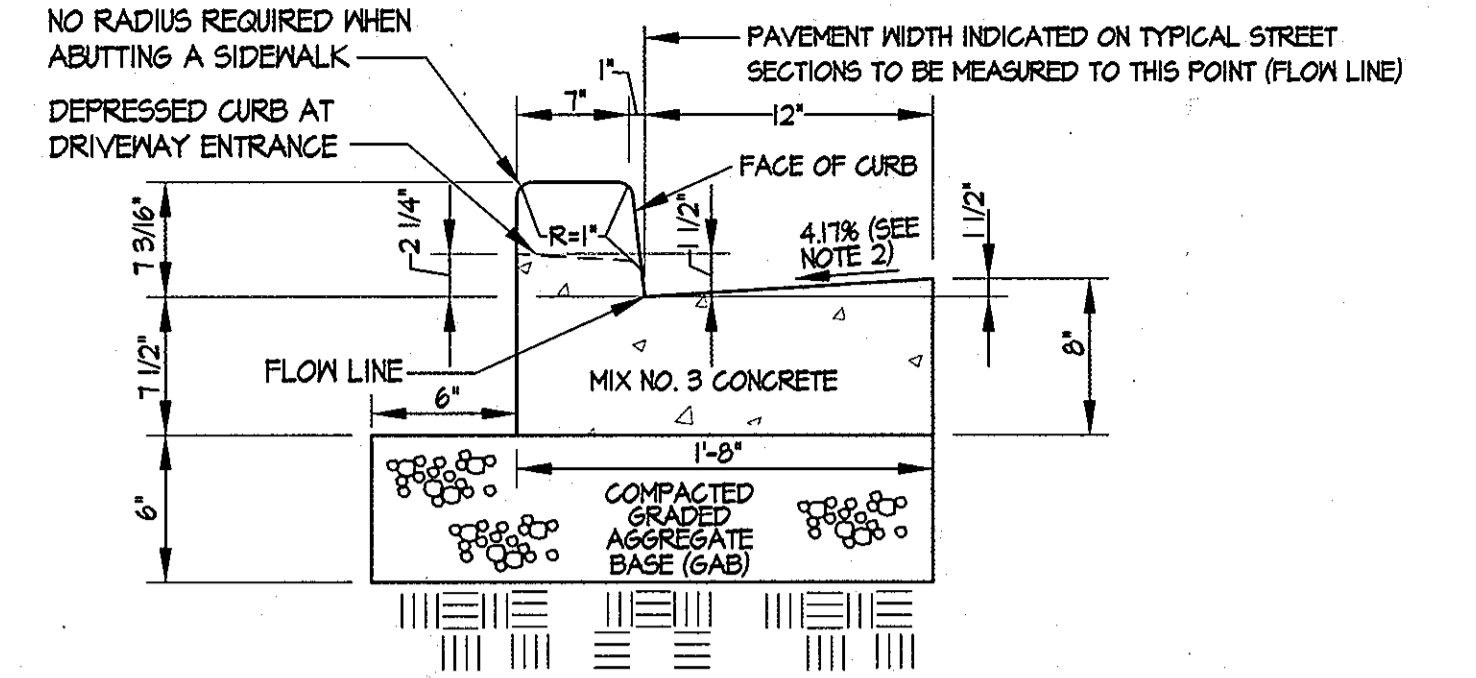
- NOTES:**
1. PAVEMENT SECTION IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, P-5 SECTION.
  1. A REPRESENTATIVE FROM THE ON-SITE GEO-TECHNICAL ENGINEER SHALL OBSERVE AND TEST ANY COMPACTED FILL TO BE USED FOR PAVEMENT SUPPORT, AND OBSERVE ANY PROOFROLLING OPERATIONS OF PAVEMENT SUBGRADES.
  2. THE GRADED AGGREGATE BASE COURSE CAN BE OMITTED IF THE SUBGRADE CONSISTS OF LIME/CEMENT-MODIFIED SOILS PER THE GEO-TECHNICAL REPORT.

**2 HEAVY-DUTY BITUMINOUS PAVEMENT**  
NOT TO SCALE



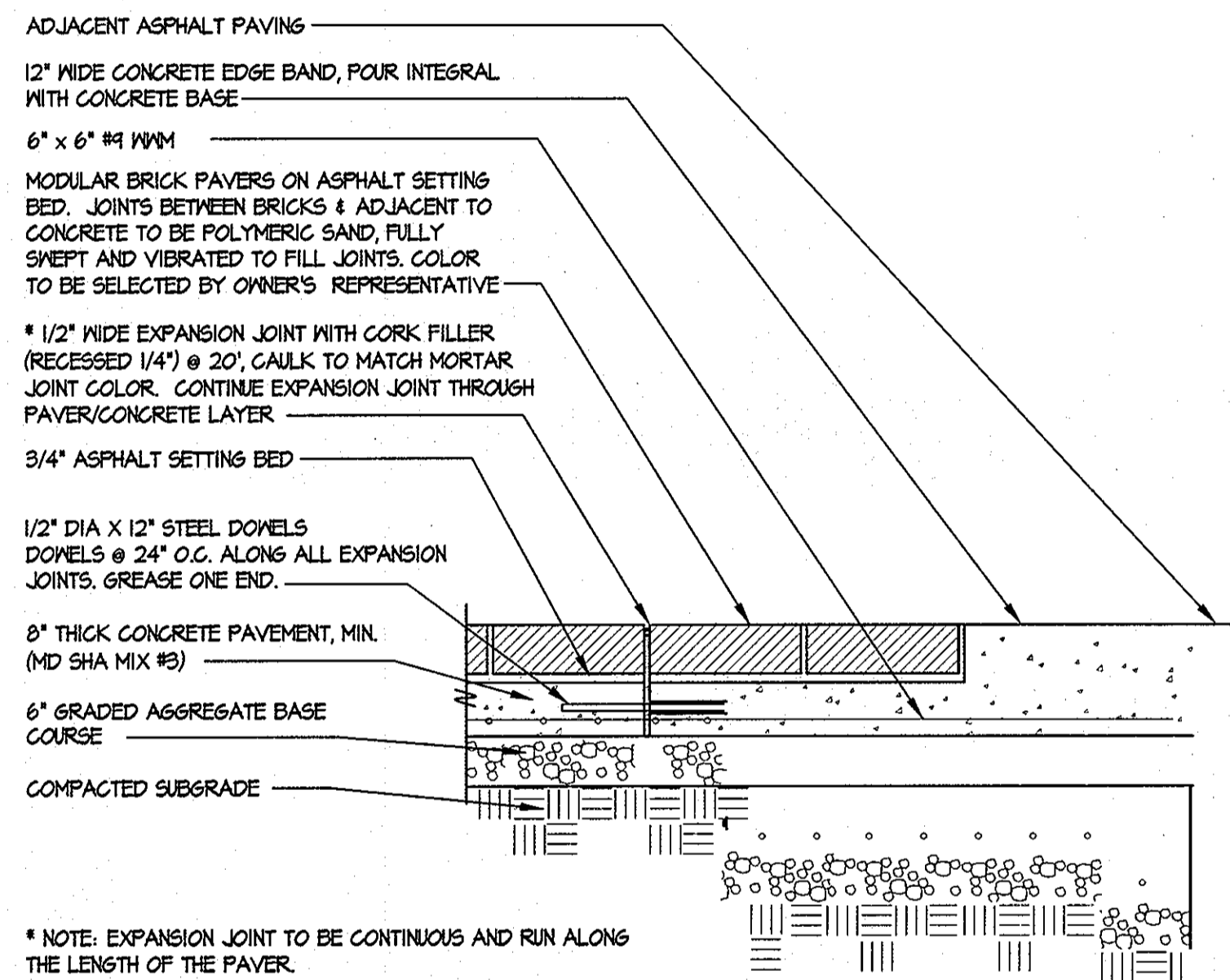
- NOTES:**
1. THE CROSS SLOPE OF AN ACCESSIBLE ROUTE SHALL NOT EXCEED 2%.
  2. PROVIDE EXPANSION JOINTS WHERE WALKS ABUT CURBS, WALKS, STEPS, FOOTINGS, ETC.

**3 CONCRETE PAVEMENT**  
NOT TO SCALE

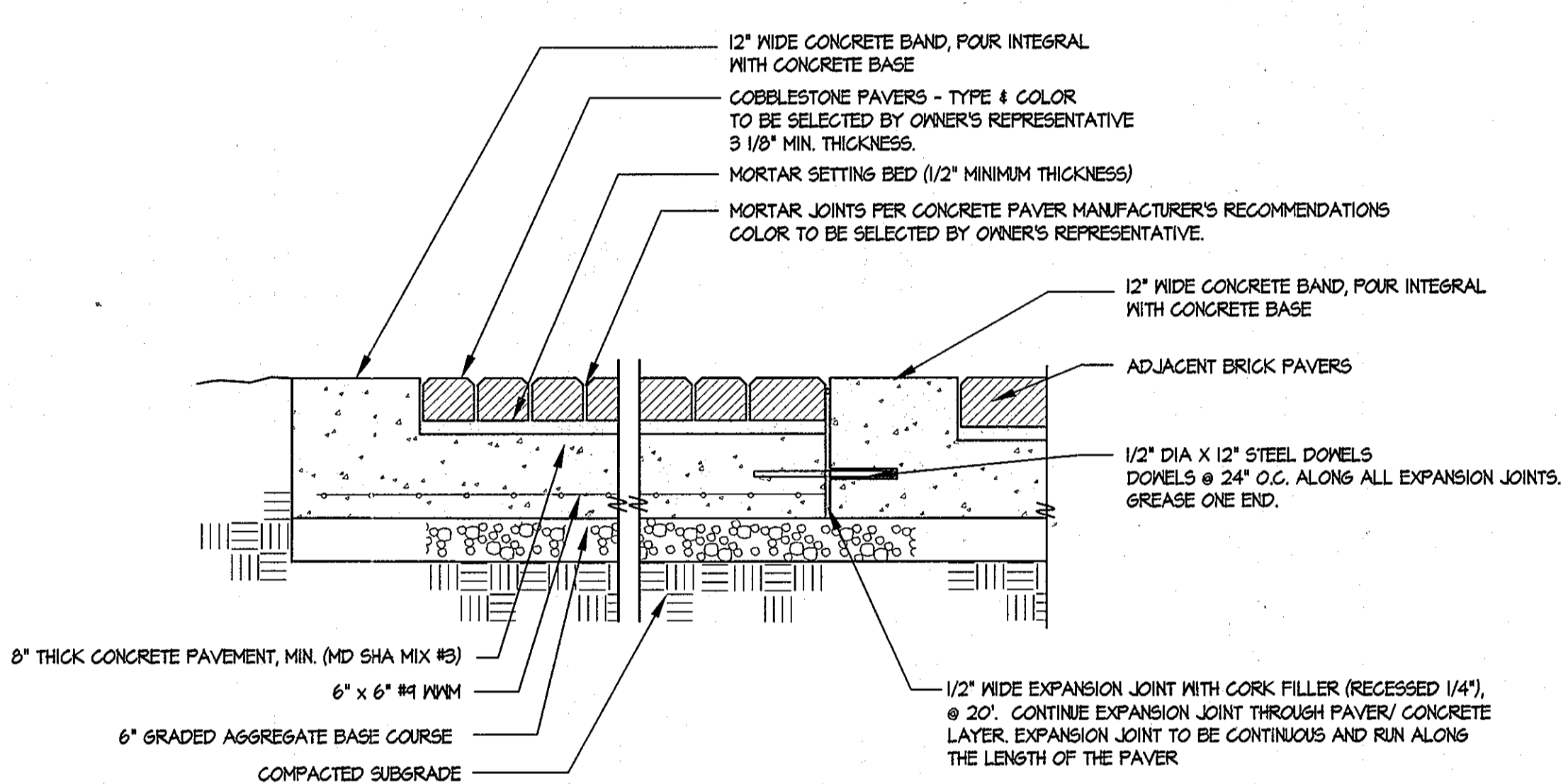


- NOTES:**
1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE AND SHALL NOT BE USED WHERE THIS DRAINAGE CREATES A HAZARDOUS CONDITION.
  2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.
  3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
  4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

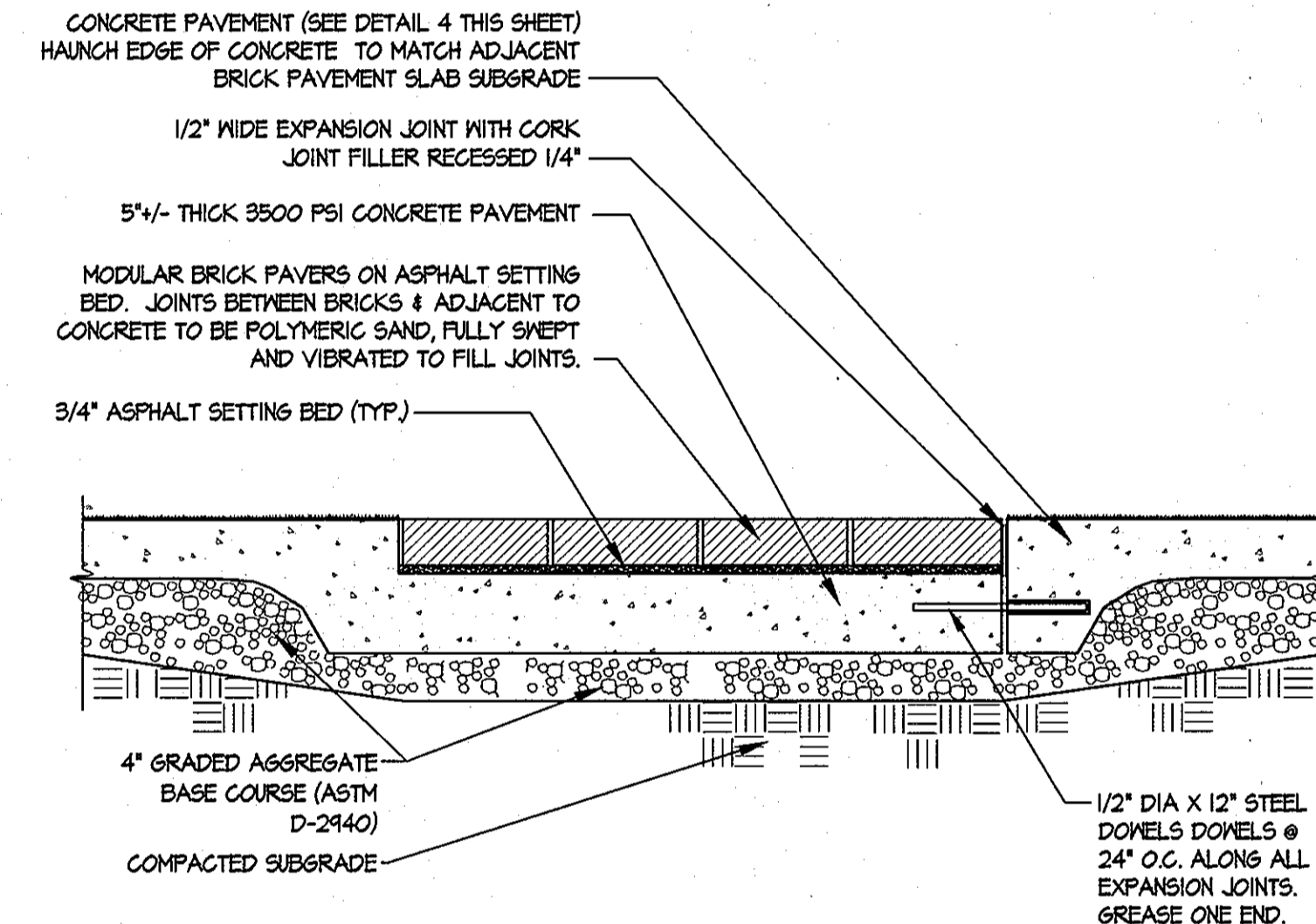
**4 CURB AND GUTTER**  
HOWARD COUNTY STD. DETAIL R-3.01  
NOT TO SCALE



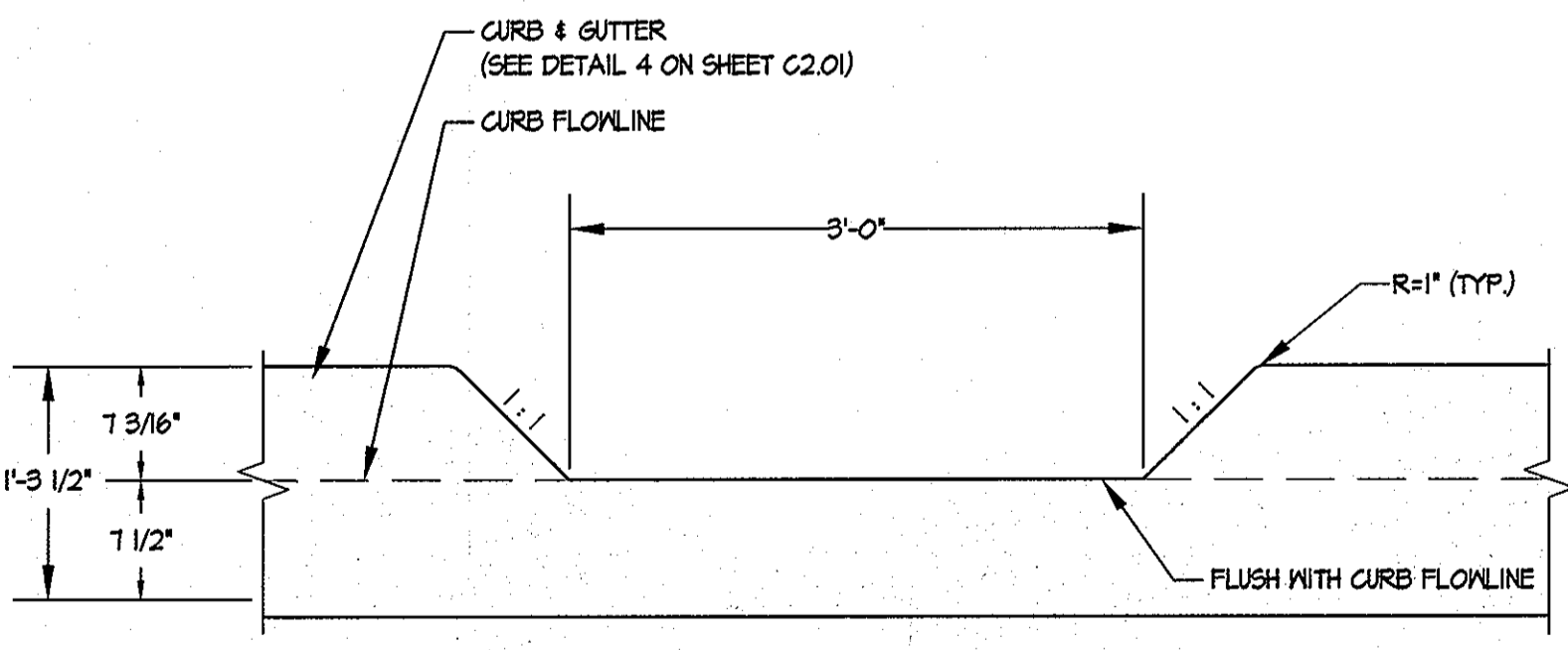
**5 BRICK PAVER DETAIL (ALTERNATE)**  
NOT TO SCALE



**6 COBBLESTONE PAVER DETAIL**  
NOT TO SCALE



**7 BRICK BANDS IN CONCRETE PAVING**  
NOT TO SCALE



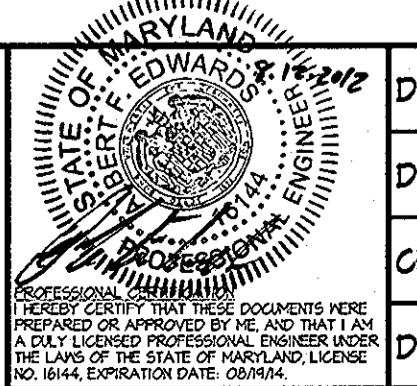
- NOTE:**  
MAINTAIN GUTTER SLOPE THROUGH CURB CUT OPENING.

**8 CURB CUT DETAIL**  
SCALE: 1"=1'

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: [Signature]  
 Chief, Development Engineering Division: [Signature]  
 Chief, Division of Land Development: [Signature]

ADDRESS / PERMIT INFORMATION  
 PARCELS 241, 242, 243, 244, 195 LOT A-21, 195 LOT A-22  
 ADDRESS: 4420 HANSON LANE  
 LST1 / F.44, L1055 / F.351, L12205 / F.240, L5785 / F.600,  
 L5841 / F.18, L4933 / F.431, L4933 / F.240, L4933 / F.640  
 GRID 11 & 12, ZONE: M-4, TAX MAP NO. 31  
 2ND ELECTION DISTRICT, CENSUS TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7025 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 383-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7025 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 383-2100

**SITE RESOURCES**  
 Incorporated  
 Comprehensive Land Planning & Site Design Services  
 14315 Arrettsville Pike • Phoenix, Maryland 21131  
 (410) 882-3388 • Fax (410) 882-3389



DES: KPR				
DRN: CMF				
CHK: AFE				
DATE: 08/12/12	BY	NO.	REVISION	DATE

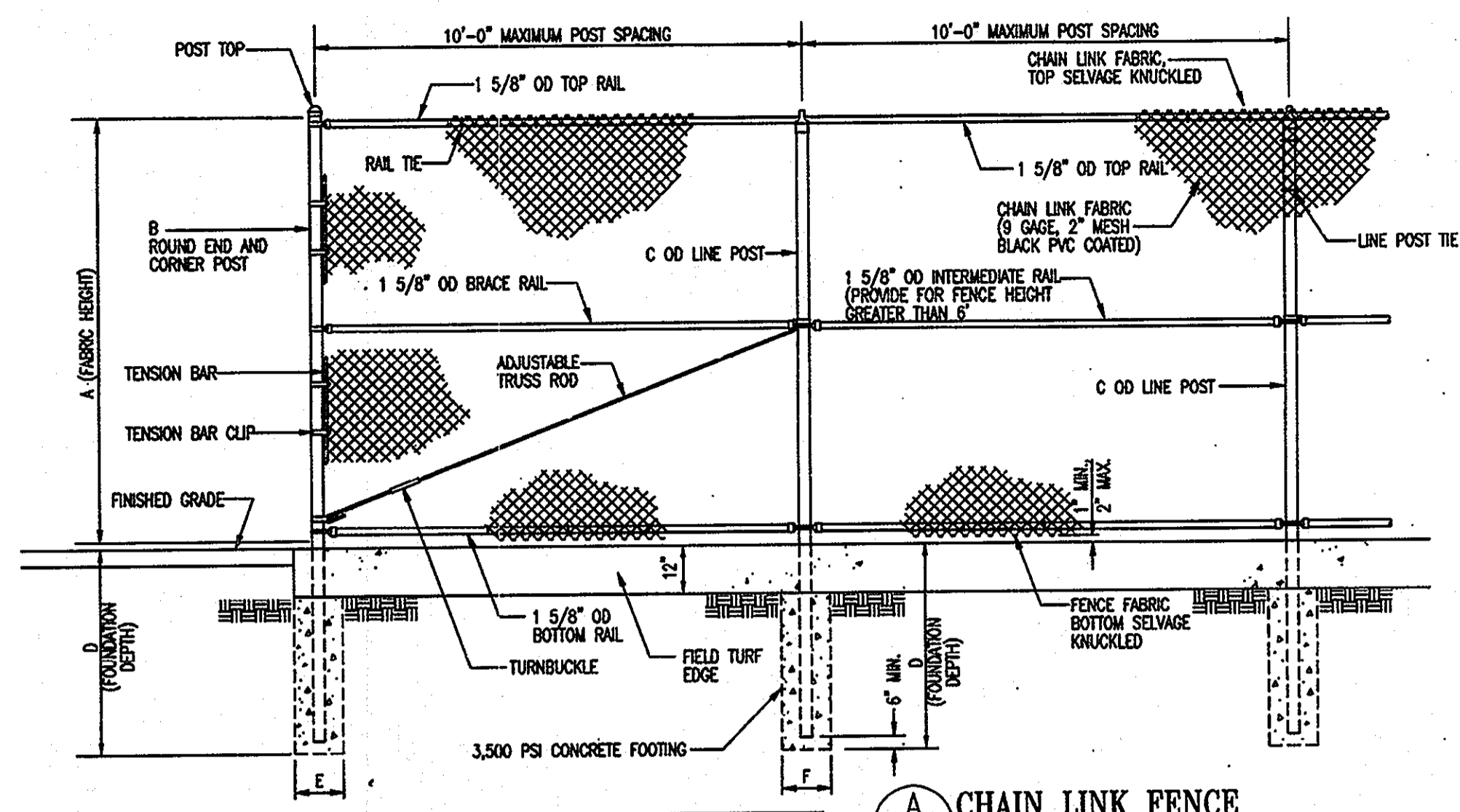
600' SCALE MAP NO. 51		BLOCK NO. 16	
-----------------------	--	--------------	--

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
**C2.01**  
 SHEET 16 OF 64

2:10/0022-Troy Park Phase 1 Site Plan/C2.01\_Site\_Details.dwg - Lognal Sep 15, 2012 02:09pm 6.0m

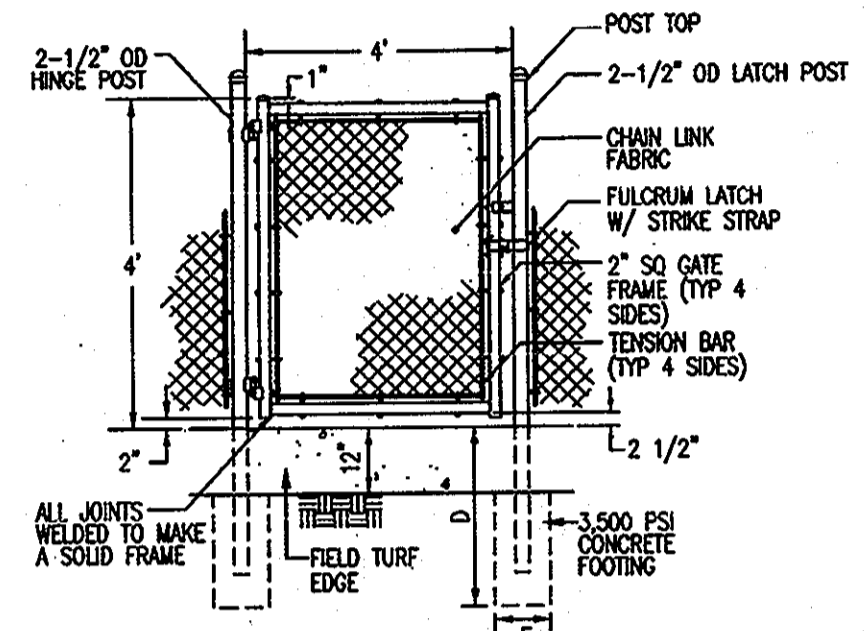




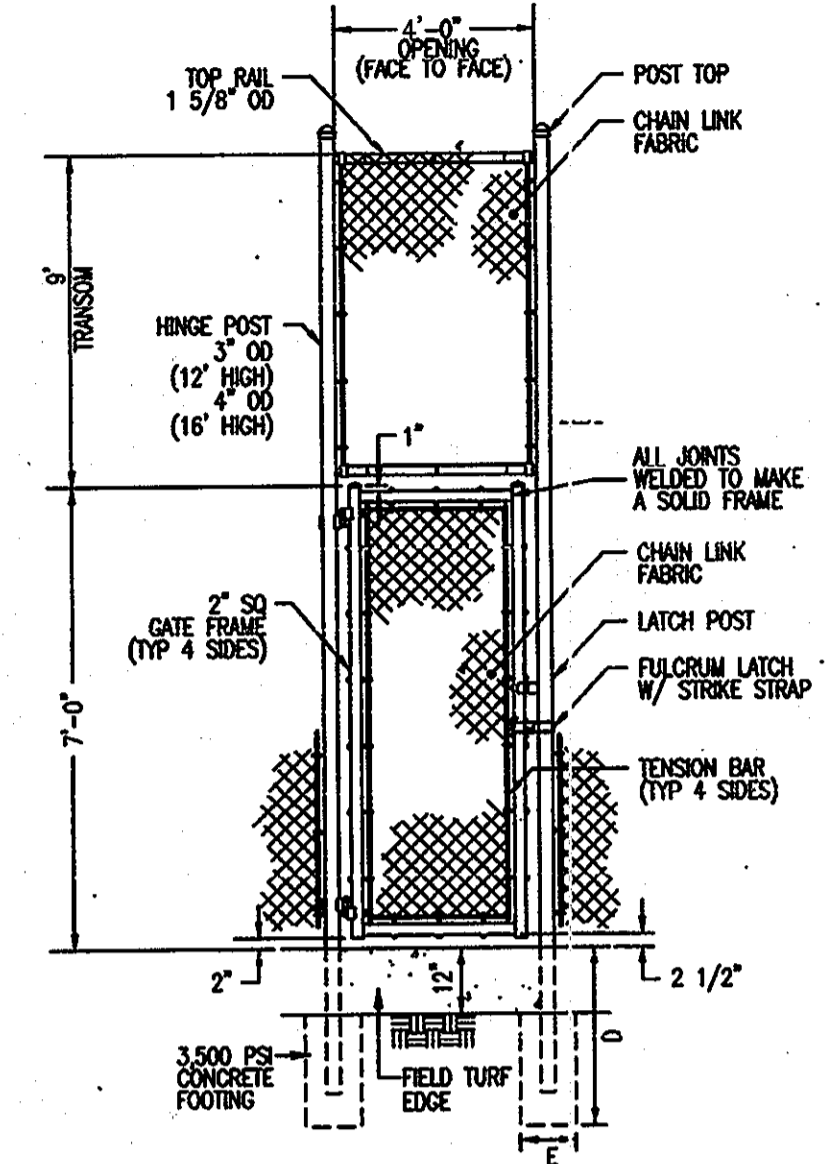
A (FENCE HEIGHT AS SHOWN ON PLAN)	4'-0"/6'-0"	8'-0"	12'-0"	16'-0"
B (END AND CORNER POST DIA.)	2 1/2"	3"	3"	4"
C (LINE POST DIA.)	2"	2 1/2"	3"	3"
D (FOUNDATION DEPTH)	3'-0"	3'-6"	4'-6"	5'-6"
E (END AND CORNER POST FOUNDATION DIA.)	12"	15"	15"	18"
F (LINE POST FOUNDATION DIA.)	10"	12"	15"	15"

ALL RAILS AND POSTS SHALL BE BLACK PVC COATED  
 \* WHERE FENCES WITH DIFFERENT HEIGHTS MEET, PROVIDE END/CORNER POST WITH LARGEST DIAMETER

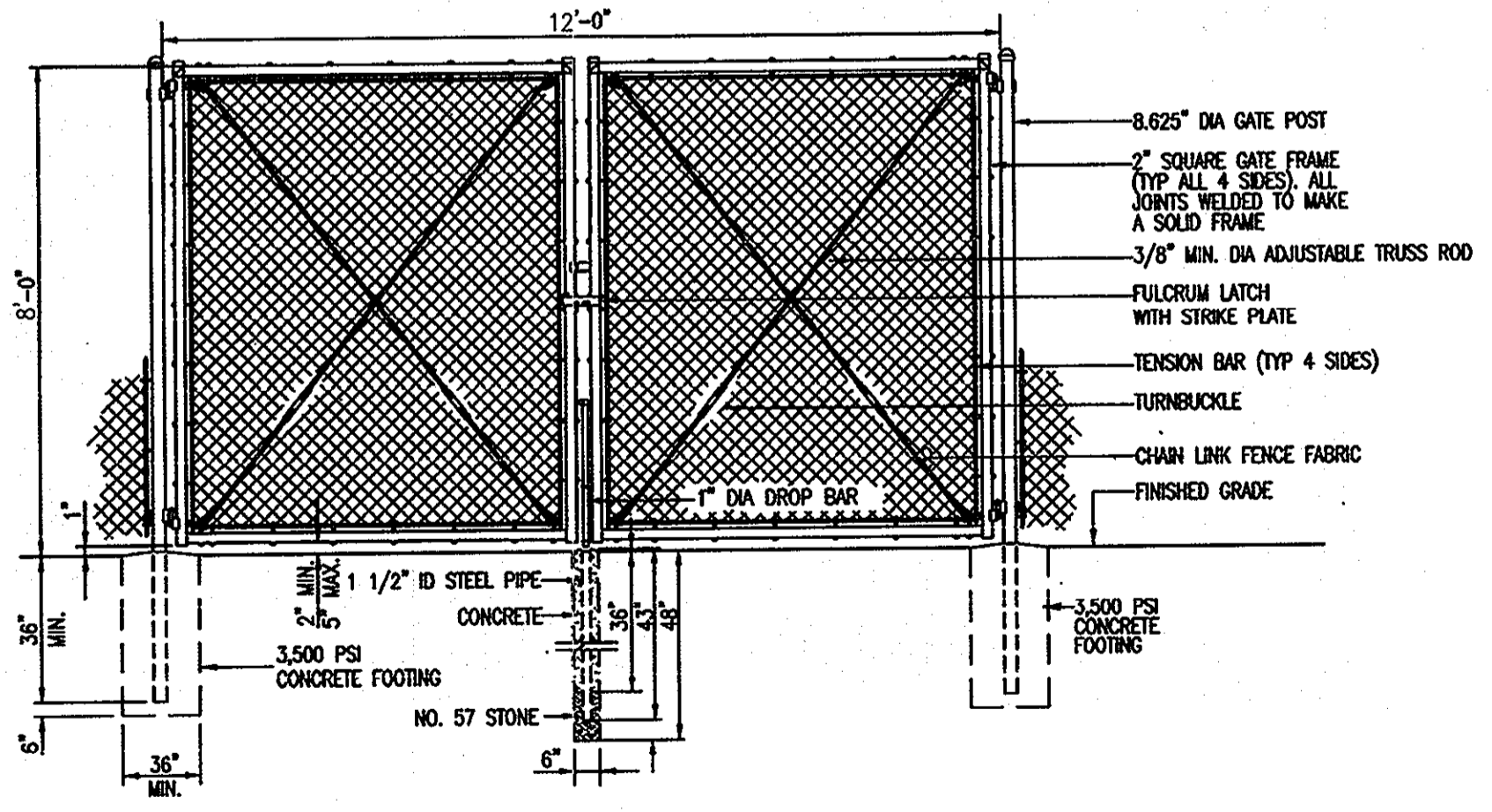
**1 CHAIN LINK FENCE**  
 NOT TO SCALE



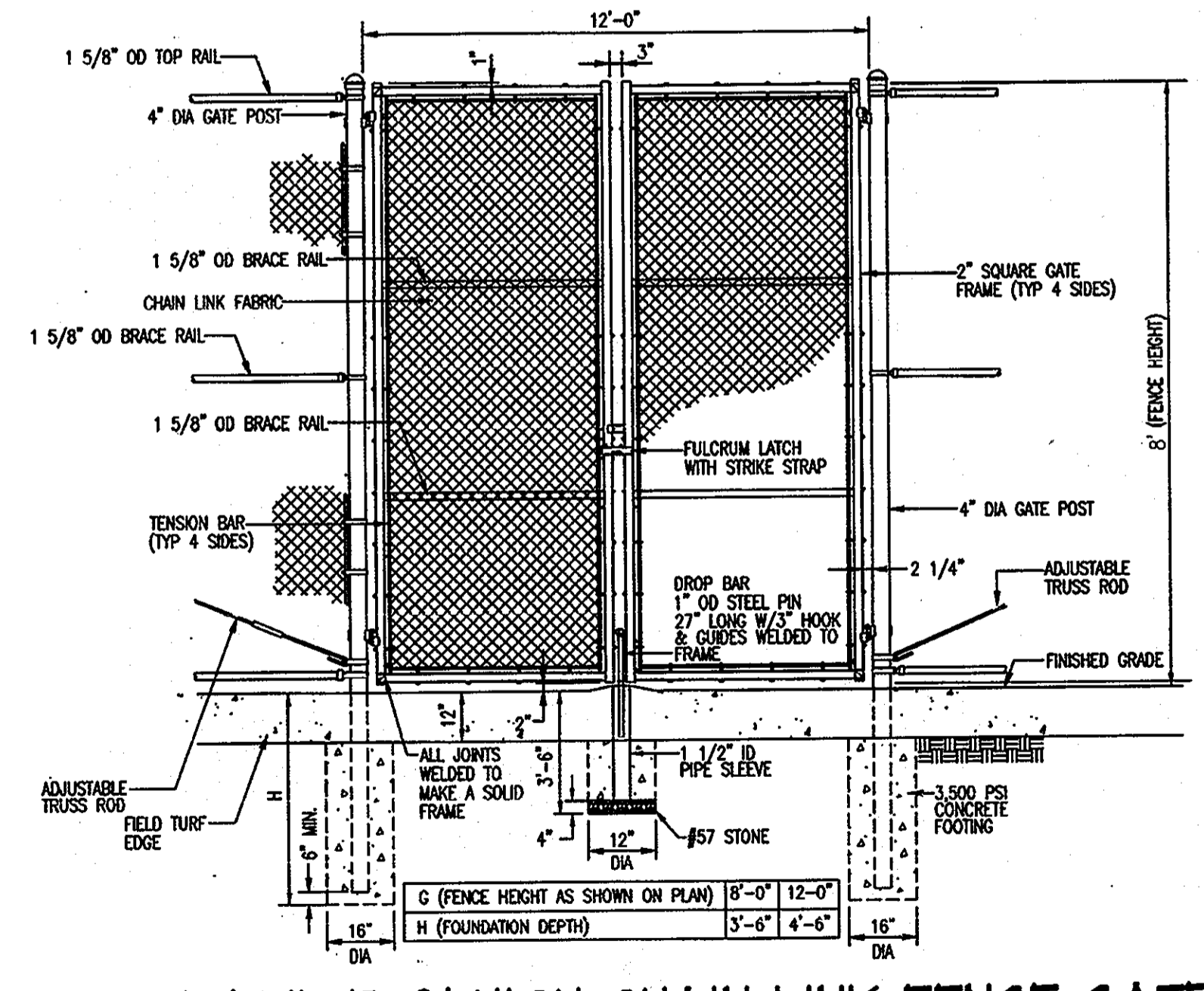
**2 4' WIDE CHAIN LINK FENCE GATE**  
 4' HEIGHT  
 NOT TO SCALE



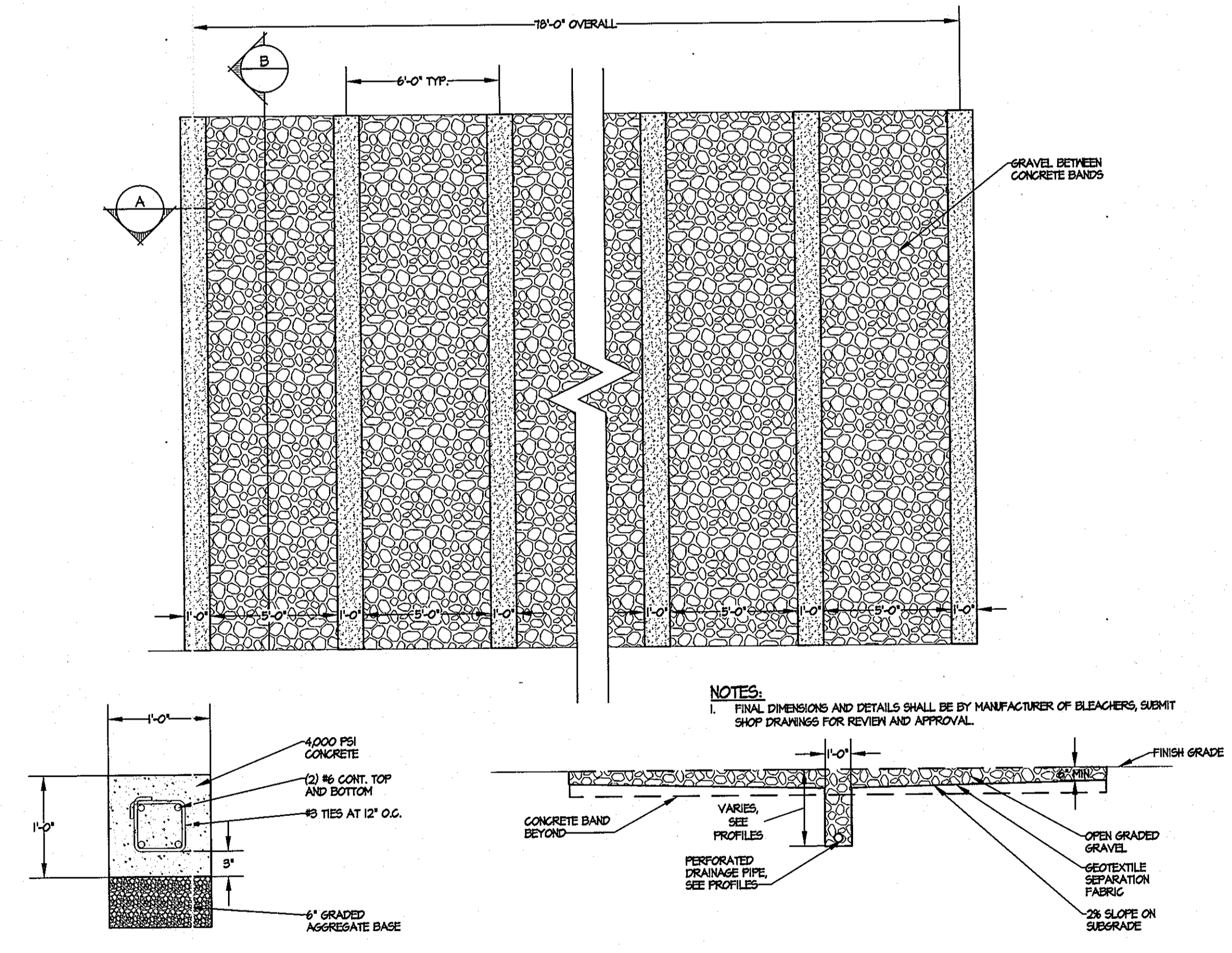
**3 4' WIDE CHAIN LINK FENCE GATE**  
 16" HEIGHT  
 NOT TO SCALE



**4 12' WIDE, 4' HIGH CHAIN LINK FENCE GATE**  
 NOT TO SCALE



**5 12' WIDE, 8' HIGH CHAIN LINK FENCE GATE**  
 NOT TO SCALE



**6 BLEACHER FOUNDATION**  
 NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 [Signature]  
 DIRECTOR  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCEL: 541, 542, 543, 140, 135 LOT A-21, 135 LOT A-22  
 ADDRESS: 1495 HANSON LANE  
 L511 / F414, L10269 / F3951, L12205 / F3910, L5183 / F4000,  
 L5841 / F118, L4939 / F431, L4933 / F490, L4855 / F1, 640  
 680 T1.18, 206, 144, TAX MAP NO. 21  
 2ND ELECTION DISTRICT, GENES TRACT 601202  
 WATER CODE: 400, SEWER CODE: 3050000  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 722 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 722 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 382-2100

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 14315 Jermantown Pike • Pikesville, Maryland 21111  
 (410) 663-3388 • fax (410) 663-3389

DES: JLT  
 DRN: AM  
 CHK: AFE  
 DATE: 08/12/12

SRI 2 ADD SPORTS FIELDS & PARKING LOTS 11/26/13

BY NO. REVISION DATE

SITE DETAILS

600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

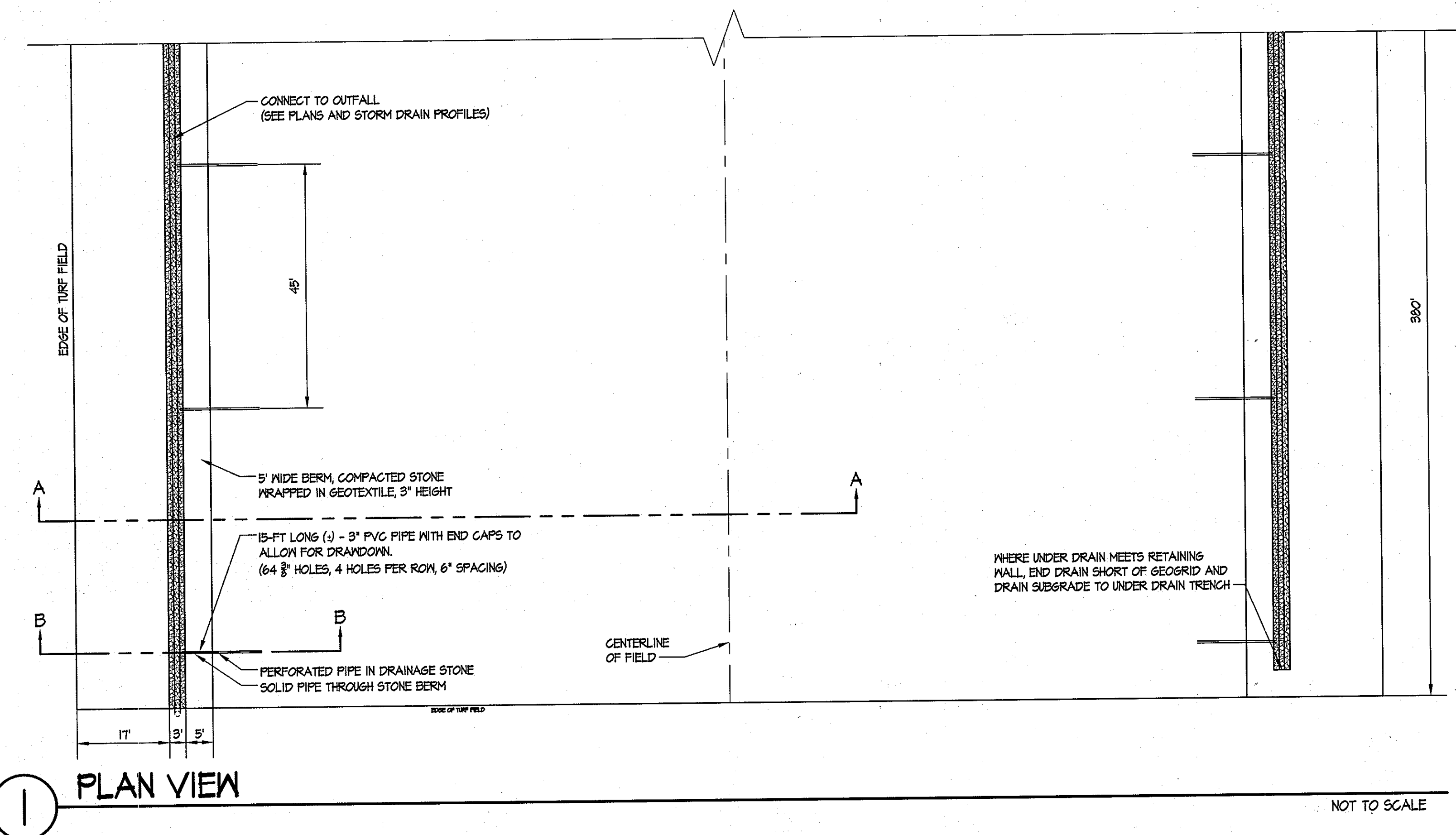
CAPITAL PROJECT NO. N-39151

HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
 C2.03  
 SHEET 17A OF 64  
 SDF-11-003

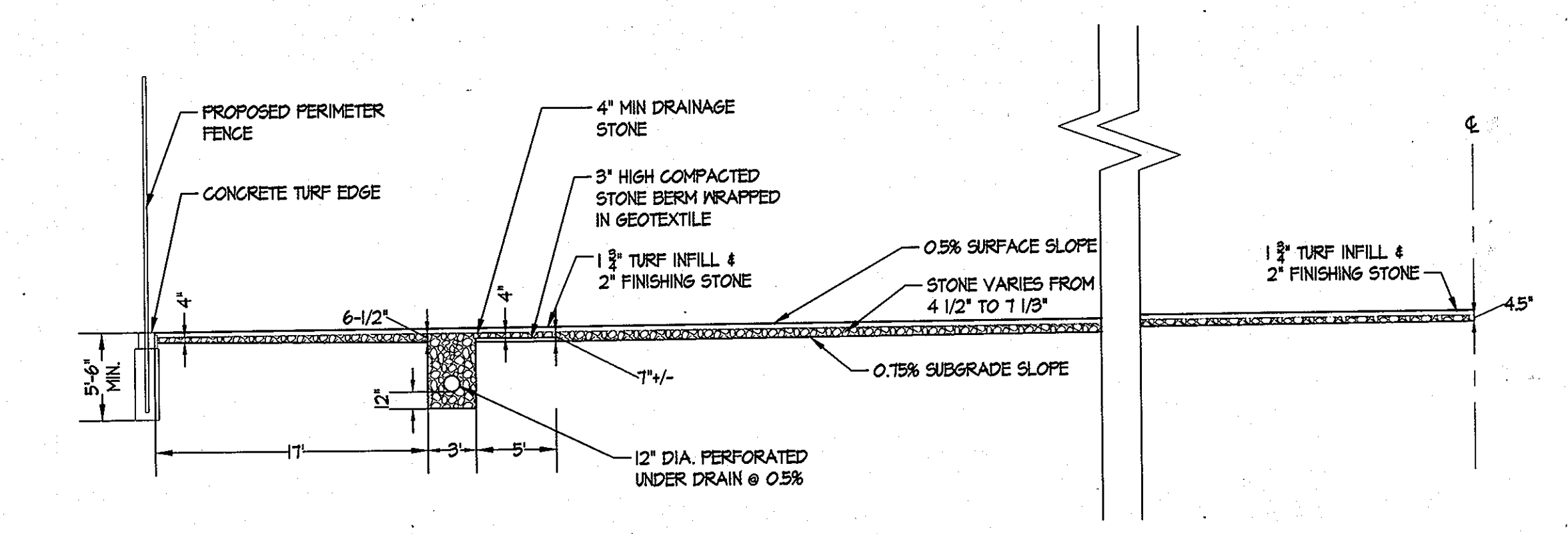






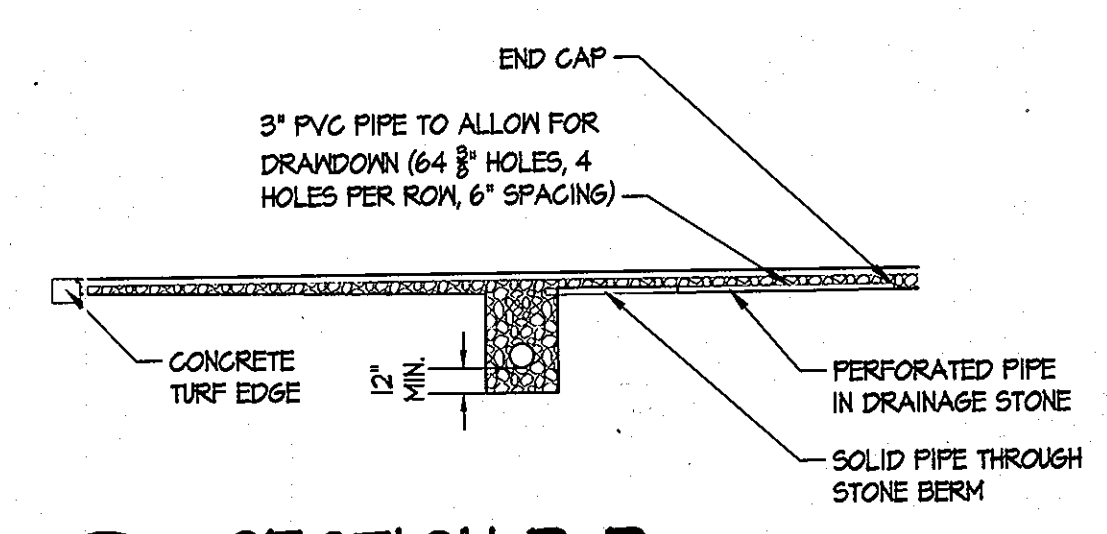
1 PLAN VIEW

NOT TO SCALE



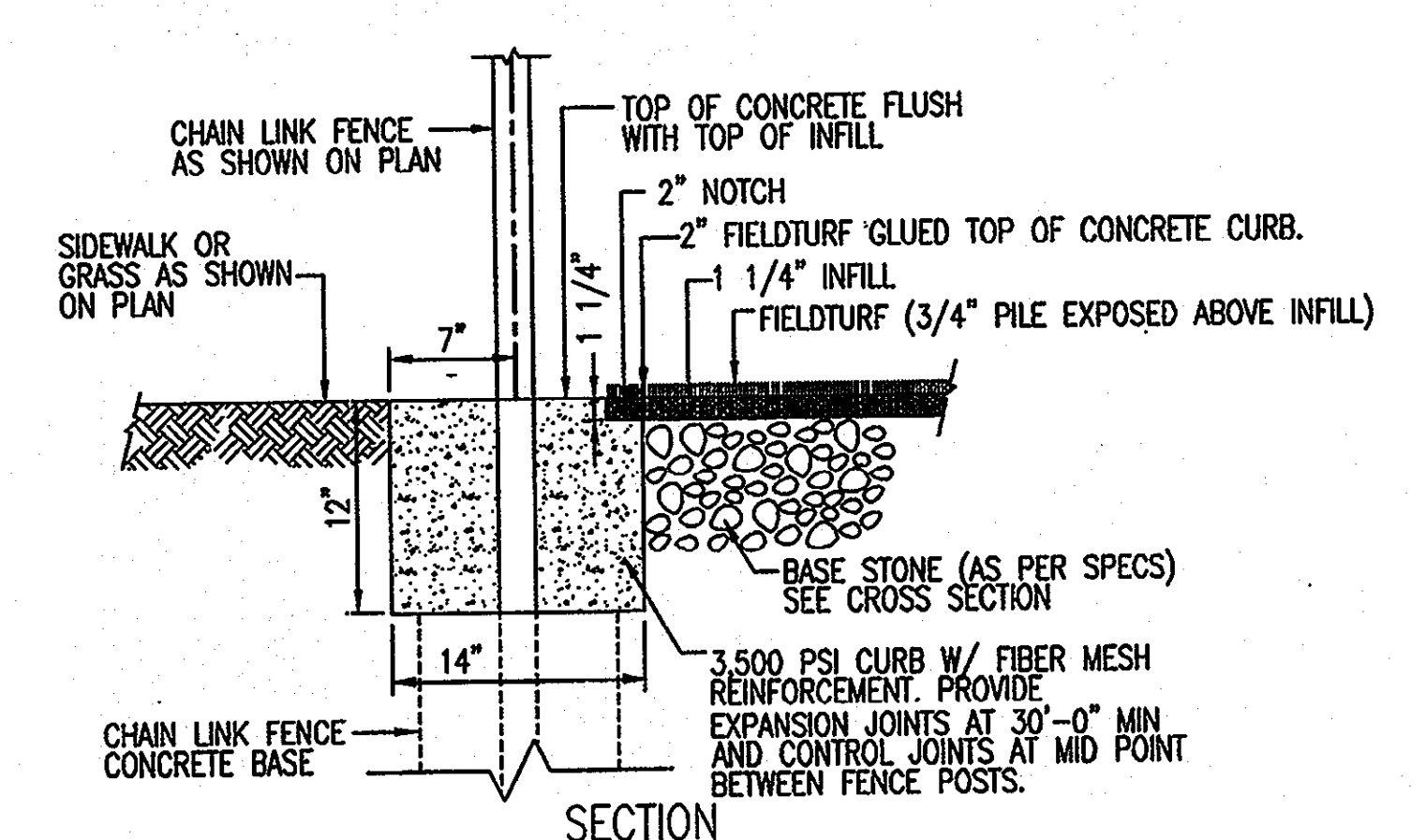
2 SECTION A-A

NOT TO SCALE



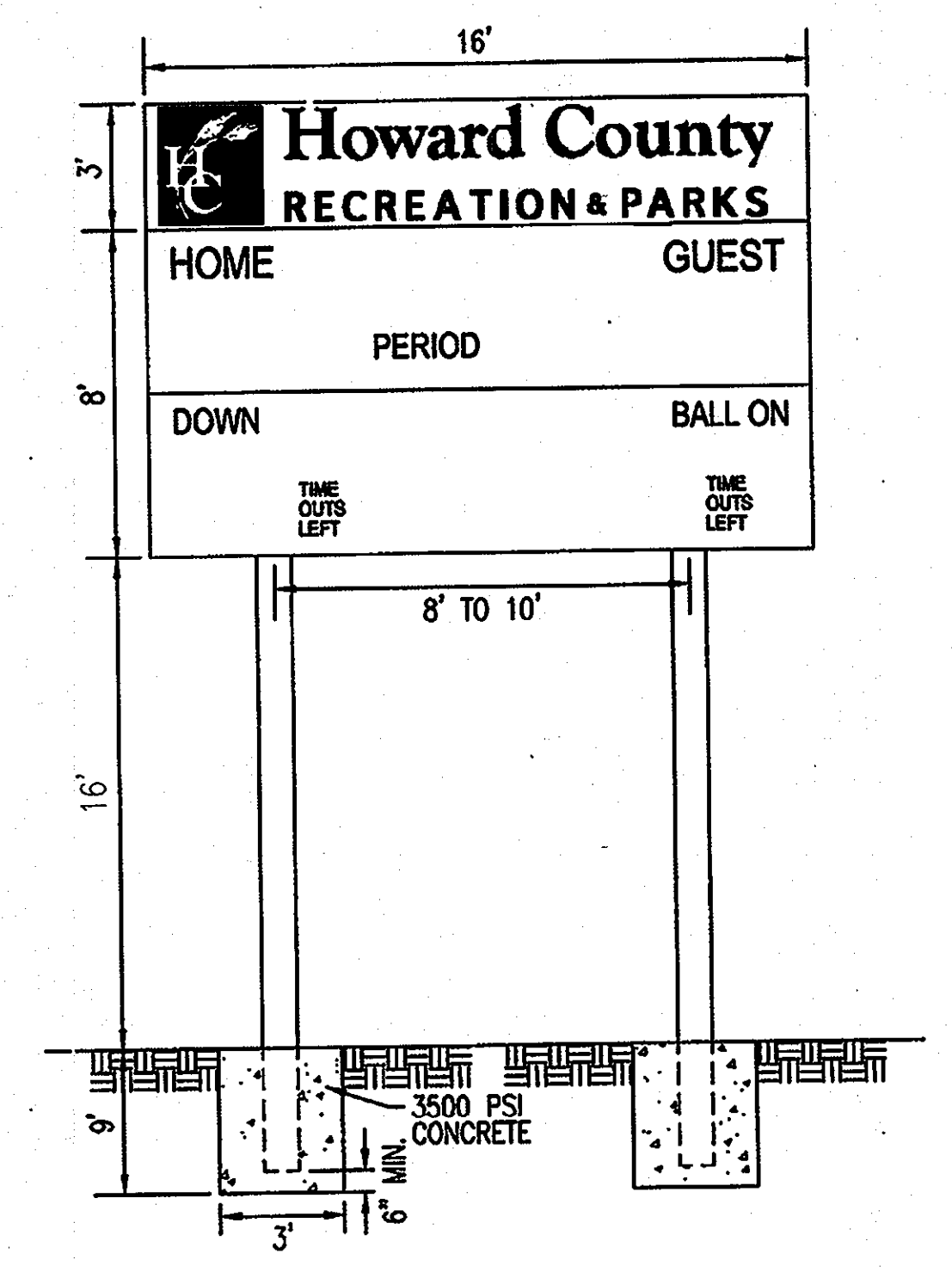
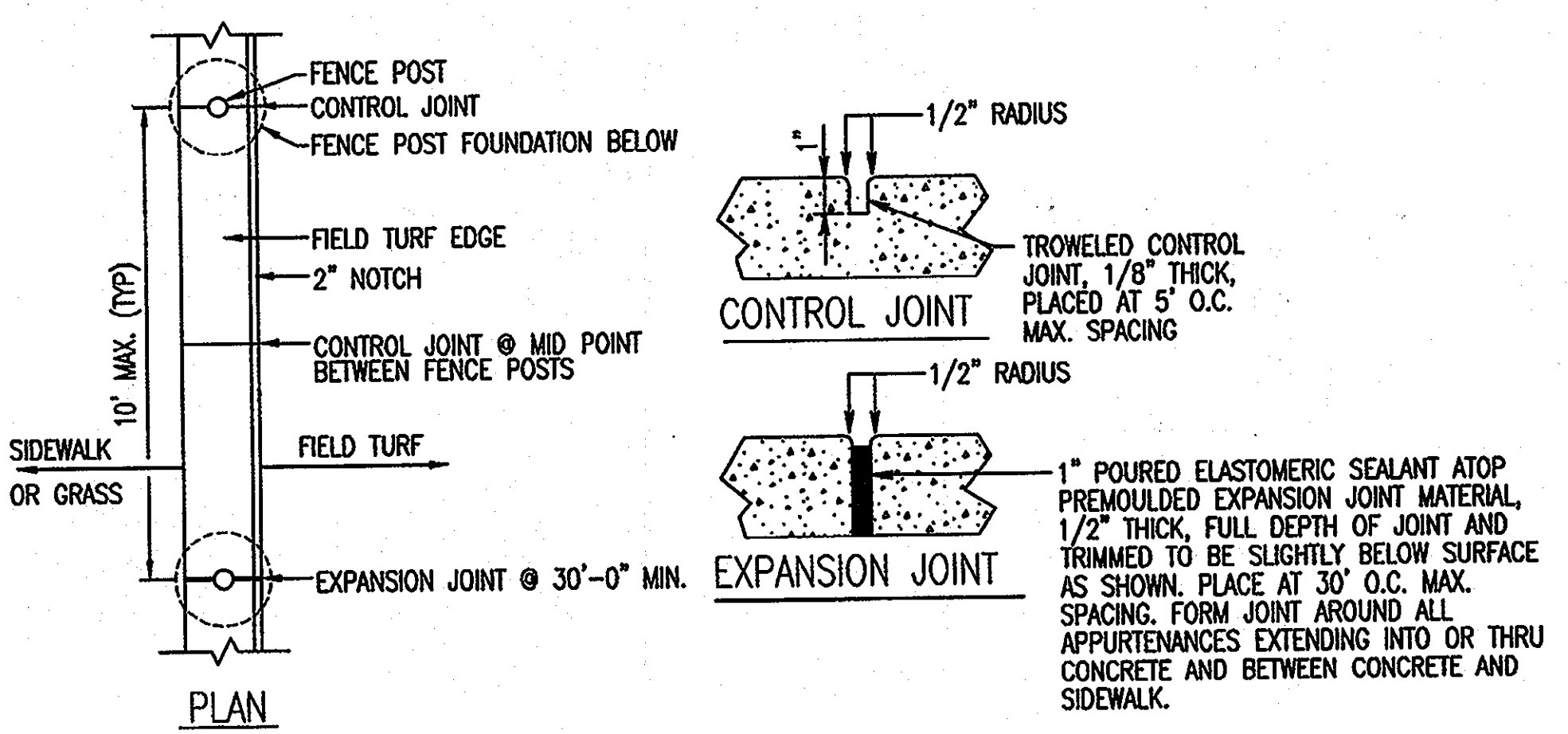
3 SECTION B-B

NOT TO SCALE



4 FIELD TURF CONCRETE EDGE

NOT TO SCALE



5 SCOREBOARD

NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Charles K. Lynch* 1/3/14  
 DIRECTOR DATE  
*Chad Edwards* 12/15/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Walt Schaefer* 12/18/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL 561 548, 542, 536, HQ 105, 106 LOT A-21, 105 LOT A-22  
 ADDRESS: 6400 HANSON LANE  
 LOTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100  
 OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 312-2100  
 DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 312-2100

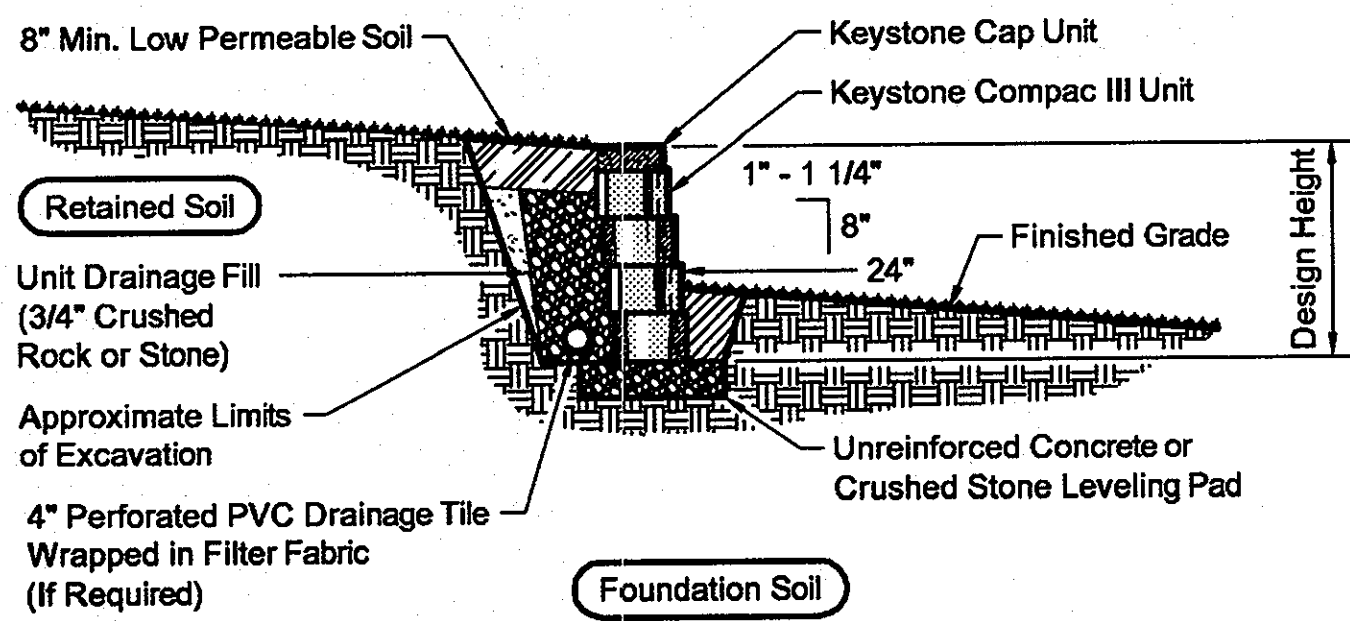
**SITE RESOURCES**  
 Incorporated  
 Comprehensive Land Planning & Site Design Services  
 14315 Ardenville Pike • Phoenix, Maryland 21111  
 (410) 685-5288 • Fax (410) 685-5289

DES: JLT  
 DRN: AM  
 CHK: AFE  
 DATE: 08/12/12  
 SRI 2 ADD SPORTS FIELDS & PARKING LOTS 1/26/13  
 BY NO. REVISION

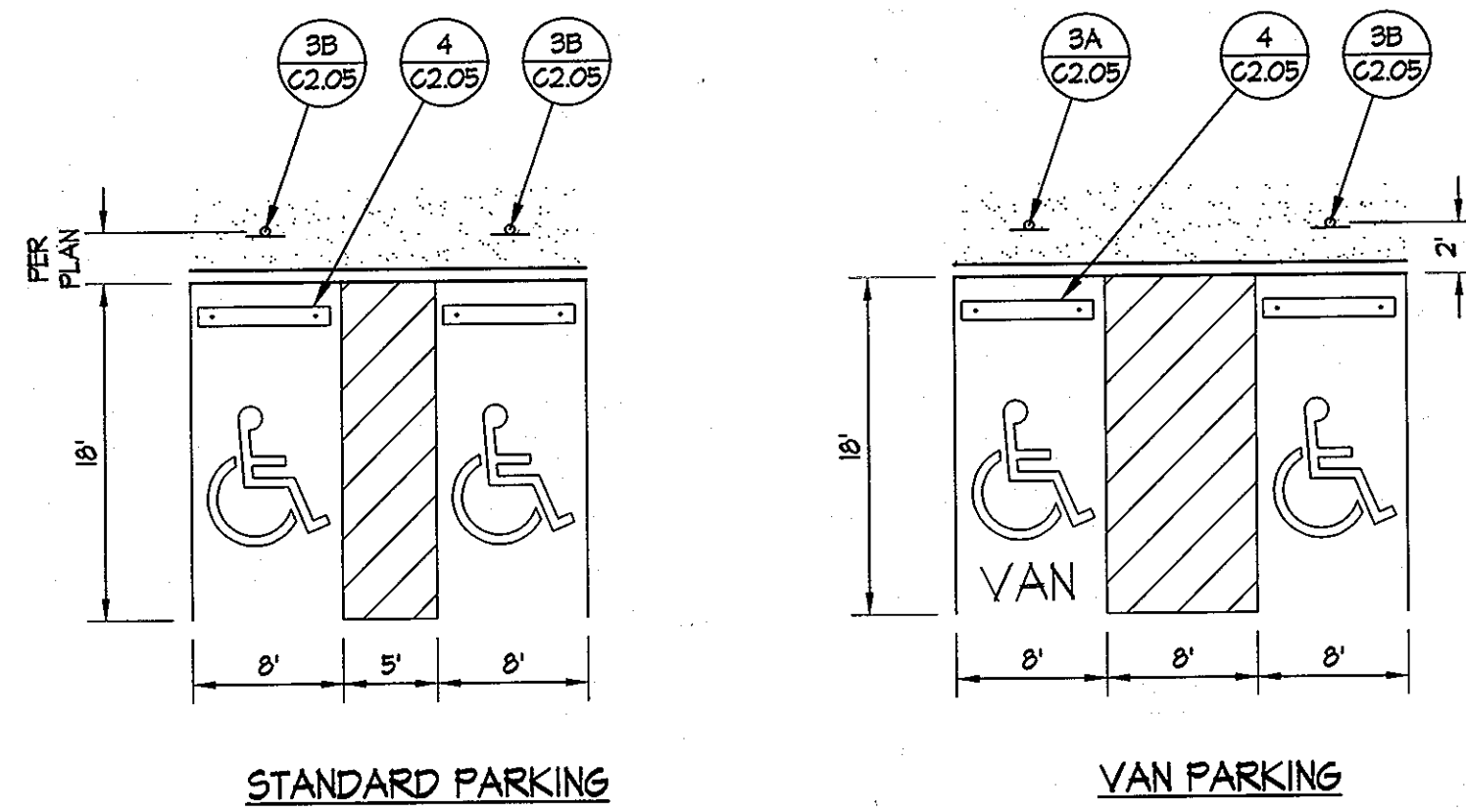
SITE DETAILS  
 600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
 C2.04  
 SHEET 11B OF 64  
 SDP-11-003

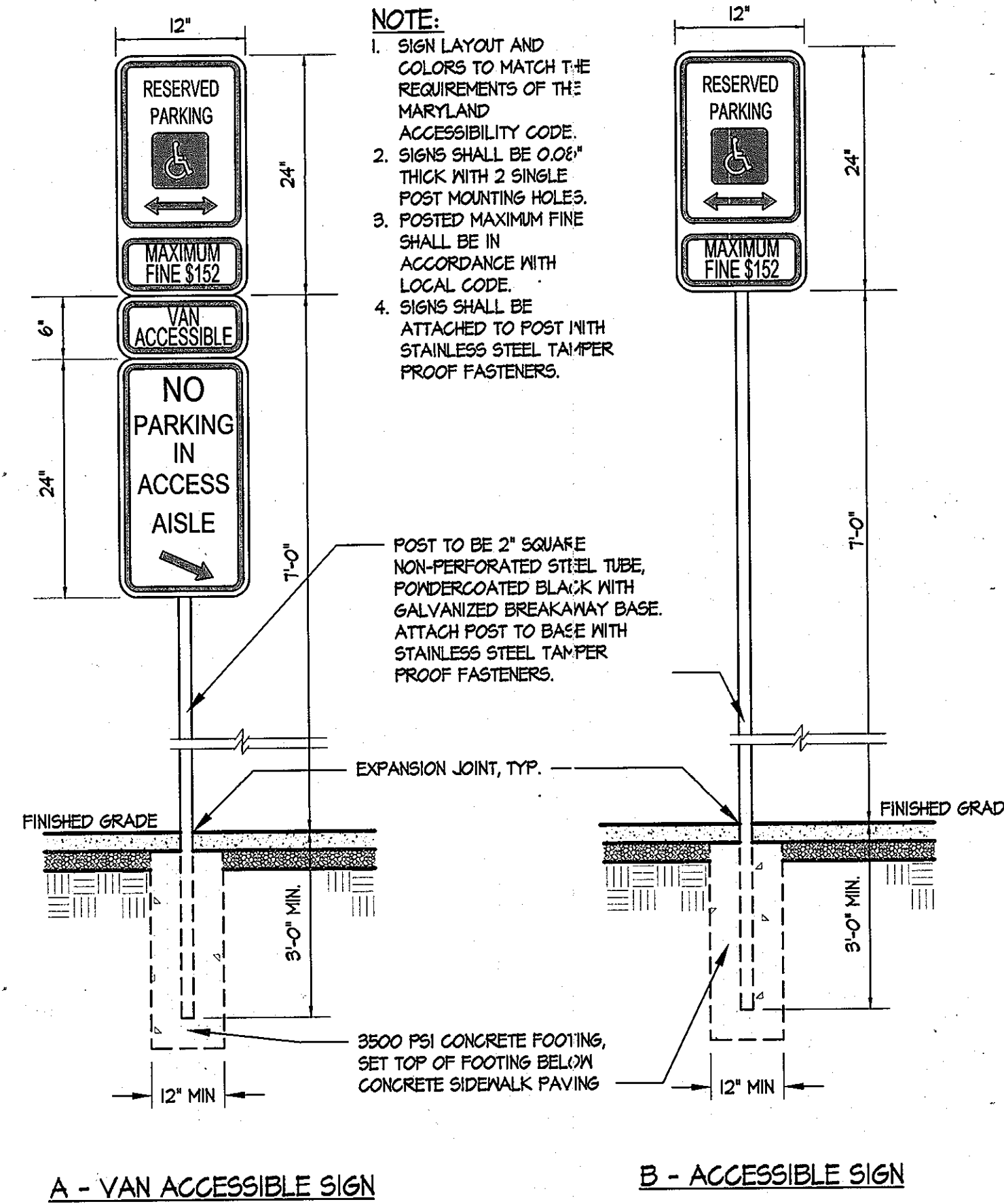


**1 SEGMENTAL BLOCK WALL**  
NOT TO SCALE

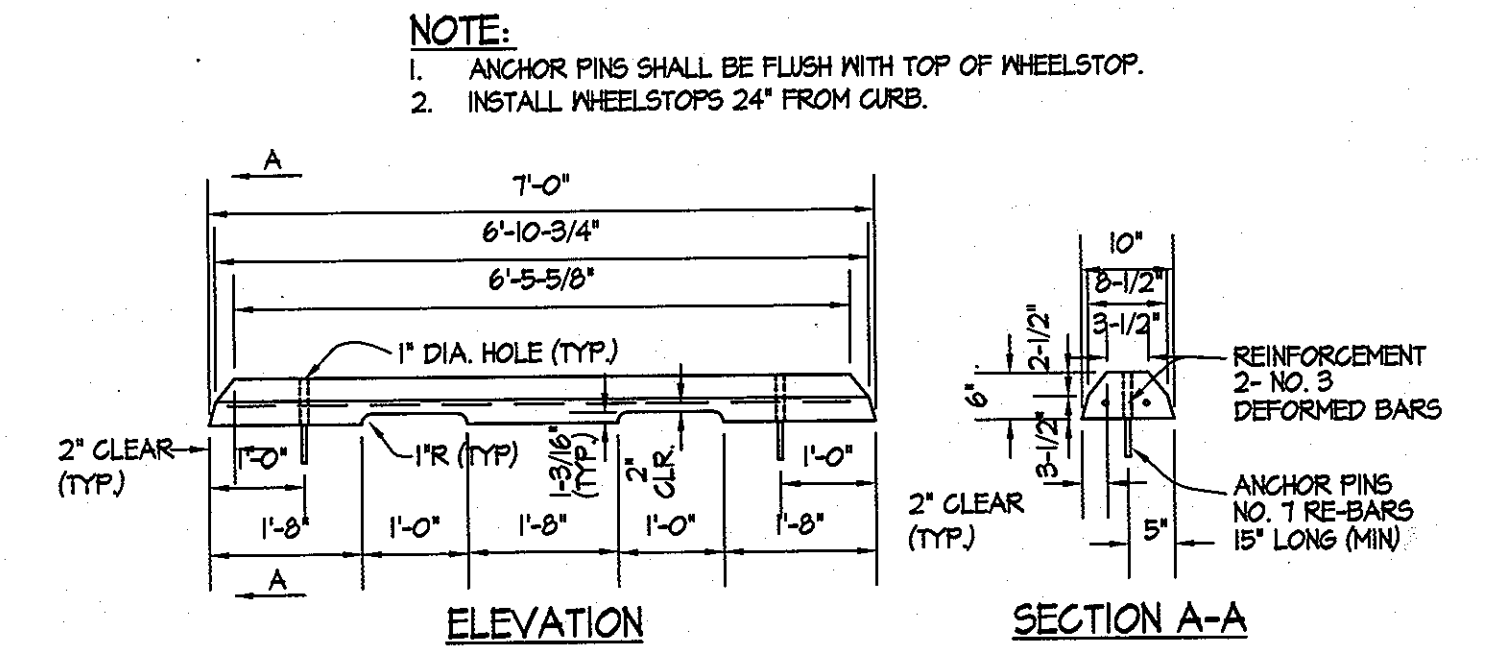


**NOTES:**  
1. HANDICAP PARKING AND ACCESS SHALL COMPLY WITH THE CURRENT ADA REQUIREMENTS AT TIME OF CONSTRUCTION.  
2. PARKING STALL AND ACCESS AISLE WIDTHS ARE SHOWN AS MINIMUMS.

**2 HANDICAP PARKING**  
NOT TO SCALE

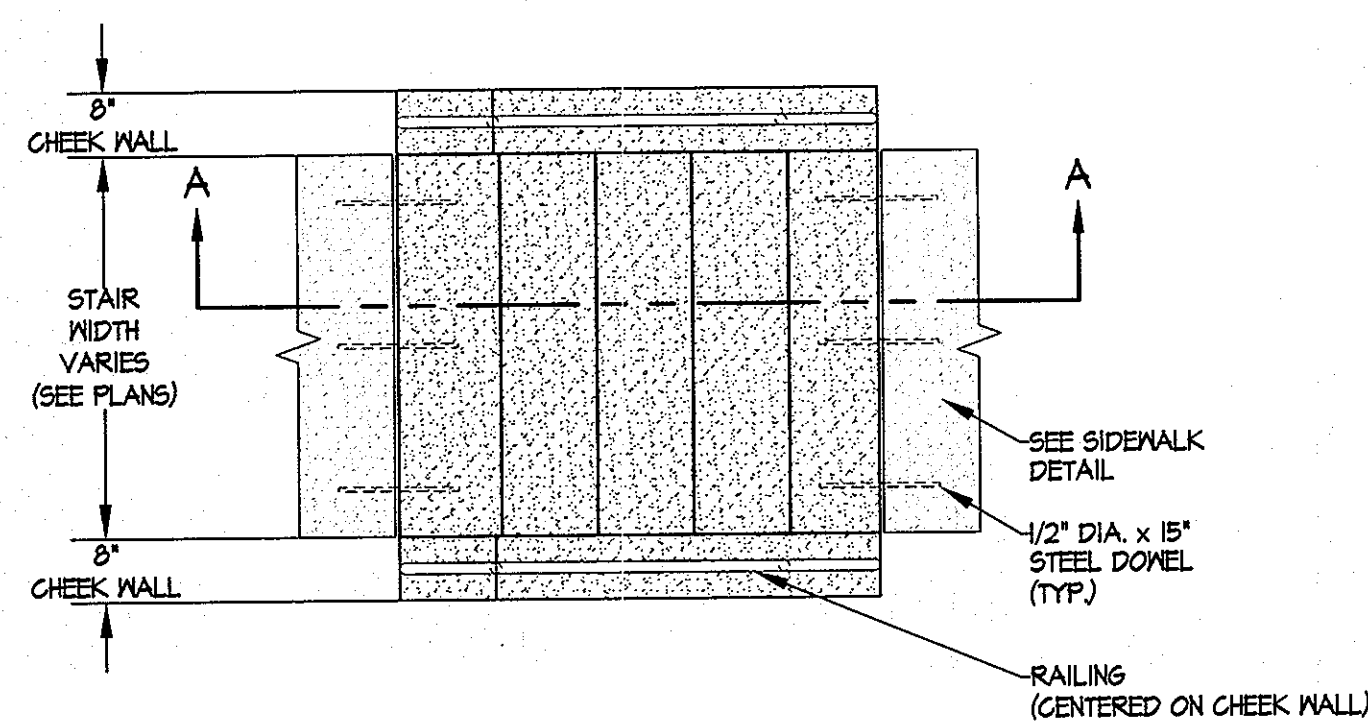


**3 HANDICAP PARKING SIGNS**  
NOT TO SCALE

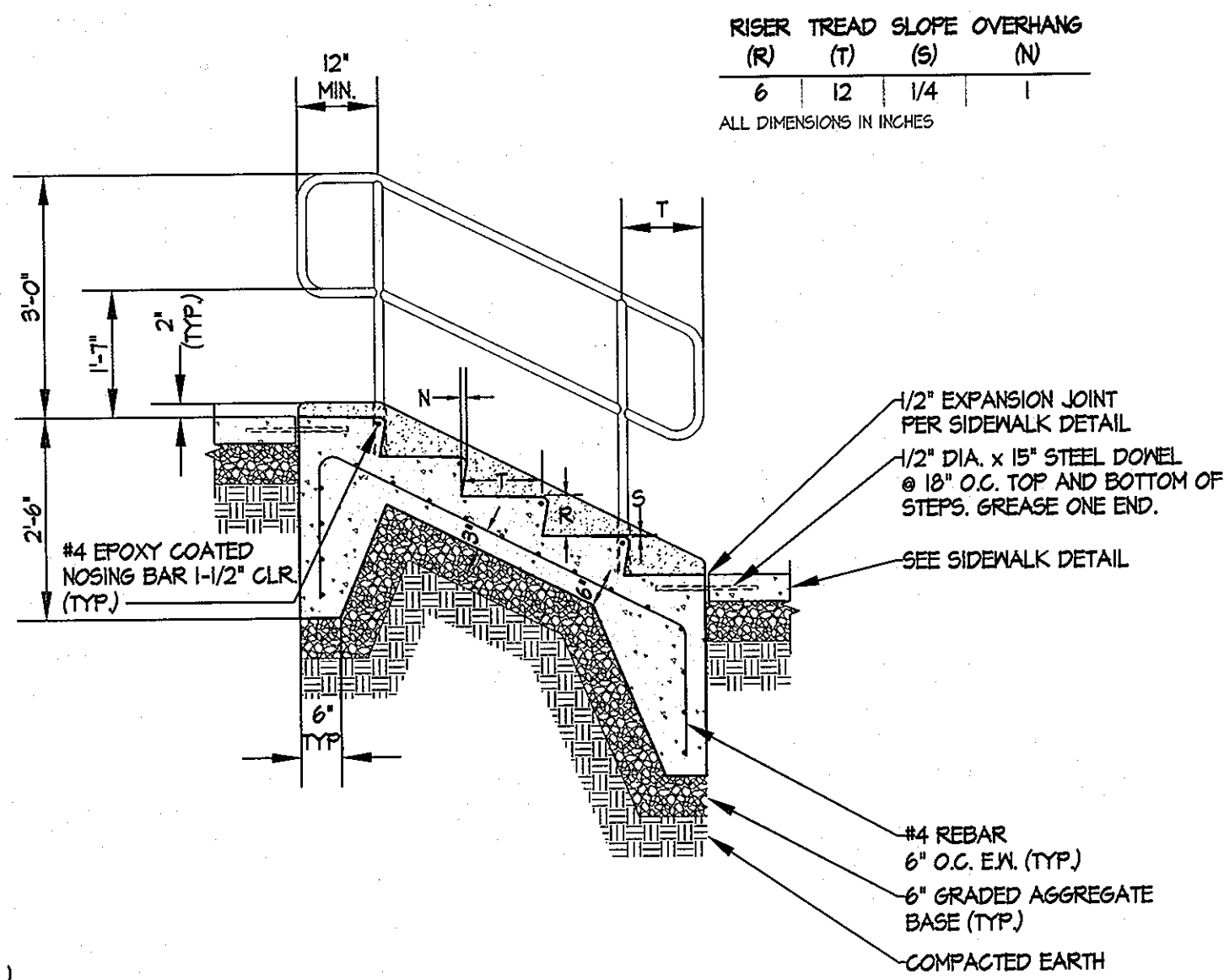


**4 CONCRETE WHEELSTOP**  
NOT TO SCALE

- NOTES:**
1. RAILINGS & POST TO BE SHOP FABRICATED OF 1-1/2\"/>



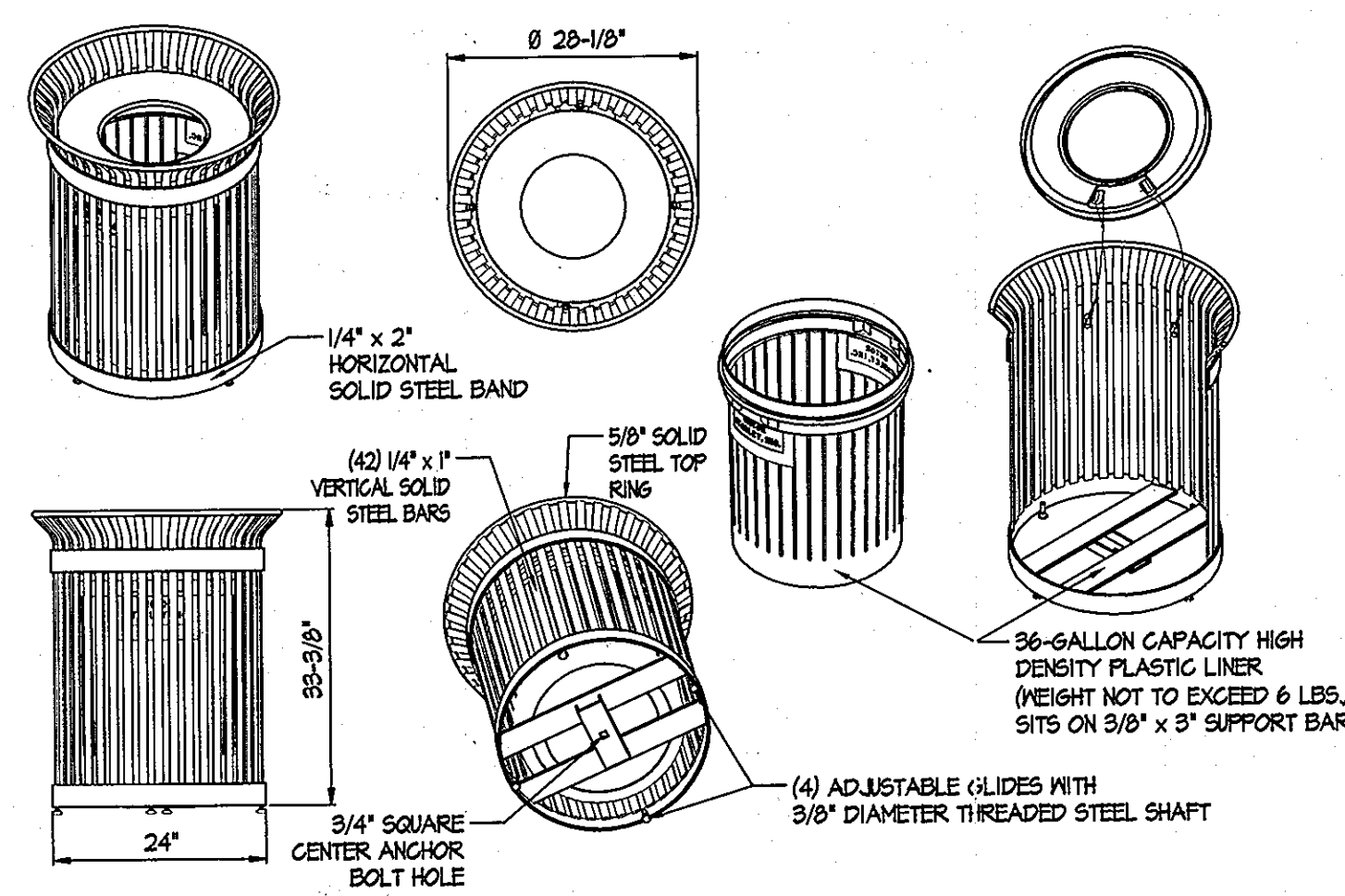
**5 CONCRETE STAIRS & RAILING**  
SCALE: 1/2\"/>



**SECTION A-A**

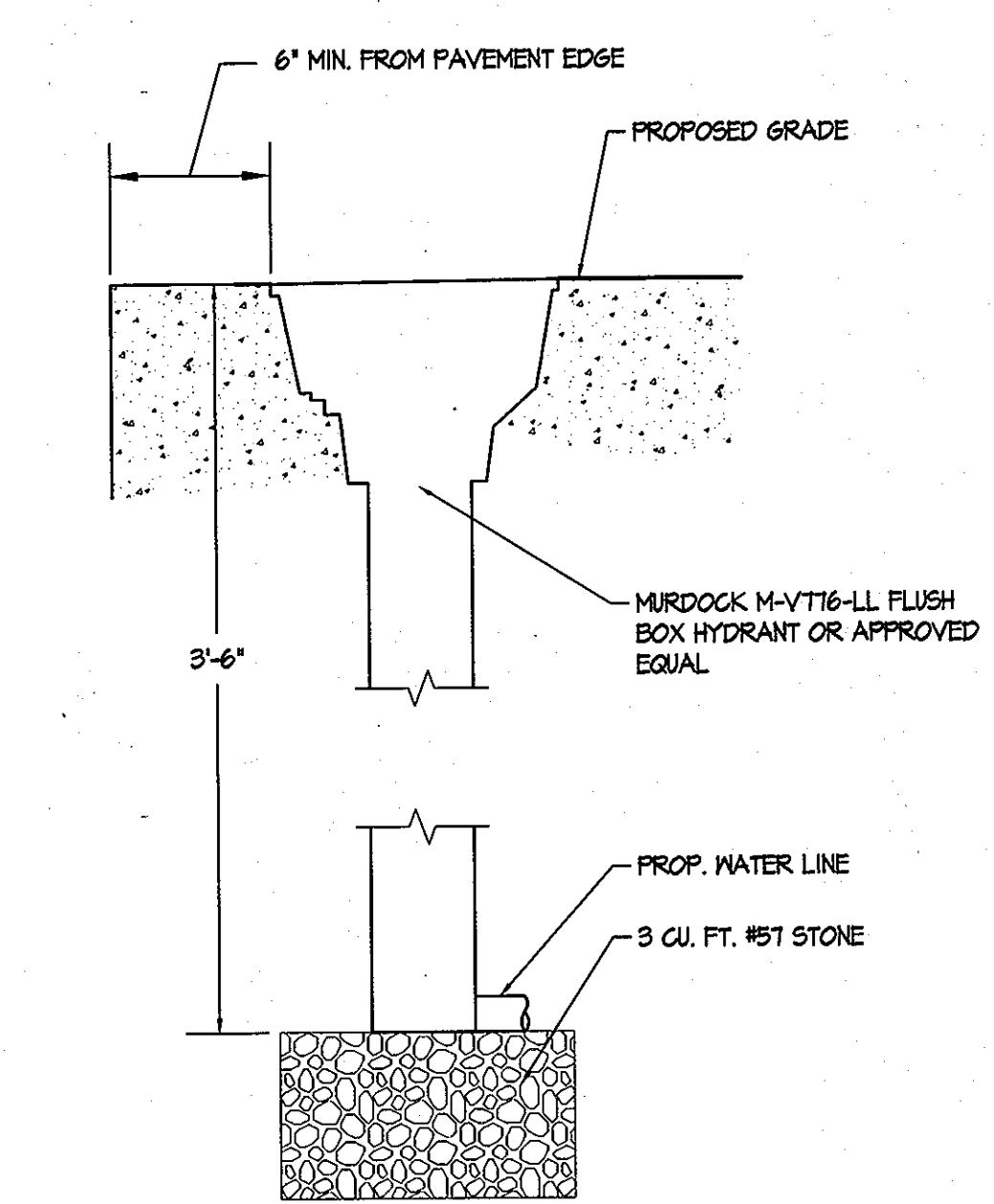
RISER (R)	TREAD (T)	SLOPE (S)	OVERHANG (N)
6	12	1/4	1

ALL DIMENSIONS IN INCHES



- NOTES:**
1. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD FILM COATINGS. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
  2. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL RECEPTACLE IS IN PLACE. CONTRACTOR TO PROVIDE STAINLESS STEEL ANCHOR BOLTS WITH TAMPER PROOF HEADS.
  3. PRODUCT TO BE ORDERED WITH A BLACK POWDERCOAT FINISH.
  4. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.
  5. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.

**6 TRASH RECEPTACLE**  
VICTOR STANLEY MODEL #ES-142 (36 GAL.) OR APPROVED EQUAL NOT TO SCALE



**7 FLUSH BOX HYDRANT**  
NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 DIRECTOR: *Charles A. ...* DATE: 4/3/14  
 CHIEF DEVELOPMENT ENGINEERING DIVISION: *Charles A. ...* DATE: 12-13-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT: *Charles A. ...* DATE: 12-18-13

ADDRESS / PERMIT INFORMATION  
 PARCEL 501 545 542 558, 102 105, 105 LOT A-21, 105 LOT A-22  
 ADDRESS: 6400 HANSON LANE  
 L571 / F414, L10589 / F3571, L12205 / F340, L5183 / F400,  
 L534 / F118, L4283 / F431, L4883 / F440, L4855 / F. 640  
 6950 FT. 11. 15. 2285. 164. TAX MAP NO. 51  
 2ND ELECTION DISTRICT, CENSUS TRACT 60202  
 WATER CODE: 400, SEWER CODE: 302000  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 393-2700  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 393-2700

**SITE RESOURCES**  
 Comprehensive Land Planning & Site Design Services  
 14315 Jermantown Pike • Pikesville, Maryland 21111  
 (410) 885-3088 • fax (410) 885-3089

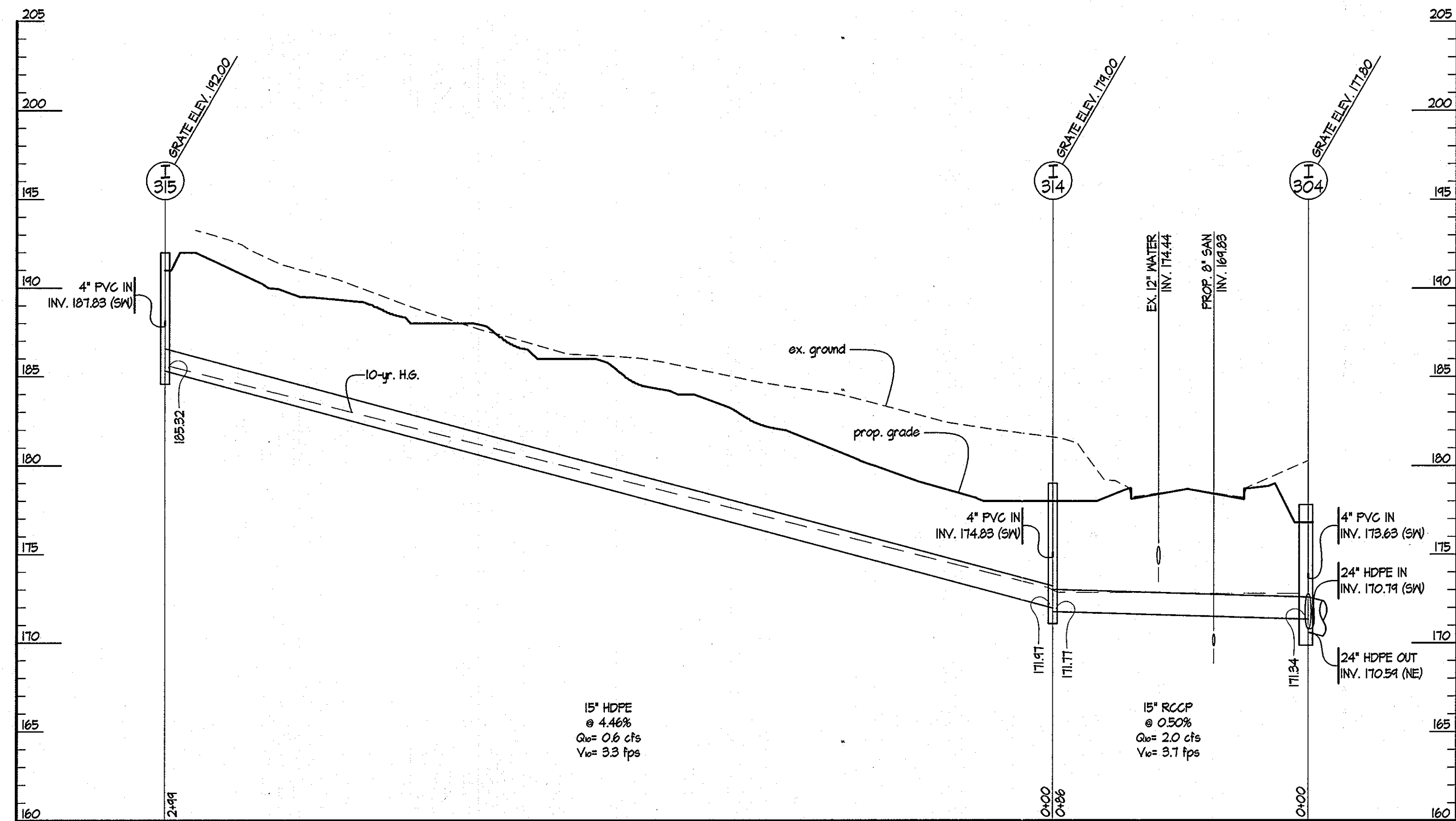
DES: JLT  
 DRN: AM  
 CHK: AFE  
 DATE: 08/12/12

NO.	REVISION	DATE
1	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
2		
3		
4		
5		
6		
7		
8		
9		
10		

600' SCALE MAP NO. 51 BLOCK NO. 16

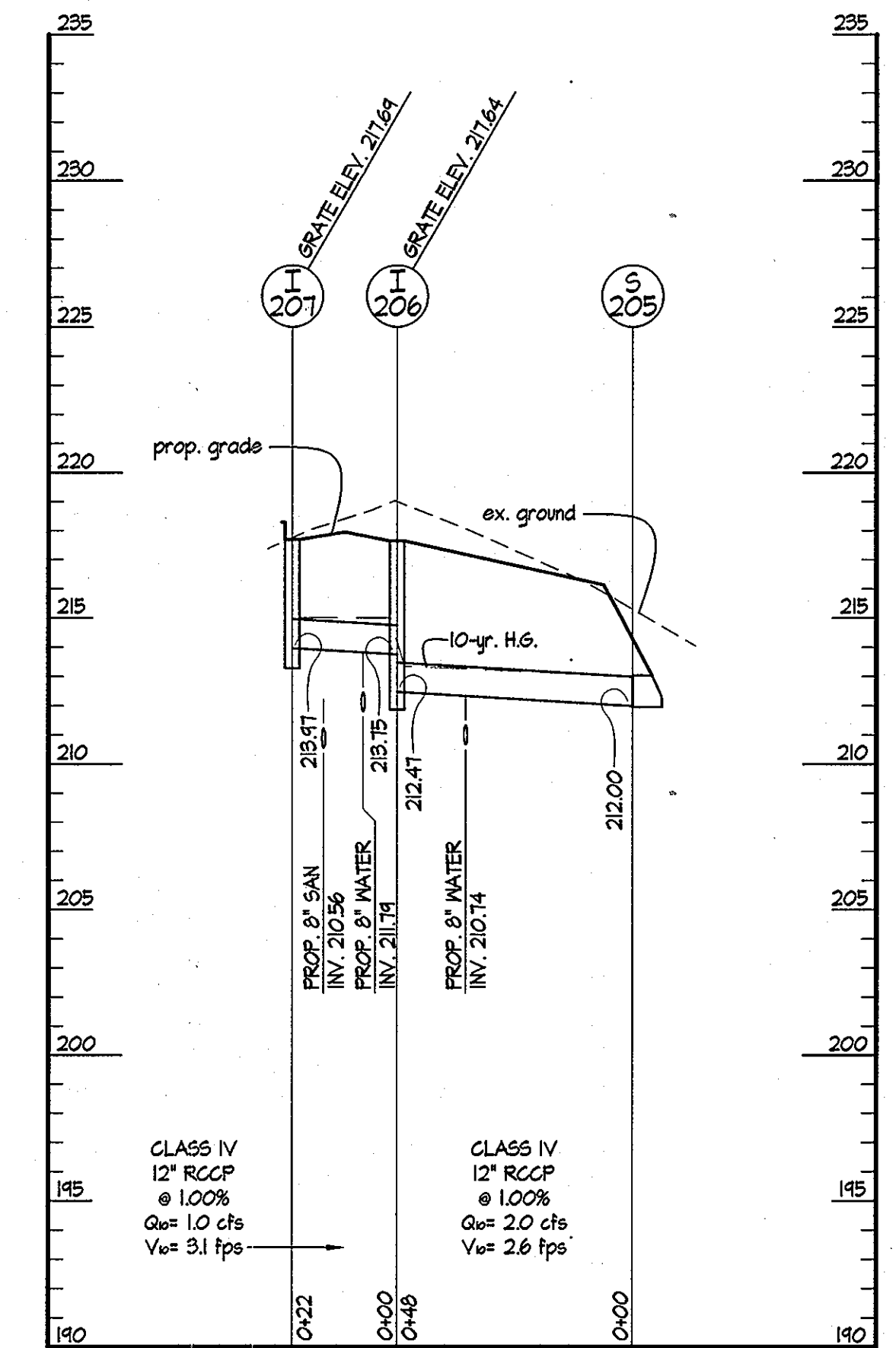
**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND  
 SHEET 11C OF 64  
 SCALE: AS SHOWN  
 C2.05  
 SDP-11-003





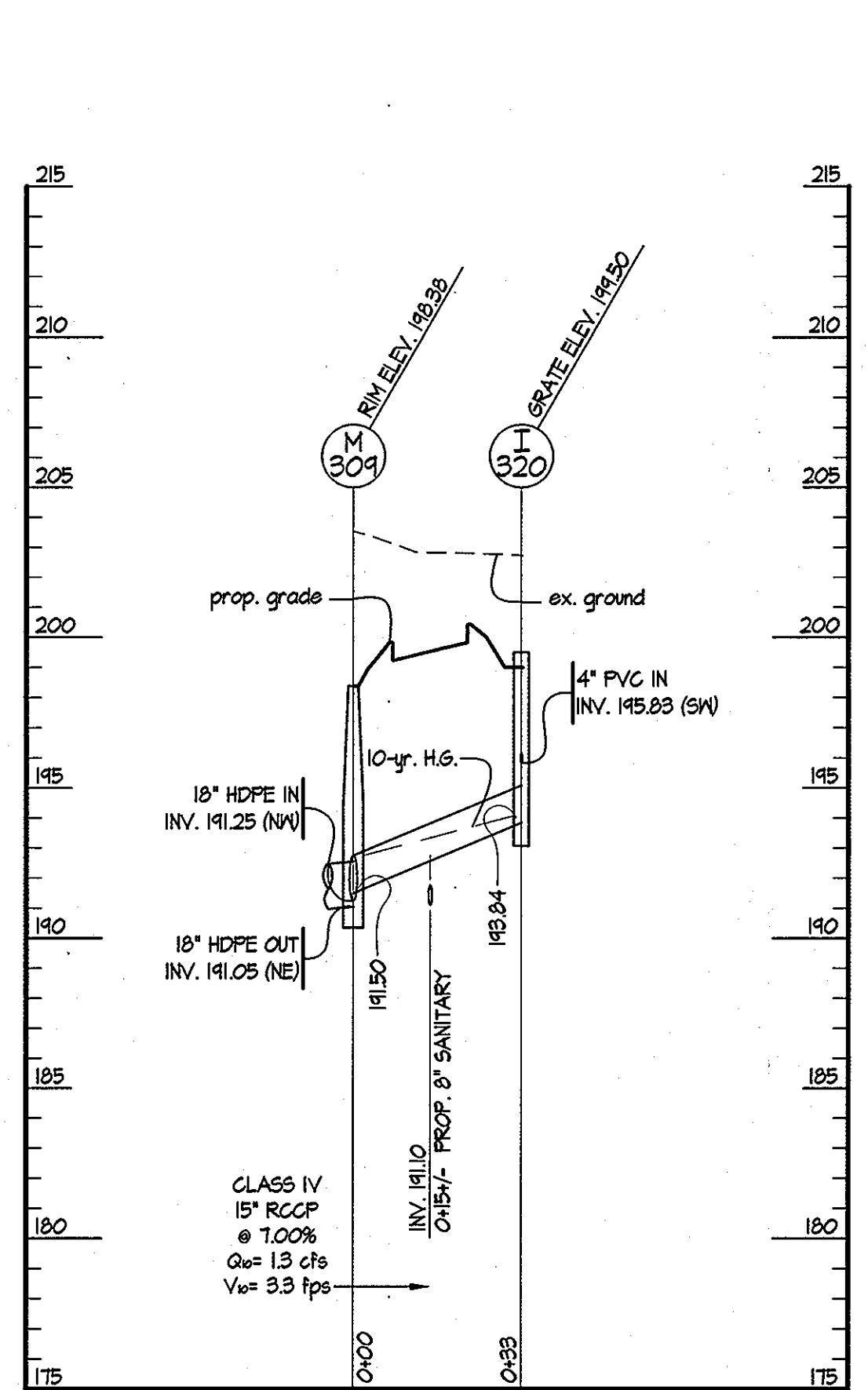
1 PROFILE I-315 TO I-304

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



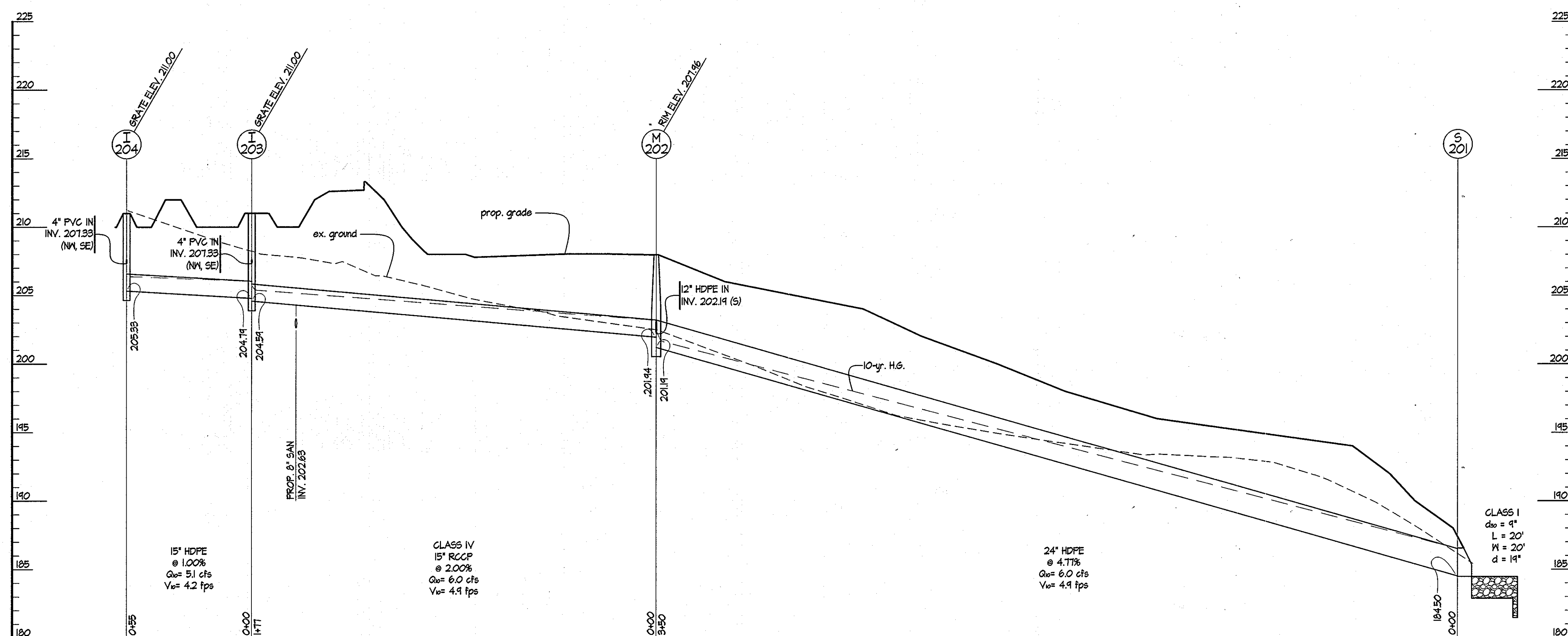
2 PROFILE I-207 TO S-205

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



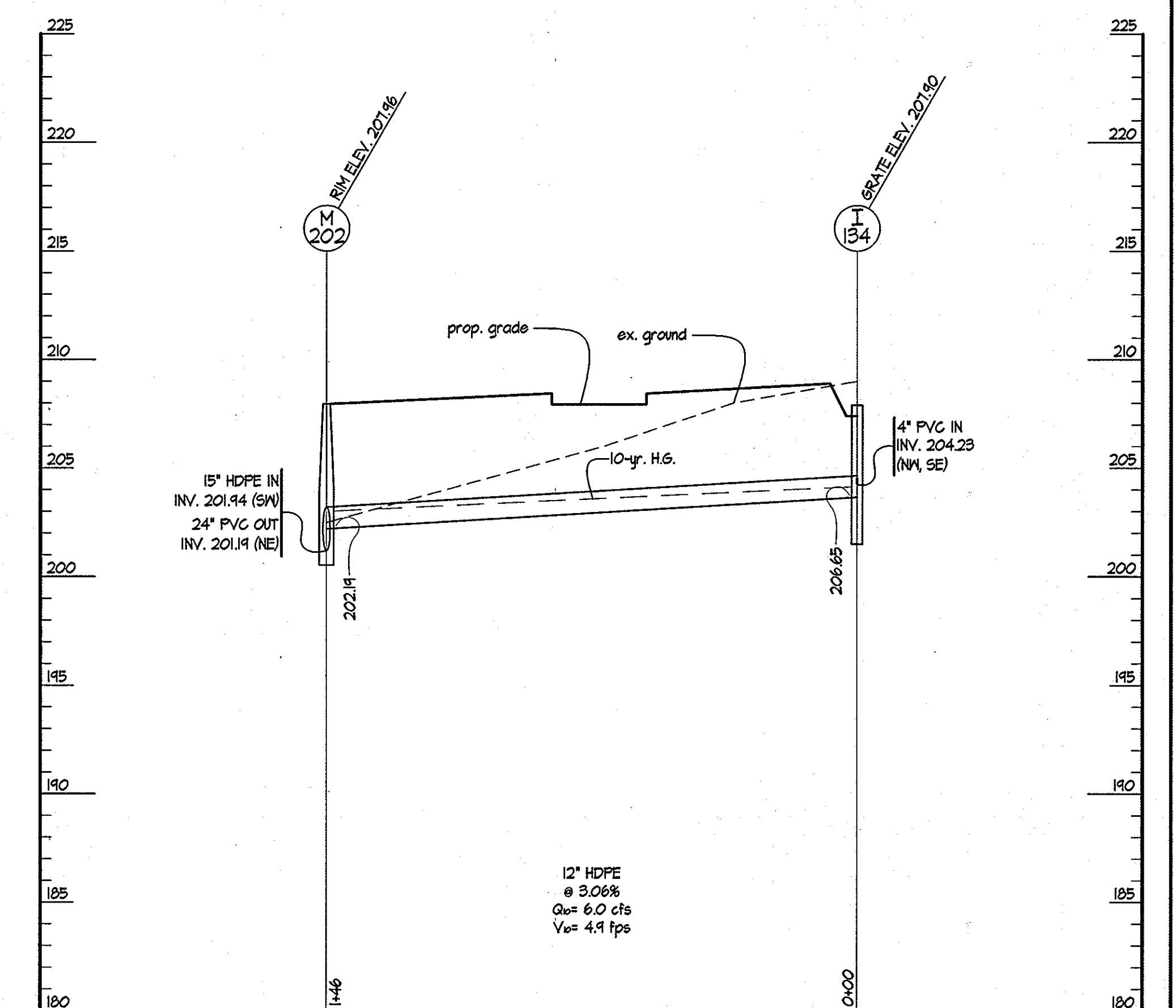
3 PROFILE I-320 TO M-309

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



4 PROFILE I-204 TO S-201

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



5 PROFILE I-134 TO M-202

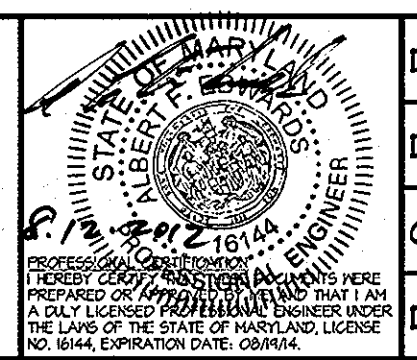
SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'

Z:\1010022-Troy Park Phase 1\Site Plan\DWG\C3.01\_SitePlan\_DrainProfiles.dwg:Legend: Sep 19, 2012 02:09pm a.m.

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: *Mark A. Gough* 2/4/12  
 Chief, Development Engineering Division: *W. J. [Signature]* 12/1/12  
 Chief, Division of Land Development: *W. J. [Signature]* 2/6/13

ADDRESS / PERMIT INFORMATION  
 PARCELS: 541, 542, 543, 542, 536, 190, 191, 192 LOT A-21, 195 LOT A-22  
 ADDRESS: 6450 MANSION LANE  
 LSTT: F-44, L-2055 / F-351, L-2205 / F-940, L-5193 / F-400,  
 L-5241 / F-18, L-4833 / F-481, L-4835 / F-640, L-4835 / F-640  
 GRID: 14 + 15' ZONE: 14. TAX MAP NO. 31  
 2ND ELECTION DISTRICT: CONGRESS TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 252200  
 OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 352-2100

**SITE RESOURCES**  
 Incorporated  
 Comprehensive Land Planning & Site Design Services  
 14315 Arretville Pike • Phoenix, Maryland 21131  
 (410) 883-3388 • fax (410) 883-3383

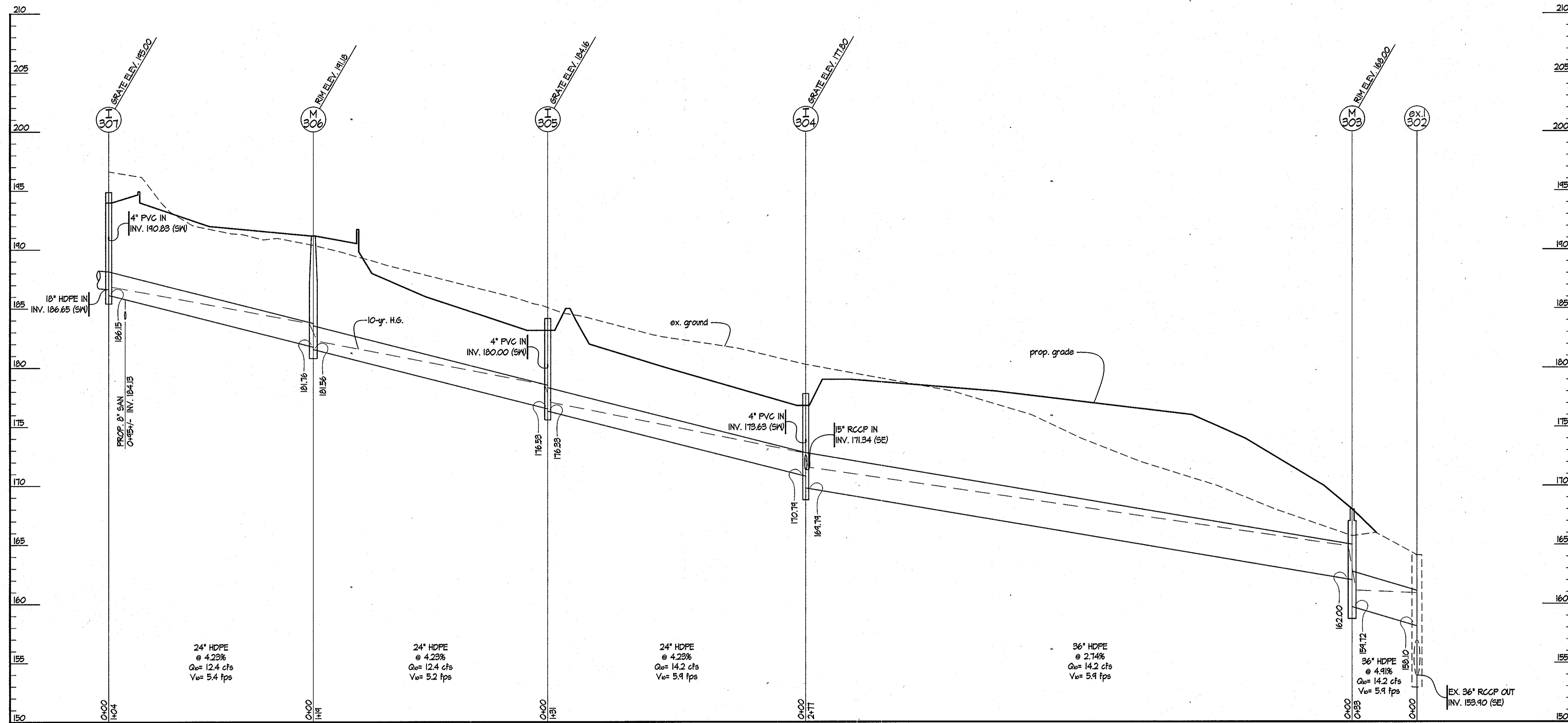


DES: SRI					
DRN: SRI					
CHK: SRI					
DATE: 08/12/12	BY: NO.	REVISION	DATE	600' SCALE MAP NO. 51	BLOCK NO. 16

STORM DRAIN PROFILES

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
 C3.01  
 SHEET 18 OF 64  
 SDF-11-003



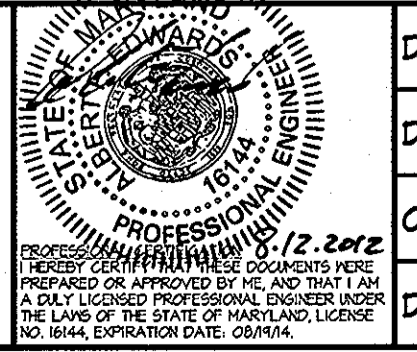
1 PROFILE I-307 TO ex. I-302

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'

Z:\10\0022-Troy Park Phase 1\Site Plan\Drawings\3.02\_Site\_Drain\_Profile.dwg - Layout Sep 18, 2012 02:04pm a.m.

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Frank A. Coyle* 2/1/13  
 DIRECTOR DATE  
*Michael J. ...* 1/31/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION CE DATE  
*Kat ...* 2/1/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCELS: 341, 342, 343, 336, 110, 105, 95 LOT A-21, 95 LOT A-22  
 ADDRESS: 6450 MANSION LANE  
 L377 / F.44, L10265 / F.871, L12225 / F.940, L5183 / F.600,  
 L534 / F.15, L4133 / F.431, L433 / F.640, L4135 / F.640  
 6000 FT. 15, ZONE: HA TAX MAP NO. 31  
 2nd ELECTION DISTRICT: CENSUS TRACT 602.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 313-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 313-2100



DES: SRI					
DRN: SRI					
CHK: SRI					
DATE: 08/12/12	BY	NO.	REVISION	DATE	

600' SCALE MAP NO. 51 BLOCK NO. 16

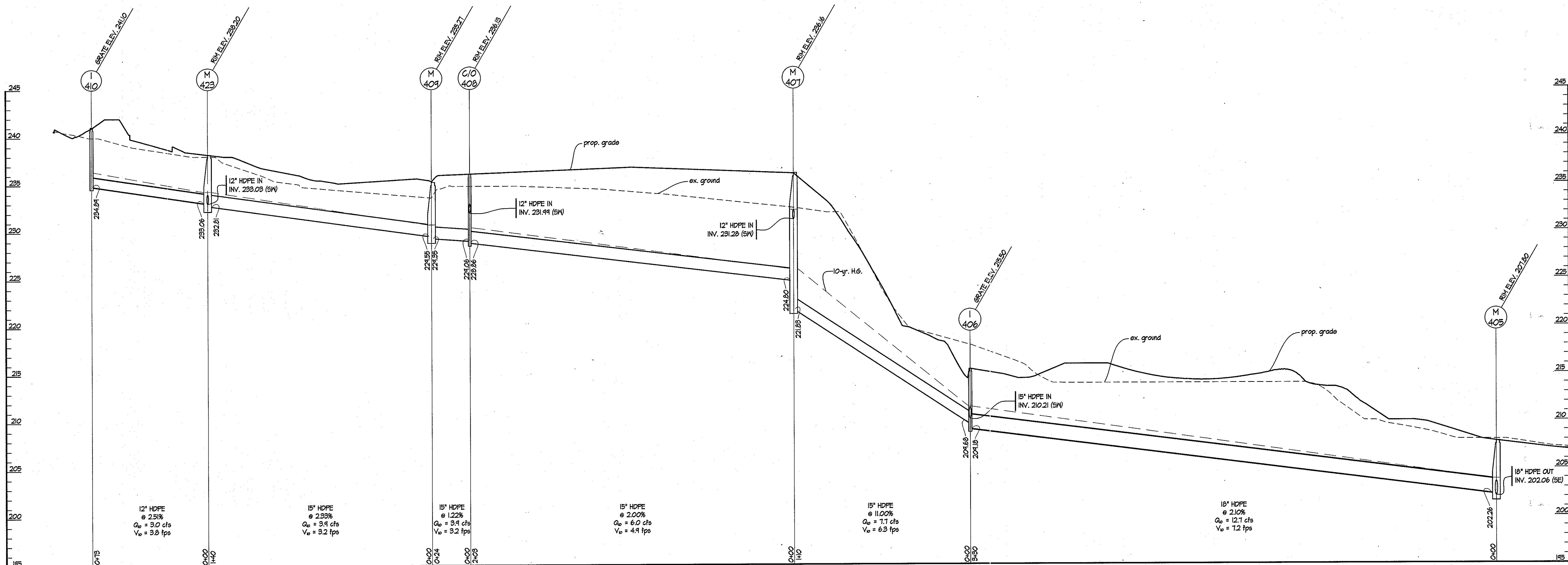
STORM DRAIN PROFILES

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3457 HOWARD COUNTY, MARYLAND

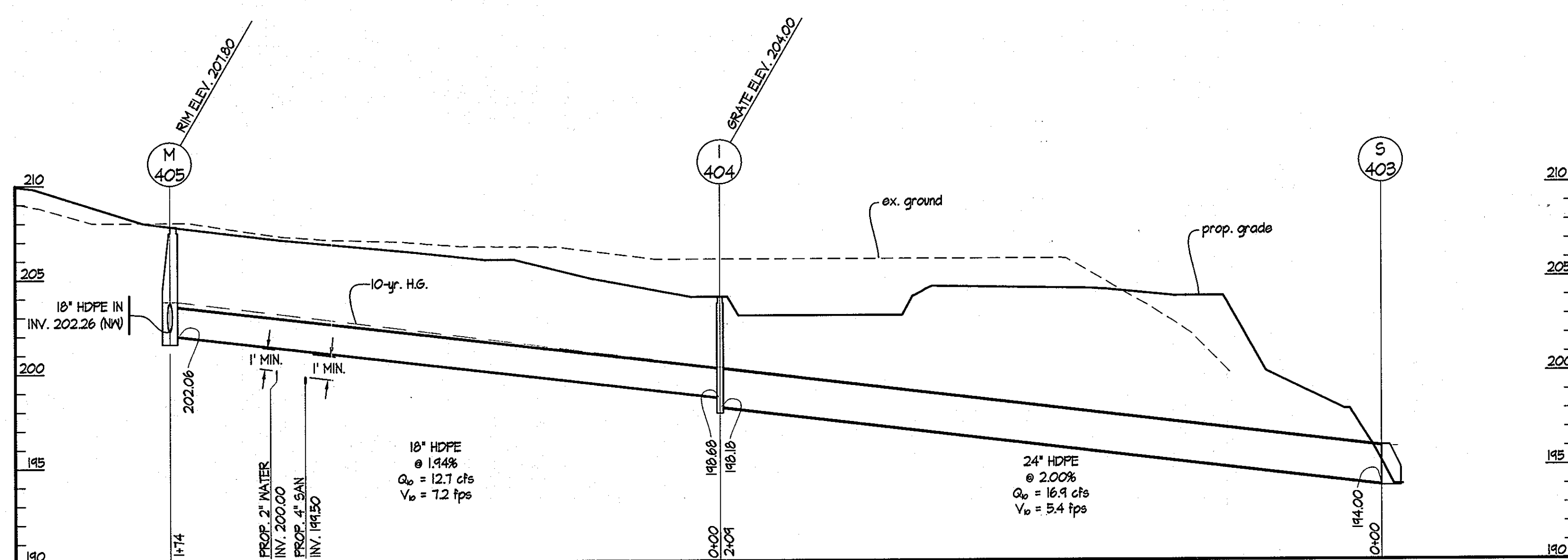
SCALE: AS SHOWN  
 C3.02  
 SHEET 19 OF 64





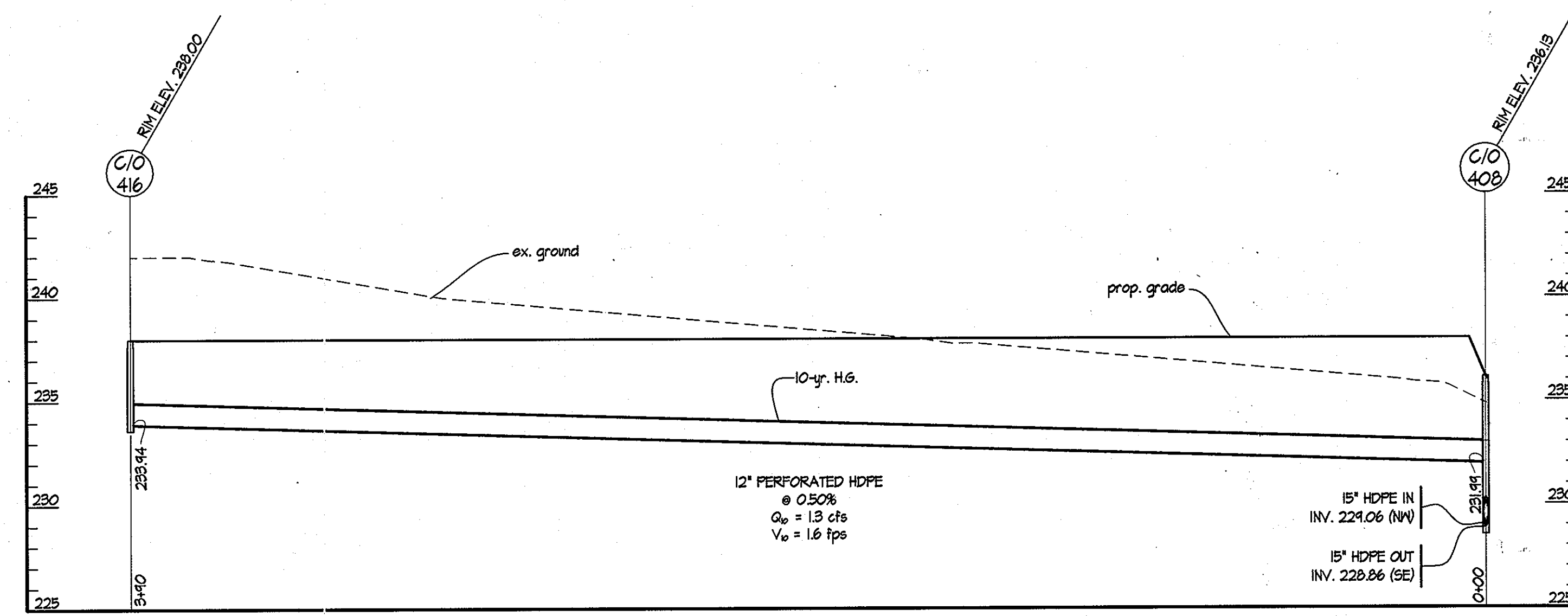
1 PROFILE I-410 TO M-405

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



2 PROFILE M-405 TO S-403

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



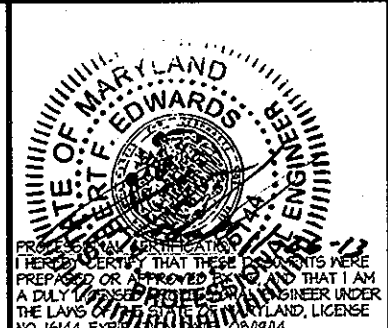
3 PROFILE C/O-416 TO C/O-408

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'

APPROVED: DEPARTMENT OF PLANNING & ZONING

[Signature] 1/7/14 DATE  
 DIRECTOR  
 [Signature] 12-13-13 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 12-13-13 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCELS: 341, 342, 343, 356, 357, 358 LOT A-21, B5 LOT A-22  
 ADDRESS: 6400 HANSON LANE  
 L571 / F.44, L1006 / F.31, L1225 / F.340, L5163 / F.600,  
 L5241 / F.18, L4933 / F.431, L4933 / F.430, L4933 / F.430,  
 6607 / F.18, ZONE: M-1, TAX MAP NO. 31  
 2ND ELECTION DISTRICT: CENSUS TRACT 602.02  
 WATER CODE: 400, SEWER CODE: 262.00  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7125 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 383-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7125 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 383-2100



DES: JLT			
DRN: AML/KH			
CHK: AFE			
DATE: 08/12/12	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
BY NO.	REVISION		DATE

STORM DRAIN PROFILES

TROY PARK - PHASE ONE

PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

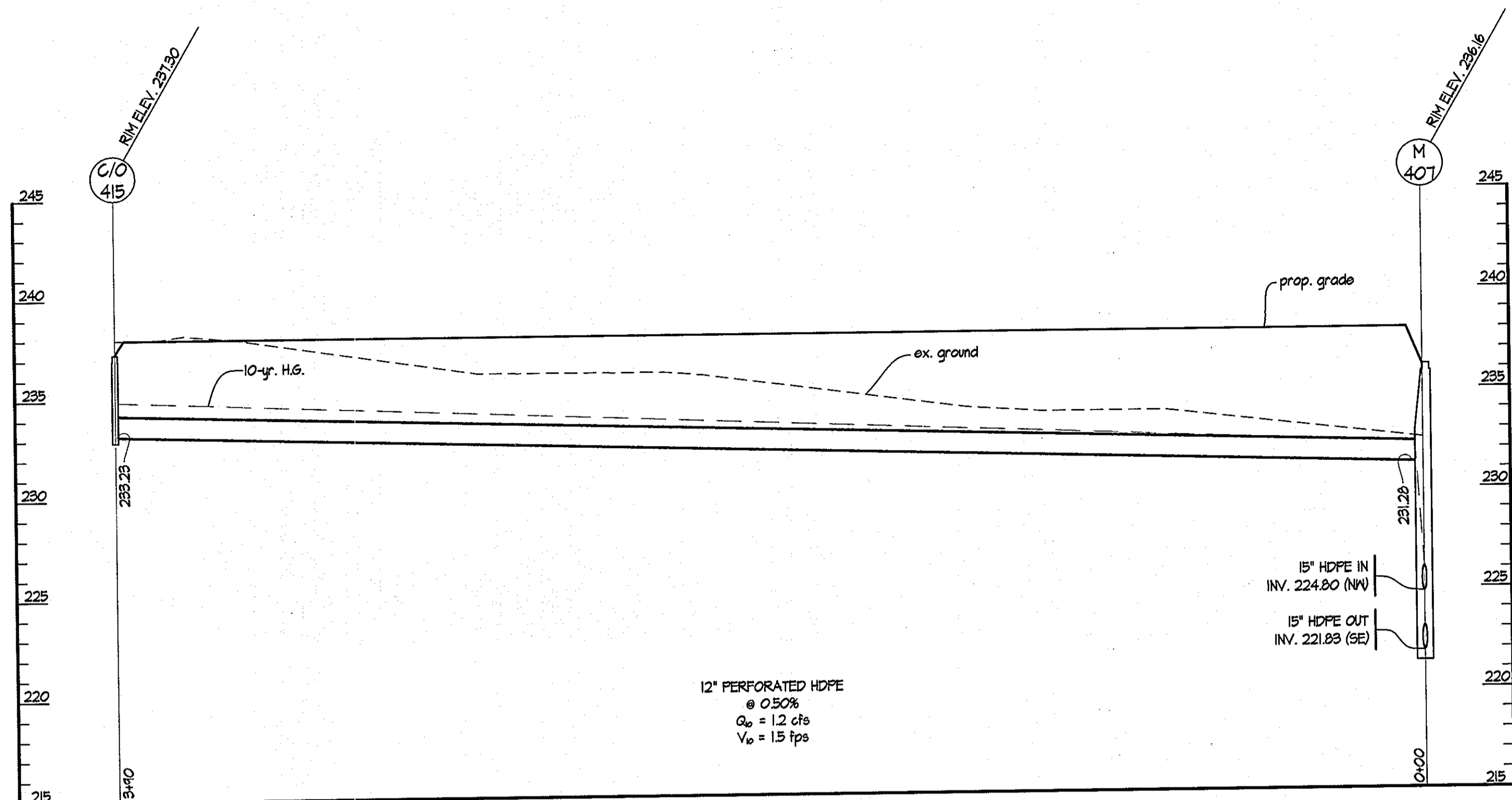
600' SCALE MAP NO. 51 BLOCK NO. 16 CAPITAL PROJECT NO. N-3451 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN

C3.04

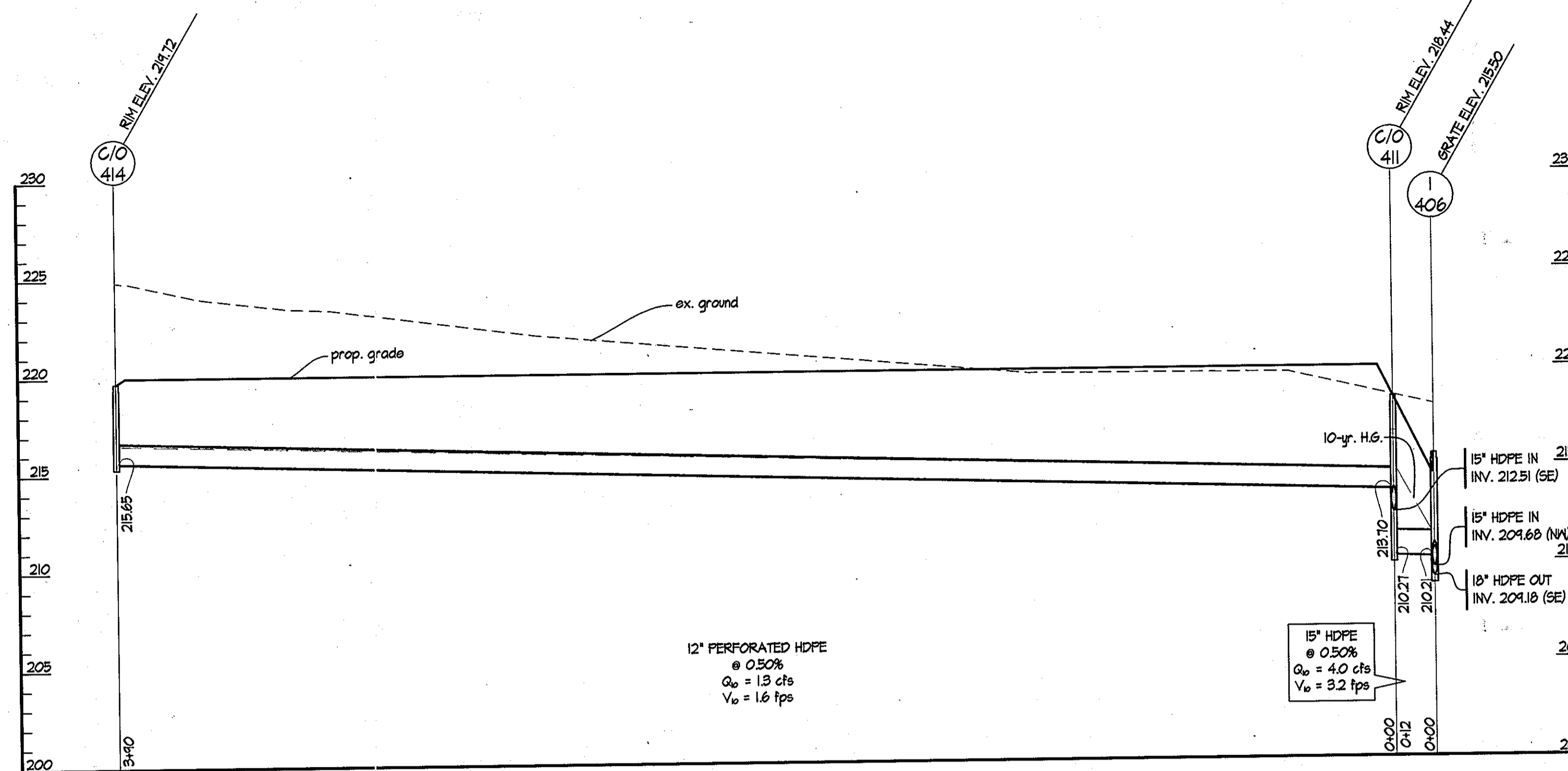
SHEET 20A OF 64

SDP-11-003



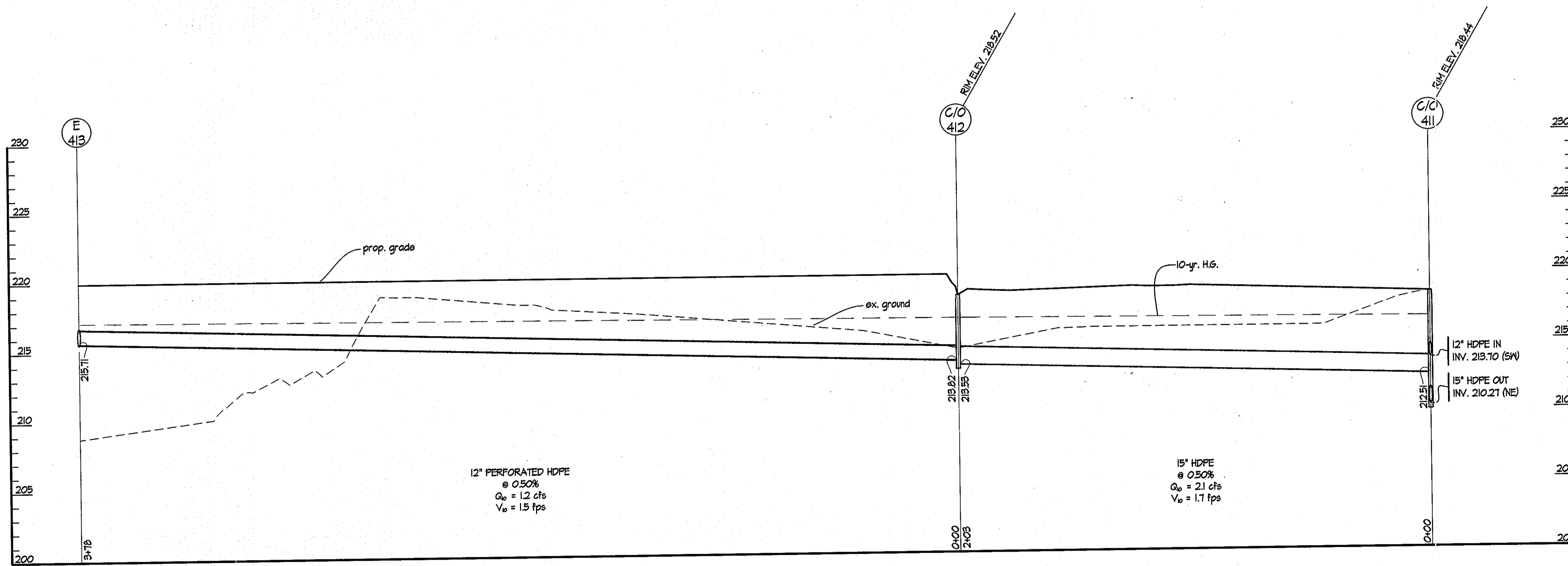
1 PROFILE C/O-415 TO M-407

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



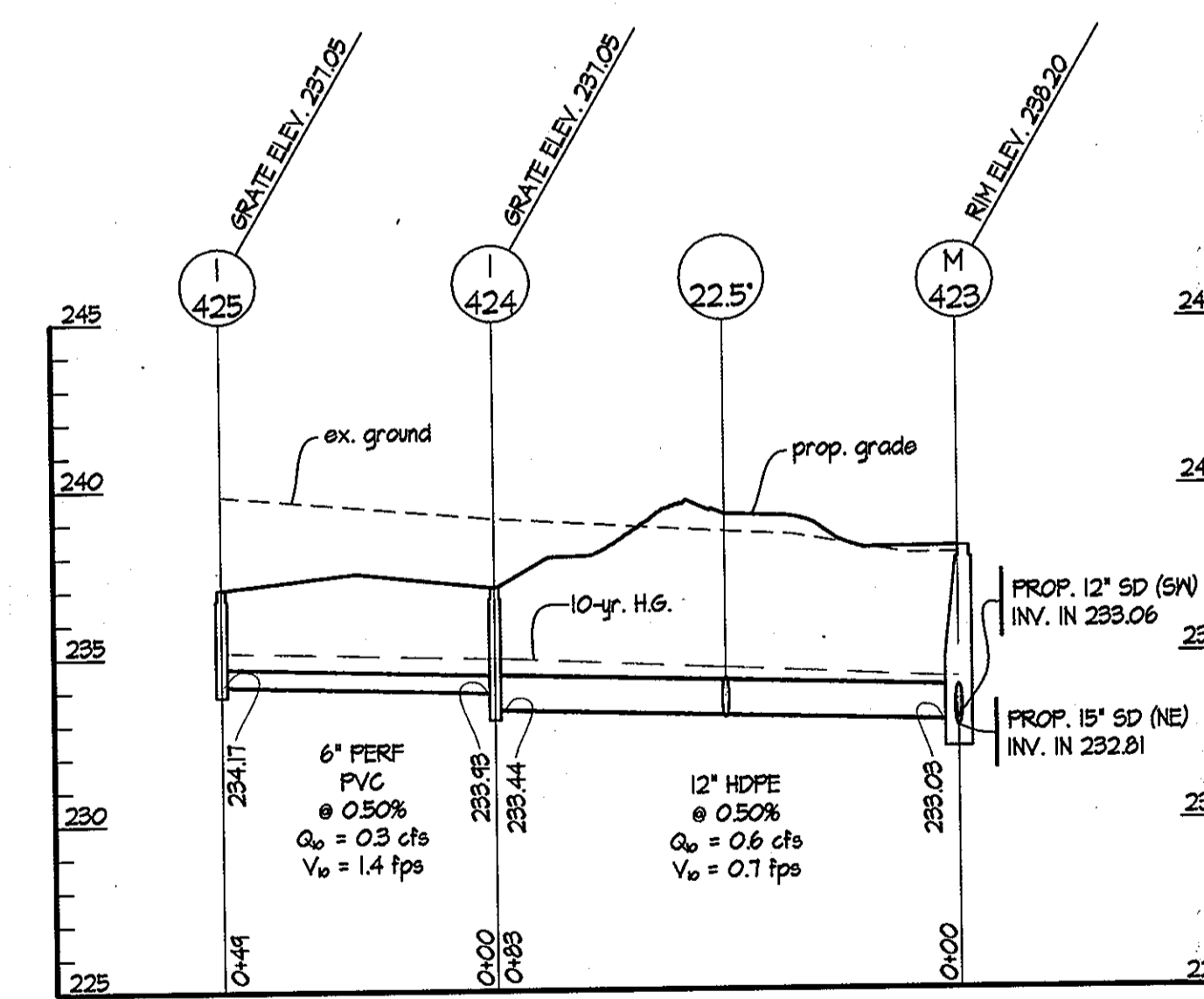
2 PROFILE C/O-414 TO I-406

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'



3 PROFILE E-413 TO C/O-411

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'

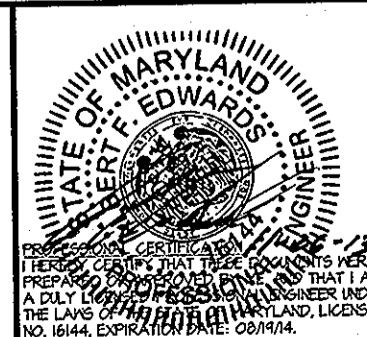


4 PROFILE I-425 TO M-423

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Frank McLaughlin*  
 DIRECTOR  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 12-13-13

ADDRESS / PERMIT INFORMATION  
 PARCEL 501, 502, 503, 105, 106, 107, 108 LOT A-21, 109 LOT A-22  
 ADDRESS: 4450 HANBORN LANE  
 L371 / F414, L10585 / F387, L12205 / F340, L15189 / F600,  
 L3841 / F718, L4889 / F497, L6189 / F440, L6189 / F. 610  
 GRID: 11.4 IS. ZONE: M-1. TAX MAP NO. 31  
 2ND ELECTION DISTRICT, CENSUS TRACT 602102  
 WATER CODE: 400, SEWER CODE: 252200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 283-2700  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 283-2700



DES: JLT			
DRN: AM/LKH			
CHK: AFE			
DATE: 08/12/12	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
BY NO.		REVISION	DATE

STORM DRAIN PROFILES

600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE

PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3457

HOWARD COUNTY, MARYLAND

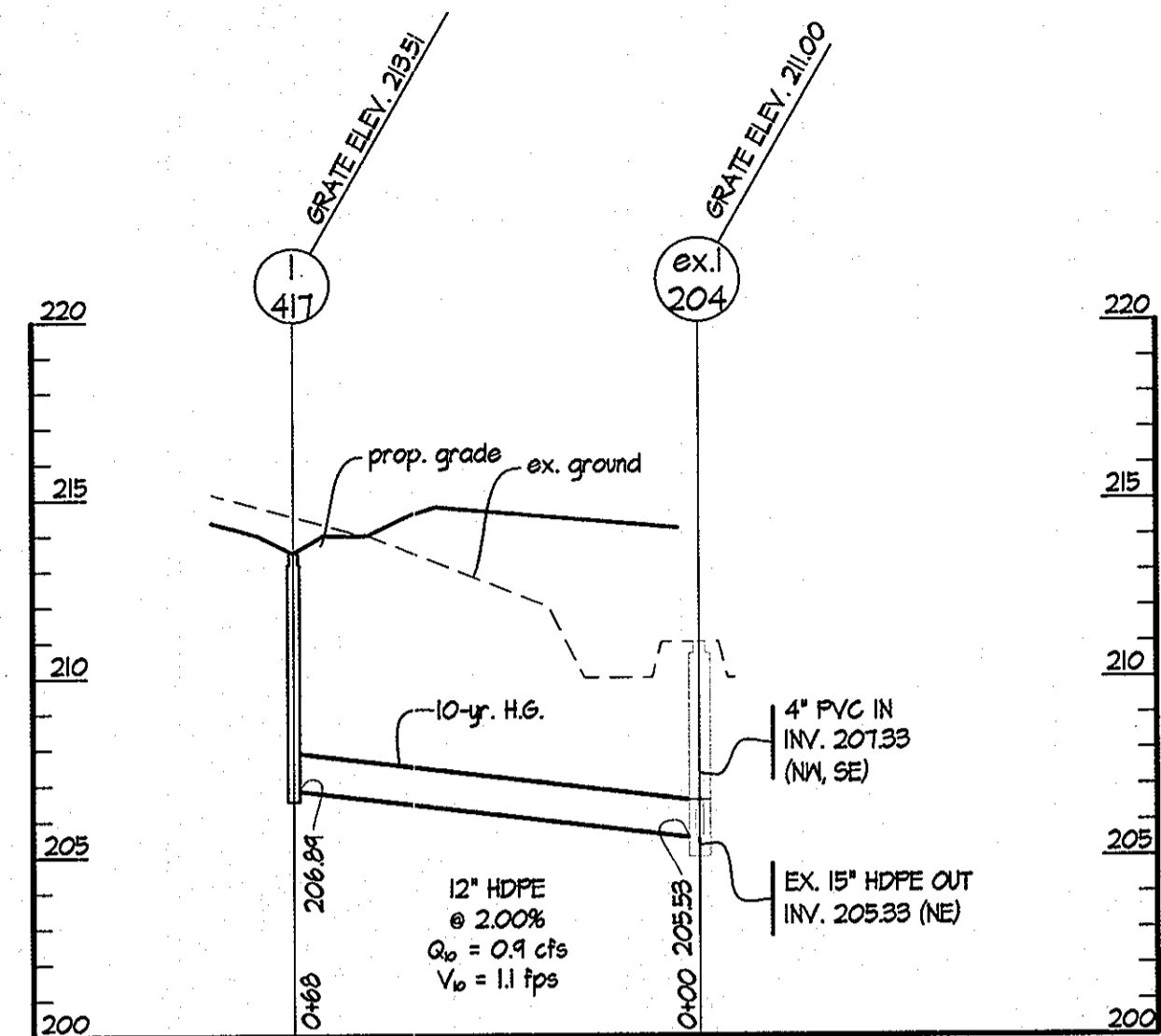
SCALE: AS SHOWN

C3.05

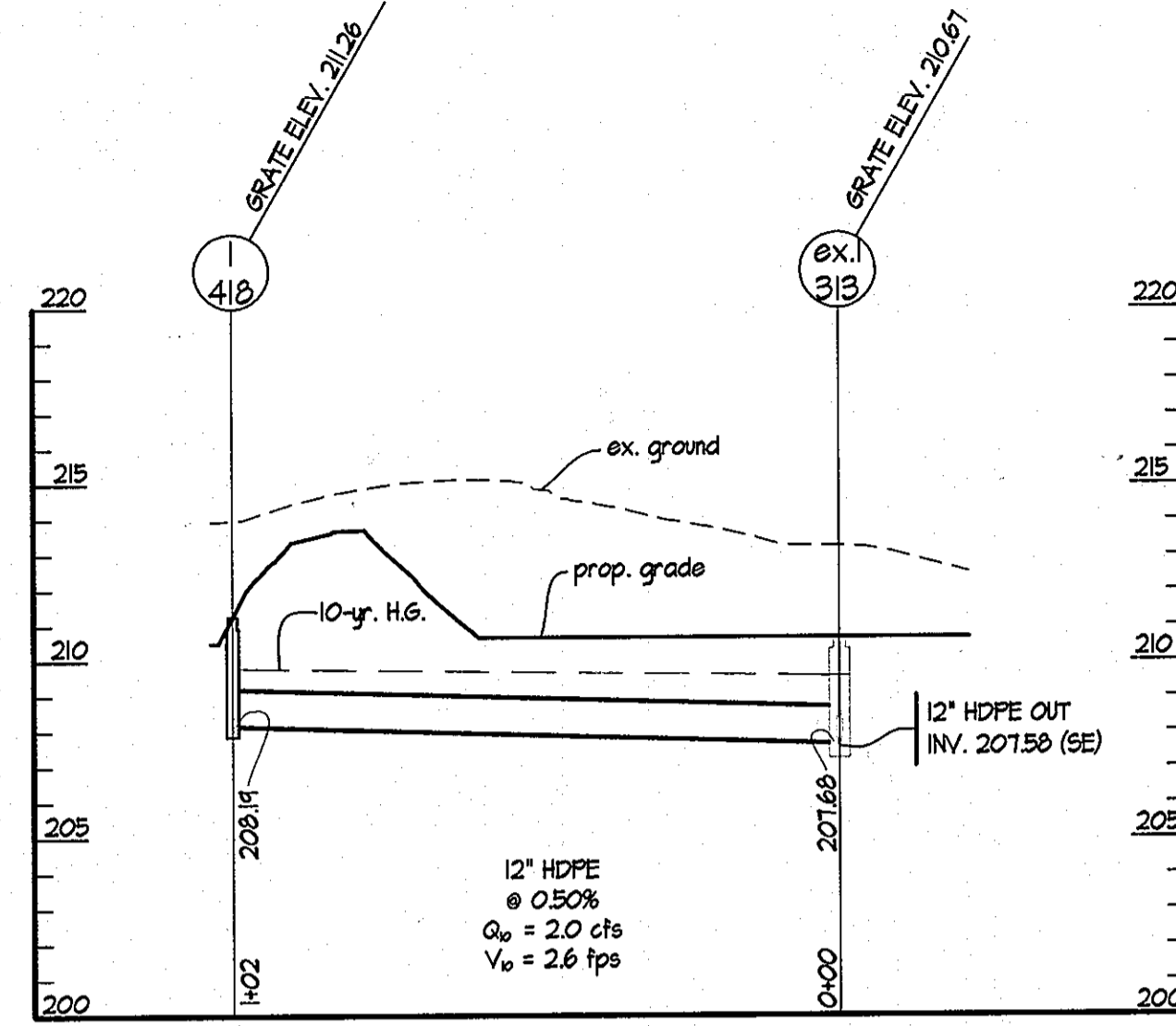
SHEET 208 OF 64

SDP-11-003

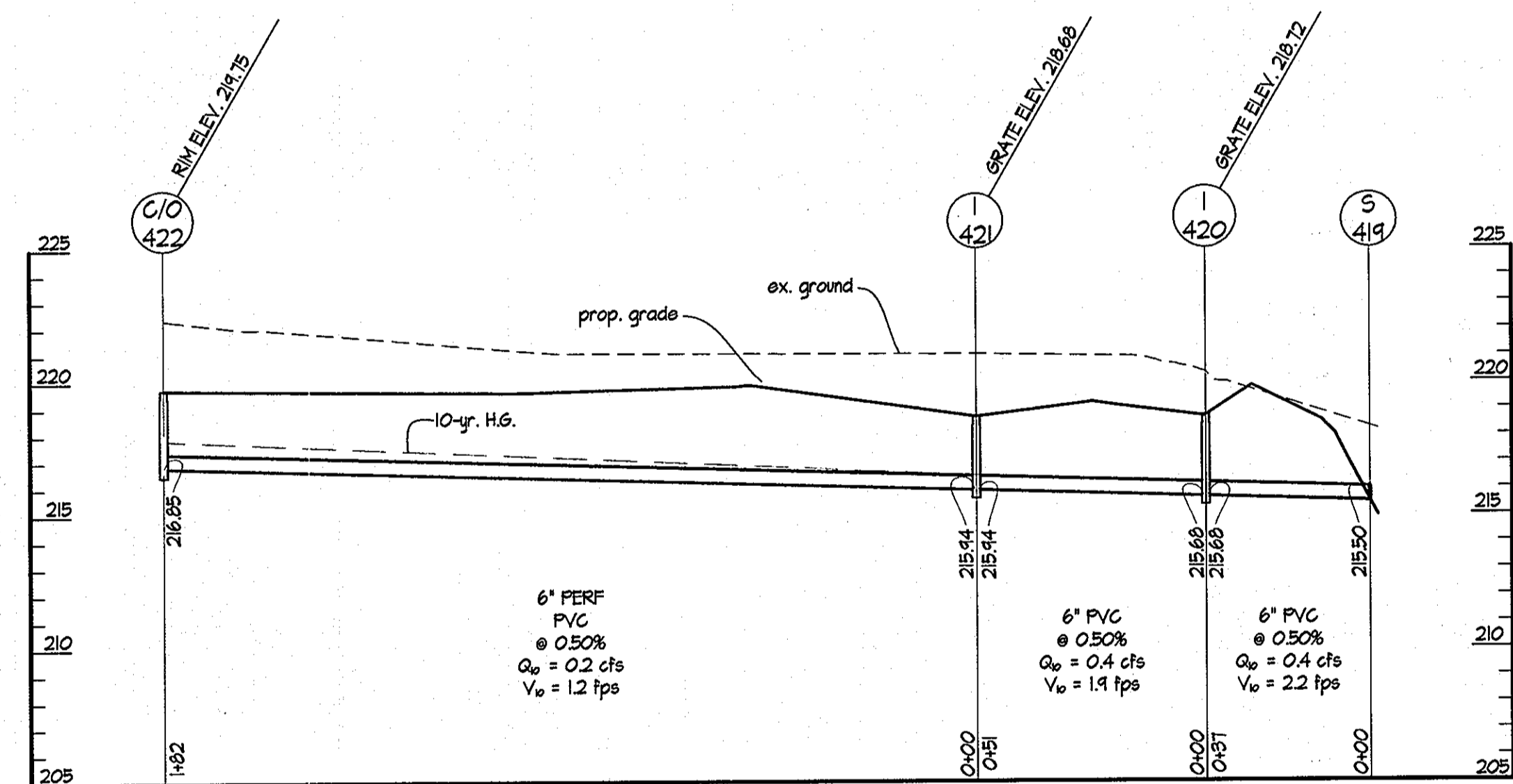




1 PROFILE 1-417 TO EX. 1-204  
 SCALES: HORIZ. 1" = 30'  
 VERT. 1" = 5'



2 PROFILE 1-418 TO EX. 1-313  
 SCALES: HORIZ. 1" = 30'  
 VERT. 1" = 5'



3 PROFILE C/O-422 TO S-419  
 SCALES: HORIZ. 1" = 30'  
 VERT. 1" = 5'

STRUCTURE SCHEDULE

STRUCTURE NO.	DETAIL NO.	DESCRIPTION	COMMENTS
I-134	HO.CO. D-4.22	TYPE S INLET	
S-201	HO.CO. D-5.51	CONCRETE END SECTION	
M-202	HO.CO. 6-5.12	PRECAST CONCRETE MANHOLE - STD 4' DIA.	HO.CO. 6-5.11
I-203	HO.CO. D-4.22	TYPE S INLET	
I-204	HO.CO. D-4.22	TYPE S INLET	
S-205	HO.CO. D-5.51	CONCRETE END SECTION	
I-206	HO.CO. D-4.22	TYPE S INLET	
I-207	HO.CO. D-4.22	TYPE S INLET	
M-303	HO.CO. 6-5.13	PRECAST CONCRETE MANHOLE - STD 5' DIA.	HO.CO. 6-5.11
I-304	HO.CO. D-4.23	DOUBLE TYPE S INLET	
I-305	HO.CO. D-4.22	TYPE S INLET	
M-306	HO.CO. 6-5.12	PRECAST CONCRETE MANHOLE - STD 4' DIA.	HO.CO. 6-5.11
I-307	HO.CO. D-4.22	TYPE S INLET	
I-308	HO.CO. D-4.22	TYPE S INLET	
M-309	HO.CO. 6-5.12	PRECAST CONCRETE MANHOLE - STD 4' DIA.	HO.CO. 6-5.11
I-310	HO.CO. D-4.22	TYPE S INLET	
I-311	HO.CO. D-4.22	TYPE S INLET	
I-312	HO.CO. D-4.22	TYPE S INLET	
I-313	HO.CO. D-4.22	TYPE S INLET	
I-320	HO.CO. D-4.22	TYPE S INLET	
I-402	HO.CO. D-4.22	TYPE S INLET	
S-401	HO.CO. D-5.51	CONCRETE END SECTION	
S-403	HO.CO. D-5.51	CONCRETE END SECTION	
I-404	HO.CO. D-4.22	TYPE S INLET	
M-405	HO.CO. 6-5.12	PRECAST CONCRETE MANHOLE - STD 4' DIA.	HO.CO. 6-5.11
I-406	HO.CO. D-4.22	TYPE S INLET	
M-407	HO.CO. 6-5.12	PRECAST CONCRETE MANHOLE - STD 4' DIA.	
C/O-408		NYLOPLAST DRAIN BASIN 2818AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
M-409	HO.CO. 6-5.12	PRECAST CONCRETE MANHOLE - STD 4' DIA.	HO.CO. 6-5.11
I-410	HO.CO. D-4.22	TYPE S INLET	
C/O-411		NYLOPLAST DRAIN BASIN 2818AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
C/O-412		NYLOPLAST DRAIN BASIN 2818AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
E-413		GAPPED PIPE	
C/O-414		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
C/O-415		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
C/O-416		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
I-417	HO.CO. D-4.22	TYPE S INLET	
I-418	HO.CO. D-4.22	TYPE S INLET	
S-419	HO.CO. D-5.51	CONCRETE END SECTION	
I-420		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
I-421		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
C/O-422		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
M-423	HO.CO. 6-5.12	PRECAST CONCRETE MANHOLE - STD 4' DIA.	
I-424		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)
I-425		NYLOPLAST DRAIN BASIN 2812AG (OR APPROVED EQUAL)	NYLOPLAST GRATE 1249CGG (OR APPROVED EQUAL)

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: *Charles Edwards*  
 Chief, Development Engineering Division  
 Chief, Division of Land Development

ADDRESS / PERMIT INFORMATION  
 PARCELS: 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

SITE RESOURCES  
 Comprehensive Land Planning & Site Design Services  
 14115 Arretville Pike • Phoenix, Maryland 21131  
 (410) 883-3388 • Fax (410) 883-3389

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 PROFESSIONAL ENGINEER  
 J. L. T. (JLT)  
 License No. 112613  
 Date: 08/12/12

DES: JLT  
 DRN: AMLKH  
 CHK: AFE  
 DATE: 08/12/12  
 SRI: 2  
 BY: NO.  
 ADD SPORTS FIELDS & PARKING LOTS  
 REVISION

STORM DRAIN PROFILES  
 60' SCALE MAP NO. 51  
 BLOCK NO. 16

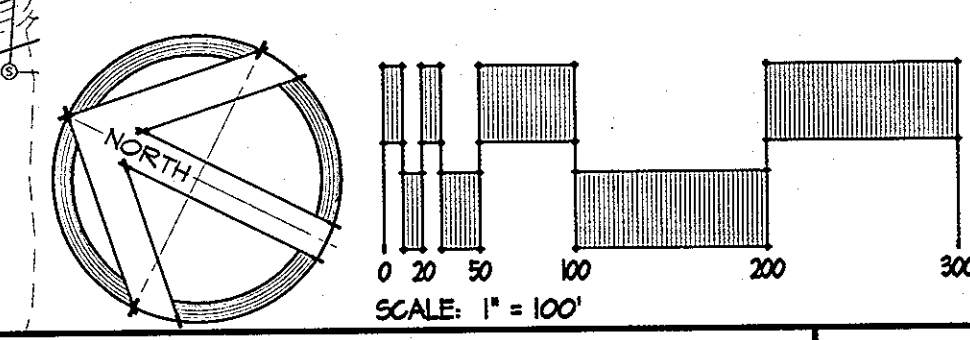
TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
 C3.06  
 SHEET 200 OF 64  
 SDR-11-003





LEGEND	
	PROPERTY LINE
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EXISTING STORM DRAIN
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING GAS
	EXISTING LIGHTING
	EXISTING BUILDING
	EXISTING WETLANDS
	25' WETLAND BUFFER
	EXISTING STREAM
	EXISTING STREAM BUFFER
	100 YR FLOODPLAIN
	EXISTING STREAM BUFFER
	PROPOSED WOODSLINE
	PROPOSED WALK
	PROPOSED ROAD
	PROPOSED FENCE
	PROPOSED GUARDRAIL
	PROPOSED CONTOURS
	LIMIT OF DISTURBANCE
	PROPOSED STORM DRAIN
	PROPOSED WATER
	PROPOSED SANITARY SEWER
	PROPOSED TELEPHONE
	PROPOSED ELECTRIC
	PROPOSED LIGHTING



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paul A. Cagle* 12/13/13  
 DIRECTOR DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*K. S. Salomon* 12-22-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL 564 345 342 536 192 195 195 LOT A-21, 195 LOT A-22  
 ADDRESS: 8490 HANCOCK LANE  
 LOTS 1 / F414, L10565 / F351, L12205 / F310, L5185 / F600,  
 L5541 / F110, L4933 / F431, L4933 / F440, L4933 / F440,  
 6922 11 16, ZONE: M4, TAX MAP NO. 21  
 2ND ELECTION DISTRICT, CENSUS TRACT 602022  
 WATER CODE: 400, SEWER CODE: 3020200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 383-2700  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 383-2700

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 16165 Ardenville Pk • Pikesville, Maryland 21111  
 (410) 883-3000 • fax (410) 883-3000

DES:	JLT				
DRN:	AM				
CHK:	AFE	GRI 2	ADD SPORTS FIELDS & PARKING LOTS	1/26/13	
		GRI 1	ADD RETAINING WALLS & REVISE GRADING	4/18/13	
DATE:	08/12/12	BY	NO.	REVISION	DATE

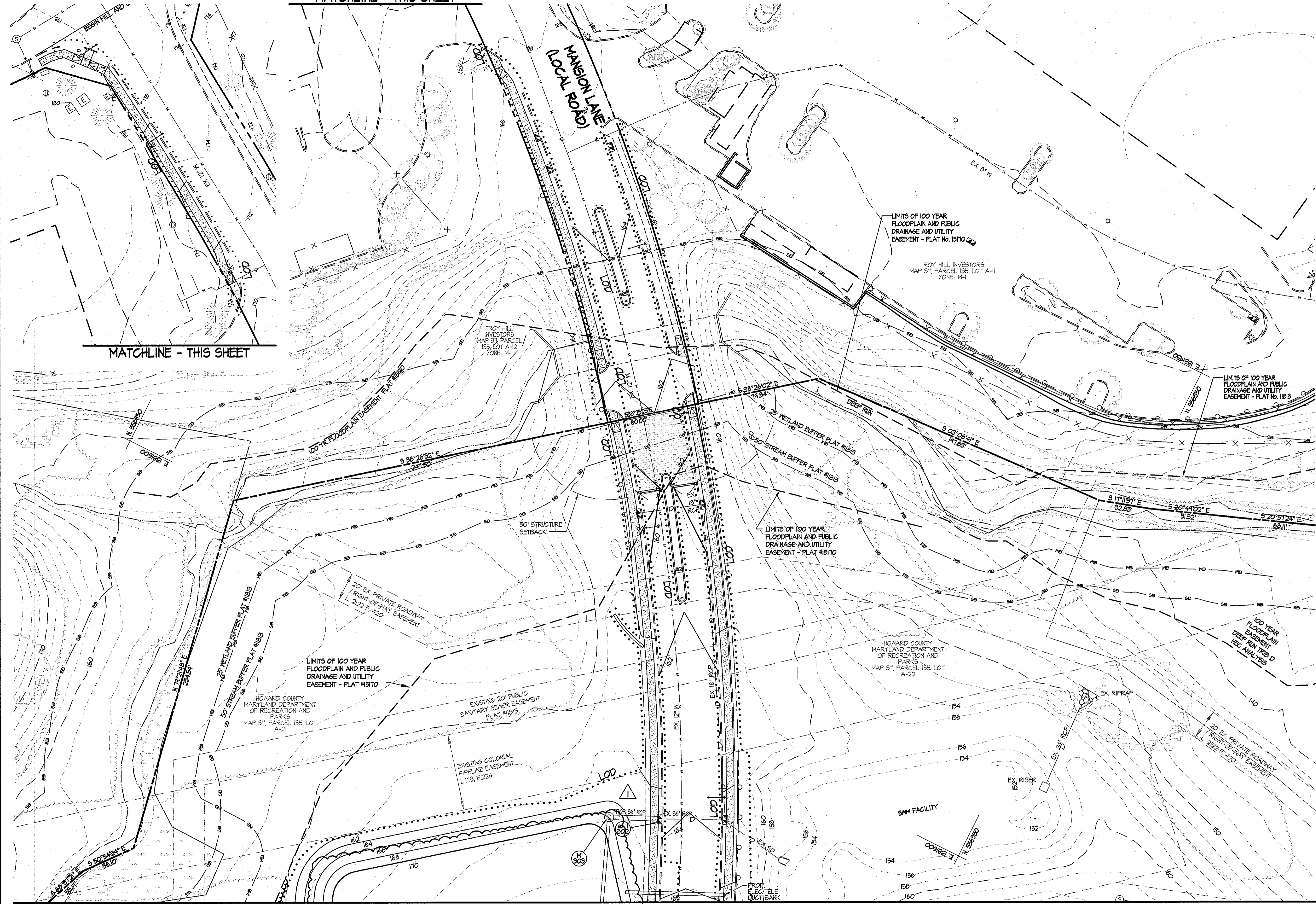
OVERALL GRADING PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1"=100'  
 SHEET 21 OF 64  
 SDP-11-003



MATCHLINE - THIS SHEET

LEGEND (THIS LEGEND APPLIES TO SHEETS C4.01 THROUGH 4.07 ONLY)



- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING TREES
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING GAS
- EXISTING LIGHTING
- EXISTING FENCE
- EXISTING GUARDRAIL
- EXISTING FLAGPOLE
- EXISTING BUILDING
- EXISTING WETLANDS
- 25' WETLAND BUFFER
- EXISTING STREAM
- EXISTING STREAM BUFFER
- 100 YR FLOODPLAIN
- EXISTING FLOODPLAIN
- PROPOSED WOODLINE
- PROPOSED WALK
- PROPOSED ROAD
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED CONTOURS
- EXISTING SPOT ELEVATIONS
- PROPOSED SPOT ELEVATIONS
- LIMIT OF DISTURBANCE
- PROPOSED STORM DRAIN
- PROPOSED WATER
- PROPOSED SANITARY SEWER
- PROPOSED TELEPHONE
- PROPOSED ELECTRIC
- PROPOSED LIGHTING

MATCHLINE - THIS SHEET

MATCHLINE - SEE SHEET C4.03

3/10/2013 Troy Park Phase 1 Site Planning - Final Grading - Planning - 10/13/13

APPROVED: DEPARTMENT OF PLANNING & ZONING

*Mark A. Coughlin* 10/13/13  
DIRECTOR DATE

*Kevin S. ...* 10/09/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Kevin S. ...* 10/09/13  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
PARCEL 561, 542, 543, 544, 195, 195 LOT A-21, 195 LOT A-22  
ADDRESS: 4640 MANSION LANE  
L171 / F.414, L10665 / F.391, L12205 / F.390, L1789 / F.600,  
L1841 / F.178, L4853 / F.871, L4853 / F.870, L4853 / F.870,  
GRD11 / F.18, ZONE M4, TAX MAP NO. 37  
2nd ELECTION DISTRICT, CDUS TRACT 600202  
WATER CODE: 400, SEWER CODE: 205200

OWNER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 325-2700

DEVELOPER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 325-2700

**SITE RESOURCES**  
INCORPORATED  
Comprehensive Land Planning & Site Design Services

1815 Harvestville Pike • Pikesville, Maryland 21111  
(410) 883-3388 • Fax (410) 883-3389

STATE OF MARYLAND  
DEPARTMENT OF GENERAL SERVICES  
DIVISION OF LAND MANAGEMENT  
APPROVED: 10/13/13

DES: KPR	SRI	ADD RETAINING WALLS & REVISE GRADING	9/18/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY	NO.	REVISION

**FINAL GRADING PLAN**

600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22

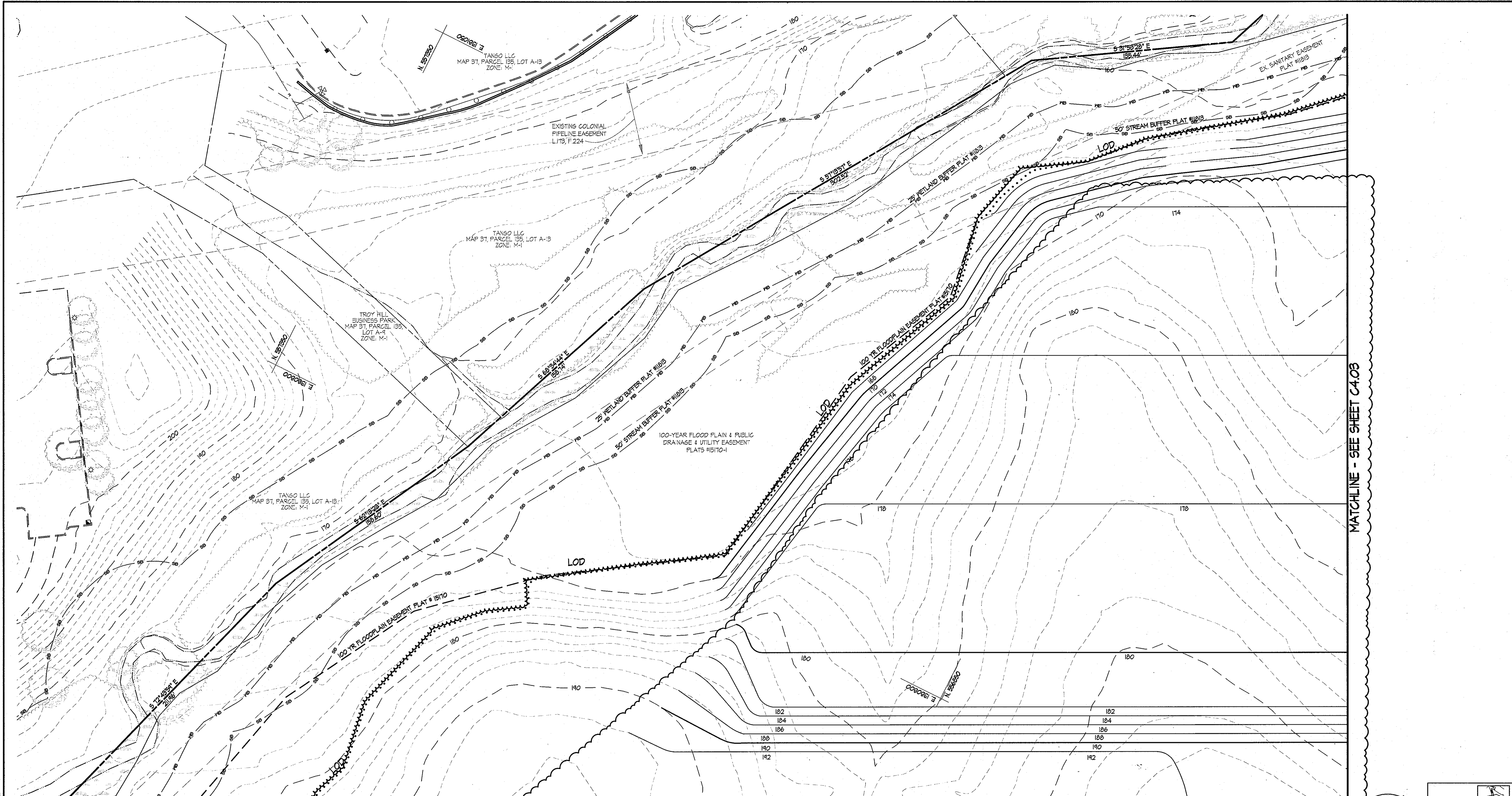
CAPITAL PROJECT NO. N-3457

HOWARD COUNTY, MARYLAND

SCALE: 1"=30'

SHEET 22 OF 64  
SDP-II-003

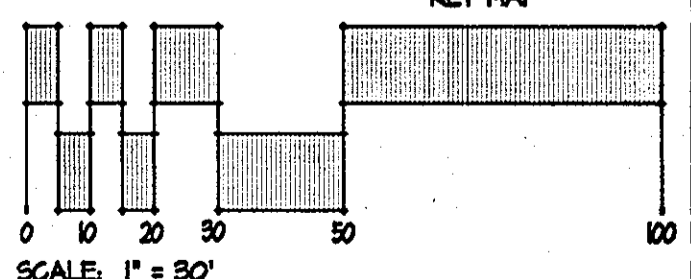
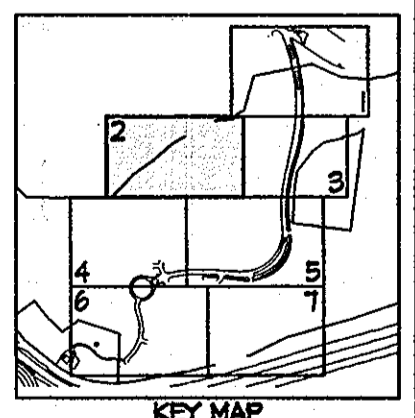
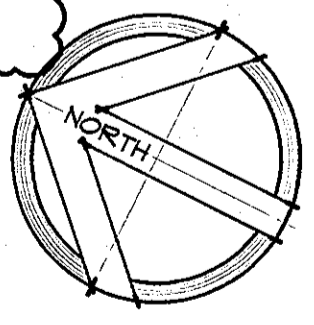




MATCHLINE - SEE SHEET C4.04

MATCHLINE - SEE SHEET C4.05

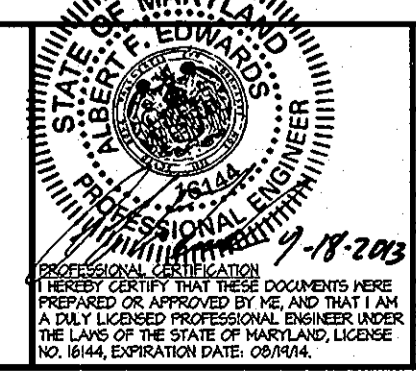
MATCHLINE - SEE SHEET C4.03



2/10/2012 10:53 AM Plot: Phase 1 Site Planning/C4.02.dwg; Plotting: Layout; Sep 18, 2013 11:58 AM 0.0

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Frank A. Cagle* 10/13/12 DATE  
 DIRECTOR  
*Michael J. ...* 10/9/13 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Kurt ...* 10/09/13 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCEL 561, 545, 542, 556, 190, 195, 195 LOT A-21, 195 LOT A-22  
 ADDRESS: 6400 WASHINGTON LANE  
 LEFT / F.A.M. L12055 / F.351, L12225 / F.390, L5183 / F.600,  
 L1504 / F.175, L4353 / F.451, L4353 / F.450, L4353 / F.450,  
 GRID 11 & 12, ZONE M-1, TAX MAP NO. 37  
 SANITATION DISTRICT: 28385 TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 283200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 315-2700  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 315-2700



DES: KPR	SRI	1	ADD RETAINING WALLS & REVISE GRADING	9/10/12
DRN: AM				
CHK: AFE				
DATE: 08/12/12	BY	NO.	REVISION	DATE

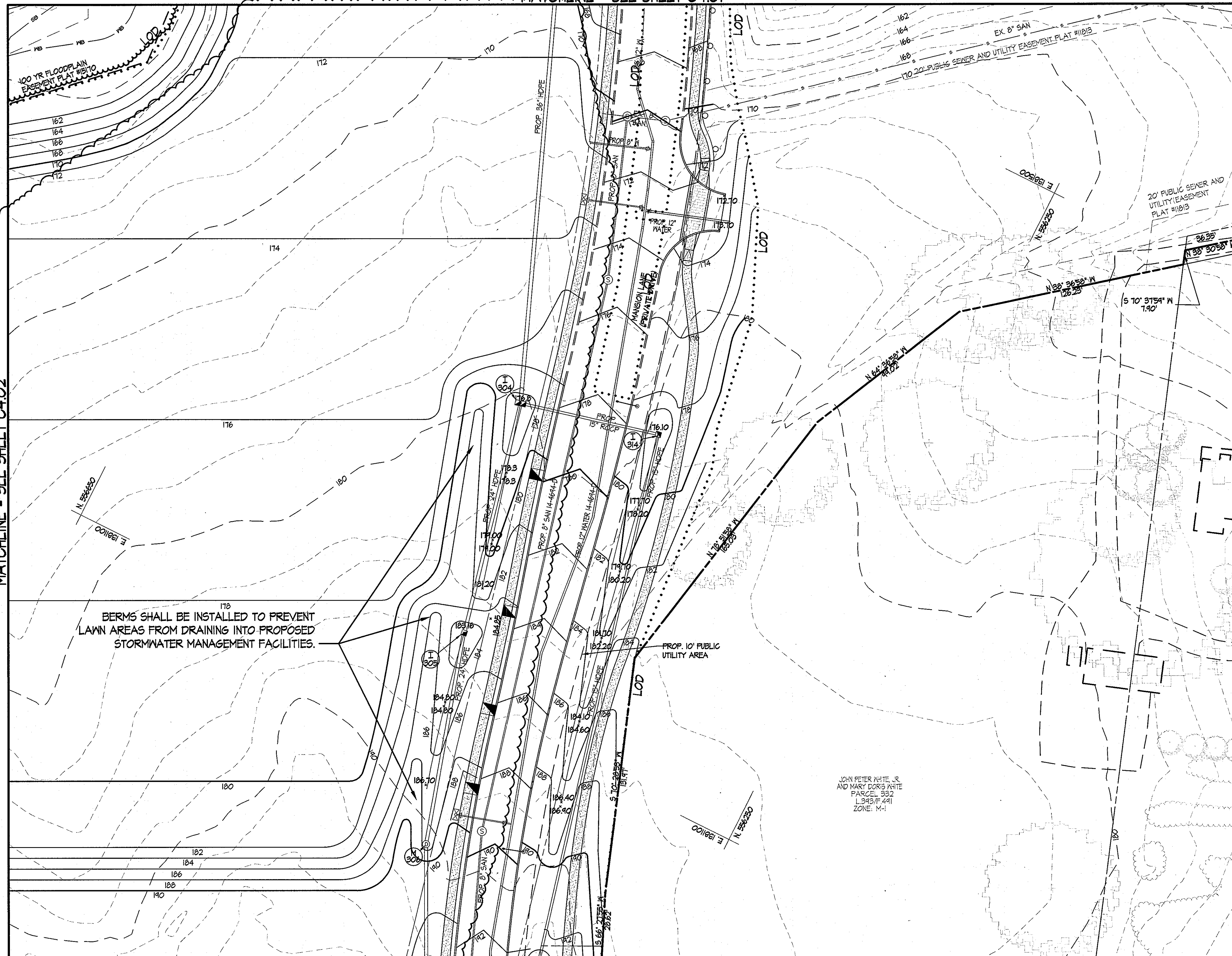
FINAL GRADING PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

SCALE: 1"=30'  
**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
**C4.02**  
 SHEET: 23 OF 64  
 SDP-11-003  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND



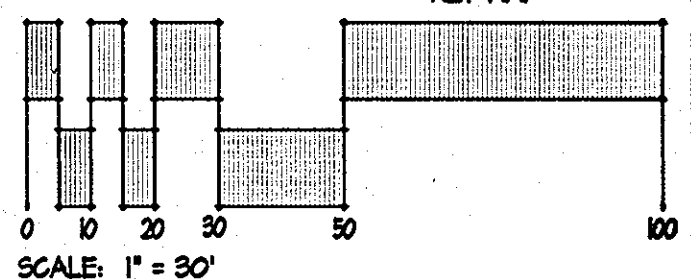
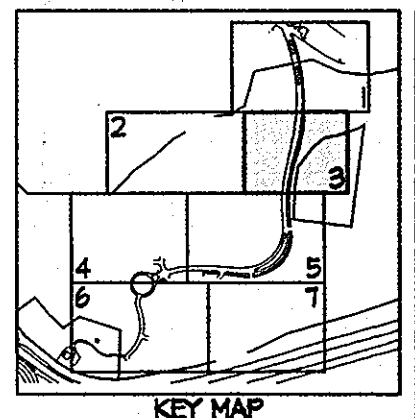
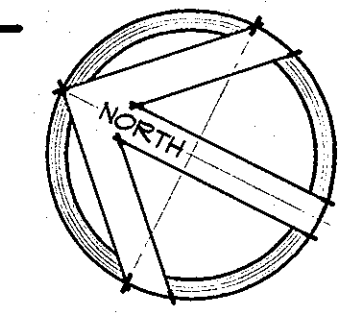
MATCHLINE - SEE SHEET C4.01

MATCHLINE - SEE SHEET C4.02



MATCHLINE - SEE SHEET C4.05

JOHN PETER WHITE, JR.  
AND MARY DORIS WHITE  
PARCEL 552  
L-349 F-441  
ZONE: M-1



T:\100222-Troy Park Phase 1-1810-Planning\C4.02-Grading-Plan\Grading-Layout\_Sep 18, 2013 11:45am.dwg

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark A. Long* 11/14/12  
 DIRECTOR DATE  
*Mark A. Long* 10/9/15  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Mark A. Long* 12/20/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL 561, 548, 542, 536, 110, 105, 105 LOT A-21, 105 LOT A-22  
 ADDRESS: 6420 MANSION LANE  
 LEFT / F-414, L-0565 / F-351, L-2225 / F-340, L-5183 / F-600,  
 L-554 / F-78, L-653 / F-871, L-653 / F-840, L-1833 / F-1, 640  
 GRID 114 18, ZONE M-1, TAX MAP NO. 37  
 2nd ELECTION DISTRICT, CENSUS TRACT 602022  
 WATER CODE: 400, SEWER CODE: 262200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 325-2700  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 325-2700



DES: SRI	SRI	1	ADD RETAINING WALLS & REVISE GRADING	9/18/13
DRN: SRI				
CHK: SRI				
DATE: 08/12/12	BY:	NO.	REVISION	DATE

FINAL GRADING PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE 111B PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

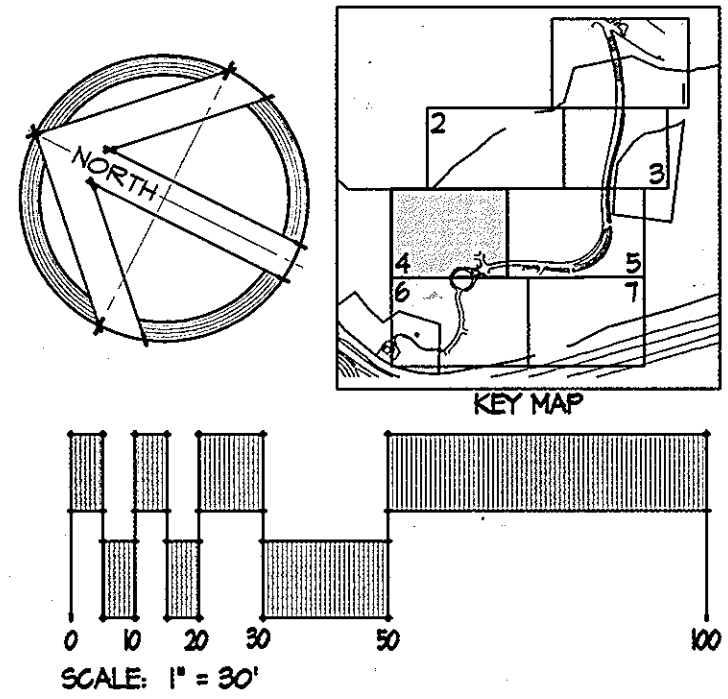
SCALE: 1"=30'  
 C4.03  
 SHEET 24 OF 64  
 SDP-II-003

MATCHLINE - SEE SHEET C4.02



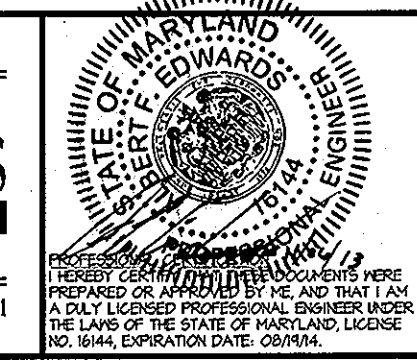
MATCHLINE - SEE SHEET C4.06

MATCHLINE - SEE SHEET C4.05



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paride A. Gough* 1/1/14  
 DIRECTOR DATE  
*Chad Stewart* 12/13/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Kate Schuchman* 12-18-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL 341, 346, 343, 338, 190, 189, 188 LOT A-21, 186 LOT A-22  
 ADDRESS: 6450 HANSON LANE  
 L171 / F444, L1658 / F1971, L12205 / F1940, L15783 / F400,  
 L1841 / F178, L14933 / F4871, L1663 / F1640, L1685 / F1640  
 5000 FT. 10, 12000 FT. 14, TAX MAP NO. 20  
 2ND ELECTION DISTRICT, CENSUS TRACT 501202  
 WATER CODE: 400, SEWER CODE: 2192200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1020 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 318-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1020 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 318-2100



DES:	JLT				
DRN:	AM				
CHK:	AFE	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13	
		SRI 1	ADD RETAINING WALLS & REVISE GRADING	9/18/13	
DATE:	08/12/12	BY:	NO.	REVISION	DATE

FINAL GRADING PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

SCALE: 1" = 30'  
**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
**C4.04**  
 SHEET 25 OF 64  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND  
 SDP-II-003

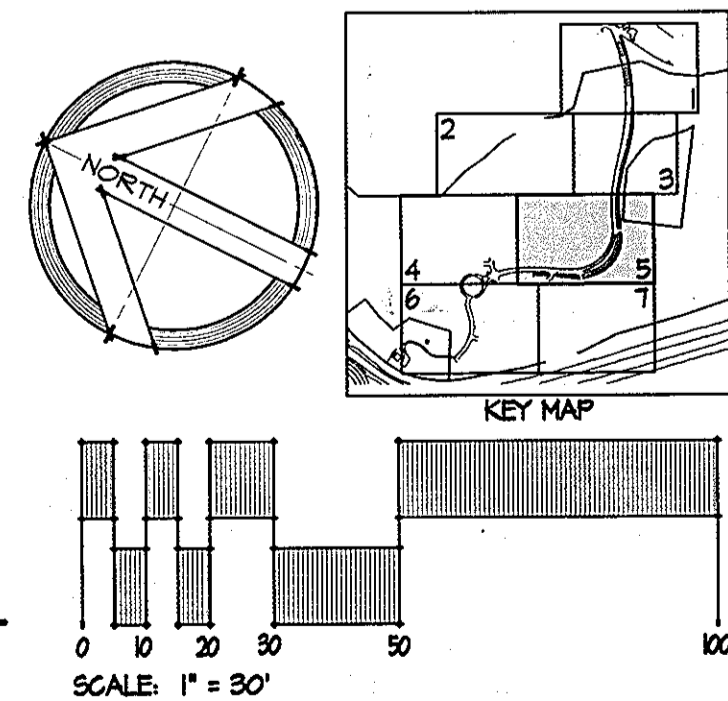


MATCHLINE - SEE SHEET C4.02

MATCHLINE - SEE SHEET C4.03

BERMS SHALL BE INSTALLED TO PREVENT LAWN AREAS FROM DRAINING INTO PROPOSED STORMWATER MANAGEMENT FACILITIES.

JOHN PETER WHITE, JR. AND MARY DORIS WHITE PARCEL 532 L 3357-441 ZONE: M-1

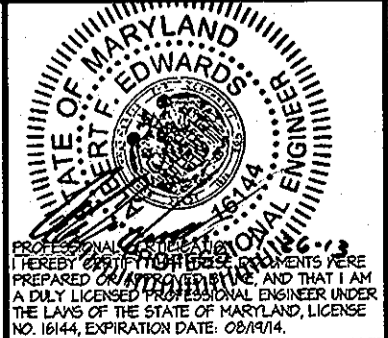


MATCHLINE - SEE SHEET C4.06

MATCHLINE - SEE SHEET C4.07

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*March A. Long*  
 DIRECTOR  
 DATE: 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Ketzel*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 12-18-13

ADDRESS / PERMIT INFORMATION  
 PARCELS 541, 542, 543, 544, 545, 185, 186 LOT A-21, 185 LOT A-22  
 ADDRESS: 6400 MANSION LANE  
 LSTT: F 44, L 10555 / F 391, L 12205 / F 940, L 5189 / F 600,  
 L 5341 / F 18, L 4833 / F 431, L 6553 / F 940, L 6139 / F 640  
 GRID 11 & 12, ZONE: M-1, TAX MAP NO. 31  
 2ND ELECTION DISTRICT: CONES TRACT 602.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 333-2100  
 DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 333-2100



DES:	JLT			
DRN:	AM			
CHK:	AFE			
DATE:	08/12/12			
BY:	NO.			
REVISION:				
DATE:	11/26/13			
DATE:	9/18/13			

FINAL GRADING PLAN	
SRI 2	ADD SPORTS FIELDS & PARKING LOTS
SRI 1	ADD RETAINING WALLS & REVISE GRADING
600' SCALE MAP NO. 51	BLOCK NO. 16

SCALE: 1"=30'

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

**C4.05**  
 SHEET 26 OF 64

CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SDP-11-003

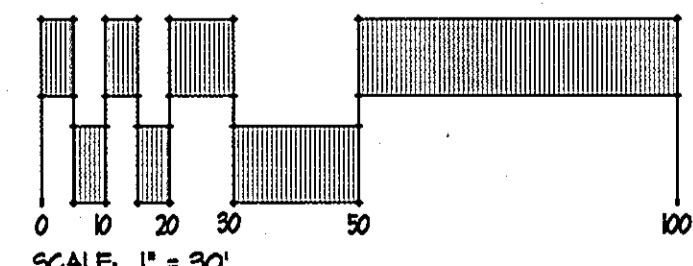
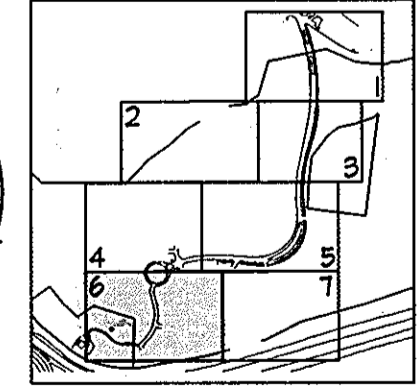
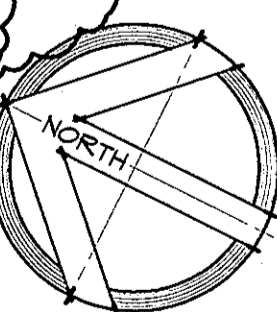


MATCHLINE - SEE SHEET C4.04

MATCHLINE - SEE SHEET C4.05



MATCHLINE - SEE SHEET C4.09



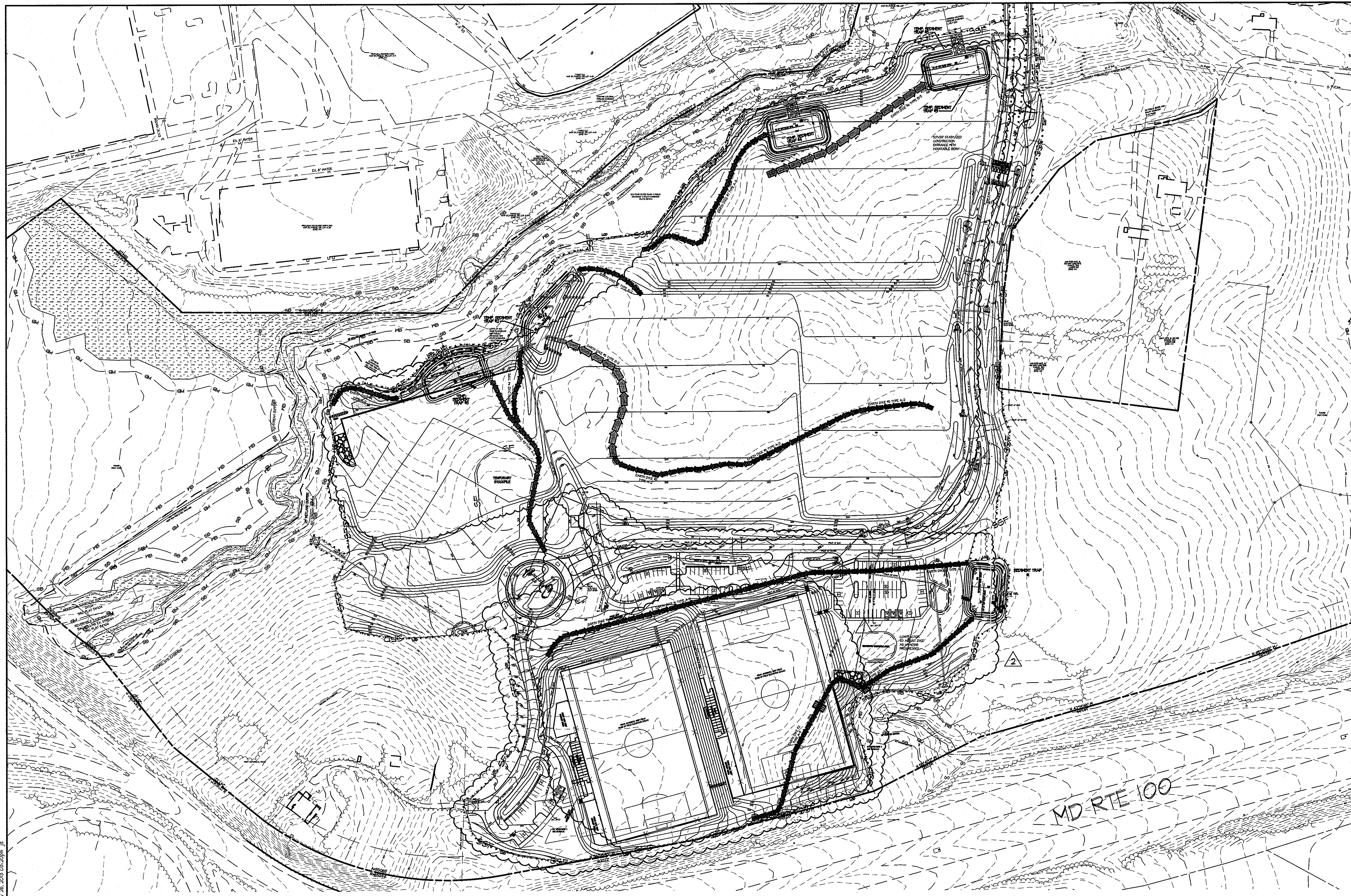
APPROVED: DEPARTMENT OF PLANNING & ZONING  
 DIRECTOR: *[Signature]* DATE: 12/17/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCEL: 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 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1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 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1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 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2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 257









**LEGEND**

	PROPERTY LINE
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EXISTING 15" SD
	EXISTING 6" WATER
	EXISTING 8" SAN
	EXISTING 2" GAS
	EXISTING LIGHTING
	EXISTING BUILDING
	EXISTING WETLANDS
	25' WETLAND BUFFER
	EXISTING STREAM
	EXISTING STREAM BUFFER
	100 YR FLOODPLAIN
	EXISTING STREAM BUFFER
	PROPOSED WOODSLINE
	PROPOSED WALK
	PROPOSED ROAD
	PROPOSED FENCE
	PROPOSED GUARDRAIL
	PROPOSED CONTOURS
	LIMIT OF DISTURBANCE
	PROPOSED 15" SD
	PROPOSED 6" WATER
	PROPOSED 8" SAN
	PROPOSED TELE
	PROPOSED ELEC
	PROPOSED LIGHTING
	SILT FENCE
	SUPER SILT FENCE
	STANDARD INLET PROTECTION
	AT GRADE INLET PROTECTION
	CURB SUPER SILT FENCE
	SSFIP SUPER SILT FENCE
	A-2 DIKE
	EARTH DIKE
	STONE CHECK DAM
	TEMPORARY STONE OUTLET STRUCTURE
	REMOVABLE PUMPING STATION
	RIFRAP INFLOW PROTECTION
	GABION INFLOW PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM

**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."

*John R. Boyle*  
 HOWARD COUNTY REC. AND PARKS - DEVELOPER  
 DATE: 11/27/13

**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 was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Albert F. Edwards, P.E.*  
 ALBERT F. EDWARDS, P.E. - ENGINEER  
 DATE: 11/20/13

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John R. Robertson*  
 HOWARD SOIL CONSERVATION DISTRICT  
 DATE: 12/5/13

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*David A. Ogilvie*  
 DIRECTOR  
 DATE: 1/3/14  
*Chad Edwards*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 12/13/13  
*Vetzel*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 12/13/13

ADDRESS / PERMIT INFORMATION  
 PARCELS: 301, 305, 340, 350, 352, 353, 354 LOT A-21, B6 LOT A-22  
 ADDRESS: 6450 HANSON LANE  
 1.571 / F.414, L.6255 / F.571, L.2205 / F.940, L.5103 / F.600,  
 L.5241 / F.173, L.4933 / F.437, L.4653 / F.640, L.6153 / F. 640  
 5500 FT. 4. 10. ZONE: M-1, TAX MAP NO. 31  
 2nd ELECTION DISTRICT, GENESIS TRACT 602.02  
 WATER CODE: 400, SEWER CODE: 252200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7020 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 263-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7020 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 263-2100

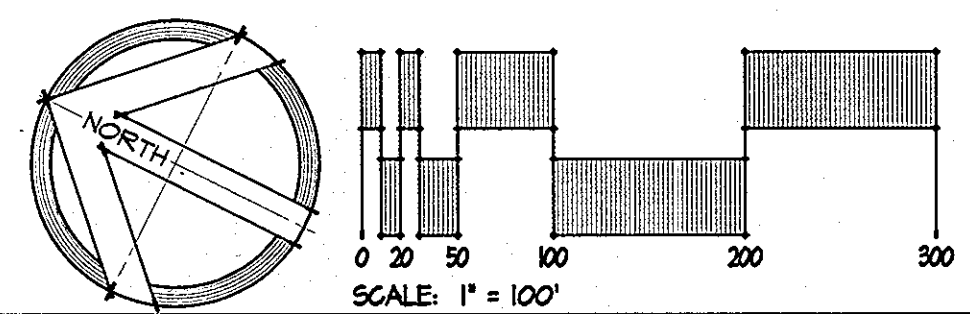
**SITE RESOURCES**  
 Comprehensive Land Planning & Site Design Services  
 14515 Arrettsville Pike • Flobitz, Maryland 21111  
 (410) 683-3388 • fax (410) 683-3389

**STATE OF MARYLAND**  
 PROFESSIONAL ENGINEER  
 JOHN R. ROBERTSON  
 LICENSE NO. 12345  
 EXPIRES 12/31/14

DES:	KPR		
DRN:	AM		
CHK:	SRI	SRI 2	ADD SPORTS FIELDS & PARKING LOTS 11/26/13
		SRI 1	ADD RETAINING WALLS & REVISE GRADING 9/18/13
DATE:	08/12/12	BY NO.	

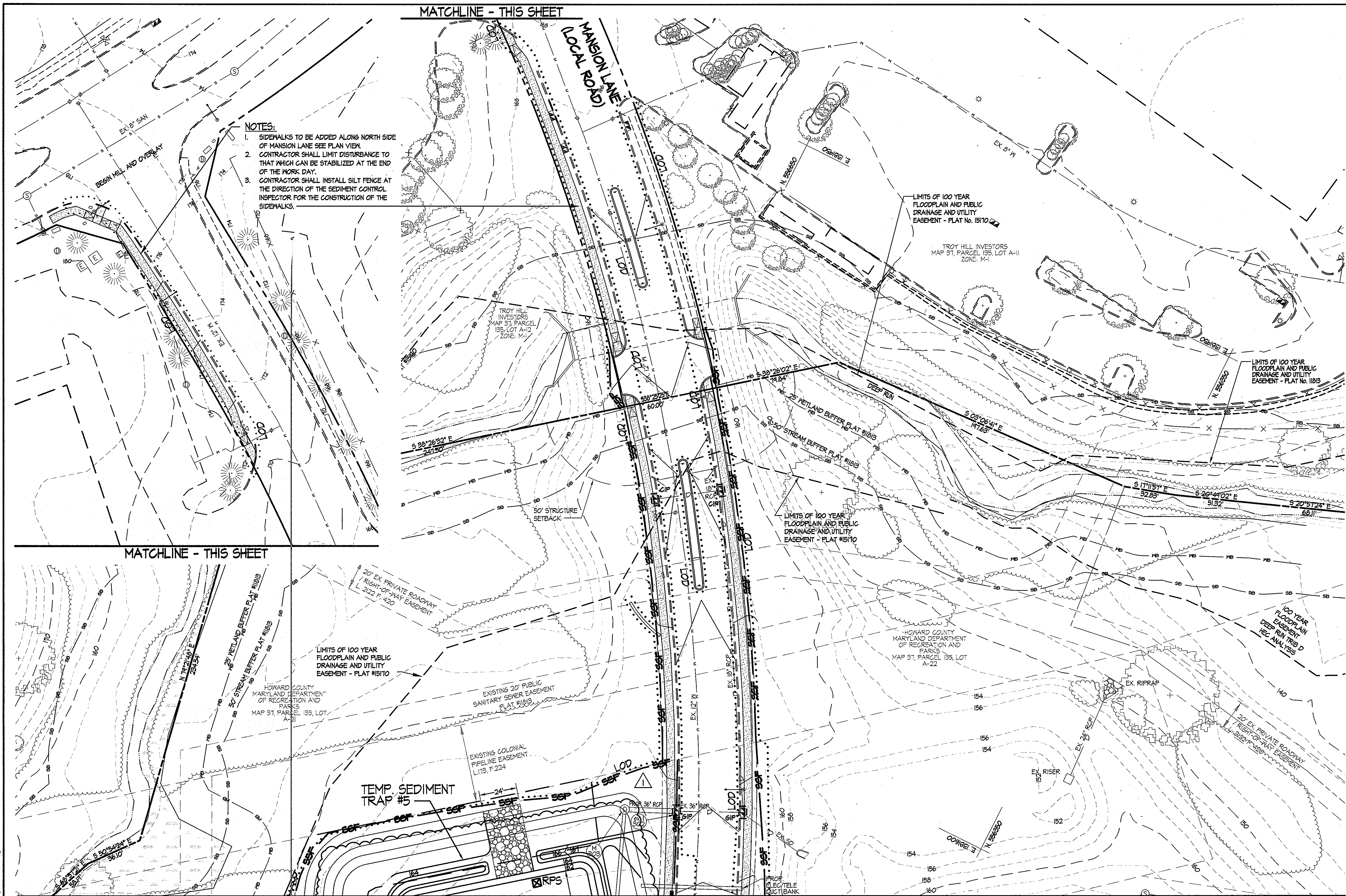
**OVERALL EROSION AND SEDIMENT CONTROL PLAN**  
 600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND  
 SHEET 24 OF 64  
 ESC1.00  
 SCALE: 1"=100'



2:10/0222-Troy Park Phase One Planning-ES&S-11/27/13-08:20pm JLR





**LEGEND** (THIS LEGEND APPLIES TO SHEETS ESC1.01 THROUGH ESC1.07 ONLY)

- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING TREES
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING GAS
- EXISTING BUILDING
- EXISTING WETLANDS
- 25' WETLAND BUFFER
- EXISTING STREAM
- EXISTING STREAM BUFFER
- 100 YR FLOODPLAIN
- EXISTING FLOODPLAIN
- PROPOSED TREELINE
- PROPOSED WALK
- PROPOSED ROAD
- PROPOSED STORM DRAIN
- PROPOSED WATER
- PROPOSED SANITARY SEWER
- PROPOSED GAS
- PROPOSED TELEPHONE
- PROPOSED ELECTRIC
- PROPOSED LIGHTING
- BASINTRAP CONTOURS
- PROPOSED CONTOURS
- SPOT ELEVATIONS
- SIF SILT FENCE
- SSF SUPER SILT FENCE
- SFD SUPER FENCE DIVERSION
- INLET PROTECTION
- EARTH DIKE
- REMOVABLE PUMPING STATION
- INFLOW PROTECTION
- LOD LIMIT OF DISTURBANCE

**NOTES:**  
 1. SIDEWALKS TO BE ADDED ALONG NORTH SIDE OF MANSION LANE SEE PLAN VIEW.  
 2. CONTRACTOR SHALL LIMIT DISTURBANCE TO THAT WHICH CAN BE STABILIZED AT THE END OF THE WORK DAY.  
 3. CONTRACTOR SHALL INSTALL SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR FOR THE CONSTRUCTION OF THE SIDEWALKS.

LIMITS OF 100 YEAR FLOODPLAIN AND PUBLIC DRAINAGE AND UTILITY EASEMENT - PLAT No. 18170

LIMITS OF 100 YEAR FLOODPLAIN AND PUBLIC DRAINAGE AND UTILITY EASEMENT - PLAT No. 11013

LIMITS OF 100 YEAR FLOODPLAIN AND PUBLIC DRAINAGE AND UTILITY EASEMENT - PLAT #18170

LIMITS OF 100 YEAR FLOODPLAIN AND PUBLIC DRAINAGE AND UTILITY EASEMENT - PLAT #18170

**DEVELOPER'S CERTIFICATE**  
 "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."

*John R. Royal* 9/10/13  
 HOWARD COUNTY REC. AND PARKS - DEVELOPER DATE

**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 was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Albert F. Edwards, P.E.* 9-10-2013  
 ALBERT F. EDWARDS, P.E. - ENGINEER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John R. Royal* 9/26/13  
 HOWARD SOIL CONSERVATION DISTRICT DATE

**APPROVED: DEPARTMENT OF PLANNING & ZONING**

*Mark M. Cagle* 10/16/13  
 DIRECTOR DATE

*W. J. Quinn* 10/17/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*W. J. Quinn* 10/28/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**ADDRESS / PERMIT INFORMATION**  
 PARCEL 961 348 392 356 100 195 195 LOT A-21, 195 LOT A-22  
 ADDRESS: 4800 MANSION LANE  
 LEFT / FAH, L2058 / F391, L2225 / F390, L5183 / F400,  
 L5841 / F10, L4858 / F181, L4818 / F140, L4815 / F140  
 GRID T14 1B, ZONE M-1, TAX MAP NO. 37  
 DISTRICT: 28818, TRACT 8022.02  
 WATER: 2225, 400, SEWER CODE: 2152200

**OWNER:**  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2700

**DEVELOPER:**  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2700

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services

1815 Annettsville Pike • Pikesville, Maryland 21111  
 (410) 663-3088 • Fax (410) 663-3089

**PROFESSIONAL ENGINEER**  
 ALBERT F. EDWARDS, P.E.  
 A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20244, EXPIRATION DATE: 02/28/14

DES: KPR	SRI	ADD RETAINING WALLS & REVISE GRADING	9/10/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY NO.	REVISION	DATE

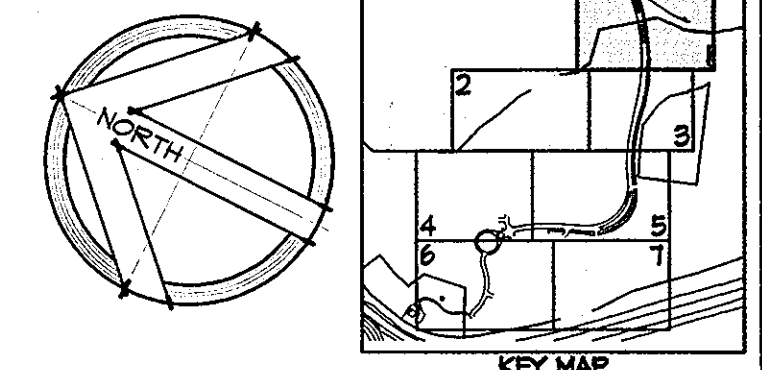
**EROSION AND SEDIMENT CONTROL PLAN**

600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22

ESCI.01  
 SHEET 30 OF 64  
 SDP-II-003

**NOTES:**  
 1. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards and Specifications For Soil Erosion And Sediment Control, and revisions thereto (see Standard Sediment Control Note #2).  
 2. Maximum height of embankment for the sediment trap is four feet.  
 3. See sheet ESC2.03 for sediment trap tables.



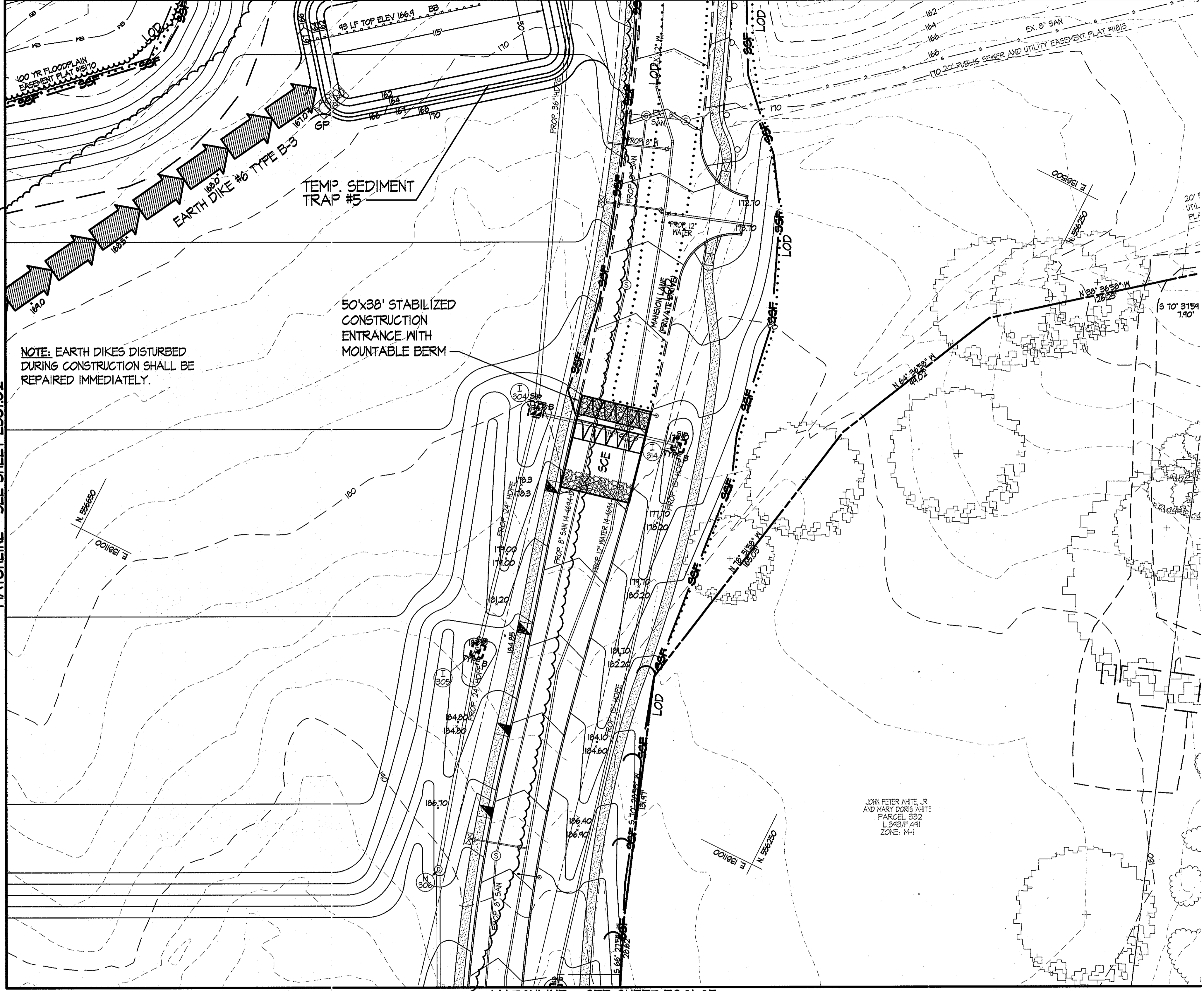
2/10/2013 10:33 AM Plot: Phase 1 Site Planning/ESCI.01 ESC Planning/Layout Sep 10, 2013 11:42am 0.m







MATCHLINE - SEE SHEET ESC1.01

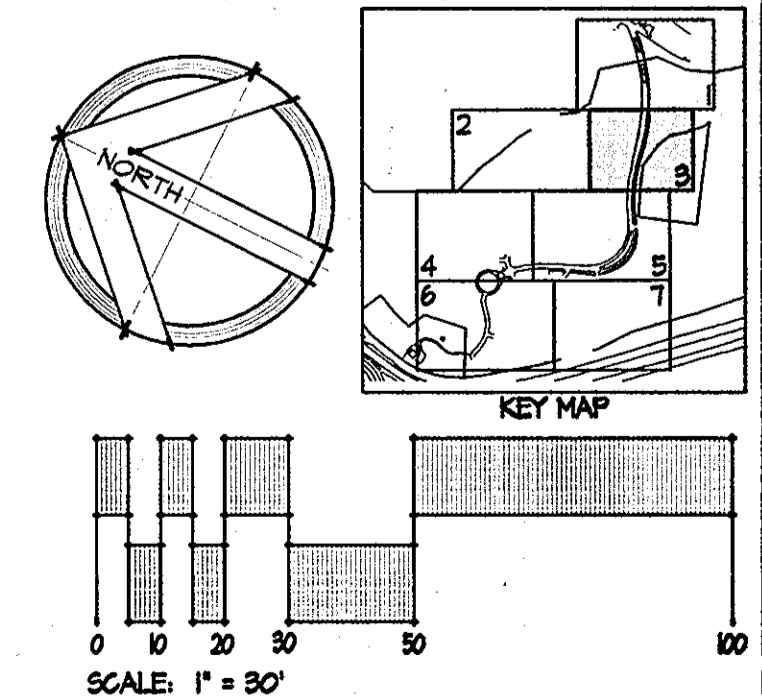


NOTE: EARTH DIKES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.

50'x38' STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM

MATCHLINE - SEE SHEET ESC1.02

MATCHLINE - SEE SHEET ESC1.05



**DEVELOPER'S CERTIFICATE**  
 "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."

*John R. Bynal* 9/19/13  
 HOWARD COUNTY REC. AND PARKS - DEVELOPER DATE

**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 was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Albert F. Edwards, P.E.* 9-18-2013  
 ALBERT F. EDWARDS, P.E. - ENGINEER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John R. Bynal* 9/26/13  
 HOWARD SOIL CONSERVATION DISTRICT DATE

**NOTES:**  
 1. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards and Specifications For Soil Erosion And Sediment Control, and revisions thereto (see Standard Sediment Control Note #2).  
 2. See sheet ESC2.03 for sediment trap tables.

**APPROVED: DEPARTMENT OF PLANNING & ZONING**

*Frank W. Cagle* 10/13/13  
 DIRECTOR DATE

*W. J. ...* 10/29/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*W. J. ...* 10/29/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**ADDRESS / PERMIT INFORMATION**  
 PARCEL 561, 546, 542, 550, 100, 105, 105 LOT A-21, 105 LOT A-22  
 ADDRESS: 6400 HANSBROOK LAKE  
 LEFT / F-44, L-024 / F-301, L-2202 / F-300, L-5789 / F-600,  
 L-5841 / F-70, L-4051 / F-401, L-655 / F-600, L-6185 / F-600,  
 GRID 11 & 12, ZONE M4, TAX MAP NO. 27  
 2nd ELECTION DISTRICT, 400 SEWER TRACT 602.02  
 WATER CODE: 400 SEWER CODE: 2152200

**OWNER:**  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 325-2170

**DEVELOPER:**  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 325-2170

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services

1818 Annetonville Pike • Pikesville, Maryland 21118  
 (410) 667-3000 • Fax (410) 667-3008

**DESIGNER:** KPR  
**DATE:** 08/12/12

DESIGNER	DATE	BY	NO.	REVISION	DATE
KPR	9/18/13				
AM					
AFE					

**EROSION AND SEDIMENT CONTROL PLAN**

600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

ESCI.03  
 SHEET 32 OF 64  
 SDP-II-003

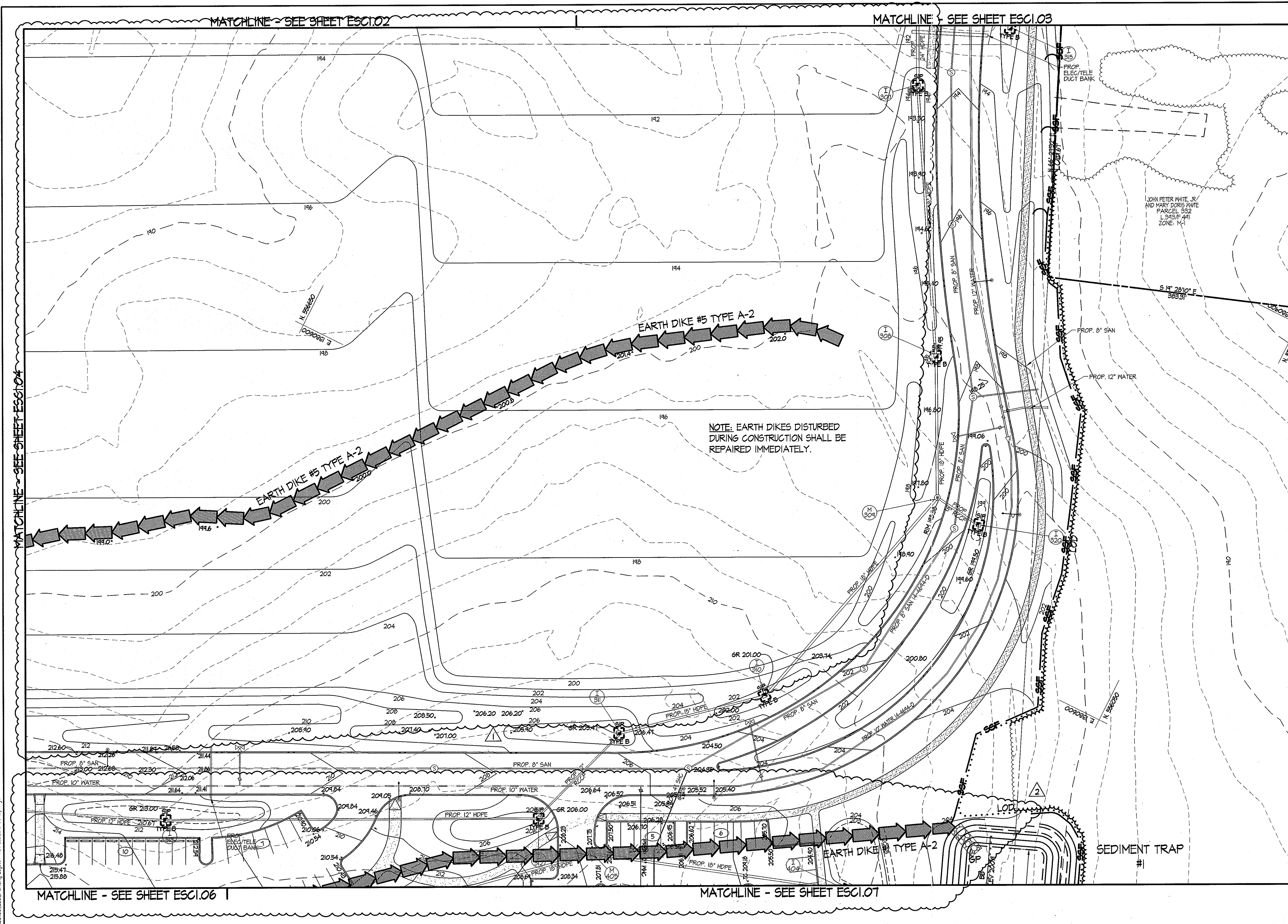
SCALE: 1" = 30'

CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND









MATCHLINE - SEE SHEET ESC1.04

MATCHLINE - SEE SHEET ESC1.02

MATCHLINE - SEE SHEET ESC1.03

EARTH DIKE #5 TYPE A-2

EARTH DIKE #5 TYPE A-2

EARTH DIKE #5 TYPE A-2

NOTE: EARTH DIKES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.

SEDIMENT TRAP #1

MATCHLINE - SEE SHEET ESC1.06

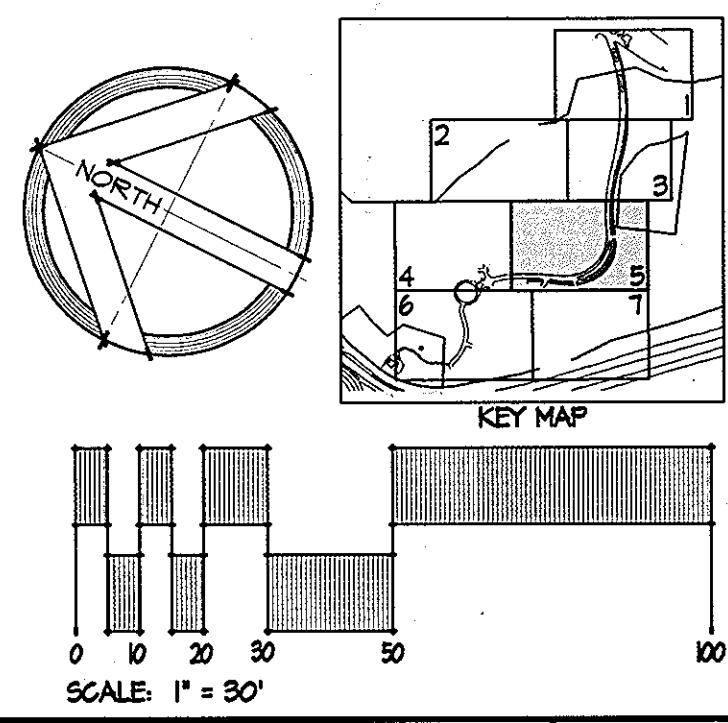
MATCHLINE - SEE SHEET ESC1.07

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John R. Edwards* 12/5/13  
 HOWARD SOIL CONSERVATION DISTRICT DATE

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 was prepared in accordance with the requirements of the Howard Soil Conservation District.  
*John R. Edwards* 11-26-13  
 ALBERT H. EDWARDS, P.E. - ENGINEER DATE

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.  
*John R. Edwards* 11/27/13  
 HOWARD COUNTY REG. AND PARKS - DEVELOPER DATE

NOTES:  
 1. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards and Specifications For Soil Erosion And Sediment Control, and revisions thereto (see Standard Sediment Control Note #2).  
 2. See sheet ESC2.03 for sediment trap tables.



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Charles Edwards* 12/13/13  
 DIRECTOR DATE  
*Charles Edwards* 12-12-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*K. Edwards*  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCEL: 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 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1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 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2444, 2445, 2446, 2447, 2448, 2449, 24



MATCHLINE - SEE SHEET ESC1.04



MATCHLINE - SEE SHEET ESC1.01

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John M. Edwards*  
HOWARD SOIL CONSERVATION DISTRICT  
DATE: 12/5/13

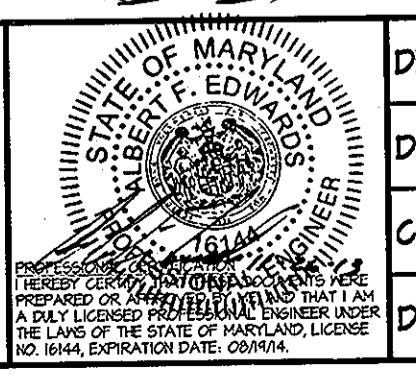
ENGINEER'S CERTIFICATE  
I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
*Albert F. Edwards*  
ALBERT F. EDWARDS, PE - ENGINEER  
DATE: 11-26-13

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.  
*John M. Boyd*  
HOWARD COUNTY REG. AND PARKS - DEVELOPER  
DATE: 11/27/13

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark D. Gough*  
DIRECTOR  
DATE: 1/21/14  
*Paul Edwards*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 12-13-13  
*Walt Schuchman*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 12-12-13

ADDRESS / PERMIT INFORMATION  
PARCEL 541 346, 342, 336, 192, 185, 185 LOT A-21, 185 LOT A-22  
ADDRESS: 6450 HANSON LANE  
L511 / F44, L10589 / F351, L12205 / F340, L5789 / F400,  
L5841 / F18, L4929 / F481, L4899 / F490, L6189 / F1, 640  
6802 / F14, 68, 2082, 18, TAX MAP NO. 51  
24 ELECTION DISTRICT, CENSUS TRACT 601202  
WATER CODE: 400 SEWER CODE: 200200  
OWNER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE: (410) 318-2100  
DEVELOPER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE: (410) 318-2100

**SITE RESOURCES**  
INCORPORATED  
Comprehensive Land Planning & Site Design Services  
1405 Annapolis Pike • Plover, Maryland 21134  
(410) 688-3888 • Fax (410) 688-3880



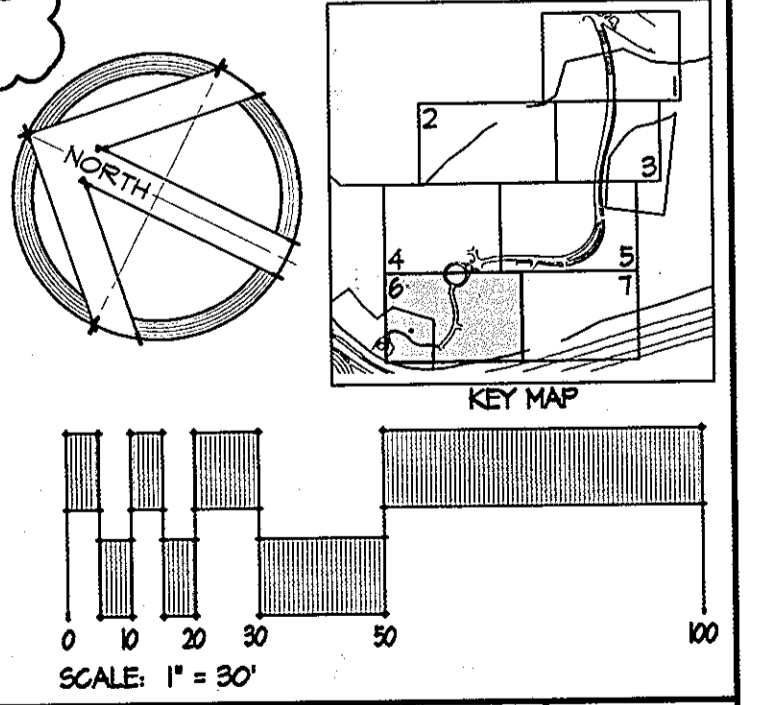
DES:	KFR				
DRN:	AM				
CHK:	AFE	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	1/26/13	
		SRI 1	ADD RETAINING WALLS & REVISE GRADING	9/18/13	
DATE:	08/12/12	BY NO.	REVISION	DATE	

**EROSION AND SEDIMENT CONTROL PLAN**  
600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22  
CAPITAL PROJECT NO. N-3451  
HOWARD COUNTY, MARYLAND

SCALE: 1"=30'  
SHEET 35 OF 64  
SDP-II-003

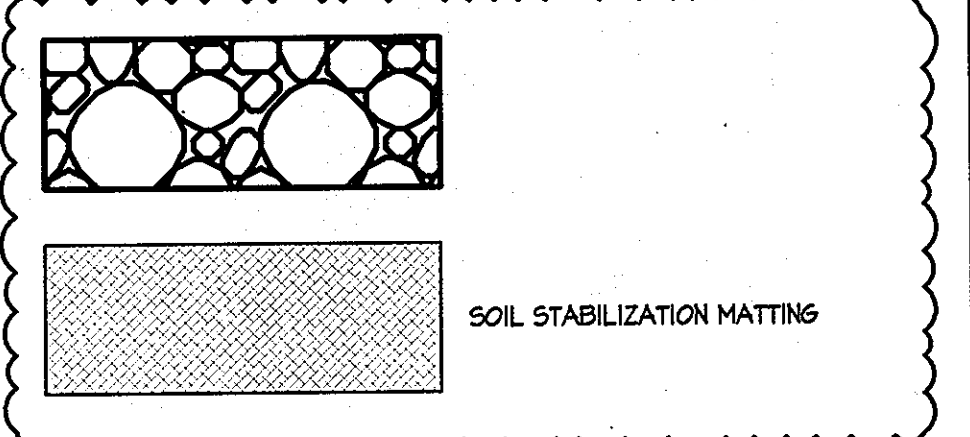
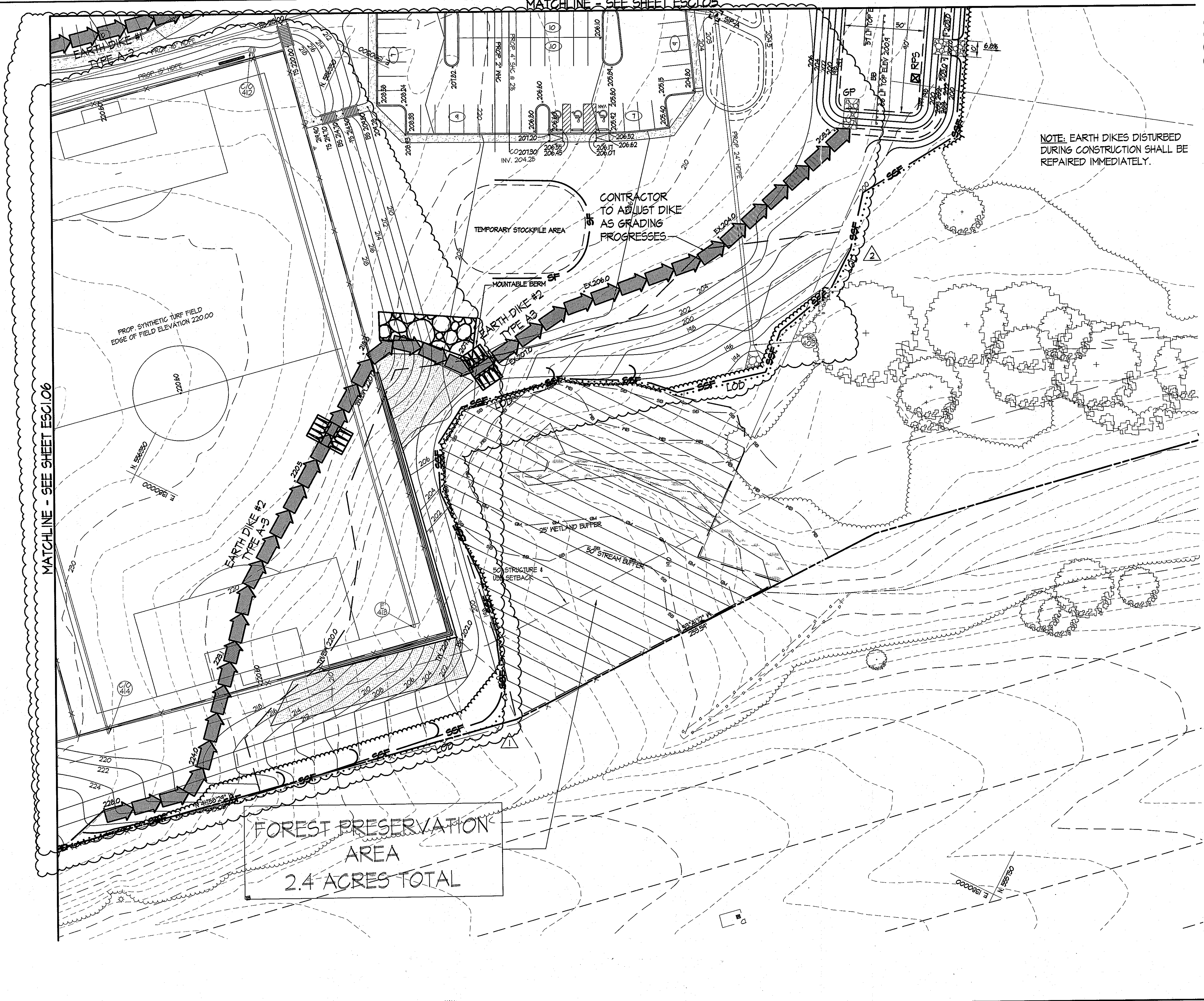
NOTES:  
1. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards And Specifications For Soil Erosion And Sediment Control, and revisions thereto (see Standard Sediment Control Note #2).  
2. See sheet ESC2.03 for sediment trap tables.





MATCHLINE - SEE SHEET ESC1.05

MATCHLINE - SEE SHEET ESC1.06



NOTE: EARTH DIKES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.

CONTRACTOR TO ADJUST DIKE AS GRADING PROGRESSES

FOREST PRESERVATION AREA  
2.4 ACRES TOTAL

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John R. Roberts* 12/5/13  
HOWARD SOIL CONSERVATION DISTRICT DATE

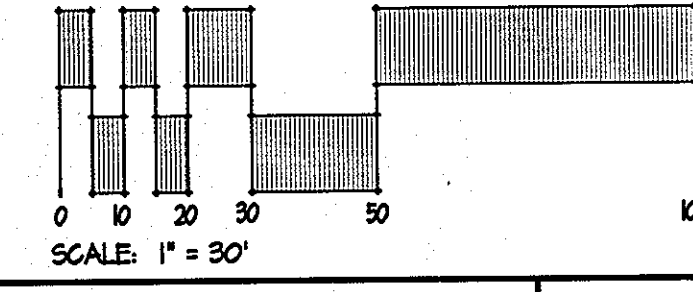
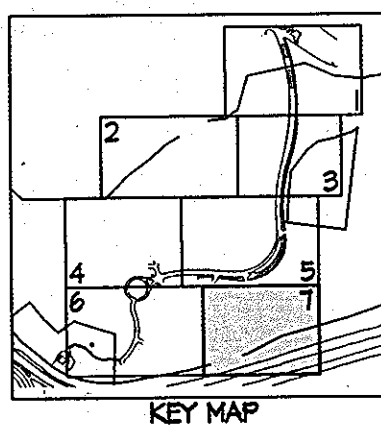
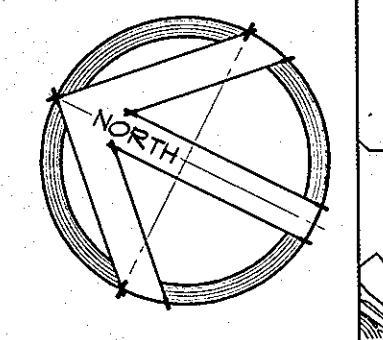
ENGINEER'S CERTIFICATE  
"I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Albert F. Edwards, P.E.* 1/26/13  
ALBERT F. EDWARDS, P.E. - ENGINEER DATE

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."

*John R. Roberts* 11/27/13  
HOWARD COUNTY REC. AND PARKS - DEVELOPER DATE

NOTE:  
1. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards And Specifications For Soil Erosion And Sediment Control, and revisions thereto (see Standard Sediment Control Note #2).  
2. See sheet ESC2.03 for sediment trap tables.



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark A. Coyle* 1/14/14  
DIRECTOR DATE  
*Chad Edwards* 12-13-13  
CHIEF DEVELOPMENT ENGINEERING DIVISION DATE  
*Veteran* 12-13-13  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
PARCEL 564 345, 342, 336, 192, 195, 195 LOT A-21, B5 LOT A-22  
ADDRESS: 6450 HANSON LANE  
L571 / F414, L0559 / F251, L12205 / F310, L5183 / F400,  
L534 / F110, L4933 / F451, L4933 / F450, L4935 / F1, 640  
6802 11 18, 2206, 164 TAX MAP 102, 21  
2ND ELECTION DISTRICT, CENSUS TRACT 602022  
WATER CODE: 400, SEWER CODE: 2920000  
OWNER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
DEVELOPER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 382-2100

**SITE RESOURCES**  
INCORPORATED  
Comprehensive Land Planning & Site Design Services  
14815 Ardenville Pike • Pikesville, Maryland 21111  
(410) 851-3000 • Fax (410) 851-3000

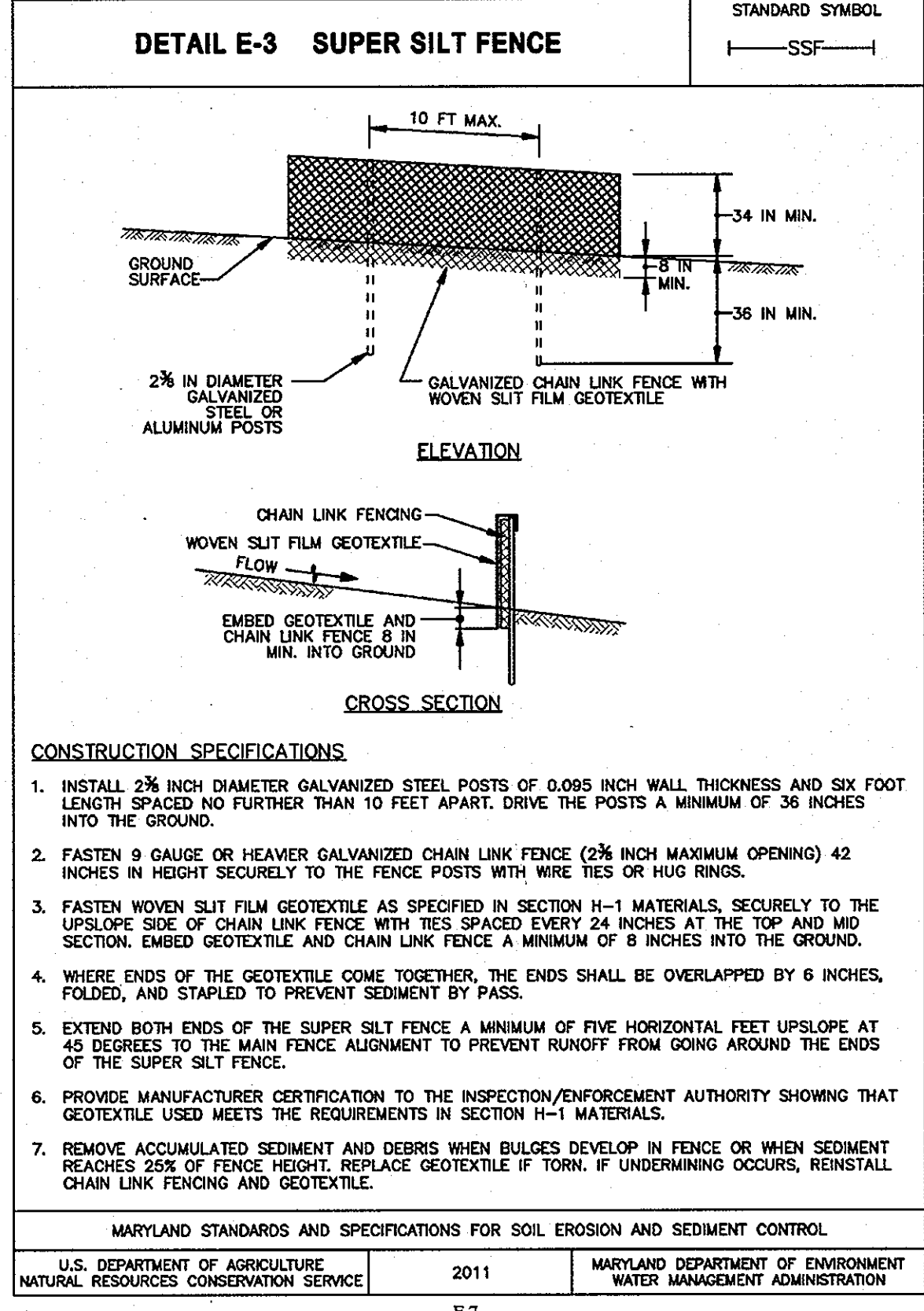
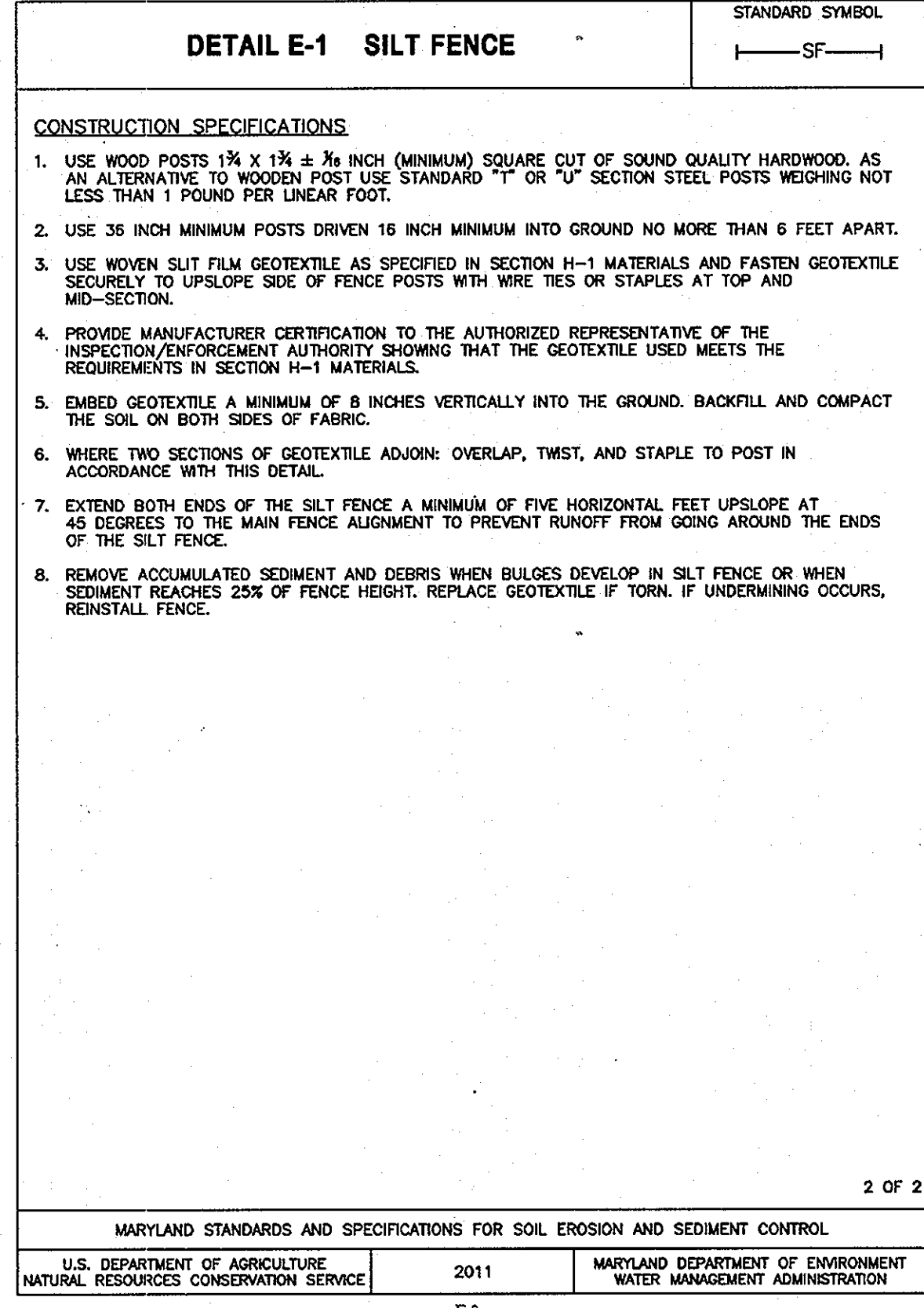
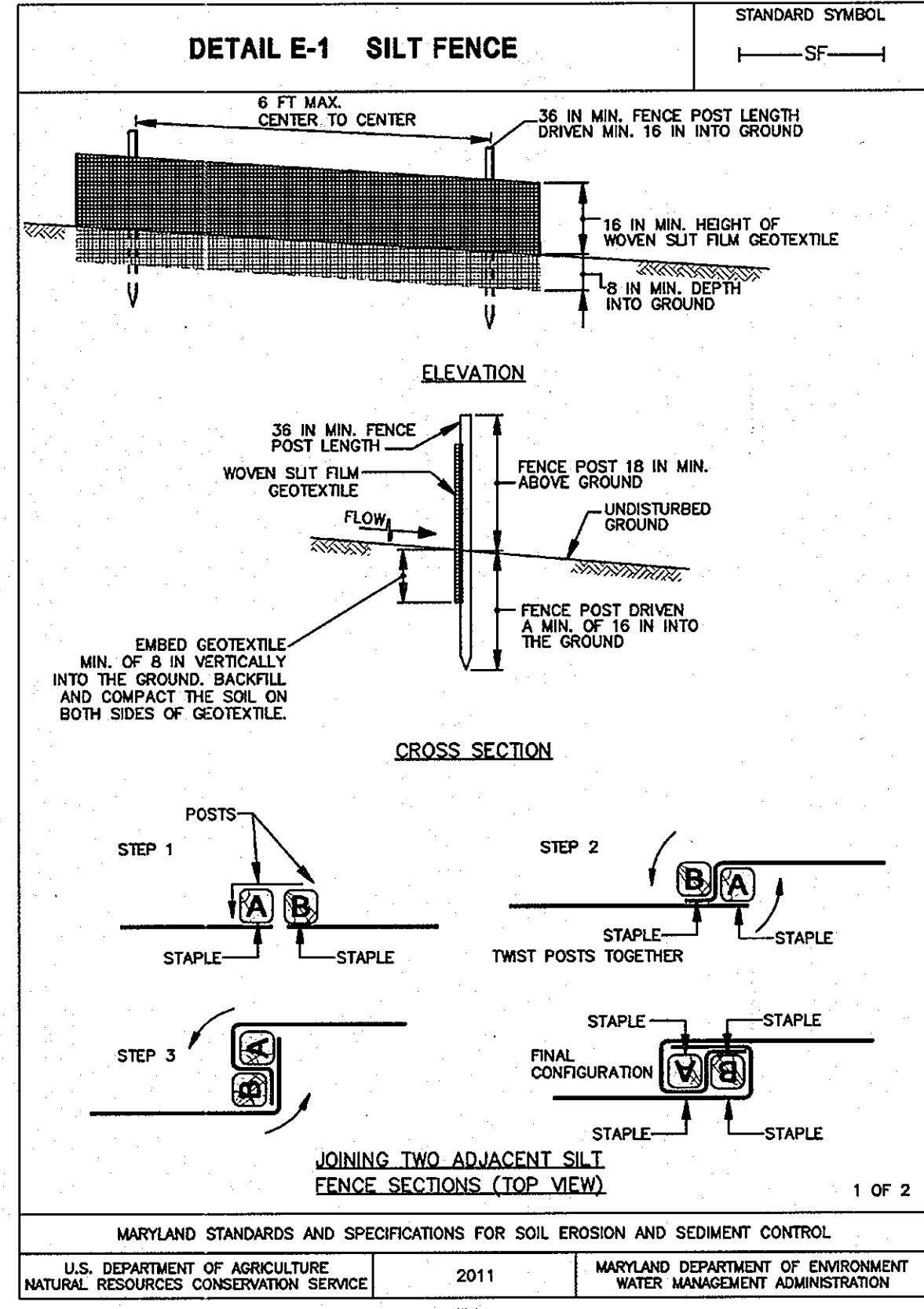
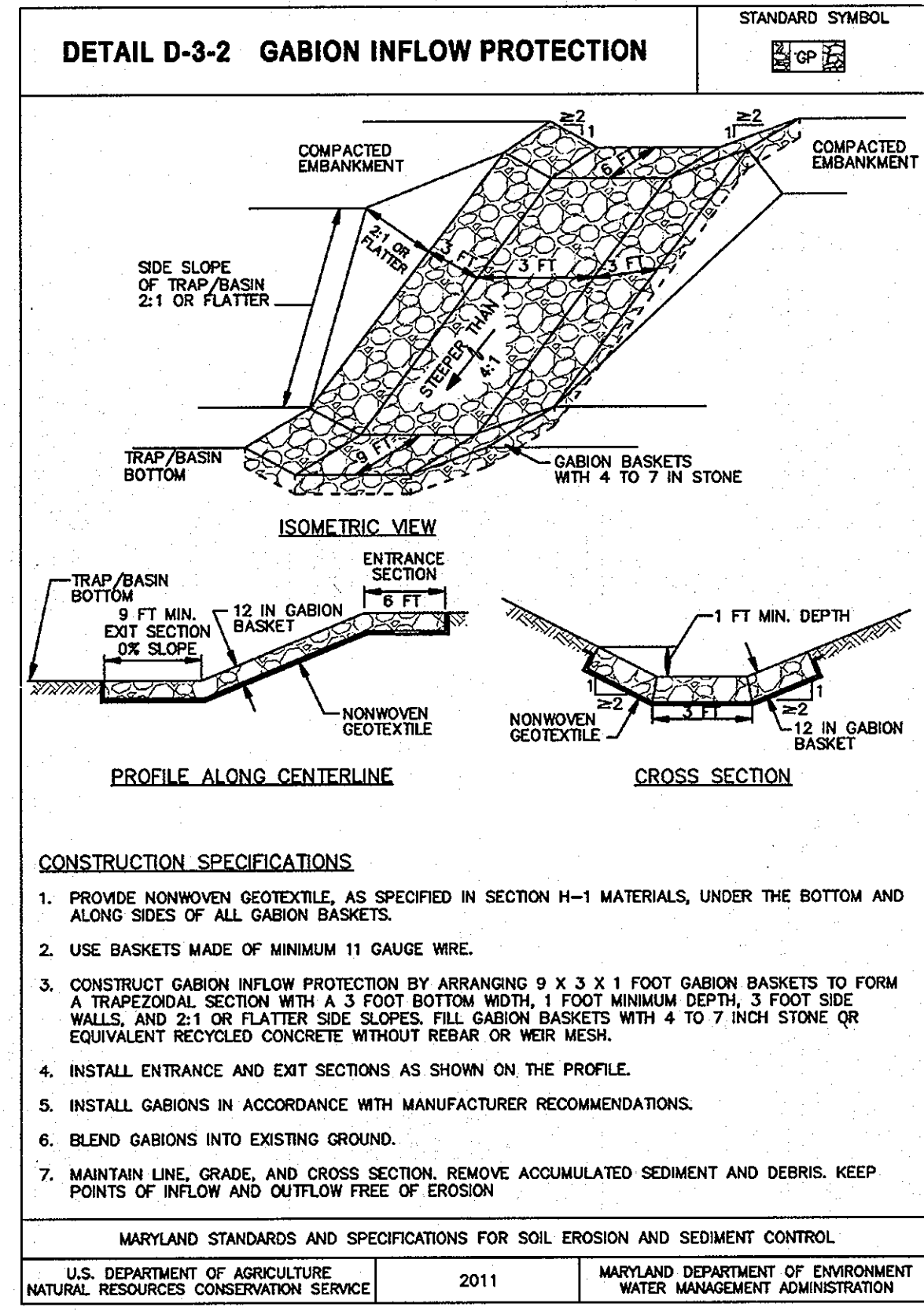
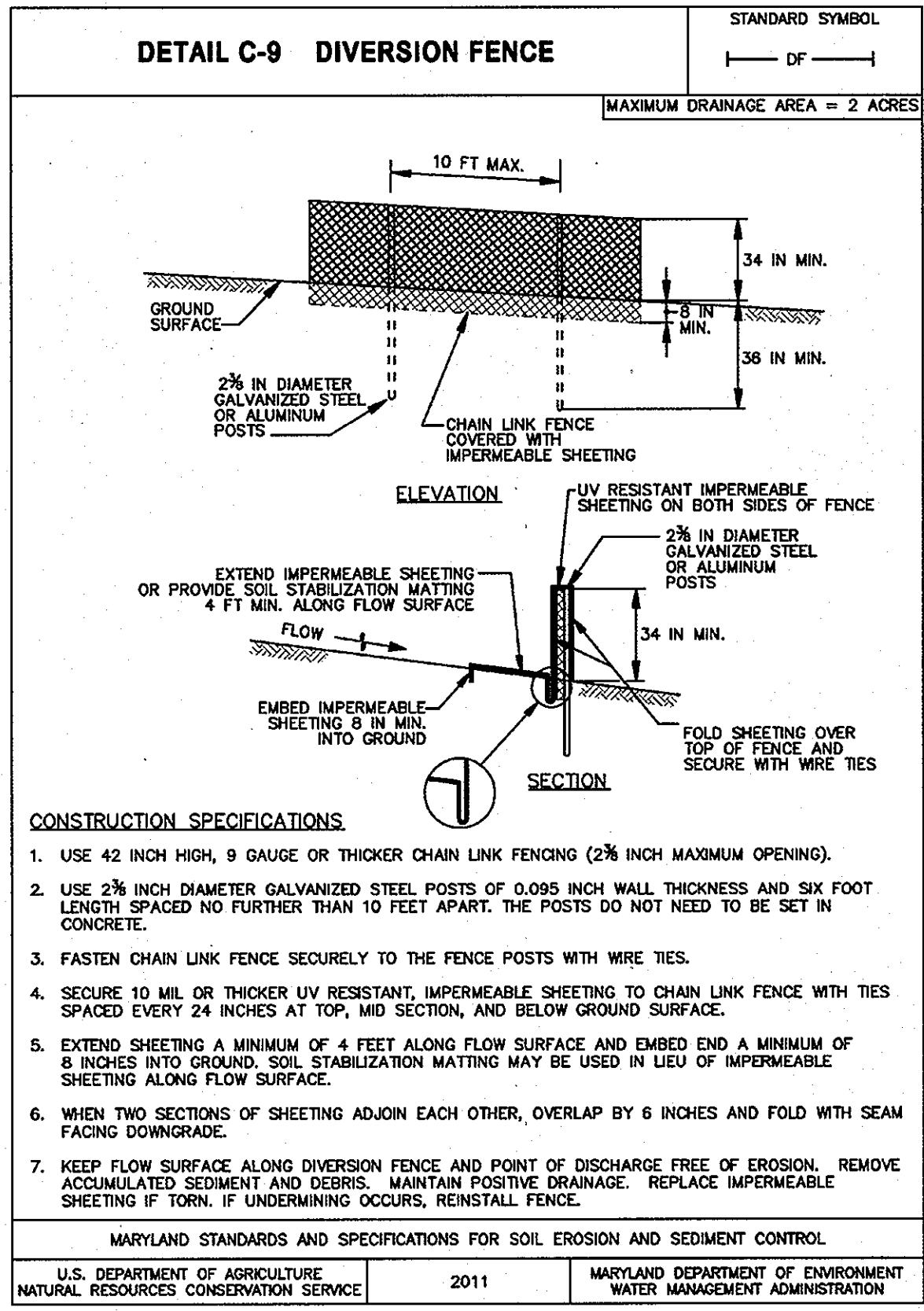
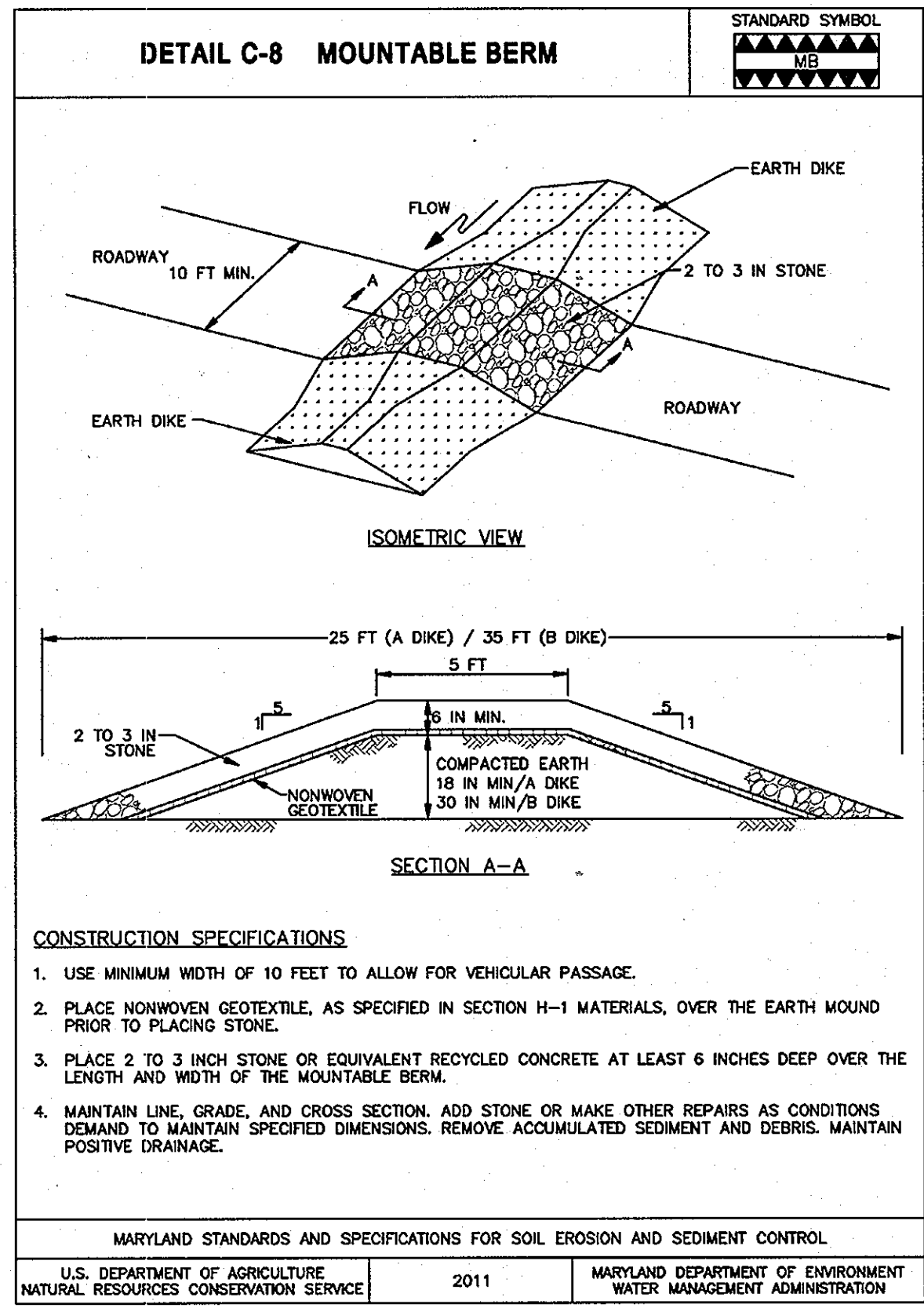
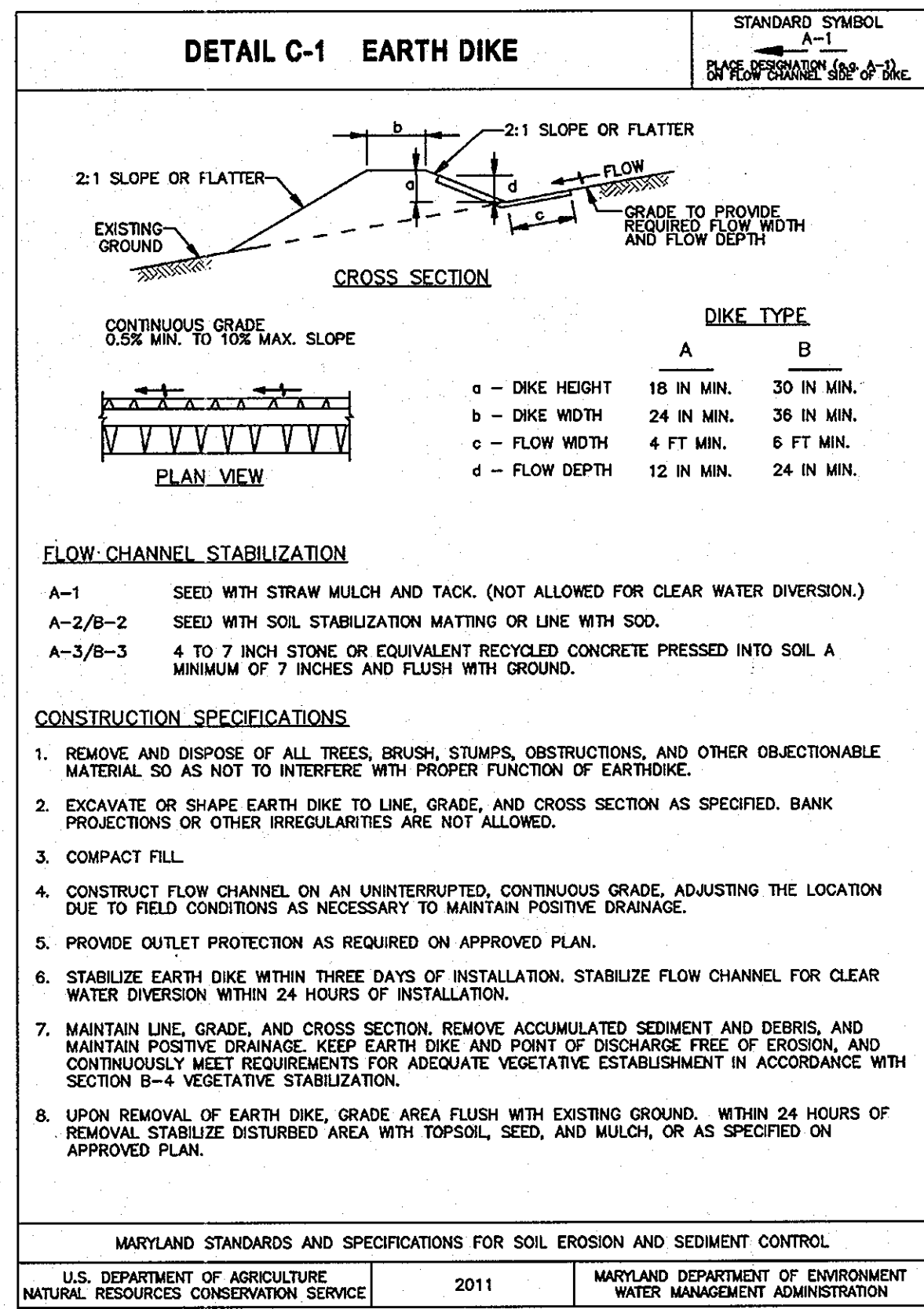
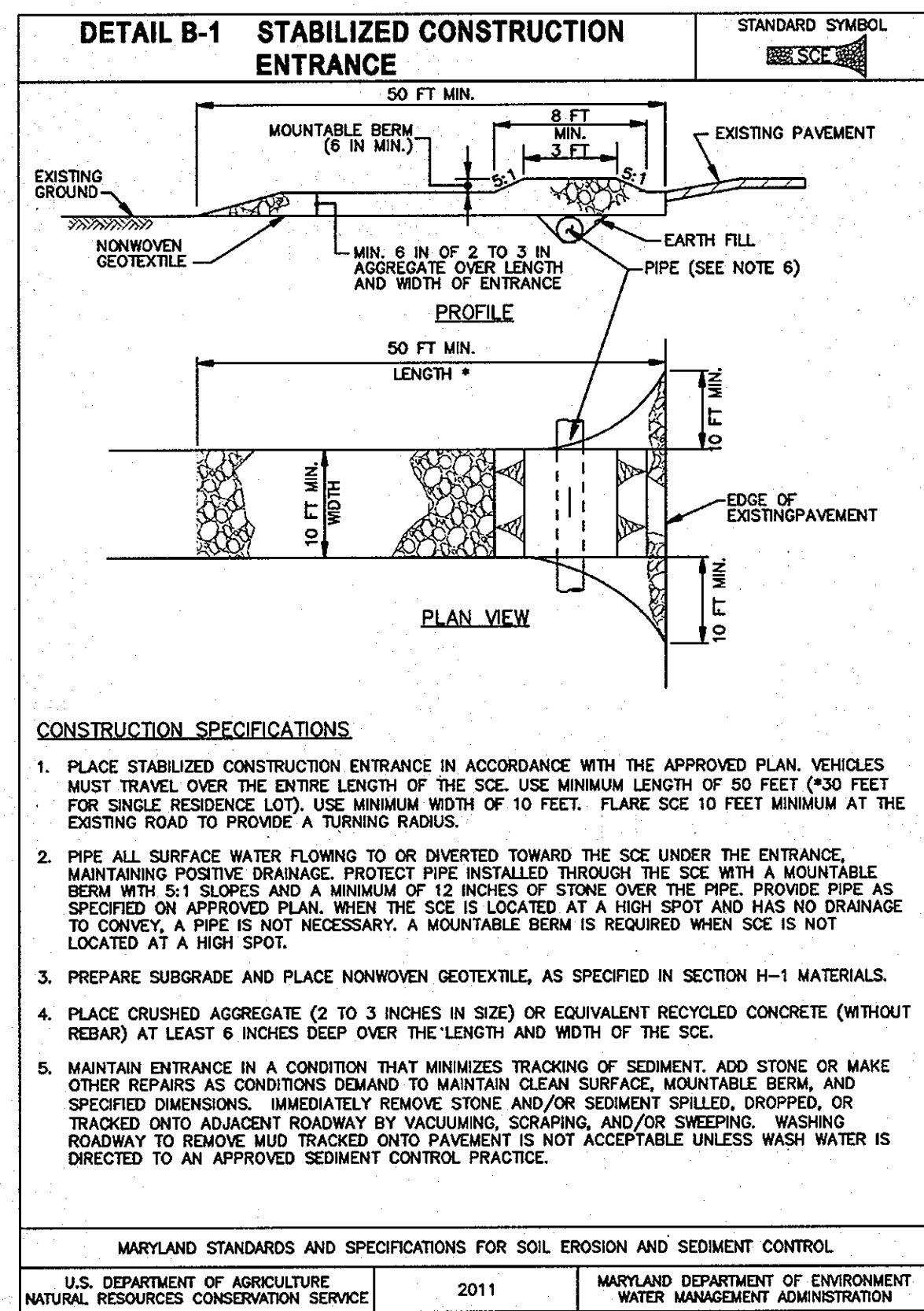
DES:	KPR				
DRN:	AM				
CHK:	AFE	ERI 2	ADD SPORTS FIELDS & PARKING LOTS	1/26/13	
		ERI 1	ADD RETAINING WALLS & REVISE GRADING	4/18/13	
DATE:	02/12/12	BY	NO.	REVISION	DATE

**EROSION AND SEDIMENT CONTROL PLAN**  
600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
CAPITAL PROJECT NO. N-3451  
HOWARD COUNTY, MARYLAND  
SHEET 36 OF 64  
SDP-11-003

Z:\1010022-1001\_Park Plaza 1 Size Plan\DWG\ESC1.07.ESC\_Plan.dwg - Layout 11 Nov 26, 2013 08:11:00 AM





**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.

*John R. Egan* 9/14/12  
 HOWARD COUNTY REC. AND PARKS DEVELOPER DATE

*Mark A. Long* 2/1/12  
 DIRECTOR DATE

*John R. Egan* 1/31/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

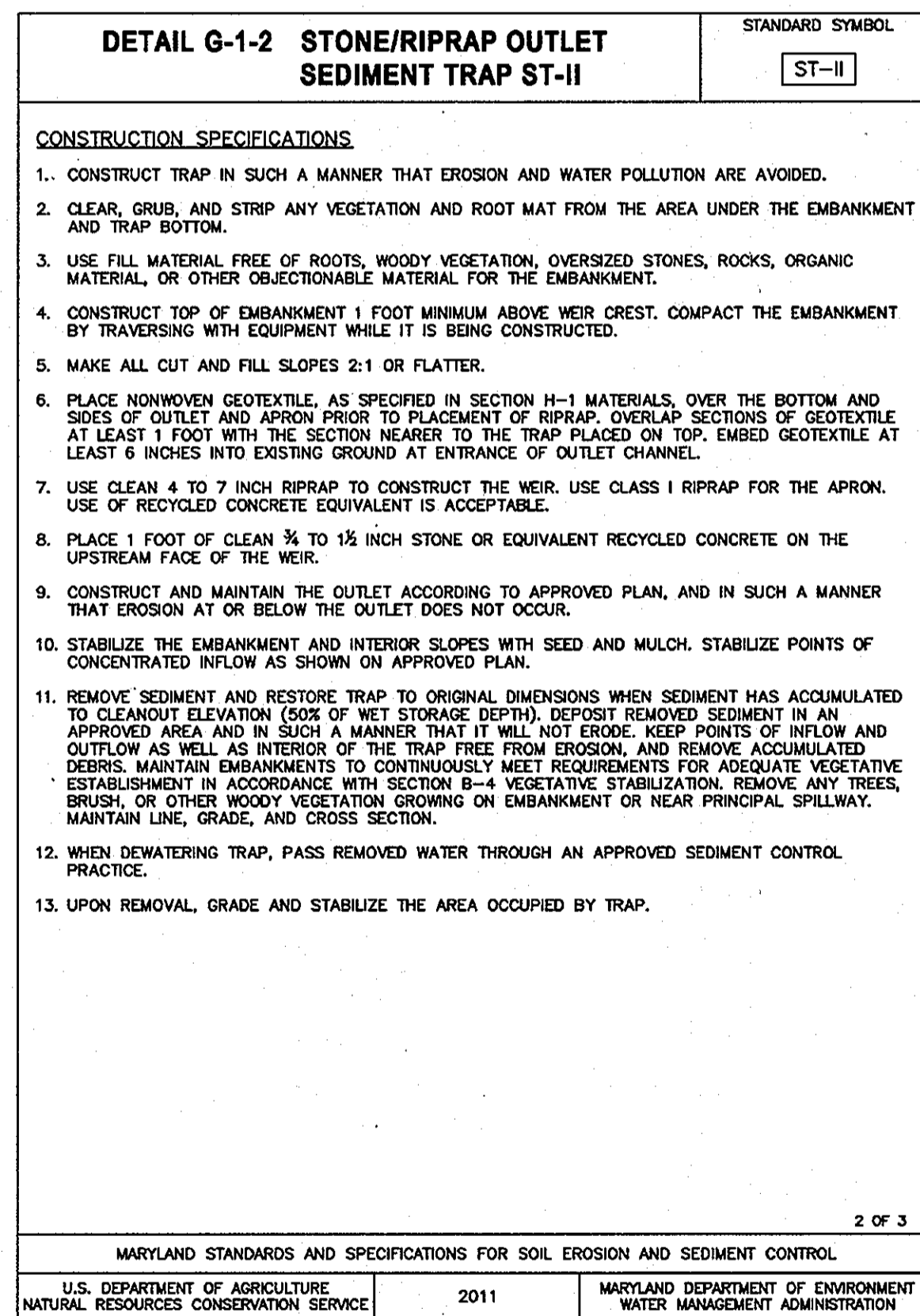
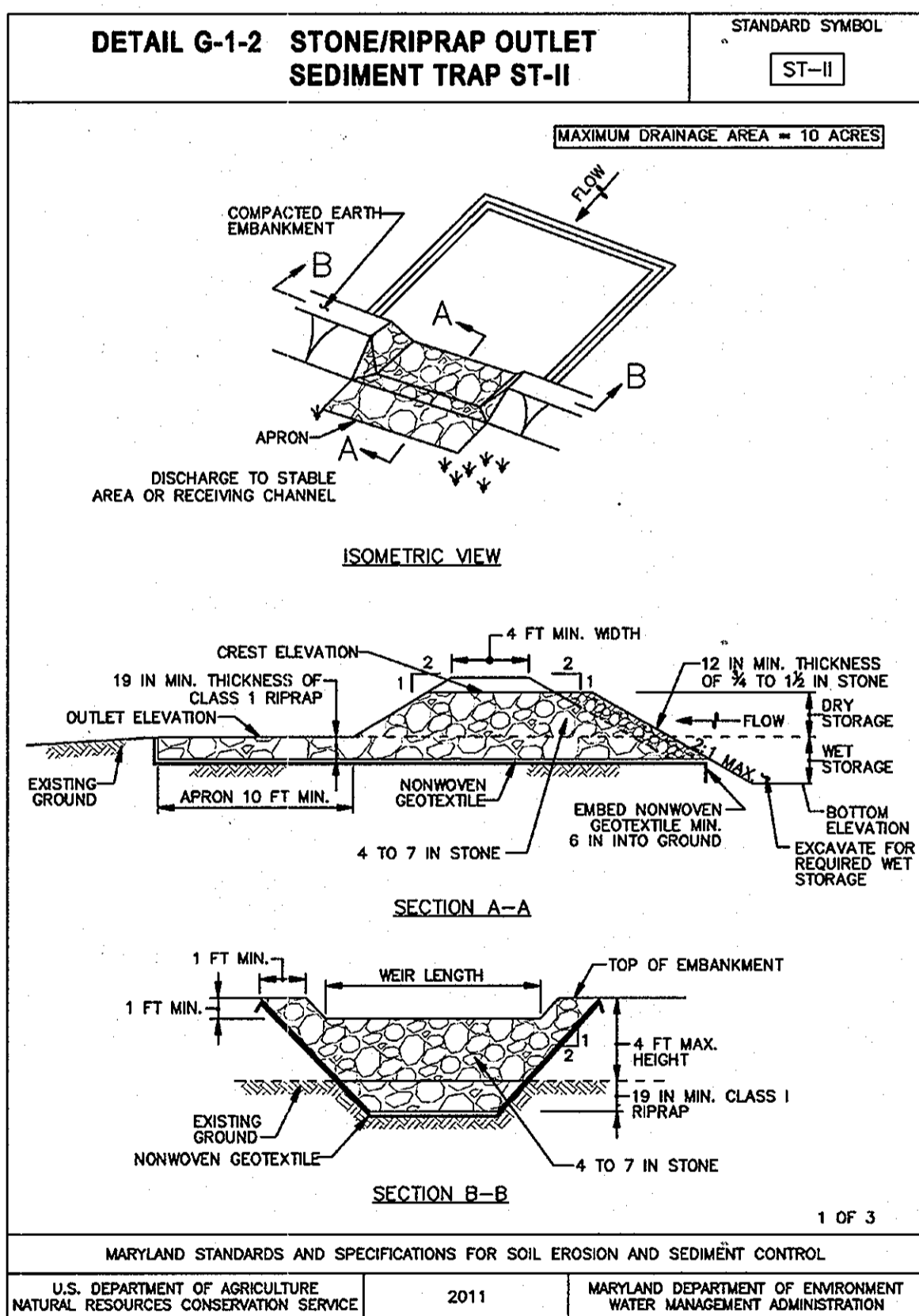
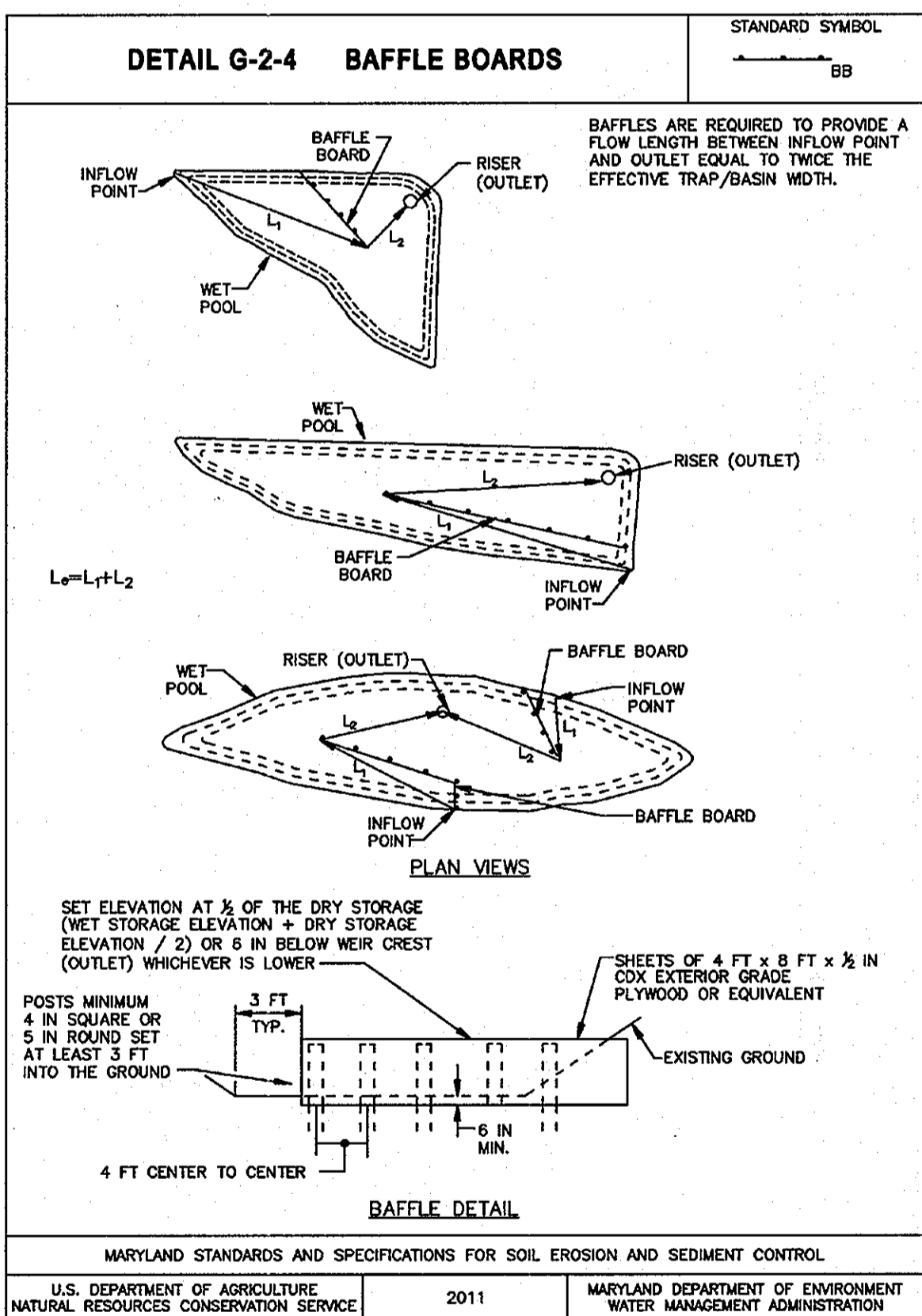
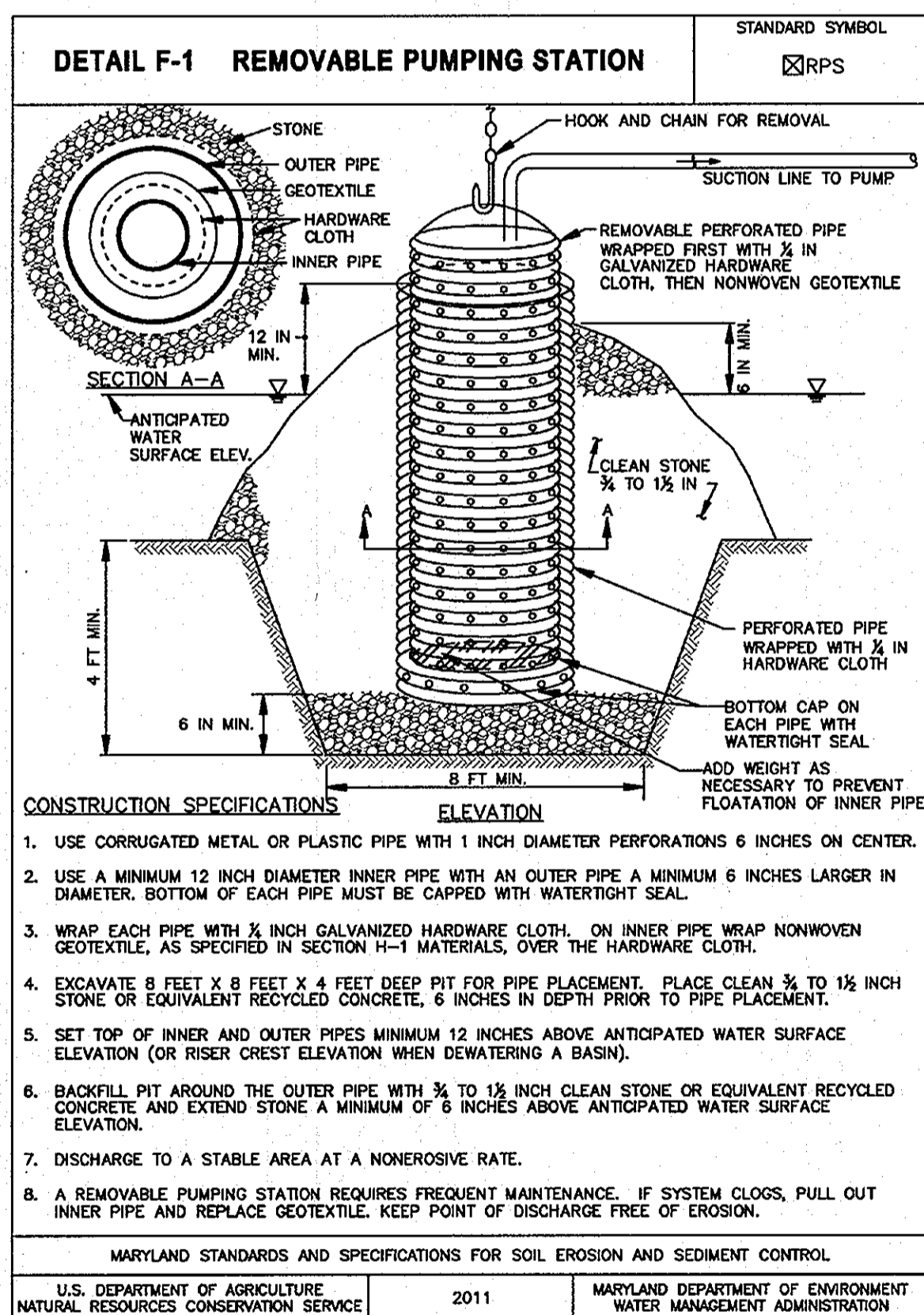
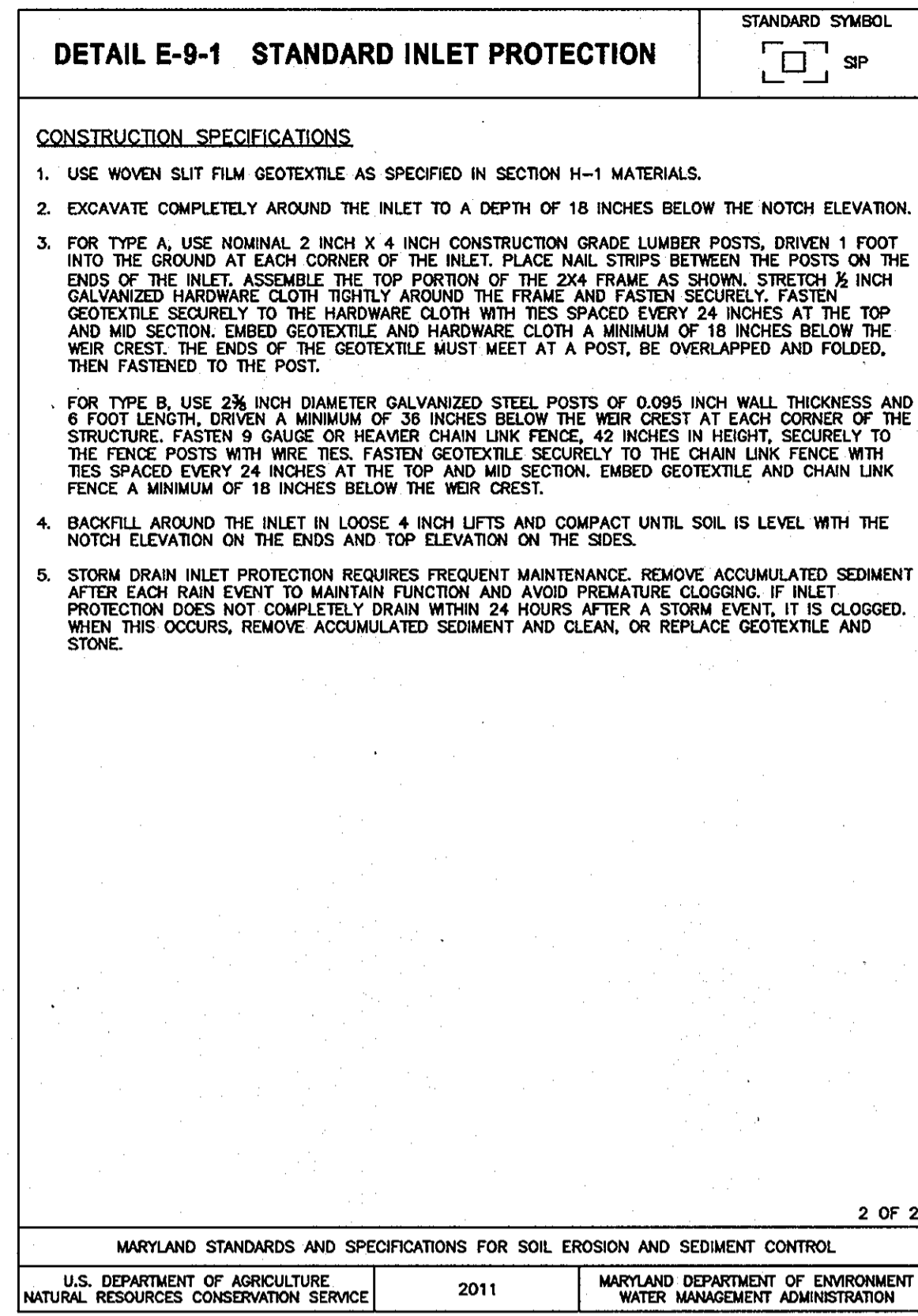
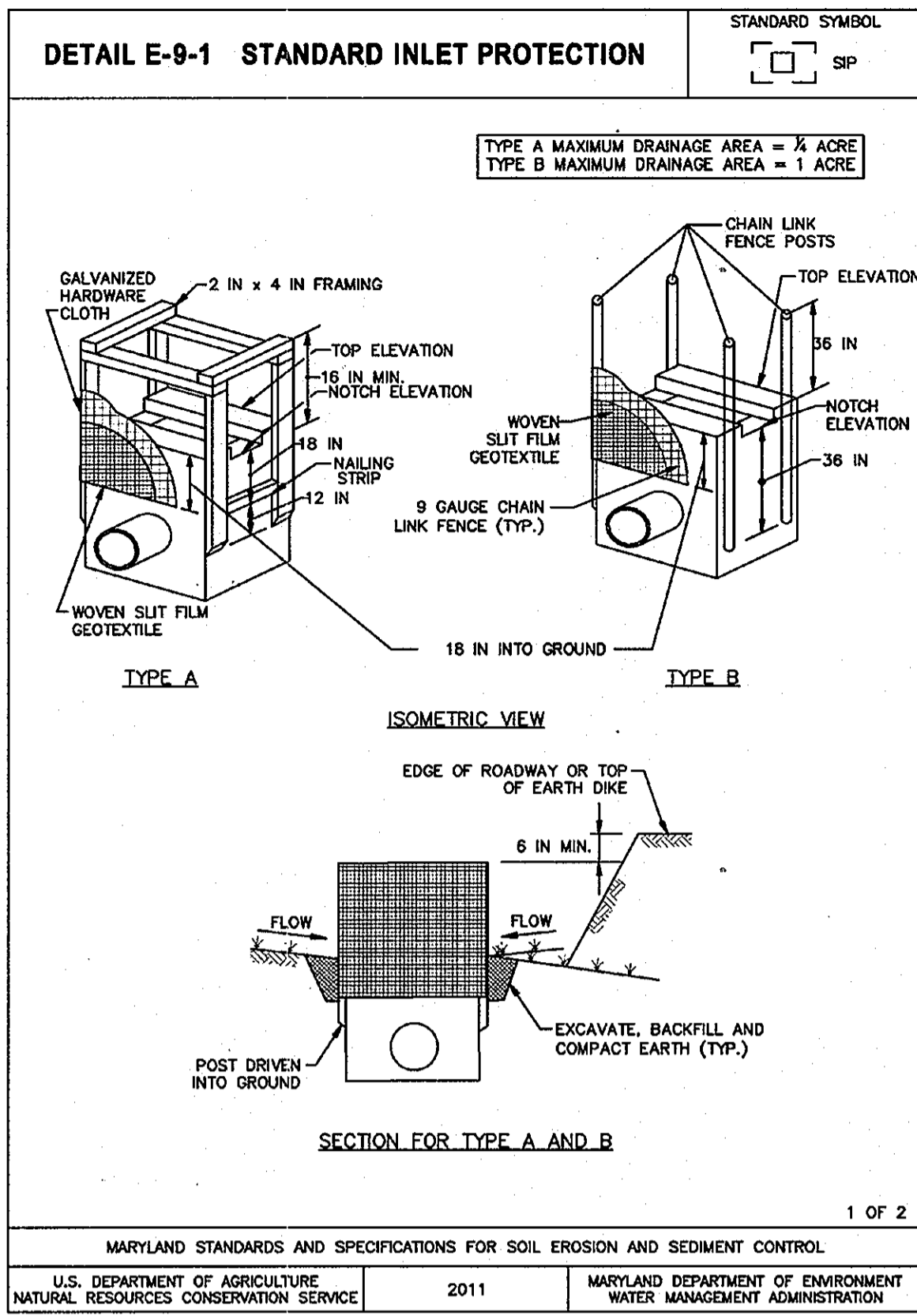
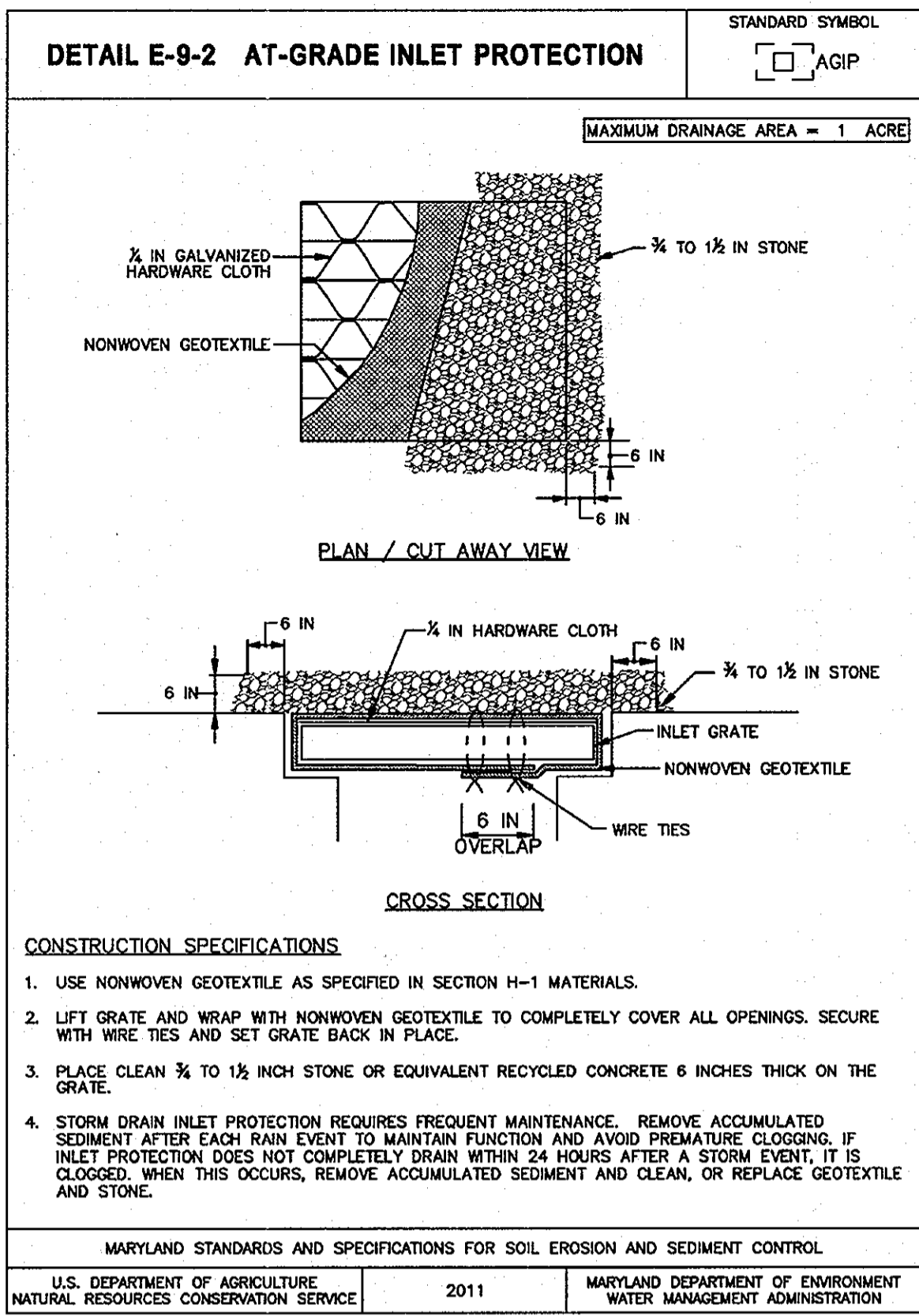
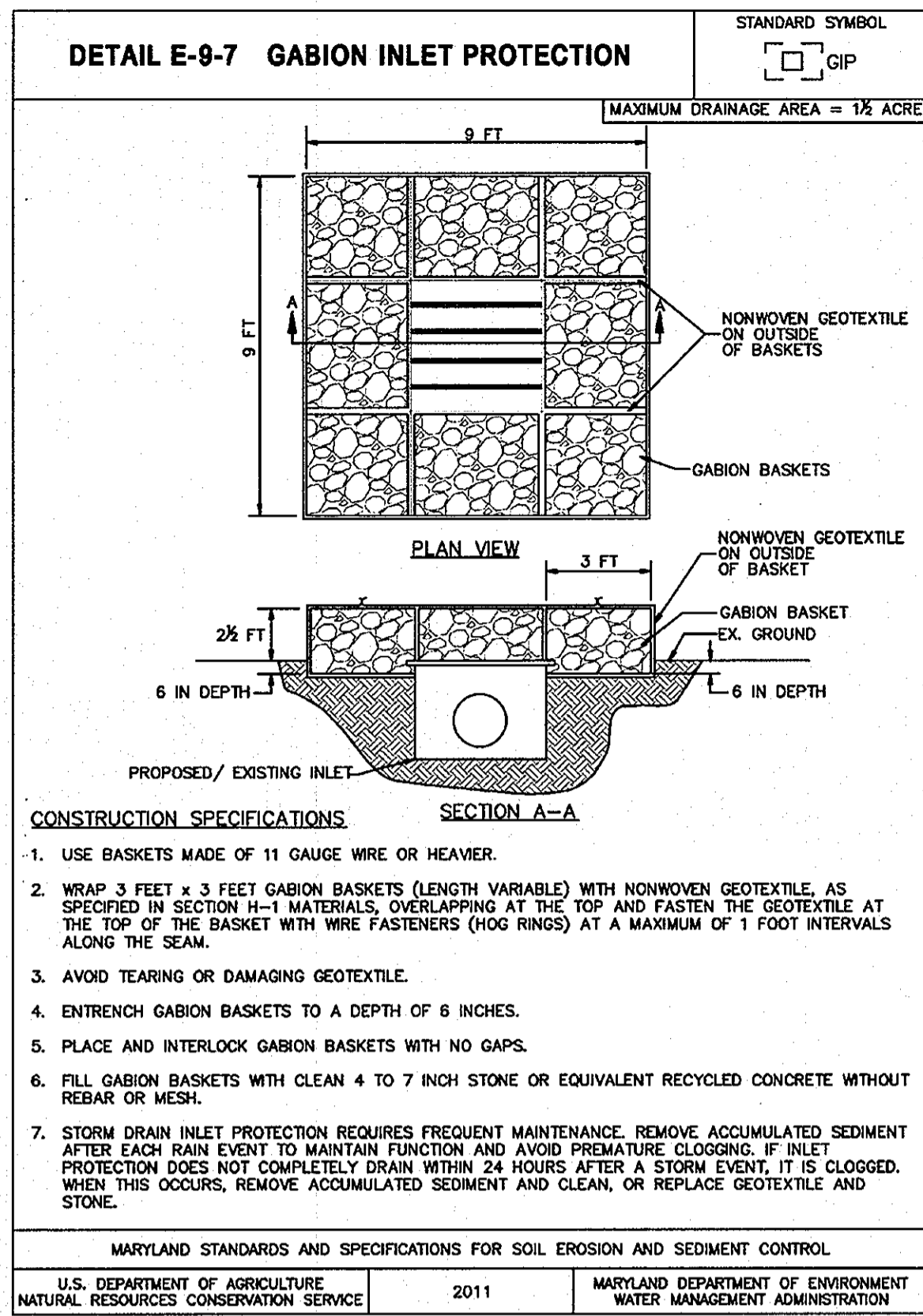
*Keith Schuler* 2/6/13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**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 was prepared in accordance with the requirements of the Howard Soil Conservation District.

*John R. Egan* 8/12/2012  
 P.E. - ENGINEER DATE

**ADDRESS / PERMIT INFORMATION**  
 PARCEL: 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 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#### 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."

*Howard County Reg. and Parks - Developer*  
DATE: 9/14/12

APPROVED: DEPARTMENT OF PLANNING & ZONING  
DATE: 2/13/13  
DATE: 1/31/13  
DATE: 2/01/13

#### 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 was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Albert F. Edwards, P.E. - Engineer*  
DATE: 8/12/2012

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John A. Roberts*  
DATE: 9/20/12

**SITE RESOURCES**  
1435 Annetville Pike • Poolesville, Maryland 21131  
(410) 882-3300 • Fax (410) 882-3300

DES:	SRI	DATE:	08/21/12
DRN:	CMF	BY:	NO.
CHK:	SRI	REVISION:	

**EROSION AND SEDIMENT CONTROL DETAILS**

600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3451 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
E502.02  
SHEET 38 OF 64



**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 1**

DRAINAGE AREA - INITIAL	6.05	ACRES
DRAINAGE AREA - INTERIM	-	ACRES
DRAINAGE AREA - FINAL	8.25	ACRES
TOTAL STORAGE REQUIRED	29700	CF
TOTAL STORAGE PROVIDED	29728	CF
WET STORAGE REQUIRED	14850	CF
WET STORAGE PROVIDED	14895	CF
DRY STORAGE REQUIRED	14850	CF
DRY STORAGE PROVIDED	14852	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	199.8	FT
TRAP BOTTOM ELEVATION	197	FT
TRAP BOTTOM DIMENSIONS	90x50	FT x FT
WEIR LENGTH	33	FT
WEIR CREST (DRY STORAGE) ELEVATION	202	FT
CLEANOUT ELEVATION	198.6	FT
TOP OF EMBANKMENT ELEVATION	203	FT
SIDE SLOPE	2:1	H:V
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	10	FT
OUTLET PROTECTION - DEPTH	19	IN

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 2**

DRAINAGE AREA - INITIAL	8.3	ACRES
DRAINAGE AREA - INTERIM	-	ACRES
DRAINAGE AREA - FINAL	3.86	ACRES
TOTAL STORAGE REQUIRED	13896	CF
TOTAL STORAGE PROVIDED	25967	CF
WET STORAGE REQUIRED	6948	CF
WET STORAGE PROVIDED	15982	CF
DRY STORAGE REQUIRED	6948	CF
DRY STORAGE PROVIDED	15542	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	183	FT
TRAP BOTTOM ELEVATION	180.25	FT
TRAP BOTTOM DIMENSIONS	147 x 40	FT x FT
WEIR LENGTH	34	FT
WEIR CREST (DRY STORAGE) ELEVATION	184.9	FT
CLEANOUT ELEVATION	182	FT
TOP OF EMBANKMENT ELEVATION	186.75	FT
SIDE SLOPE	2:1	H:V
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	10	FT
OUTLET PROTECTION - DEPTH	19	IN

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 3**

DRAINAGE AREA - INITIAL	6.74	ACRES
DRAINAGE AREA - INTERIM	-	ACRES
DRAINAGE AREA - FINAL	6.10	ACRES
TOTAL STORAGE REQUIRED	24264	CF
TOTAL STORAGE PROVIDED	31019	CF
WET STORAGE REQUIRED	12132	CF
WET STORAGE PROVIDED	15458	CF
DRY STORAGE REQUIRED	12132	CF
DRY STORAGE PROVIDED	15562	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	179	FT
TRAP BOTTOM ELEVATION	177	FT
TRAP BOTTOM DIMENSIONS	122x62	FT x FT
WEIR LENGTH	27	FT
WEIR CREST (DRY STORAGE) ELEVATION	180.75	FT
CLEANOUT ELEVATION	178	FT
TOP OF EMBANKMENT ELEVATION	182	FT
SIDE SLOPE	2:1	H:V
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	10	FT
OUTLET PROTECTION - DEPTH	19	IN

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 4**

DRAINAGE AREA - INITIAL	5.52	ACRES
DRAINAGE AREA - INTERIM	-	ACRES
DRAINAGE AREA - FINAL	6.96	ACRES
TOTAL STORAGE REQUIRED	25056	CF
TOTAL STORAGE PROVIDED	31000	CF
WET STORAGE REQUIRED	12528	CF
WET STORAGE PROVIDED	15430	CF
DRY STORAGE REQUIRED	12528	CF
DRY STORAGE PROVIDED	15430	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	168.2	FT
TRAP BOTTOM ELEVATION	166	FT
TRAP BOTTOM DIMENSIONS	125 x 50	FT x FT
WEIR LENGTH	28	FT
WEIR CREST (DRY STORAGE) ELEVATION	170	FT
CLEANOUT ELEVATION	167	FT
TOP OF EMBANKMENT ELEVATION	171	FT
SIDE SLOPE	2:1	H:V
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	10	FT
OUTLET PROTECTION - DEPTH	19	IN

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 5**

DRAINAGE AREA - INITIAL	4.56	ACRES
DRAINAGE AREA - INTERIM	-	ACRES
DRAINAGE AREA - FINAL	5.75	ACRES
TOTAL STORAGE REQUIRED	20700	CF
TOTAL STORAGE PROVIDED	26979	CF
WET STORAGE REQUIRED	10350	CF
WET STORAGE PROVIDED	13618	CF
DRY STORAGE REQUIRED	10350	CF
DRY STORAGE PROVIDED	13361	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	166	FT
TRAP BOTTOM ELEVATION	164	FT
TRAP BOTTOM DIMENSIONS	115 x 50	FT x FT
WEIR LENGTH	23	FT
WEIR CREST (DRY STORAGE) ELEVATION	167.8	FT
CLEANOUT ELEVATION	165	FT
TOP OF EMBANKMENT ELEVATION	169	FT
SIDE SLOPE	2:1	H:V
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	10	FT
OUTLET PROTECTION - DEPTH	19	IN

**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."

*John B. Boyd*  
HOWARD COUNTY REC. AND PARKS - DEVELOPER  
DATE: 9/14/12

**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 was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Robert Edwards*  
P.E. - ENGINEER  
DATE: 8.12.2012

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John K. Roberts*  
HOWARD SOIL CONSERVATION DISTRICT  
DATE: 9/20/12

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark W. Geyer*  
DIRECTOR  
DATE: 2/14/12  
*John J. Williams*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 1/21/12  
*Ved Chakrabarti*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 2/6/12

ADDRESS / PERMIT INFORMATION  
PARCEL: 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 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1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990,



B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

A. Soil Preparation
1. Temporary Stabilization
a. Seedbed Preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...
B. Topsoiling
1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation...
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications...
C. Soil Amendments (Fertilizer and Lime Specifications)
1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more...

TEMPORARY SEEDING SUMMARY

Table with columns: Species, Application Rate (lb/acc), Seeding Dates, Seeding Depth, Fertilizer Rate (lb/1000 sq ft), Lime Rate. Rows include Annual Ryegrass and Millet.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

A. Seeding
1. Specifications
a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory...
B. Mulching
1. Mulch Materials (in order of preference)
a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color...
b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state...
2. Application
a. Apply mulch to all seeded areas immediately after seeding...
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches...

PERMANENT SEEDING SUMMARY

Table with columns: No., Species, Application Rate (lb/acc), Seeding Dates, Seeding Depths, Fertilizer Rate (lb/1000 sq ft), Lime Rate. Rows include Tall Fescue, Perennial Ryegrass, and Kentucky Bluegrass.

SEDIMENT AND EROSION CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction...
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL...
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 3 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 7 days as to all other disturbed or graded areas on the project site...
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol.1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage...
5. All disturbed areas must be stabilized within the time period specified above in accordance with the MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec.51), sod (Sec.54), temporary seeding (Sec.50) and mulching (Sec.52)...
7. SITE ANALYSIS:
Total Area of Site: 101.84 Acres
Area Disturbed: 34.48 Acres
Area to be roofed or paved: 15.31 Acres
Area to be vegetatively stabilized: 24.16 Acres
Total Cuts: 150,000 Cu. Yds.
Total Fill: 150,000 Cu. Yds.
Off-site Waste/Borrow Area Location:
a. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance...
b. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector...
c. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading...
d. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan...
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1...
3. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion trench...
4. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge...
5. Stockpiles must be established in accordance with the 37 day stabilization requirement as well as Standard B-4-4 Incremental Stabilization and Standard B-4-4 Temporary Stabilization...
6. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup...
Maintenance
The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization...
NOTE: All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards and Specifications for Soil Erosion and Sediment Control, and revisions thereto (see Standard Sediment Control Note #2).

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

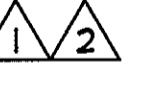
Definition
To stabilize disturbed soils with vegetation for up to 6 months.
Purpose
To use fast growing vegetation that provides cover on disturbed soils.
Conditions Where Practice Applies
Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
Criteria
1. Select one or more of the species or seed mixtures listed in Table B1 for the appropriate Plant Hardiness Zone (from Figure B3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths...
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding...
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3 A1b and maintain until the next seeding season.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition
To stabilize disturbed soils with permanent vegetation.
Purpose
To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.
Conditions Where Practice Applies
Exposed soils where ground cover is needed for 6 months or more.
Criteria
A. Seed Mixtures
1. General Use
a. Select one or more of the species or mixtures listed in Table B3 for the appropriate Plant Hardiness Zone (from Figure B3) and based on the site condition or purpose found on Table B2...
b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 -- Critical Area Planting...
c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency...
d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/4 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary...
2. Turfgrass Mixtures
a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance...
b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary...
i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management...
ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary...
iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management...
iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in bluegrass lawns...
Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #11, Turfgrass Cultivar Recommendations for Maryland
Choose certified material. Certified material is the best guarantee of cultivar purity...
c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
d. Till areas to receive seed by disk or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1/2 inches in diameter...
e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established...
f. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

SEQUENCE OF CONSTRUCTION

- 1. Assure that Grading Permit and all other necessary permits are obtained from Owner.
2. Notify Howard County Department of Public Works at least 48 hours before start of work. Contact Miss Utility at 1-800-251-TTTT at least three days in advance of starting work shown on plans.
3. Clear and grub for and install erosion and sediment control measures or devices. See ESC 100 for the overall sediment control plan.
3a. Begin with the installation of the stabilized construction entrance (SCE), silt fence (SFF), and inlet protection (IP) along Existing/Proposed Mansion Drive.
3b. Install Trap #1 and Earth Dike #1 and #2 along with associated SFF on the downstream side of the dikes and trap.
3c. Install diversion fence and SFF along southwest side of project limits. Install clear water diversion pipe and rip-rap outlet on northwest side of the site. Provide adequate cover for protection from construction equipment.
3d. Install Sediment Trap #3, Earth Dike #3 and #4, and SFF below trap and dikes.
3e. Install Sediment Trap #2, Earth Dike #4 and #5, and SFF below trap and dikes.
3f. Install Sediment Trap #5, Earth Dike #6, and SFF below trap and dikes.
3g. Install Sediment Trap #4, Earth Dike #7, and SFF below trap and dikes.
3h. Delay construction of the extension of Earth Dike #1 until mass grading of western fields area is complete (see sequence #6 below).
3i. Delay construction of Earth Dike #8 until mass grading progresses and Earth Dike #5 can be removed (see sequence #10 below).
4. Notify sediment control inspector and engineer upon completion of this installation.
5. With the permission of the sediment control inspector, remove the existing road from the SCE for an approximate distance of 1400 linear feet along the proposed road. Rough grade adjacent roadway swales.
6. Clear and mass grade western fields area. Extend Earth Dike #1 an approximate length of 250 linear feet.
7. Adjust alignment of Earth Dike #2 to allow for construction of Retaining Wall #2. Provide rip-rap stabilization along Earth Dike #2 for stable conveyance. Install mountable berm for access for wall construction. Construct Retaining Wall #2. Stabilize slopes with erosion control matting.
8. Clear and mass grade north eastern fields area.
9. Install Temporary Gabion Outlet Structure as shown. Extend SFF along east edge of LOD and connect to existing SFF. Remove Sediment Trap #3 and grade to allow for construction of Retaining Wall #1. Remove lower portion Earth Dike #3 and adjust alignment Earth Dike #4 to allow for wall construction. Construct Retaining Wall #1. Provide rip-rap stabilization of swale along the north side of the wall. Stabilize slopes with erosion control matting.
10. Clear and mass grade central area. As mass grading progresses to the East, remove Earth Dike #3 and install Earth Dike #5. Remove 160 linear feet of Earth Dike #6 adjacent to Sediment Trap #4.
11. Install storm drains. Install water and sanitary sewer lines and manholes. Install inlet protection as shown on approved Erosion and Sediment Control Plans.
12. Rough grade the three parking lots adjacent to Synthetic Fields 3 and 4. Fine grade Fields 3 and 4 to subgrade. Remove Earth Dike #1 as necessary for grading of fields and parking lots. As the grading of the Field progresses, remove Earth Dike #2 to a point just beyond the extent of the field grading. Stabilize all slopes and remaining disturbed areas adjacent to fields and parking areas.
13. Fine grade and install base course for all road surfaces and the three parking lots adjacent to Fields 3 and 4. Install curb and gutter.
14. Construct synthetic fields in accordance with manufacturer's specifications including underdrains, concrete edging for fencing, and turf surface. Construct bleachers and walkways associated with Fields 3 and 4.
15. Final grade the remaining areas and permanently stabilize those areas.
16. Pave all road surfaces - the final surface course shall not be installed until the future build-out of the park.
17. After all contributing drainage areas have been completely stabilized, install proposed SMM facilities per approved SMM plans.
18. After permanent stabilization of site with established vegetation and with permission of the Sediment Control Inspector, remove erosion and sediment control measures or devices, and stabilize those areas disturbed by this process.
18a. Remove Clear Water Diversion Pipe, Diversion Fence and SFF and associated Earth Dikes.
18b. Remove Trap 5 and associated Earth Dike.
18c. Remove Trap 4 and associated Earth Dike.
18d. Remove Trap 2 and associated Earth Dike.
18e. Remove Trap 1 and associated Earth Dike.
18f. Remove remaining sediment controls and stabilize areas disturbed by this process.



APPROVED: DEPARTMENT OF PLANNING & ZONING
Director: Charles Edwards
Chief, Development Engineering Division: [Signature]
Chief, Division of Land Development: [Signature]

ADDRESS / PERMIT INFORMATION
Parcel: 541, 542, 586, 190, 193, 199 LOT A-21, 195 LOT A-22
Address: 8400 MANSION LANE
Lot 17 / PARCELS 12288 / E571, 12205 / F340, L5783 / F 640
Lot 14 / F13, L4933 / F431, L4935 / F440, L4935 / F 640
Lot 15 / F13, L4933 / F431, L4935 / F440, L4935 / F 640
Subdivision: TROY PARK, PHASE ONE, LOT 17, 14, 15 AND 18
Address: TROY PARK, PHASE ONE, LOT 17, 14, 15 AND 18
Water Code: 400, Sewer Code: 252200
OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF REGISTRATION AND PARKS
1800 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046
Phone (410) 385-2100
DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF REGISTRATION AND PARKS
1800 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046
Phone (410) 385-2100

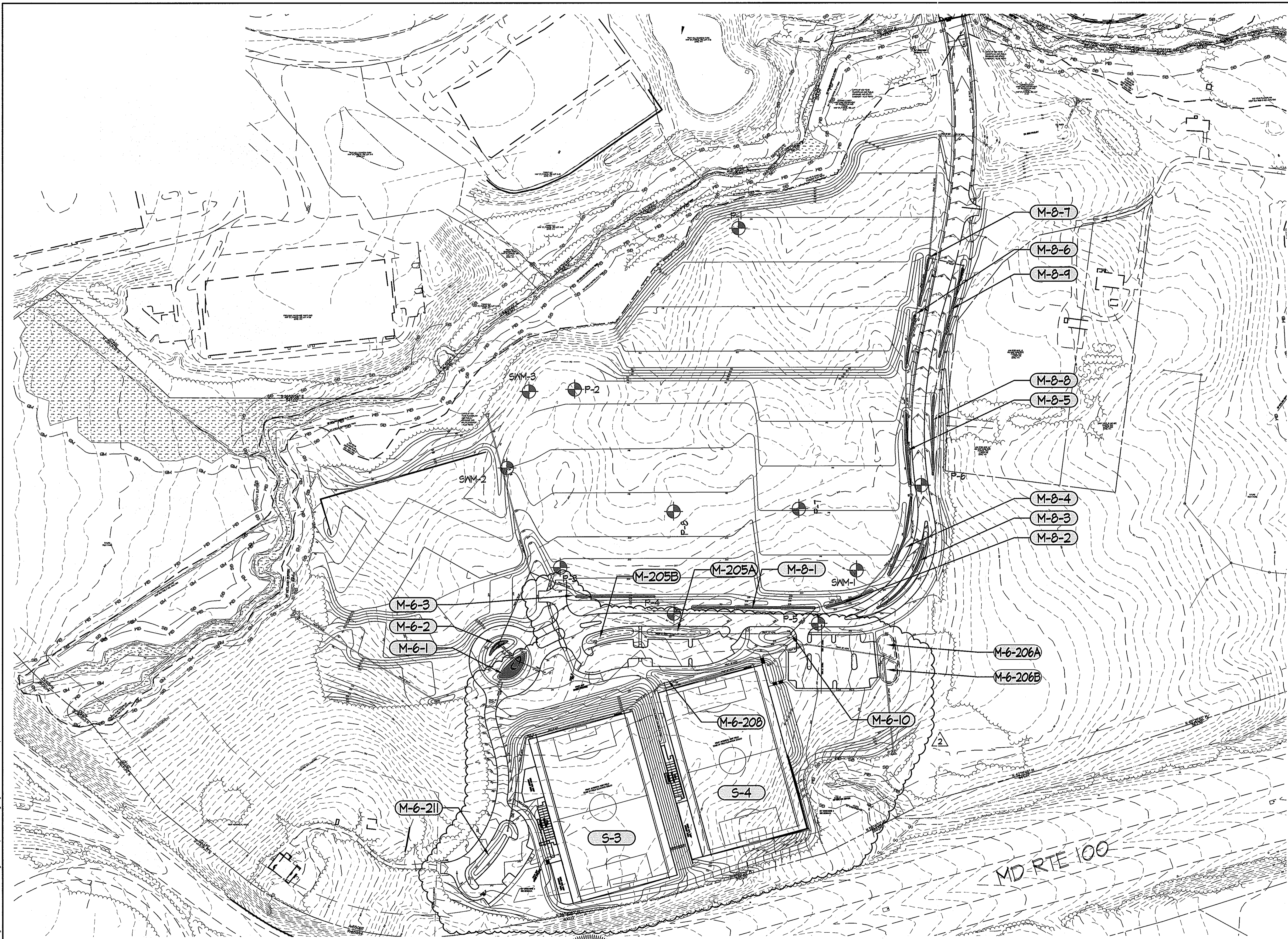
SITE RESOURCES INCORPORATED logo and contact information: 16185 Armetville Pike - Poolesville, Maryland 21131 (410) 883-3388 - Fax (410) 883-3389

DESIGN AND REVISION TABLE with columns: No., Description, Date, By. Includes rows for DRN, CHK, and REVISION.

EROSION AND SEDIMENT CONTROL NOTES table with columns: Description, Date, Scale. Includes notes for ADD SPORTS FIELDS & PARKING LOTS and ADD RETAINING WALLS & REVISE GRADING.

TROY PARK - PHASE ONE PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22. Includes developer information: HOWARD COUNTY REG. AND PARKS - DEVELOPER, SHEET 40 OF 64, SCALE: AS SHOWN.





**LEGEND** (THIS LEGEND APPLIES TO SHEET SWM100 ONLY)

- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING STORM DRAIN
- EXISTING LIGHTING
- EXISTING BUILDING
- EXISTING WETLANDS
- WETLAND BUFFER
- EXISTING STREAM
- EXISTING STREAM BUFFER
- EXISTING STREAM BUFFER
- PROPOSED WOODLINE
- PROPOSED WALK
- PROPOSED ROAD
- PROPOSED CONTOURS
- PROPOSED STORM DRAIN

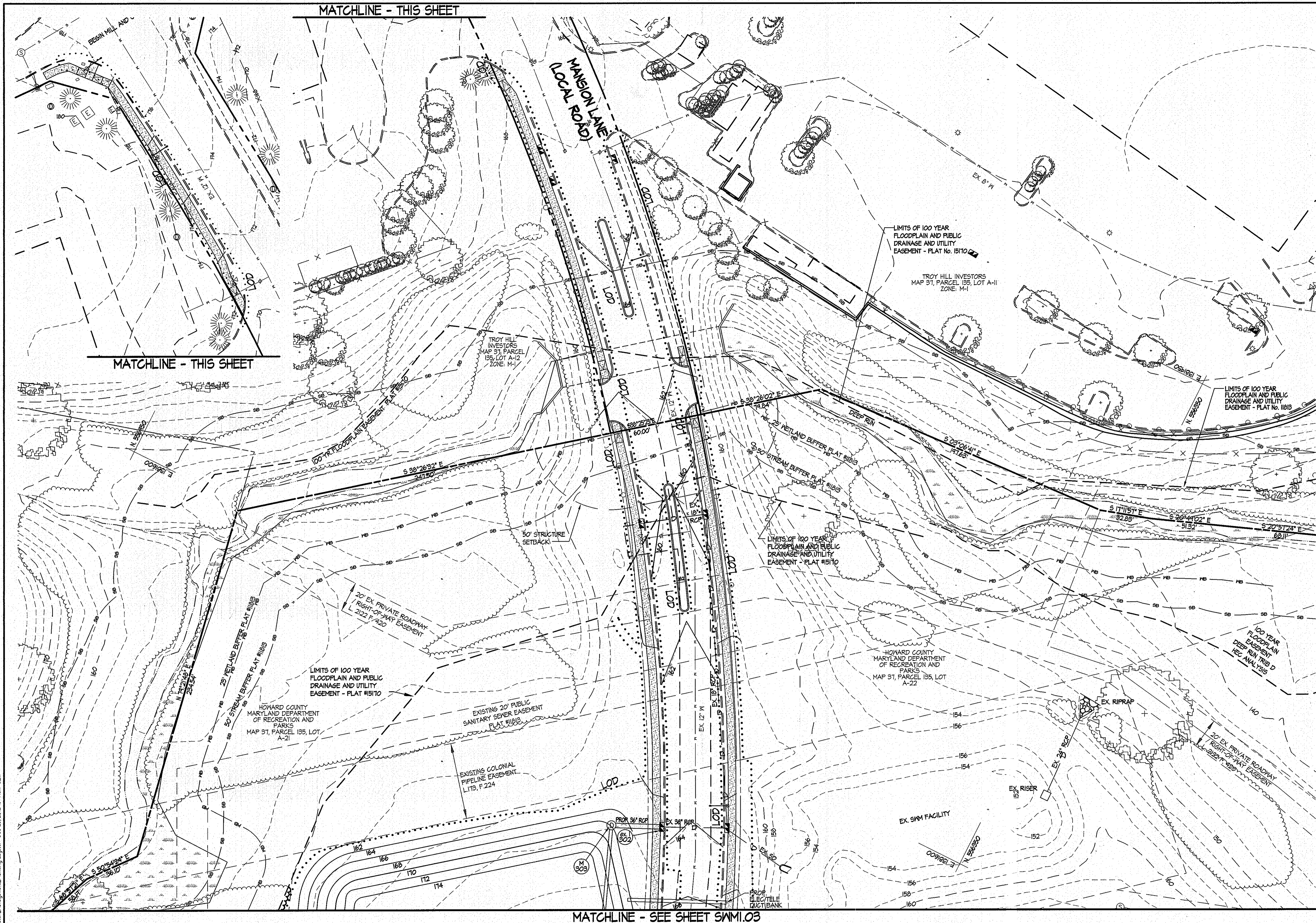
**ESD TABLE** (THIS TABLE APPLIES TO SHEETS SWM100 - SWM101)

ESD NO.	DETAIL REFERENCE	PLANTING MEDIA DIMENSIONS (FT x FT)	PLANTING MEDIA AREA (SF)	PERFORATED 4" PIPE (LF)
M-6-1	#1 / SHT. SWM2.01	30x80	1800	75
M-6-2	#1 / SHT. SWM2.01	15x54	810	44
M-6-3	#1 / SHT. SWM2.01	6x180	1080	175
M-6-10	#1 / SHT. SWM2.01	13x10	140	68
M-6-1	#2 / SHT. SWM2.01	6x215	1290	210
M-6-2	#2 / SHT. SWM2.01	6x110	660	105
M-6-3	#2 / SHT. SWM2.01	6x175	1050	170
M-6-4	#2 / SHT. SWM2.01	6x185	1110	180
M-6-5	#2 / SHT. SWM2.01	6x160	960	155
M-6-6	#2 / SHT. SWM2.01	6x120	720	115
M-6-7	#2 / SHT. SWM2.01	6x105	630	100
M-6-8	#2 / SHT. SWM2.01	6x175	1050	170
M-6-4	#2 / SHT. SWM2.01	6x210	1260	205
M-6-205A	#1 / SHT. SWM2.01	10x111	1110	105
M-6-205B	#1 / SHT. SWM2.01	7x14	98	81
M-6-206A	#1 / SHT. SWM2.01	24x46	1104	41
M-6-206B	#1 / SHT. SWM2.01	24x46	1104	41
M-6-208	#1 / SHT. SWM2.01	18x58	1044	58
M-6-211	#1 / SHT. SWM2.01	12x14	168	104
S-3	SHT. C2.04	-	-	-
S-4	SHT. C2.04	-	-	-

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark A. Joyce* 1/13/13  
 DIRECTOR DATE  
*David Edmunds* 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Kate L. Leahy* 12-18-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

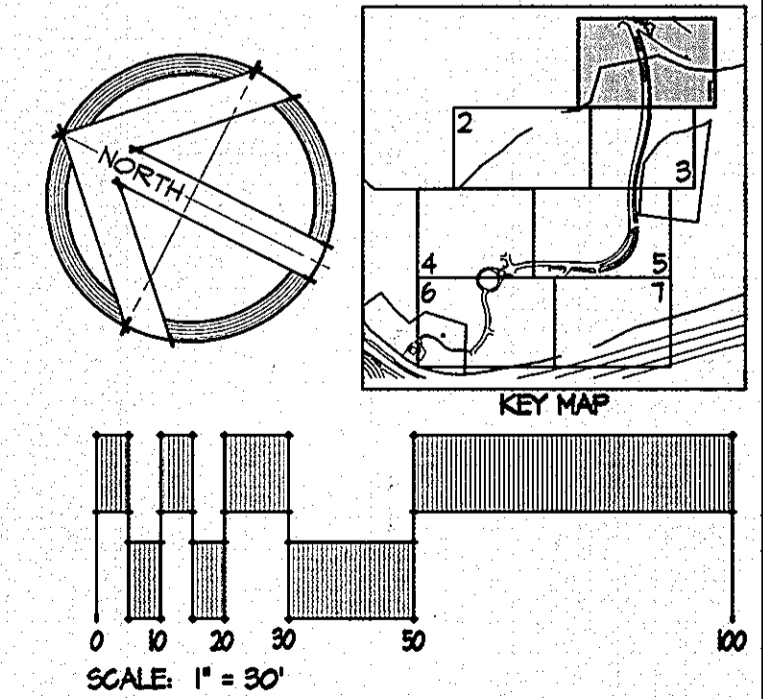
ADDRESS / PERMIT INFORMATION  
 PARCEL: 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 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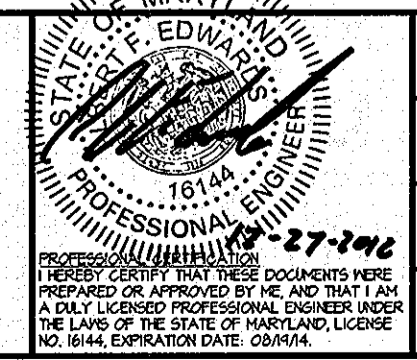
**LEGEND** (THIS LEGEND APPLIES TO SHEETS SWM1.01 THROUGH SWM1.07 ONLY)

- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING TREES
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EX. 15" SD
- EX. 6" WATER
- EX. 8" SAN
- EXISTING LIGHTING
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING WETLANDS
- 25' WETLAND BUFFER
- EXISTING STREAM
- EXISTING STREAM BUFFER
- 100 YR. FLOODPLAIN
- EXISTING FLOODPLAIN
- PROPOSED WOODSLINE
- PROPOSED WALK
- PROPOSED ROAD
- PROPOSED FENCE
- PROPOSED CONTOURS
- EXISTING SPOT ELEVATIONS
- PROPOSED SPOT ELEVATIONS
- LIMIT OF DISTURBANCE
- PROPOSED 15" SD
- PROPOSED 6" WATER
- PROPOSED 8" SAN
- PROPOSED LIGHTING



APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: *Paul A. Gage* 2/1/12  
 Chief, Development Engineering Division: *W. J. [Signature]* 1/31/13  
 Chief, Division of Land Development: *W. J. [Signature]* 2/01/13

ADDRESS / PERMIT INFORMATION  
 PARCEL: 361, 362, 363, 195, 196, 197 LOT A-21, 195 LOT A-22  
 ADDRESS: 6450 MANSION LANE  
 L371 / F. 44, L395 / F. 51, L2205 / F. 940, L5109 / F. 602,  
 L3341 / F. 18, L4429 / F. 451, L4855 / F. 640, L4335 / F. 640  
 6810 / F. 14, ZONE: M-1, TAX MAP NO. 31  
 2nd ELECTION DISTRICT, GENUS TRACT 2012.02  
 PAPER CODE: 400, SEWER CODE: 252200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 383-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 383-2100



DES: KPR	BY NO.	REVISION	DATE
DRN: AM			
CHK: AFE			
DATE: 08/12/12			

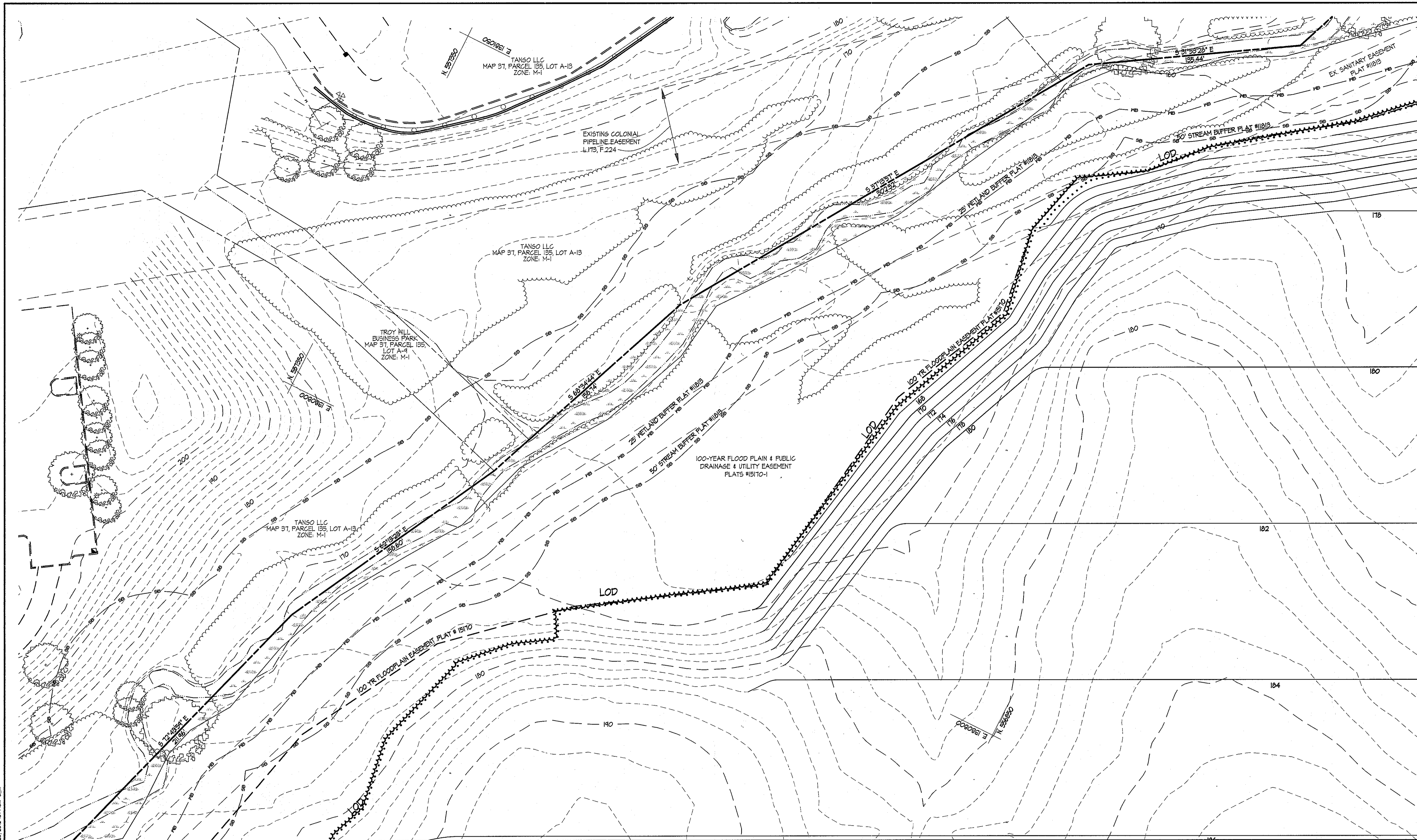
<b>STORMWATER MANAGEMENT PLAN</b>	
600' SCALE MAP NO. 51	BLOCK NO. 16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE 111B PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3457      HOWARD COUNTY, MARYLAND

SCALE: 1" = 30'  
 SWM1.01  
 SHEET 42 OF 64  
 SDP-II-003

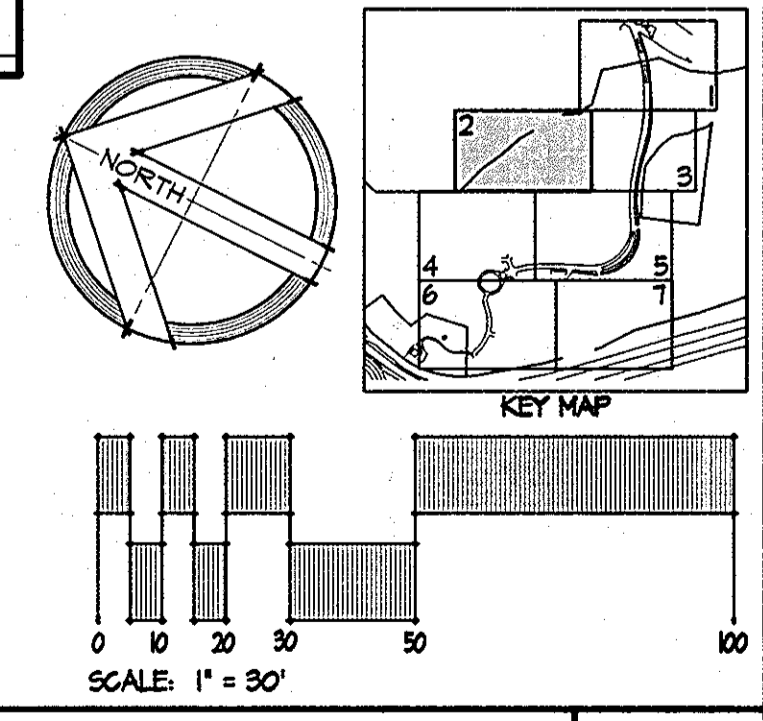




MATCHLINE - SEE SHEET SWMI.04

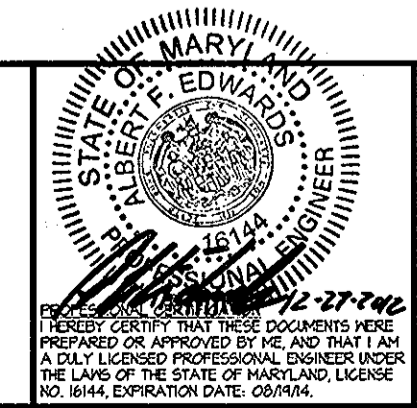
MATCHLINE - SEE SHEET SWMI.05

MATCHLINE - SEE SHEET SWMI.03



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paula K. Unger*  
 DIRECTOR  
 DATE: 2/4/13  
 DATE: 1/31/13  
 DATE: 2/01/13

ADDRESS / PERMIT INFORMATION  
 PARCEL: 361, 362, 363, 185, 185 LOT A-21, 185 LOT A-22  
 ADDRESS: 4450 MANSION LANE  
 LSTY / F. 644, L. 6359 / F. 551, L. 6205 / F. 640, L. 6183 / F. 640,  
 L. 6341 / F. 18, L. 6339 / F. 431, L. 6153 / F. 640, L. 6185 / F. 640,  
 5041 / F. 18, ZONE: M-1, TAX MAP NO. 91  
 2ND ELECTION DISTRICT, GENUS TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 2152200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 313-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 313-2100



DES: KPR					
DRN: AM					
CHK: AFE					
DATE: 08/12/12	BY	NO.	REVISION	DATE	

STORMWATER MANAGEMENT PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SCALE: 1" = 30'  
 SWMI.02  
 SHEET 43 OF 64

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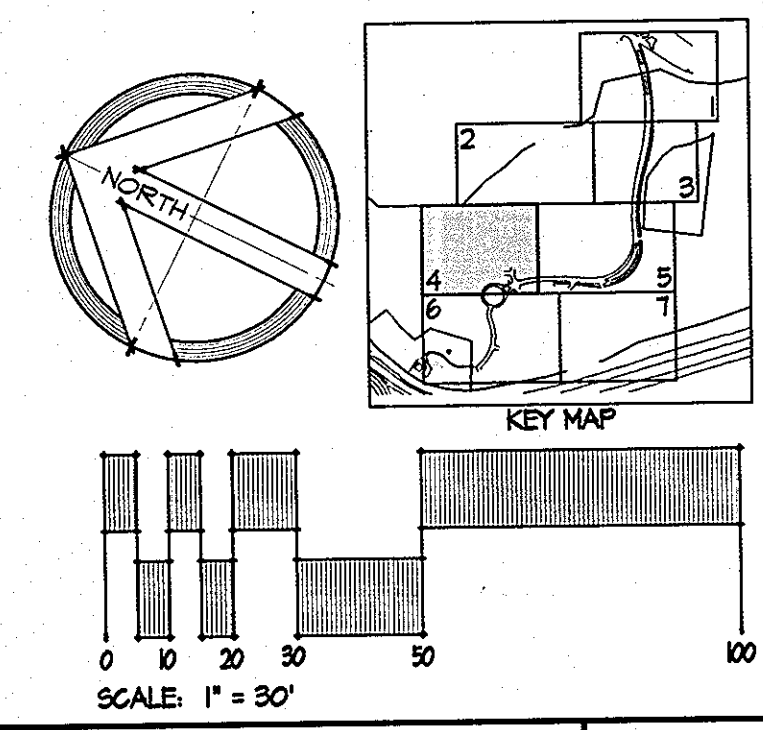


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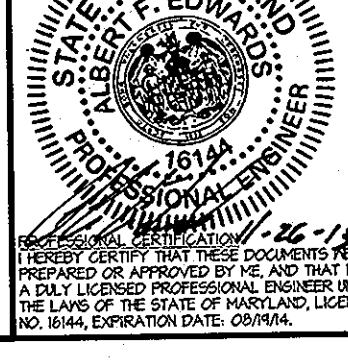
MATCHLINE - SEE SHEET SWMI.05

MATCHLINE - SEE SHEET SWMI.06



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paul A. Gage* 1/14  
 DIRECTOR DATE  
*Chris Edwards* 12-17-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Kurt Schaefer* 12-18-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL 541, 542, 543, 544, 545, 546, 547, 548, 549, 550 LOT A-21, 185 LOT A-22  
 ADDRESS: 6450 HANSON LANE  
 LST1 / F.44, L10569 / F.351, L12205 / F.340, L5189 / F.600,  
 L5341 / F.18, L4953 / F.431, L4953 / F.610, L6156 / F.640  
 6600 FT. & 10, 1206, 161, TAX MAP NO. 51  
 2ND ELECTION DISTRICT, GEORGE TRACT 601202  
 WATER CODE: 400, SEWER CODE: 305200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2100



DES: KFR			
DRN: AM			
CHK: AFE			
DATE: 08/12/12	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
BY NO.		REVISION	DATE

STORMWATER MANAGEMENT PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

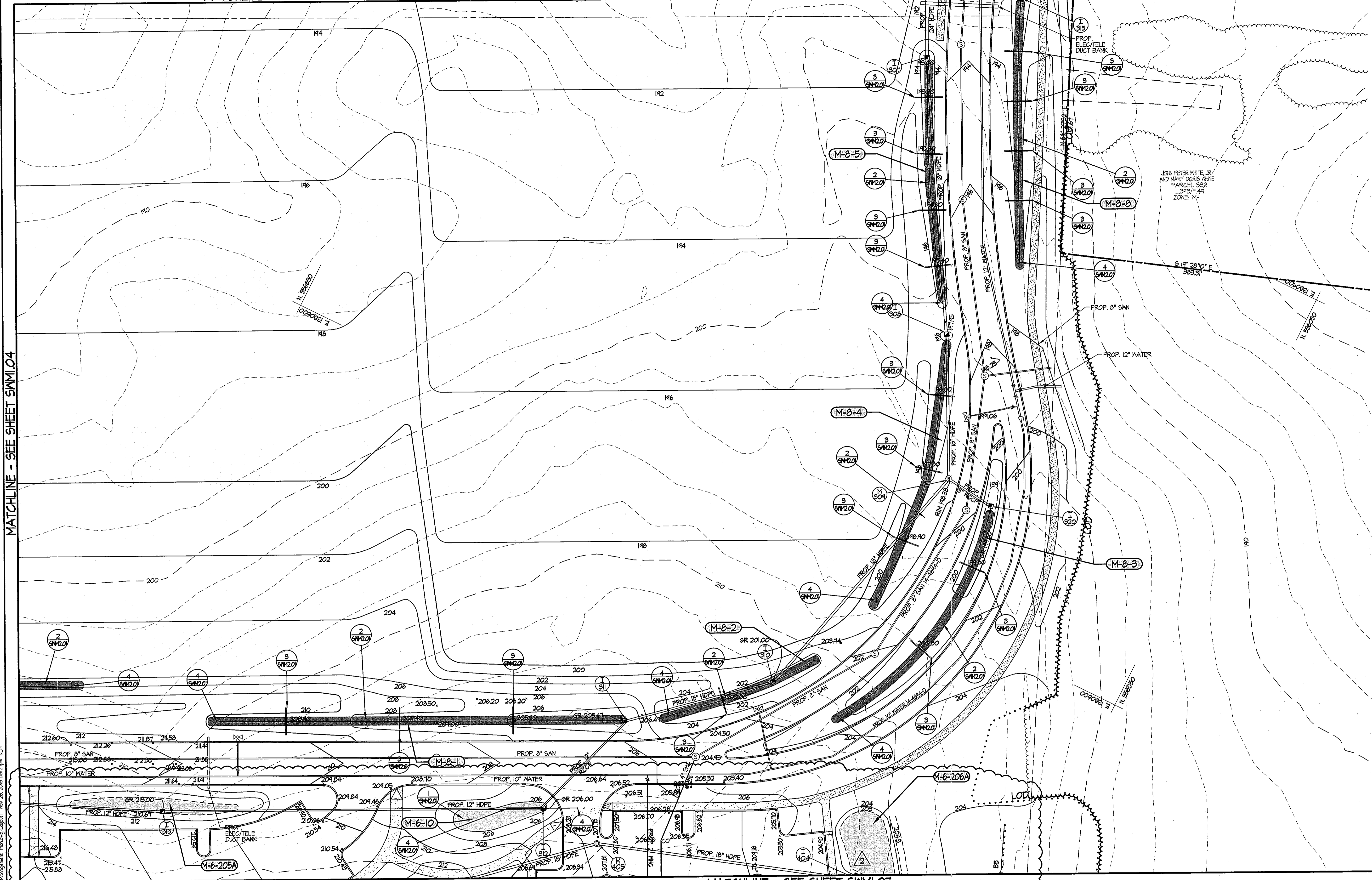
SCALE: 1" = 30'  
 SHEET SWMI.04  
 45 OF 64

SDP-11-003



MATCHLINE - SEE SHEET SWMI.02

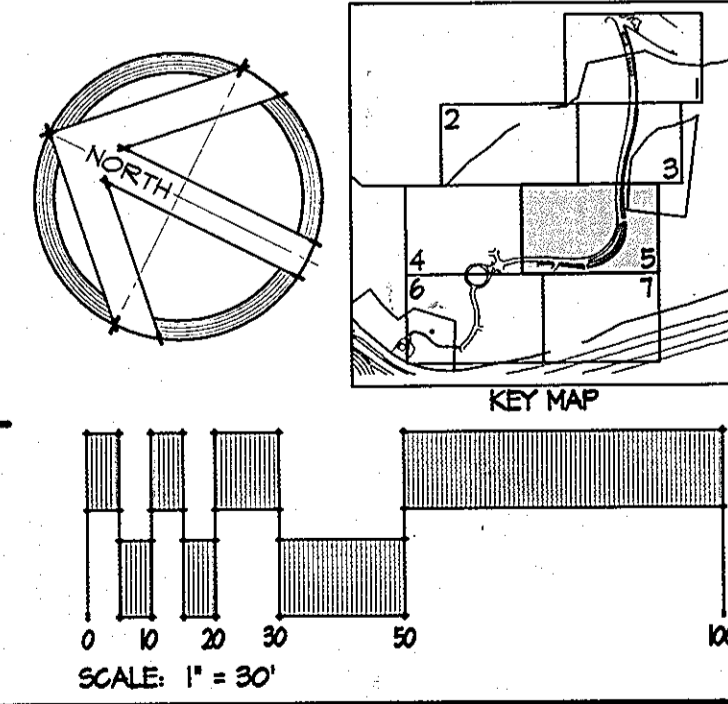
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MATCHLINE - SEE SHEET SWMI.04

MATCHLINE - SEE SHEET SWMI.06

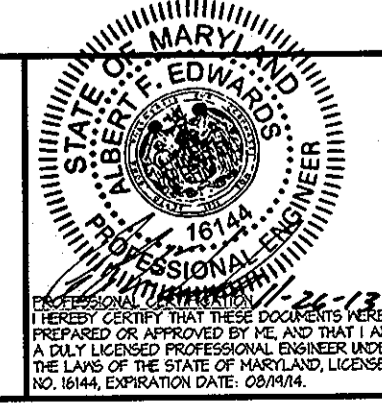
MATCHLINE - SEE SHEET SWMI.07



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paul A. Loyell* 1/21/14  
 DIRECTOR DATE  
*Chris Edmund* 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Walt Sheple* 12-13-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCELS: 545, 546, 547, 550, 190, 195, 196 LOT A-21, 195 LOT A-22  
 ADDRESS: 6450 MANSION LANE  
 LEFTY PARK LOTS 15 / F. 151, L. 2205 / F. 1940, L. 1918 / F. 1900,  
 L. 1841 / F. 18, L. 1823 / F. 181, L. 1805 / F. 1840, L. 1819 / F. 1810  
 6800 F. 18, ZONE: 14-1, TAX MAP NO. 87  
 2ND ELECTION DISTRICT: CENSUS TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 252200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 315-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 700 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 315-2100

**SITE RESOURCES**  
 Comprehensive Land Planning & Site Design Services  
 14315 Jurellville Pike • Phoenix, Maryland 21133  
 (410) 883-3388 • Fax (410) 883-3389



DES: JLH					
DRN: AM					
CHK: AFE					
DATE: 08/12/12	SRI: 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13		
BY: NO.		REVISION	DATE		

STORMWATER MANAGEMENT PLAN			
600' SCALE MAP NO.	51	BLOCK NO.	16

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3157  
 HOWARD COUNTY, MARYLAND

SCALE: 1"=30'  
 SWMI.05  
 SHEET 46 OF 64  
 SDP-11-003

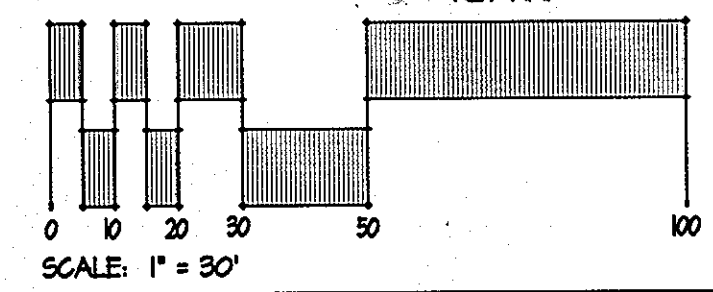
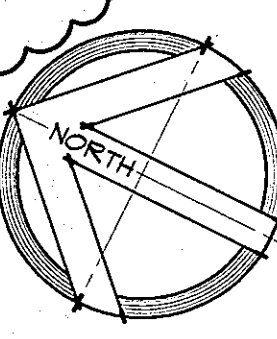
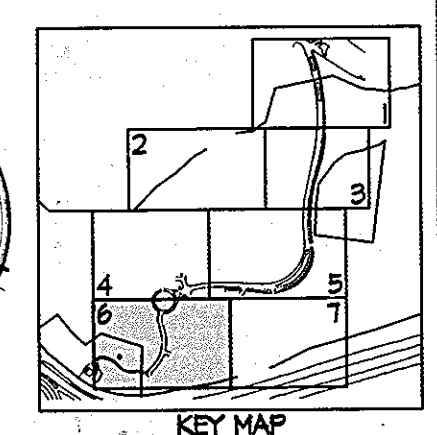


MATCHLINE - SEE SHEET SWMI.04

MATCHLINE - SEE SHEET SWMI.05



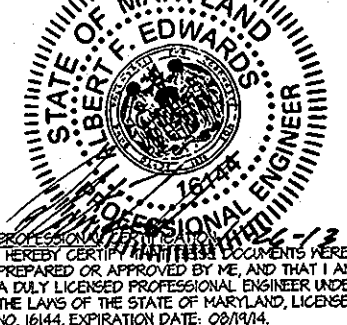
MATCHLINE - SEE SHEET SWMI.07



APPROVED: DEPARTMENT OF PLANNING & ZONING  
 [Signature]  
 DIRECTOR  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 1/11/12  
 DATE: 1/13/13  
 DATE: 12-18-13

ADDRESS / PERMIT INFORMATION  
 PARCELS: 241, 246, 242, 238, 190, 195, 191 LOT A-21, 195 LOT A-22  
 ADDRESS: 6450 MARSHON LANE  
 LOTS: F. 194, L. 20285 / F. 201, L. 22205 / F. 240, L. 21899 / F. 800,  
 L. 2341 / F. 19, L. 4428 / F. 431, L. 6185 / F. 240, L. 6189 / F. 640  
 GRID: 11418, 208, 141, TAX MAP NO. 21  
 2ND ELECTION DISTRICT, GENES TRACT 6012.02  
 OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 2100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 383-2100  
 DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 2100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 383-2100



DES: JLH				
DRN: AM				
CHK: AFE				
DATE: 08/12/12	SRI: 2	ADD SPORTS FIELDS & PARKING LOTS	DATE: 11/26/13	
	BY: NO.	REVISION		

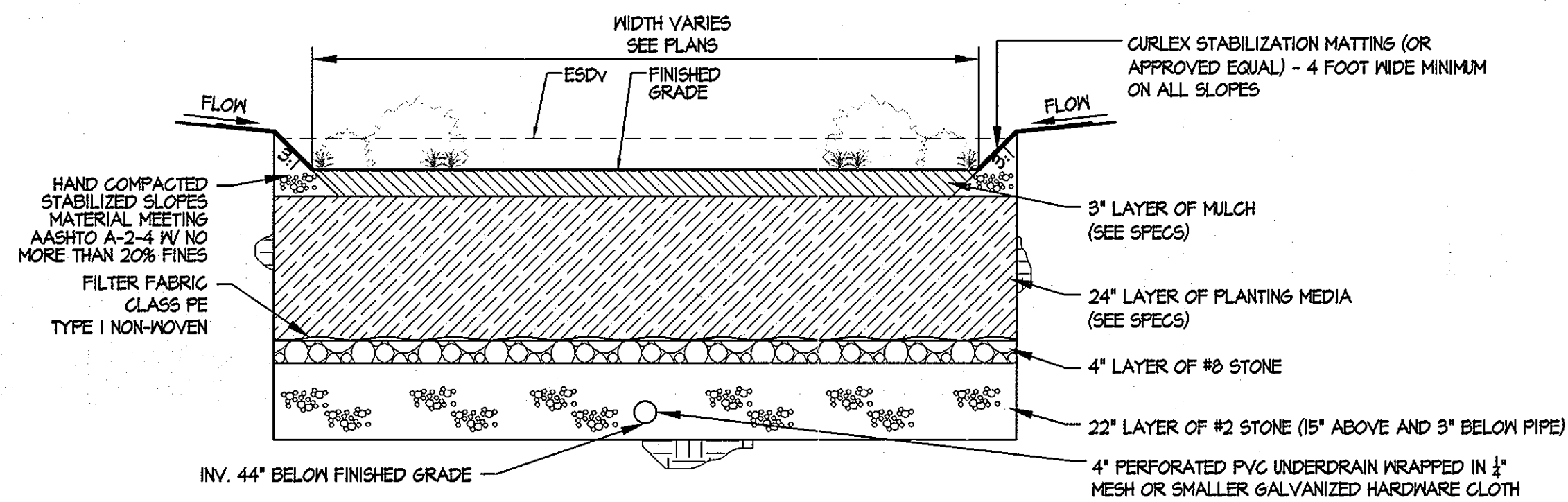
STORMWATER MANAGEMENT PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND  
 SHEET 41 OF 64  
 SDP-II-003

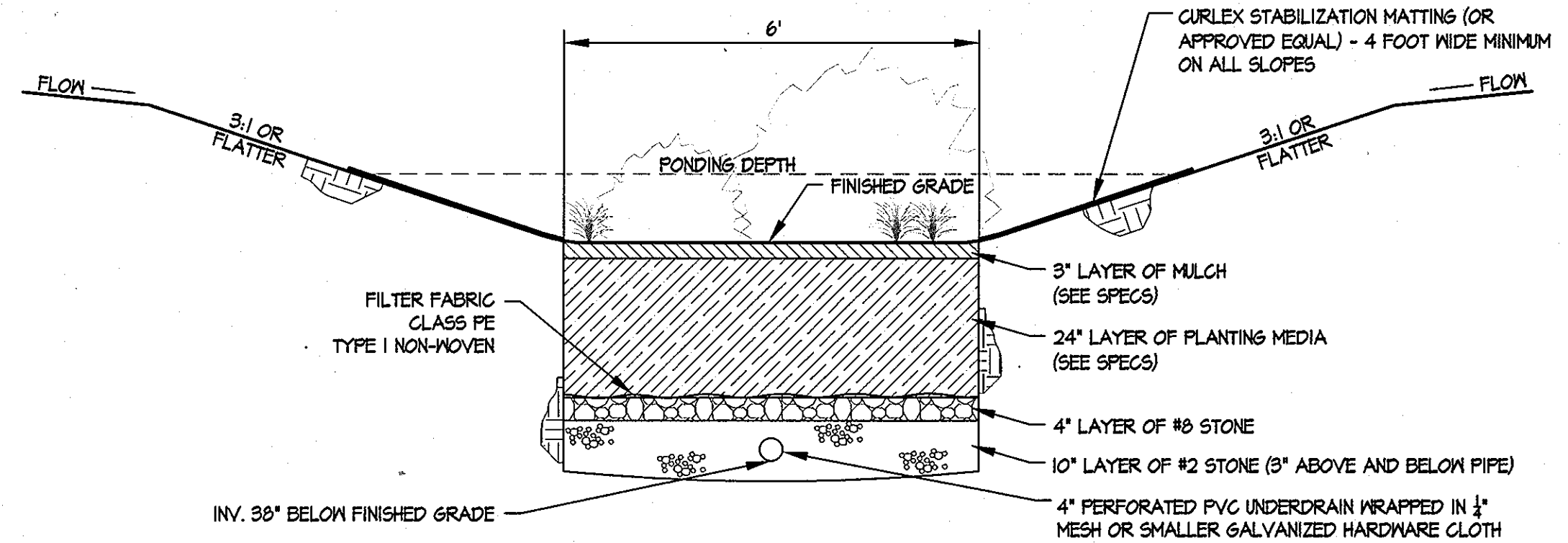




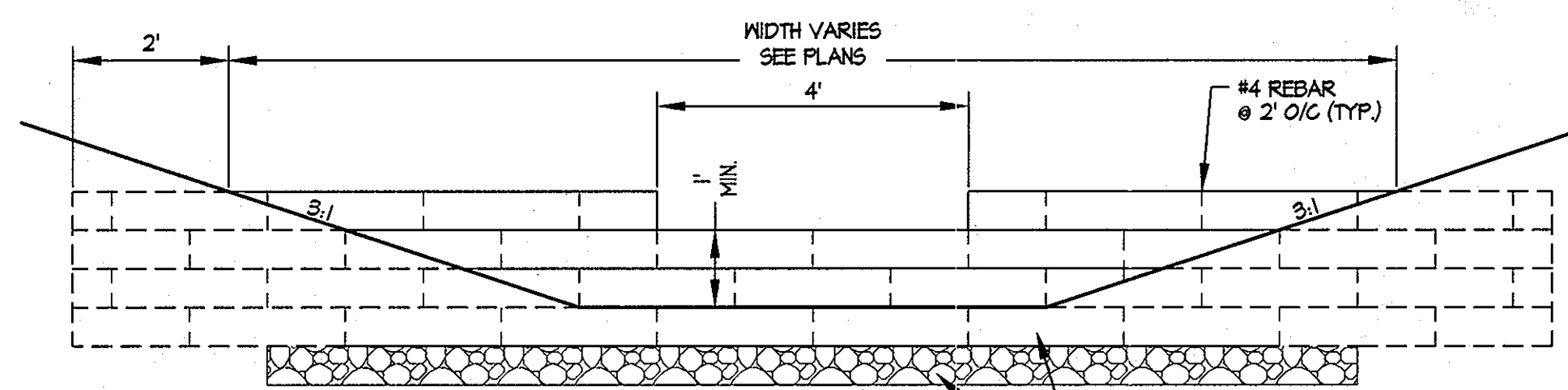




**1 MICRO-BIORETENTION (M-6) (24" DEPTH)** NOT TO SCALE

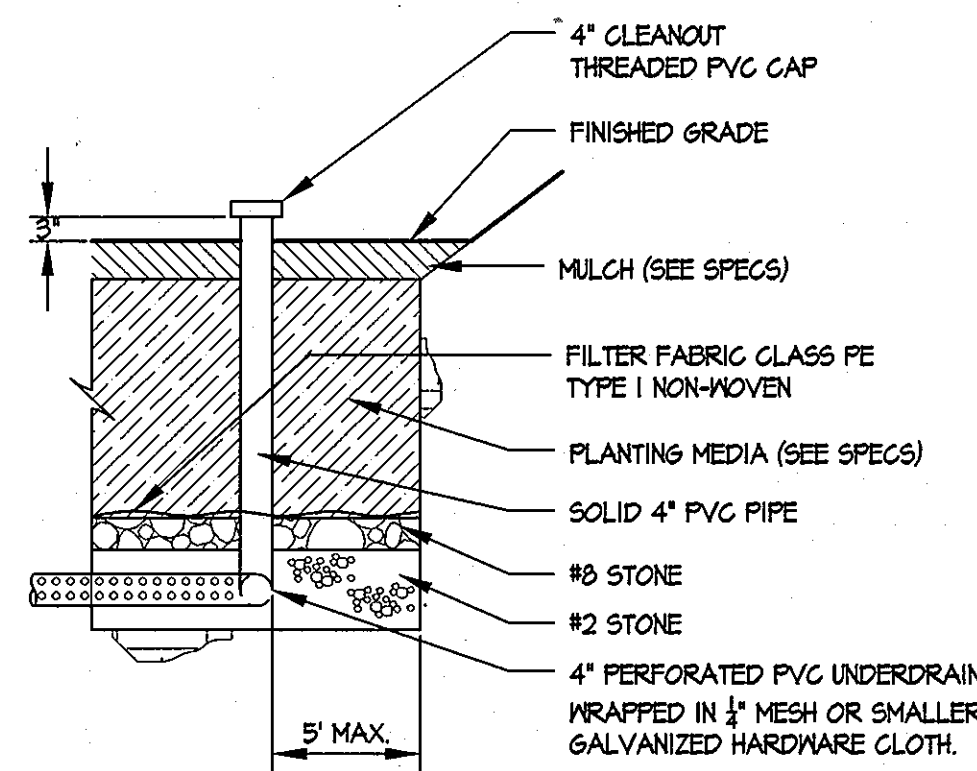


**2 BIO-SWALE (M-8) (6' WIDTH, 24" DEPTH)** NOT TO SCALE



**NOTES:**  
 1. MAXIMUM HEIGHT OF CHECK DAM = 1'-6"  
 2. BURY ONE TIE BELOW GRADE.  
 3. CAULK JOINTS BETWEEN TIES.  
 4. EMBED TIES 2' MINIMUM INTO SIDE SLOPES OF SWALE.

**3 WOOD CHECKDAM** NOT TO SCALE



**4 4" CAPPED CLEANOUT** NOT TO SCALE

2:\10\0022-Trog\_Park\_Phase 1\_Site\_Plan\DWG\SWM2-01\_SWM\_Details.dwg - Logon! Sep 18, 2012 01:12pm a.m.

APPROVED: DEPARTMENT OF PLANNING & ZONING <i>Mark A. Cagle</i> DIRECTOR <i>John J. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>Katherine ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT		ADDRESS / PERMIT INFORMATION PARCELS: 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000		DES: JLH DRN: AM CHK: AFE DATE: 08/12/12		<b>STORMWATER MANAGEMENT DETAILS</b>		<b>TROY PARK - PHASE ONE</b> PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22		SCALE: AS SHOWN <b>SWM2.01</b> SHEET 49 OF 64
		1415 Arretville Pike • Phoenix, Maryland 21131 (410) 882-3388 • fax (410) 882-3389		BY NO. REVISION DATE		CAPITAL PROJECT NO. N-3451 HOWARD COUNTY, MARYLAND		SDP-11-003		



OPERATION AND MAINTENANCE SCHEDULE

BAYSAVER WATER QUALITY DEVICE

- 1. The BaySaver water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the BaySaver unit yearly at a minimum...

MICRO BIO-RETENTION AREAS (M-6) & BIO-SWALES (M-6)

- 1. Annual maintenance of plant material, mulch layer and soil layer is required. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring...

STORMWATER INFILTRATION TRENCHES (I-1)

- 1. The monitoring wells and structures shall be inspected on a quarterly basis and after every large storm event. Water levels and sediment build up in the monitoring wells shall be recorded over a period of several days to insure trench drainage.

JOINTLY MAINTAINED STORMWATER PONDS (P-1 THROUGH P-5)

- 1. Top and side slopes of the embankment shall be mowed a minimum of two (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.

PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION BASINS (I-2)

- 1. The infiltration basin shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly. The top and side slopes of the embankment shall be mowed a minimum of once per year...

PRIVATELY OWNED AND MAINTAINED STORMWATER PONDS (P-1 THROUGH P-5) Routine Maintenance

- 1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly. Top and side slopes of the embankment shall be mowed a minimum of two (2) times per year...

Non-Routine Maintenance

- 1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations. Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond, or forebay, is half full of sediment...

PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1)

- 1. The monitoring wells and structures shall be inspected on a quarterly basis and after every large storm event. Water levels and sediment build up in the monitoring wells shall be recorded over a period of several days to insure trench drainage. A logbook shall be maintained to determine the rate at which the facility drains.

PRIVATELY OWNED AND MAINTAINED STORMWATER QUALITY DEVICE

- 1. The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample...

- 2. after petroleum spills. The owner shall contact the appropriate regulatory agencies. The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.

PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1, F-4, AND F-5)

- 1. The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly. The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.

PRIVATELY OWNED AND MAINTAINED UNDERGROUND FACILITIES

- 1. The underground stormwater management facility is privately owned and it shall be the responsibility of the owner to periodically inspect and clean the facility to maintain its operation and function. The underground stormwater management facility shall be inspected yearly at a minimum and after especially severe storm events.

PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER FILTRATION SYSTEMS (F-2 AND F-3)

- 1. The sediment chamber outlet devices shall be cleaned and/or repaired when drawdown times within the chamber exceed 36 hours. Debris and litter shall be removed as necessary to insure proper operation of the system. Sediment shall be cleaned out of the sedimentation chamber when it accumulates to a depth of 6 inches.

CONSTRUCTION SPECIFICATIONS FOR SAND FILTERS, BIORETENTION AND OPEN CHANNELS

B.A.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION AND INFILTRATION BERMS

- 1. Material Specifications The allowable materials to be used in these practices are detailed in Table B.4.1. 2. Filtering Media or Planting Soil The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches.

The planting soil shall be tested and shall meet the following criteria:

- Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)
• Organic Content - Minimum 10% by dry weight (ASTM D 2474). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
• Clay Content - Media shall have a clay content of less than 5%.

These shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoists to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material Recommended plant material for micro-bioretention practices can be found in Appendix A, Section A.2.3.

5. Plant Installation Compast is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/2th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

- Underdrains should meet the following criteria:
• Pipes - should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 750, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g. PVC or HDPE).
• Perforations - If perforated pipe is used, perforations should be 3/8" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/2" (No. 4 or 4-1/2) galvanized hardware cloth.
• Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
• The main collector pipe shall be at a minimum 0.5% slope.
• A rigid, non-perforated observation well must be provided (one per every 1000 square feet) to provide a clean-out port and monitor performance of the filter.
• A 4" layer of pea gravel (3/8" to 3/4" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

These practices may not be constructed until all contributing drainage area has been stabilized.

TABLE B.4.1 MATERIAL SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS & LANDSCAPE INFILTRATION

Table with columns: MATERIAL, SPECIFICATION, SIZE, NOTES. Rows include PLANTINGS, ORGANIC CONTENT, MULCH, FEA GRAVEL DIAPHRAGM, CURTAIN DRAIN, GEOTEXTILE, GRAVEL (UNDERDRAINS AND INFILTRATION BERMS), UNDERDRAIN PIPING, POURED IN PLACE CONCRETE (IF REQUIRED), SAND.

Approval block for Howard Soil Conservation District. Includes signature of John R. K... and date 9/12/12.

BY THE ENGINEER: I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. Includes signature of Albert F. Edwards, P.E. and date 9-11-2012.

BY THE DEVELOPER: I/we certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program. Includes signature of John Byrd and date 9/14/12.

2:\10\0022-Troy Park Phase 1 Site Plan\DWG\SM210\_SWM\_Notes.dwg - Layout1 Sep 13, 2012 10:52am a.m.

APPROVED: DEPARTMENT OF PLANNING & ZONING. Includes signatures of Mark A. W... and dates 2/1/12, 1/31/12, 2/10/13.

ADDRESS / PERMIT INFORMATION. Includes parcel number 241, 345, 342, 350, 105, 155 LOT A-21, 135 LOT A-22 and address 6400 HANSON LANE.

SITE RESOURCES logo and contact information for 14515 Arrettsville Pike • Phoenix, Maryland 21131.

DES: J.L.H. DRN: AM. CHK: AFE. DATE: 08/21/12. BY NO. REVISION. DATE 600' SCALE MAP NO. 51 BLOCK NO. 16.

STORMWATER MANAGEMENT NOTES. CAPITAL PROJECT NO. N-3451. HOWARD COUNTY, MARYLAND. SHEET 56 OF 64.

TROY PARK - PHASE ONE. PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22. SCALE: AS SHOWN. SHEET 56 OF 64.



LOG OF BORING NO. P-1

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons
PROJECT NO: 100461
PROJECT LOCATION: Howard County, Maryland
DATE STARTED: May 24, 2010
DATE COMPLETED: May 24, 2010
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Fleming
LOGGED BY: Jude O-A
CHECKED BY: Mark Grande

Table with columns: SAMPLE NUMBER, SAMPLE DEPTH (ft), SAMPLE RECOVERY, SAMPLE BLOWERS INCHES, N (blows/ft), ELEVATION (ft), DEPTH (ft), USCS SYMBOL, DESCRIPTION, REMARKS. Includes soil descriptions like 'Brown, Grey, moist, medium stiff to very stiff, Sandy Elastic SILT'.

NOTES:
GTA GEO-TECHNOLOGY ASSOCIATES, INC.
14280 Park Center Drive, Suite A
Laurel, Maryland 20707

LOG OF BORING NO. P-2

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons
PROJECT NO: 100461
PROJECT LOCATION: Howard County, Maryland
DATE STARTED: May 24, 2010
DATE COMPLETED: May 24, 2010
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Fleming
LOGGED BY: Jude O-A
CHECKED BY: Mark Grande

Table with columns: SAMPLE NUMBER, SAMPLE DEPTH (ft), SAMPLE RECOVERY, SAMPLE BLOWERS INCHES, N (blows/ft), ELEVATION (ft), DEPTH (ft), USCS SYMBOL, DESCRIPTION, REMARKS. Includes soil descriptions like 'Brown, Grey, moist, medium stiff to very stiff, Sandy Elastic SILT'.

NOTES:
GTA GEO-TECHNOLOGY ASSOCIATES, INC.
14280 Park Center Drive, Suite A
Laurel, Maryland 20707

LOG OF BORING NO. P-3

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons
PROJECT NO: 100461
PROJECT LOCATION: Howard County, Maryland
DATE STARTED: June 3, 2010
DATE COMPLETED: June 3, 2010
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Fleming
LOGGED BY: Jude O-A
CHECKED BY: Mark Grande

Table with columns: SAMPLE NUMBER, SAMPLE DEPTH (ft), SAMPLE RECOVERY, SAMPLE BLOWERS INCHES, N (blows/ft), ELEVATION (ft), DEPTH (ft), USCS SYMBOL, DESCRIPTION, REMARKS. Includes soil descriptions like 'Brown, Tan, Yellow-Brown, moist, soft, Sandy Elastic SILT'.

NOTES:
GTA GEO-TECHNOLOGY ASSOCIATES, INC.
14280 Park Center Drive, Suite A
Laurel, Maryland 20707

LOG OF BORING NO. P-4

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons
PROJECT NO: 100461
PROJECT LOCATION: Howard County, Maryland
DATE STARTED: June 3, 2010
DATE COMPLETED: June 3, 2010
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Fleming
LOGGED BY: Jude O-A
CHECKED BY: Mark Grande

Table with columns: SAMPLE NUMBER, SAMPLE DEPTH (ft), SAMPLE RECOVERY, SAMPLE BLOWERS INCHES, N (blows/ft), ELEVATION (ft), DEPTH (ft), USCS SYMBOL, DESCRIPTION, REMARKS. Includes soil descriptions like 'Brown, Tan, moist, very loose, Clayey Sand, trace Gravel'.

NOTES:
GTA GEO-TECHNOLOGY ASSOCIATES, INC.
14280 Park Center Drive, Suite A
Laurel, Maryland 20707

LOG OF BORING NO. P-5

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons
PROJECT NO: 100461
PROJECT LOCATION: Howard County, Maryland
DATE STARTED: June 2, 2010
DATE COMPLETED: June 2, 2010
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Fleming
LOGGED BY: Jude O-A
CHECKED BY: Mark Grande

Table with columns: SAMPLE NUMBER, SAMPLE DEPTH (ft), SAMPLE RECOVERY, SAMPLE BLOWERS INCHES, N (blows/ft), ELEVATION (ft), DEPTH (ft), USCS SYMBOL, DESCRIPTION, REMARKS. Includes soil descriptions like 'Brown to Orange-Brown, moist, loose to medium dense, Clayey SAND'.

NOTES:
GTA GEO-TECHNOLOGY ASSOCIATES, INC.
14280 Park Center Drive, Suite A
Laurel, Maryland 20707

LOG OF BORING NO. P-6

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons
PROJECT NO: 100461
PROJECT LOCATION: Howard County, Maryland
DATE STARTED: June 3, 2010
DATE COMPLETED: June 3, 2010
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Fleming
LOGGED BY: Jude O-A
CHECKED BY: Mark Grande

Table with columns: SAMPLE NUMBER, SAMPLE DEPTH (ft), SAMPLE RECOVERY, SAMPLE BLOWERS INCHES, N (blows/ft), ELEVATION (ft), DEPTH (ft), USCS SYMBOL, DESCRIPTION, REMARKS. Includes soil descriptions like 'Brown, Red-Brown, moist, loose to medium dense, Clayey SAND'.

NOTES:
GTA GEO-TECHNOLOGY ASSOCIATES, INC.
14280 Park Center Drive, Suite A
Laurel, Maryland 20707

LOG OF BORING NO. P-7

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons
PROJECT NO: 100461
PROJECT LOCATION: Howard County, Maryland
DATE STARTED: June 3, 2010
DATE COMPLETED: June 3, 2010
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Fleming
LOGGED BY: Jude O-A
CHECKED BY: Mark Grande

Table with columns: SAMPLE NUMBER, SAMPLE DEPTH (ft), SAMPLE RECOVERY, SAMPLE BLOWERS INCHES, N (blows/ft), ELEVATION (ft), DEPTH (ft), USCS SYMBOL, DESCRIPTION, REMARKS. Includes soil descriptions like 'Brown, Red-Brown, moist, soft, Fat CLAY with Sand'.

NOTES:
GTA GEO-TECHNOLOGY ASSOCIATES, INC.
14280 Park Center Drive, Suite A
Laurel, Maryland 20707

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, erosion and sediment control.
USDA - Natural Resources Conservation Service
Date
John R. Kauter 9/20/12
Howard Soil Conservation District

BY THE ENGINEER:
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions.
Signature of Engineer: Albert F. Edwards, P.E.
Date: 8.12.2012

BY THE DEVELOPER:
I/We certify that all development and/or construction will be done according to these plans, and that any 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.
Signature of Engineer: John Byrd
Date: 9/14/12

APPROVED: DEPARTMENT OF PLANNING & ZONING
Director: [Signature]
Chief, Development Engineering Division: [Signature]
Chief, Division of Land Development: [Signature]

ADDRESS / PERMIT INFORMATION
PARCEL: 541, 545, 546, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

SITE RESOURCES INCORPORATED
1435 Arretsville Pike • Pikesville, Maryland 21111
(410) 683-3388 • Fax (410) 683-3389

DES: JLH
DRN: AM
CHK: AFE
DATE: 08/21/12
BY NO. REVISION

STORMWATER MANAGEMENT SOIL BORINGS
600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE
PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22
CAPITAL PROJECT NO. N-3451 HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
SWM2.20
SHEET 5 OF 64
SDP-II-003



**LOG OF BORING NO. P-8**

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons  
 PROJECT NO: 100461  
 PROJECT LOCATION: Howard County, Maryland  
 DATE STARTED: June 3, 2010  
 DATE COMPLETED: June 3, 2010  
 DRILLING CONTRACTOR: Geo-Technology Associates, Inc.  
 DRILLER: Fleming  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: Split Spoon  
 WATER LEVEL (ft):  $\nabla$  Dry  $\nabla$  Dry  
 DATE: 6/3/2010 6/4/2010  
 CAVED (ft): 4.8 5.6  
 WATER ENCOUNTERED DURING DRILLING (ft): Dry  
 GROUND SURFACE ELEVATION: 195.7  
 DATUM: Survey  
 EQUIPMENT: CME 45  
 LOGGED BY: Jude O-A  
 CHECKED BY: Mark Grande

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY	SAMPLE BLOW/6 INCHES	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	0.0	8	1-2-2	4	0	0	SC	Dark Brown, Tan, moist, very loose to loose, Clayey SAND with Organics	Topsoil: 3.9 in.
S-2	2.5	6	5-5-5	10	190.7	8	CH	Brown, Tan, moist, stiff, Fat CLAY with Sand	
S-3	5.0	16	4-4-6	10	189.7	10	MH	Brown, Tan, Yellow-Brown, moist, stiff, Sandy Elastic SILT with Rock Fragments	
S-4	8.5	16	22-28-38	65	187.2	15	CH	Brown, Tan, Yellow-Brown, moist, very dense, Highly Weathered Rock	Boring Terminated at 10.0 ft.

NOTES:  
 LOG OF BORING NO. P-8  
 GEO-TECHNOLOGY ASSOCIATES, INC.  
 14280 Park Center Drive, Suite A  
 Laurel, Maryland 20707  
 Sheet 1 of 1

**LOG OF BORING NO. SWM-1**

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons  
 PROJECT NO: 100461  
 PROJECT LOCATION: Howard County, Maryland  
 DATE STARTED: June 2, 2010  
 DATE COMPLETED: June 2, 2010  
 DRILLING CONTRACTOR: Geo-Technology Associates, Inc.  
 DRILLER: Fleming  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: Split Spoon  
 WATER LEVEL (ft):  $\nabla$  Dry  $\nabla$  Dry  
 DATE: 6/2/2010 6/3/2010  
 CAVED (ft): 8.7 6.1  
 WATER ENCOUNTERED DURING DRILLING (ft): Dry  
 GROUND SURFACE ELEVATION: 209.7  
 DATUM: Survey  
 EQUIPMENT: CME 45  
 LOGGED BY: Jude O-A  
 CHECKED BY: Mark Grande

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY	SAMPLE BLOW/6 INCHES	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	0.0	12	1-3-3	6	0	0	CH	Light Brown, Red-Brown, Tan to Yellow to Light Green, moist, medium stiff to very stiff, Fat CLAY with Sand	Topsoil: 2 in.
S-2	2.5	14	4-10-11	21	199.2	2.5	CH		
S-3	5.0	16	10-15-15	30	196.2	5	CH		
S-4	8.5	18	5-6-9	15	189.7	8.5	CH		
S-5	13.5	18	4-6-6	12	186.2	13.5	MH	Brown, Red-Brown, Yellow to Light Green, moist, stiff to very stiff, Sandy Elastic SILT	
S-6	18.5	18	6-8-14	23	181.7	18.5	MH		Boring Terminated at 20.0 ft.

NOTES:  
 LOG OF BORING NO. SWM-1  
 GEO-TECHNOLOGY ASSOCIATES, INC.  
 14280 Park Center Drive, Suite A  
 Laurel, Maryland 20707  
 Sheet 1 of 1

**LOG OF BORING NO. SWM-2**

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons  
 PROJECT NO: 100461  
 PROJECT LOCATION: Howard County, Maryland  
 DATE STARTED: May 25, 2010  
 DATE COMPLETED: May 25, 2010  
 DRILLING CONTRACTOR: Geo-Technology Associates, Inc.  
 DRILLER: Fleming  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: Split Spoon  
 WATER LEVEL (ft):  $\nabla$  Dry  $\nabla$  12.0  
 DATE: 5/25/2010 5/28/2010  
 CAVED (ft): 13.7 13.0  
 WATER ENCOUNTERED DURING DRILLING (ft): Dry  
 GROUND SURFACE ELEVATION: 195.0  
 DATUM: Survey  
 EQUIPMENT: CME 45  
 LOGGED BY: Jude O-A  
 CHECKED BY: Mark Grande

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY	SAMPLE BLOW/6 INCHES	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	0.0	18	1-2-4	6	0	0	SC	Brown, Red-Brown, moist, loose, Clayey SAND	Topsoil: 3 in.
S-2	2.5	18	5-8-11	20	192.5	2.5	MH	Brown, Red-Brown, Tan, Grey, moist, very stiff, Sandy Elastic SILT	
S-3	5.0	18	10-13-13	26	189.5	5	CH		
S-4	8.5	18	18-24-29	53	186.5	8.5	CH	Tan, Light Grey, Green, moist, very dense, Highly Weathered Rock	
S-5	13.5	18	21-27-31	58	181.5	13.5	CH		
S-6	16.5	10	27-50*	50*	175.0	16.5	CH		Boring Terminated at 20.0 ft.

NOTES:  
 LOG OF BORING NO. SWM-2  
 GEO-TECHNOLOGY ASSOCIATES, INC.  
 14280 Park Center Drive, Suite A  
 Laurel, Maryland 20707  
 Sheet 1 of 1

**LOG OF BORING NO. SWM-3**

Sheet 1 of 1

PROJECT: Troy Hill Tennis Patrons  
 PROJECT NO: 100461  
 PROJECT LOCATION: Howard County, Maryland  
 DATE STARTED: May 25, 2010  
 DATE COMPLETED: May 25, 2010  
 DRILLING CONTRACTOR: Geo-Technology Associates, Inc.  
 DRILLER: Fleming  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: Split Spoon  
 WATER LEVEL (ft):  $\nabla$  Dry  $\nabla$  Dry  
 DATE: 5/25/2010 5/28/2010  
 CAVED (ft): 8.6 8.0  
 WATER ENCOUNTERED DURING DRILLING (ft): Dry  
 GROUND SURFACE ELEVATION: 191.1  
 DATUM: Survey  
 EQUIPMENT: CME 45  
 LOGGED BY: Jude O-A  
 CHECKED BY: Mark Grande

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY	SAMPLE BLOW/6 INCHES	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	0.0	13	2-5-6	11	0	0	SC	Brown, moist, medium dense, Clayey Sand, trace Gravel	Topsoil: 5 in.
S-2	2.5	18	5-7-8	16	188.6	2.5	MH	Brown, Red-Brown to Grey, moist, very stiff, Sandy Elastic SILT	
S-3	5.0	16	6-9-9	18	185.6	5	CH		
S-4	8.5	1	50**	50**	182.6	8.5	CH	Grey, moist, very dense, Highly Weathered Rock	
S-5	13.5	0	60**	60**	177.3	13.5	CH		Boring Terminated at 13.8 ft Auger Refusal at 13.8 ft

NOTES:  
 LOG OF BORING NO. SWM-3  
 GEO-TECHNOLOGY ASSOCIATES, INC.  
 14280 Park Center Drive, Suite A  
 Laurel, Maryland 20707  
 Sheet 1 of 1

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.  
 USDA - Natural Resources Conservation Service Date  
 John R. Chatsa 9/20/12  
 Howard Soil Conservation District Date

BY THE ENGINEER:  
 I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.  
 Signature of Engineer: [Signature] Date: 8-12-2012  
 Printed Name of Engineer: Robert F. Edwards, P.E.

BY THE DEVELOPER:  
 I certify that all development and/or construction will be done according to these plans, and that any 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.  
 Signature of Engineer: [Signature] Date: 9/14/12  
 Printed Name: John Byrd

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: [Signature] DATE: 2/14/12  
 Chief, Development Engineering Division: [Signature] DATE: 12/1/12  
 Chief, Division of Land Development: [Signature] DATE: 2/14/12

ADDRESS / PERMIT INFORMATION  
 PARCELS: 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.  
 DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 383-2100  
 DATE: 2/14/12

SITE RESOURCES INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 14315 Arretville Pike • Phoenix, Maryland 21131  
 (410) 683-3388 • Fax (410) 683-3389  
 DES: JLH  
 DRN: AM  
 CHK: AFE  
 DATE: 08/12/12

STORMWATER MANAGEMENT SOIL BORINGS  
 TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND  
 SHEET 52 OF 64  
 SCALE: AS SHOWN  
 SWM2.21

600' SCALE MAP NO. 51 BLOCK NO. 16  
 REVISION  
 DATE

2:10/0022-Troy Park Phase 1 Site Plan/Drainage/Stormwater Management/Log/Log - Sep 19, 2012 01:15pm c.m



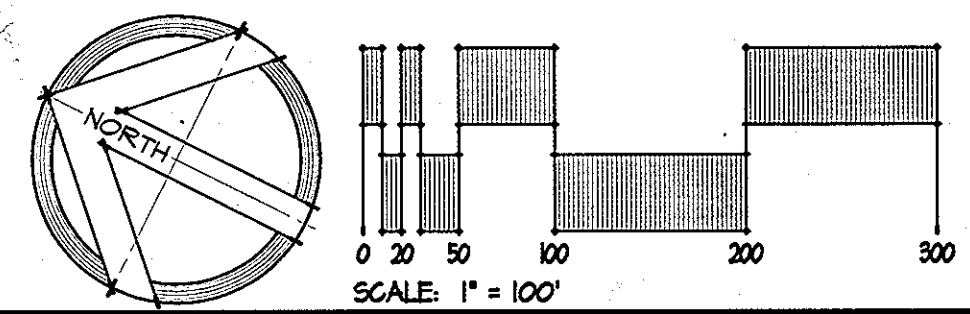


### ESD DRAINAGE TABLE

ESD NO.	ESD USED	DRAINAGE AREA (FT <sup>2</sup> )	INTERVIOUS AREA (FT <sup>2</sup> )	AF PVD (FT <sup>3</sup> )	ESDV PVD (CUFT)
N-2-1	Disconnection Non-roof	1138	1138	-	90
N-2-2	Disconnection Non-roof	5400	5400	-	428
N-2-3	Disconnection Non-roof	8142	8142	-	644
N-2-4	Disconnection Non-roof	16208	8156	-	642
M-6-1	Micro-Bioretenion	21483	14520	1800	3054
M-6-2	Micro-Bioretenion	10134	3530	850	198
M-6-3	Micro-Bioretenion	15556	5350	1080	1385
M-6-10	Micro-Bioretenion	16220	13434	740	1160
M-6-205A	Micro-Bioretenion	10271	8712	880	1114
M-6-205B	Micro-Bioretenion	15814	13803	630	1434
M-6-206A	Micro-Bioretenion	15052	13434	1260	1773
M-6-206B	Micro-Bioretenion	20234	15246	1260	1464
M-6-208	Micro-Bioretenion	20474	1307	610	821
M-6-211	Micro-Bioretenion	17121	15246	1370	2075
M-8-1	BioSwales	14012	7610	1650	1603
M-8-2	BioSwales	6617	2557	660	588
M-8-3	BioSwales	11603	4430	1050	1047
M-8-4	BioSwales	14376	4480	1100	1040
M-8-5	BioSwales	8243	2740	460	601
M-8-6	BioSwales	10434	4404	720	1050
M-8-7	BioSwales	4842	2340	630	524
M-8-8	BioSwales	12836	5420	1050	1175
M-8-4	BioSwales	16305	8084	1260	1804
S-3	Alternative Surface	91200	91200	12000	1220
S-4	Alternative Surface	91200	91200	12000	1220

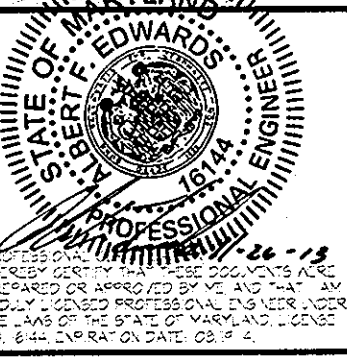
ESDV PROVIDED = 41,340 CF

MD RTE 100



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paul A. Lynch* 12/14 DATE  
 DIRECTOR  
*Chad Edinger* 12-17-13 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Walter L. Wood* 12-18-13 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCELS 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



DES: J.L.H.	
DRN: J.L.H.	
CHK: AFE	
DATE: 08/12/12	
BY NO.	
SRI 2	ADD SPORTS FIELDS & PARKING LOTS
	11/26/13

ESD DRAINAGE AREA PLAN		
600' SCALE MAP NO. 5	BLOCK NO. 6	DATE

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3457      HOWARD COUNTY, MARYLAND

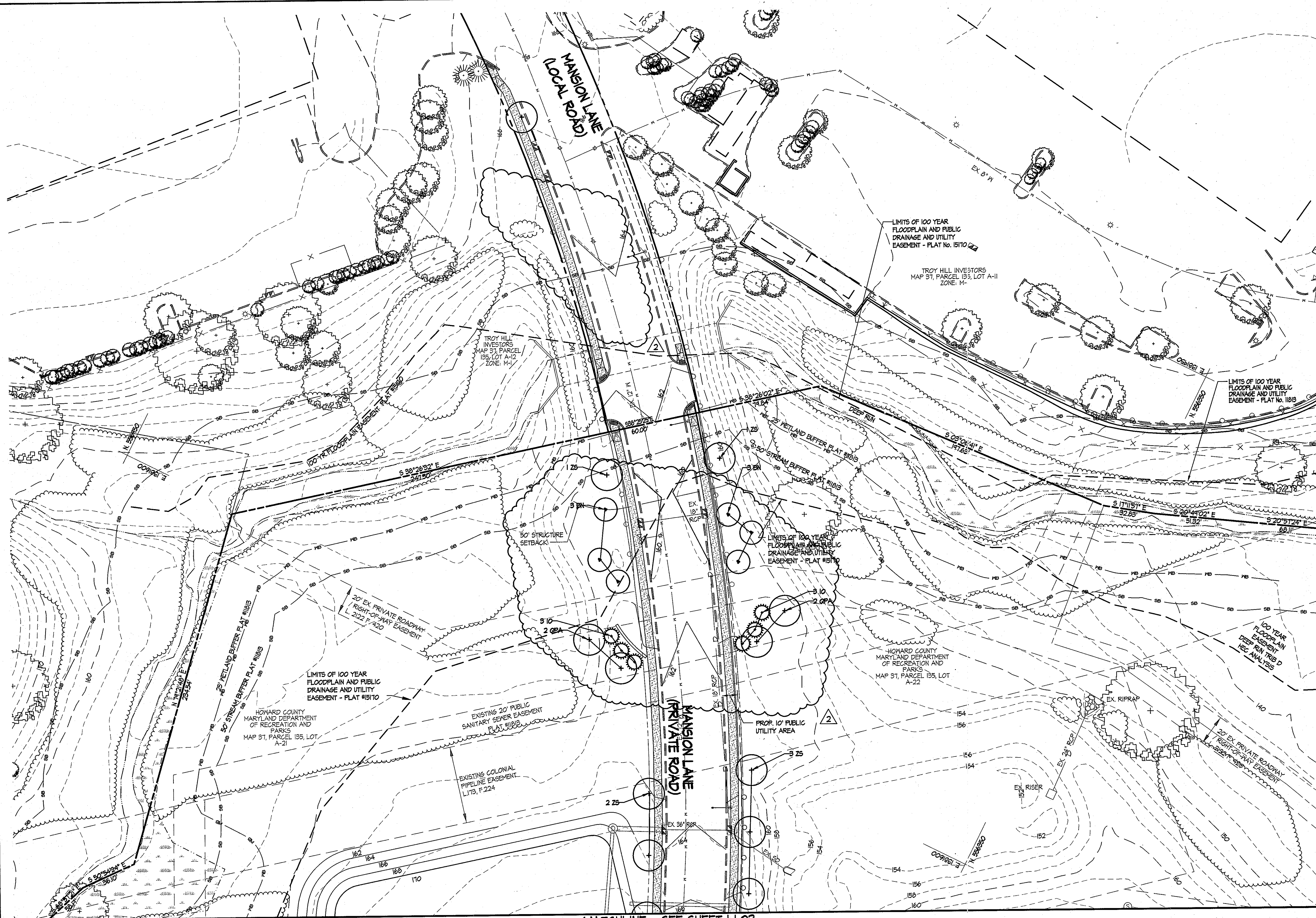
SCALE: 1" = 100'  
 SHEET 53 OF 64  
 SWM-DAI  
 SDP-II-003

Z:\10\0022-Troy Park Phase I Site Plan\DWG\SDA1\_BNA\_DWG\_Map.dwg, 11/14/13, 10:28:03 AM, 0.0m



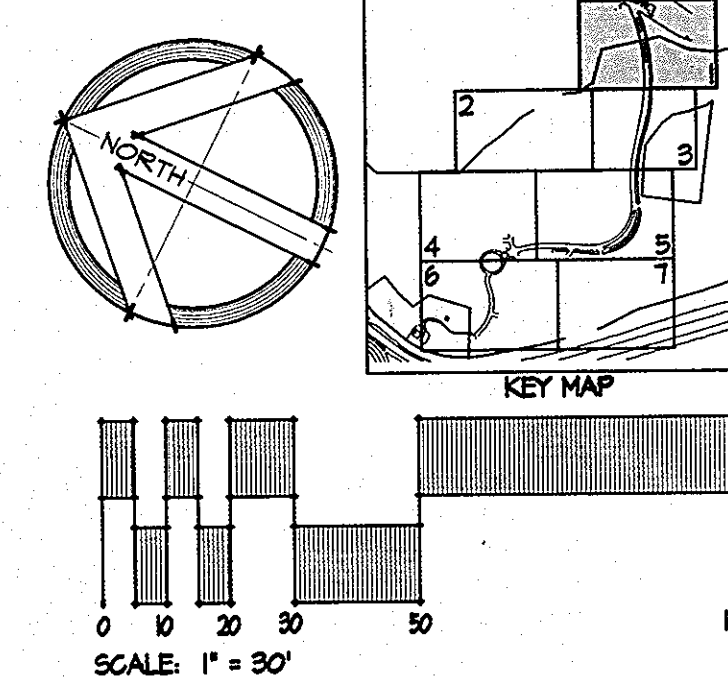
LEGEND (THIS LEGEND APPLIES TO SHEETS LI.01 THROUGH LI.07 ONLY)

- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING TREES
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING BUILDING
- EXISTING WETLANDS
- 25' WETLAND BUFFER
- EXISTING STREAM
- EXISTING STREAM BUFFER
- EXISTING FLOODPLAIN
- 100 YR FLOODPLAIN
- PROPOSED WOODLINE
- PROPOSED WALK
- PROPOSED ROAD
- PROPOSED CONTOURS
- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUBS
- PROPOSED GROUNDCOVER / SEEDING



MATCHLINE - SEE SHEET LI.03

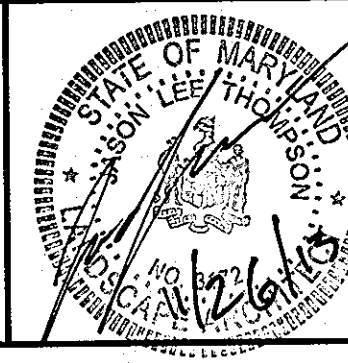
NOTE:  
SEE SHEET LI.01 FOR PLANT SCHEDULE AND DETAILS



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*David A. Leyle*  
 DIRECTOR  
 DATE: 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*K. S. ...*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 12-18-13

ADDRESS / PERMIT INFORMATION  
 PARCEL 561, 548, 542, 536, 100, 105, 106 LOT A-21, 106 LOT A-22  
 ADDRESS: 4490 MANSION LANE  
 LOTS: F44, L10055 / F351, L12205 / F340, L5183 / F400,  
 L584 / F18, L483 / F481, L485 / F482, L6155 / F, 640  
 680114, 10, 2025, M4, TAX MAP NO. 31  
 2ND ELECTION DISTRICT, CELESTINE TRACT 601202  
 WATER CODE: 460, SEWER CODE: 095240  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 313-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 313-2100

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 14515 Jenneville Pike • Poolesville, Maryland 21131  
 (410) 855-3388 • Fax (410) 855-3388



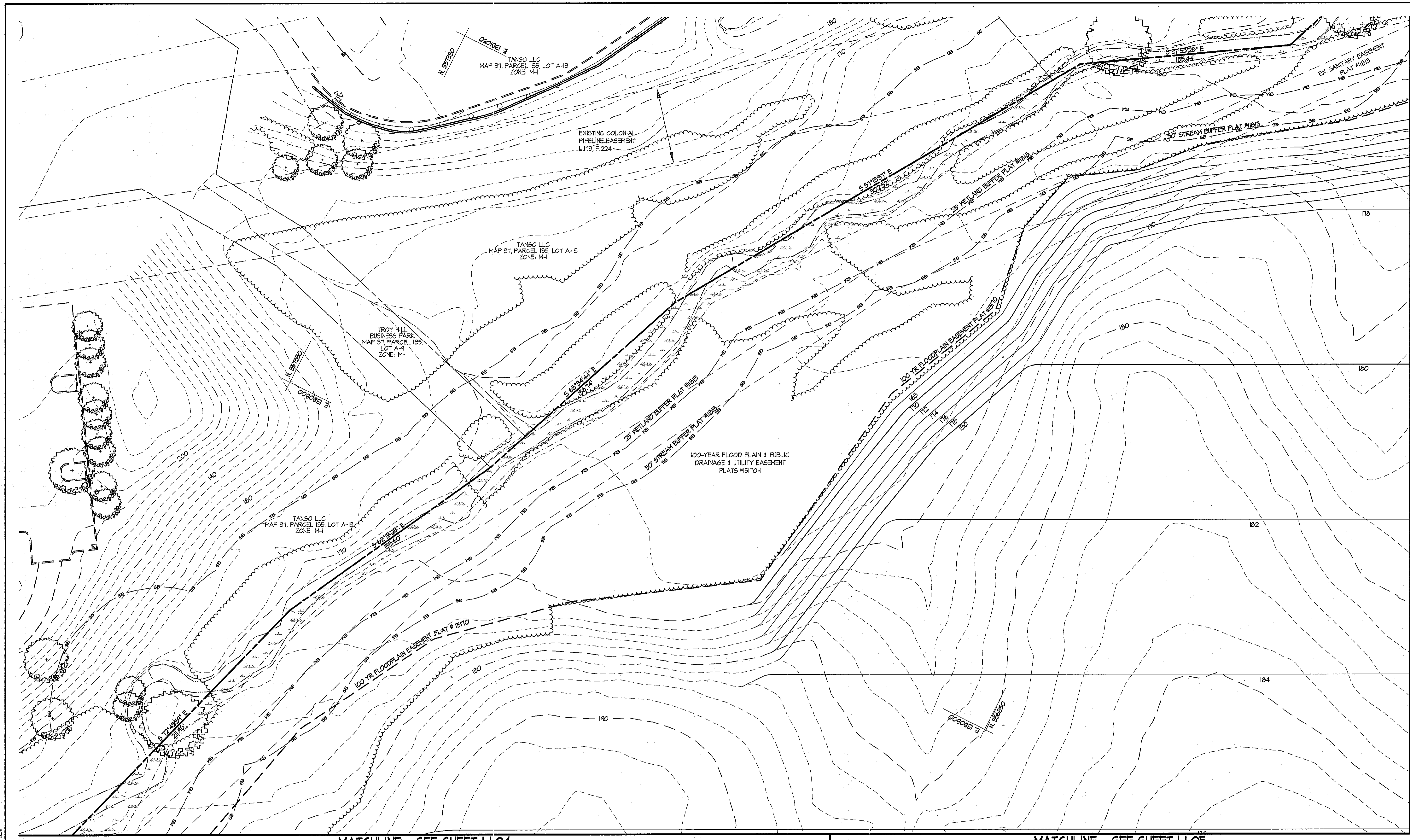
DES: KPR	SRI: 2	REMOVE PLANTING	1/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY: NO.	REVISION	DATE

600' SCALE MAP NO. 51	BLOCK NO. 16
-----------------------	--------------

PLANTING PLAN

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND  
 SHEET 34 OF 64  
 SDP-11-003



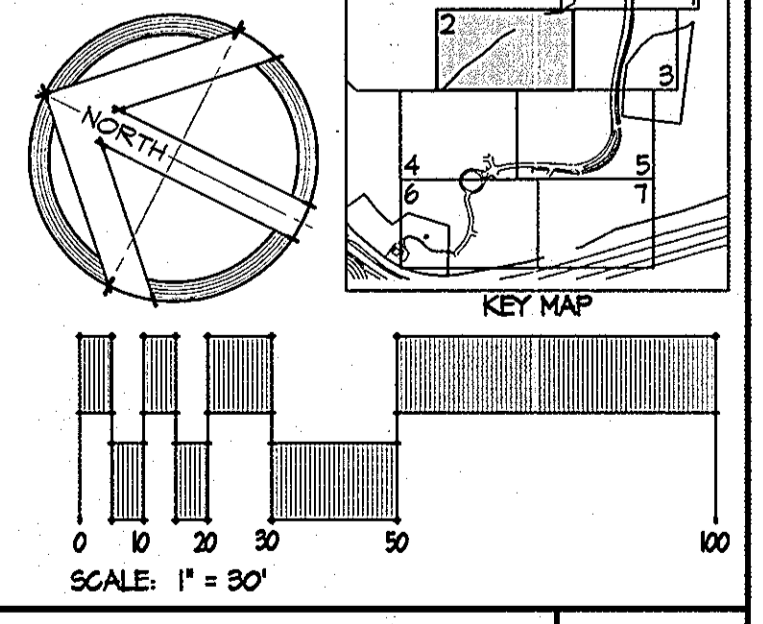


MATCHLINE - SEE SHEET LI.03

MATCHLINE - SEE SHEET LI.04

MATCHLINE - SEE SHEET LI.05

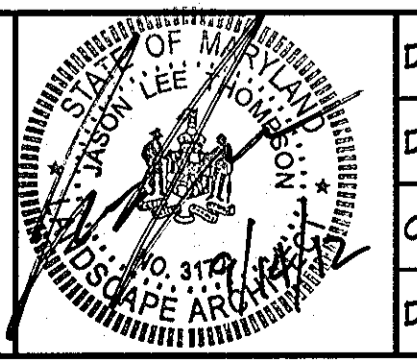
NO PROPOSED PLANTINGS ON THIS SHEET



NOTE:  
SEE SHEET L2.01 FOR PLANT  
SCHEDULE AND DETAILS

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark A. Uggie*  
 DIRECTOR  
 DATE: 2/1/13  
*W. D. ...*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 1/31/13  
*K. ...*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 2/1/13

ADDRESS / PERMIT INFORMATION  
 PARCELS: 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



DES:	KPR				
DRN:	AM				
CHK:	AFE				
DATE:	08/12/12	BY:	NO.	REVISION	DATE

600' SCALE MAP NO. 51 BLOCK NO. 16

PLANTING PLAN  
**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SCALE: 1" = 30'  
 LI.02  
 SHEET 55 OF 64

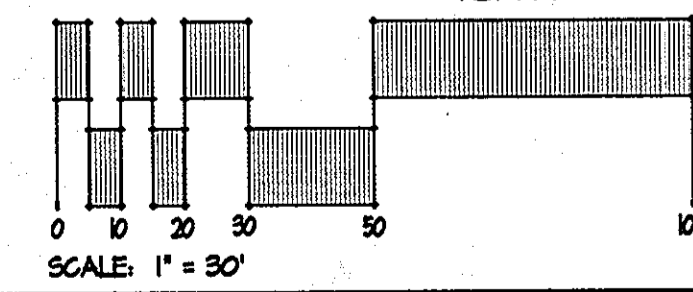
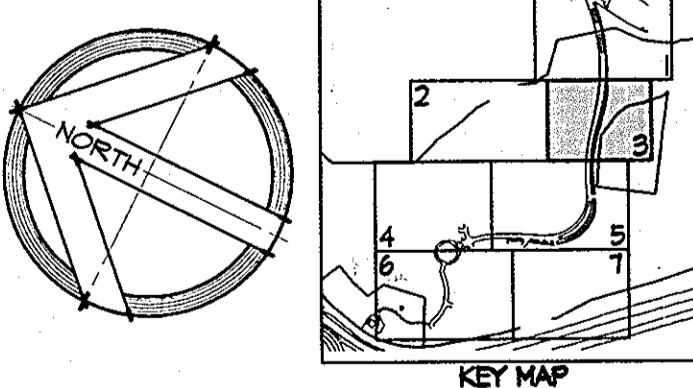
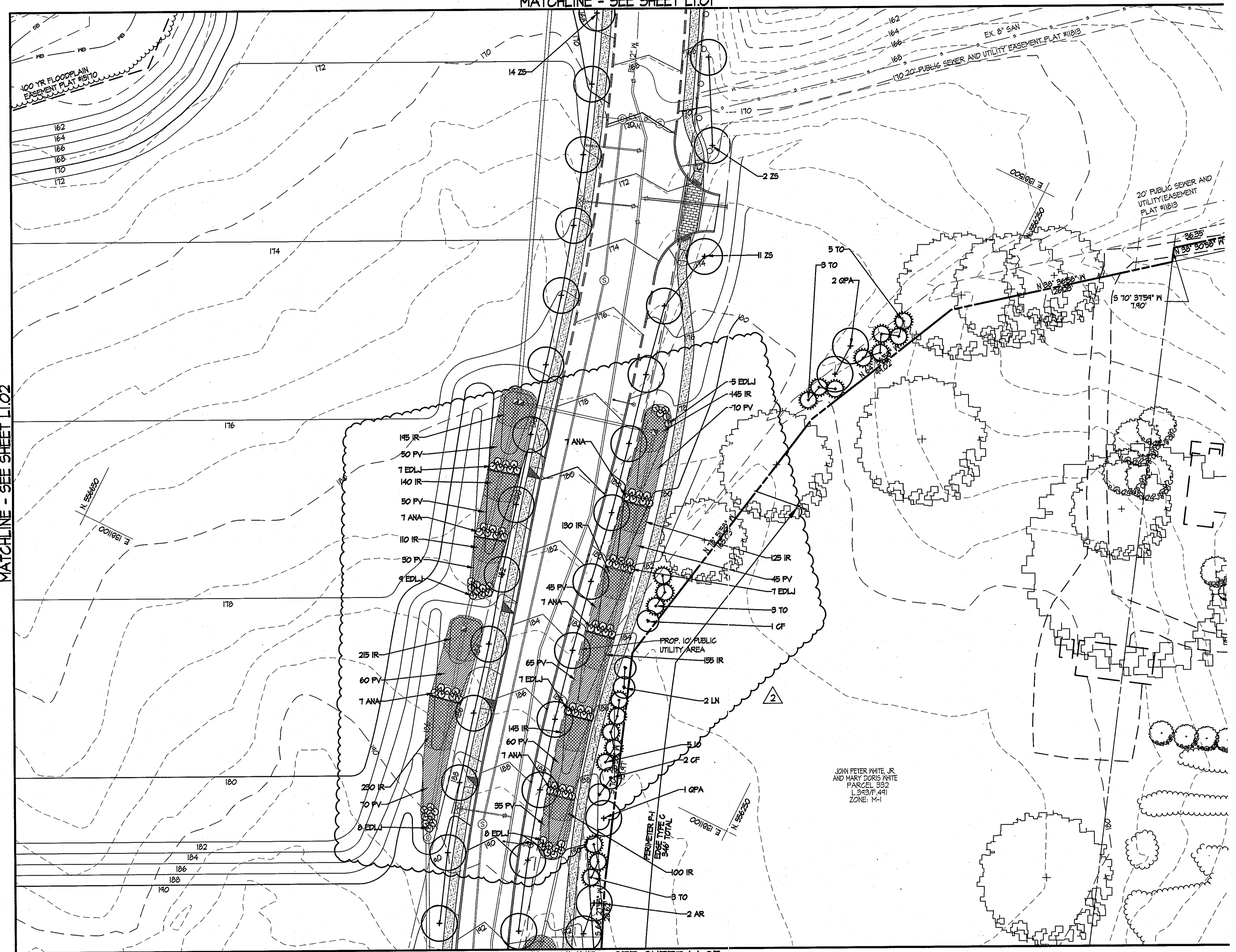
Z:\10\02022-Troy Park Phase 1 Site Plan\DWG\LI.02\_Planting\_Pending.rvt Sep 18, 2012 01:50pm a.m.



MATCHLINE - SEE SHEET LI.01

MATCHLINE - SEE SHEET LI.02

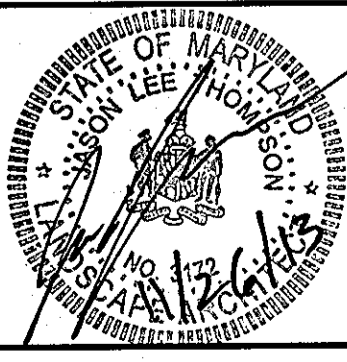
MATCHLINE - SEE SHEET LI.05



NOTE:  
SEE SHEET LI.01 FOR PLANT  
SCHEDULE AND DETAILS

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Mark A. Lyell* 1/2/13  
 DIRECTOR DATE  
*Chad Edwards* 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Kathleen Dewah* 12-18-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCELS: 545, 546, 547, 536, 535, 534, 533 LOT A-21, 535 LOT A-22  
 ADDRESS: 6450 MARSHON LANE  
 LOTS: 1 F.444, L.20505 / F.351, L.22205 / F.340, L.5783 / F.600,  
 L.5841 / F.710, L.4933 / F.457, L.4825 / F.440, L.6125 / F. 610  
 580' 11" x 18" ZONE: M-1 TAX MAP NO. 571  
 3rd ELECTION DISTRICT, CENSUS TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 326-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 326-2100



DES: KFR	SRI 2	REVISE PLANT TYPES	11/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY NO.	REVISION	DATE

PLANTING PLAN  
 600' SCALE MAP NO. 51 BLOCK NO. 16

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE 1113 PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND  
 SHEET 56 OF 64  
 SDP-11-003

Z:\010222-Frog Park Phase 1 Site Plan\SDP\LI.02\_Planting\_Plan.dwg-Layout1 Nov 26, 2013 12:49pm JT



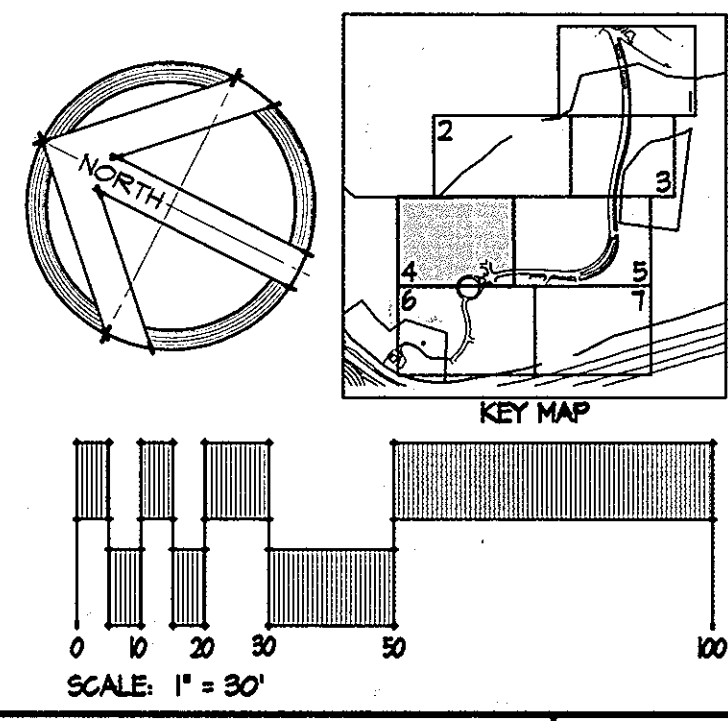
MATCHLINE - SEE SHEET LI.02



MATCHLINE - SEE SHEET LI.05

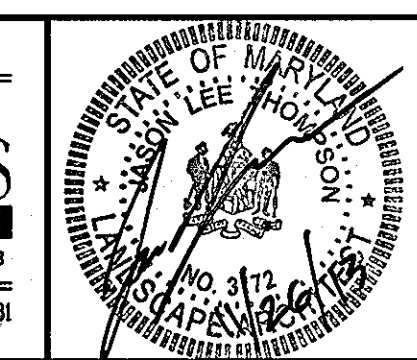
MATCHLINE - SEE SHEET LI.06

NOTES:  
 1. SEE SHEET L2.01 FOR PLANT SCHEDULE AND DETAILS  
 2. TREES MARKED WITH AN ASTERISK (\*) ARE TO BE LIMBED UP TO 1' ABOVE THE ADJACENT WALKING SURFACE. PRUNE TREES TO MAINTAIN BALANCED FORM.



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*David A. Uygell* 12/13/13  
 DIRECTOR DATE  
*Chad Edwards* 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*V. S. ...* 12-18-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL: 341, 342, 343, 344, 345, 346, 347, 348, 349, 350 LOT A-21, B2 LOT A-22  
 ADDRESS: 6420 HANSON LANE  
 L571 / F. 44, L1055 / F. 571, L1225 / F. 590, L1518 / F. 600,  
 L1841 / F. 13, L423 / F. 431, L653 / F. 640, L615 / F. 640  
 GRID: 11 F. 13, ZONE: MH, TAX MAP: 103.31  
 2ND ELECTION DISTRICT: CRESS TRACT 6013.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 325-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1120 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 325-2100



DES: KPR	SRI: 2	ADD SPORTS FIELDS & PARKING LOTS	DATE: 11/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY: NO.	REVISION	DATE

600' SCALE MAP NO. 51 BLOCK NO. 16

PLANTING PLAN

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3957 HOWARD COUNTY, MARYLAND

SCALE: 1" = 30'  
 SHEET 51 OF 64  
 SDP-11-003



MATCHLINE - SEE SHEET LI.02

MATCHLINE - SEE SHEET LI.03

MATCHLINE - SEE SHEET LI.04

MATCHLINE - SEE SHEET LI.06

MATCHLINE - SEE SHEET LI.07

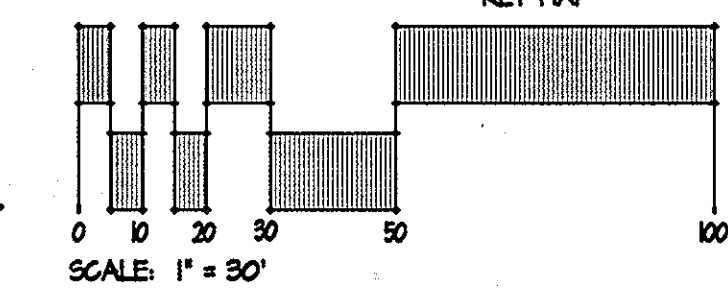
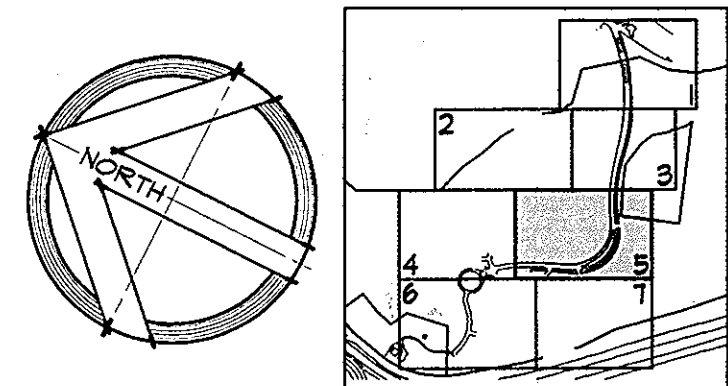


JOHN PETER WHITE, JR.  
AND MARY DORIS WHITE  
PARCEL 332  
L 1987 F 441  
ZONE M-1

5 1/2' 2810° E  
388.31'

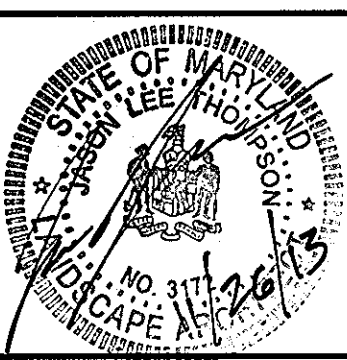
PROP. 10' PUBLIC  
UTILITY AREA.

NOTE:  
SEE SHEET LI.01 FOR PLANT  
SCHEDULE AND DETAILS



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*David de la Cruz* 12/13/13 DATE  
 DIRECTOR  
*Chris Edmondson* 12/13/13 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Victor A. Leon* 12-13-13 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCELS 341, 342, 354, 356, 358, 360 LOT A-21, B5 LOT A-22  
 ADDRESS: 6400 MANSION LANE  
 L571 / F444, L10265 / F371, L12205 / F340, L5183 / F600,  
 L5841 / F118, L4933 / F401, L4933 / F340, L4155 / F, 640  
 9600 / F118, ZONE M-1, TAX MAP NO. 31  
 2ND ELECTION DISTRICT, GENESIS TRACT 602.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1702 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1702 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2100



DES: KPR	SRI 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY NO.	REVISION	DATE

600' SCALE MAP NO. 51 BLOCK NO. 16

PLANTING PLAN

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND

SCALE: 1"=30'  
 LI.05  
 SHEET 58 OF 64

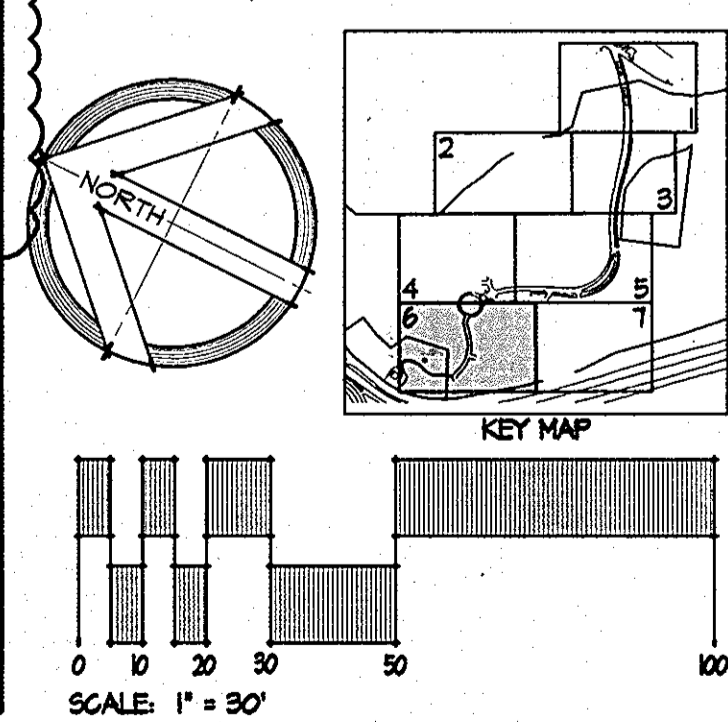


MATCHLINE - SEE SHEET LI.04

MATCHLINE - SEE SHEET LI.05

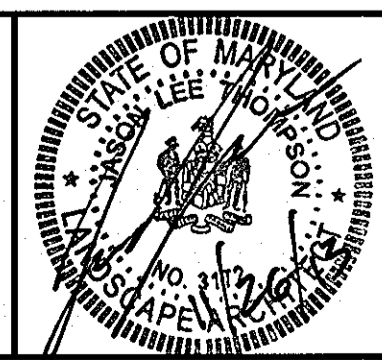


NOTE:  
SEE SHEET L2.01 FOR PLANT  
SCHEDULE AND DETAILS



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paul A. Weger* 1/3/14  
 DIRECTOR DATE  
*Chris Edwards* 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*V. K. ...* 12-18-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCEL: 594, 595, 596, 597, 598, 599, 599 LOT A-21, 599 LOT A-22  
 ADDRESS: 6400 HANSON LANE  
 L571 / F.44, L1958 / F.371, L12205 / F.390, L5183 / F.600,  
 L5241 / F.15, L4933 / F.491, L4933 / F.490, L4155 / F. 640  
 GRID (1) 11.18, ZONE: M-1, TAX MAP NO. 31  
 2ND ELECTION DISTRICT: CDE15 TRACT 6022.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7102 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7102 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 385-2100



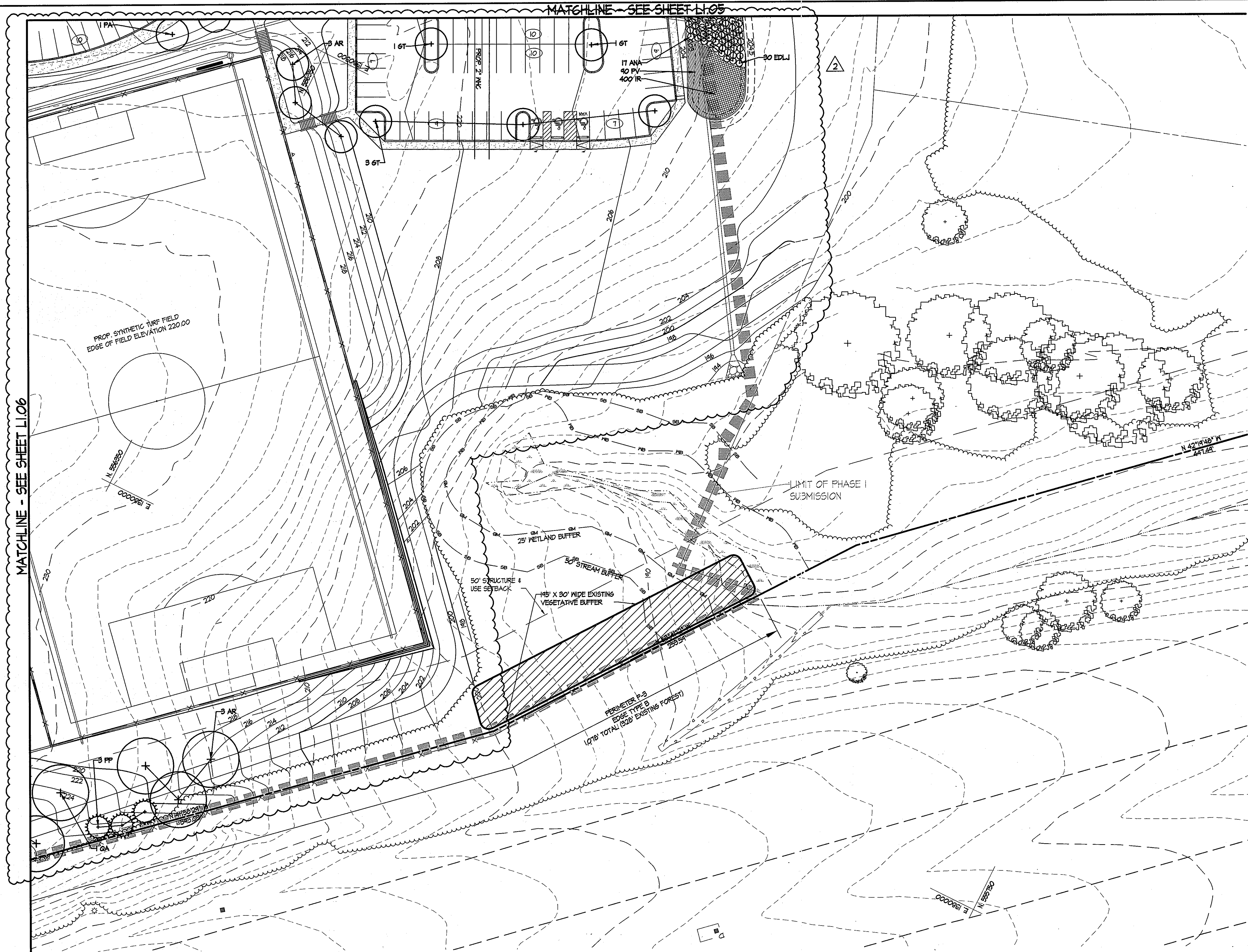
DES: KPR	SRI: 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY NO.	REVISION	DATE

600' SCALE MAP NO. 51 BLOCK NO. 16

PLANTING PLAN

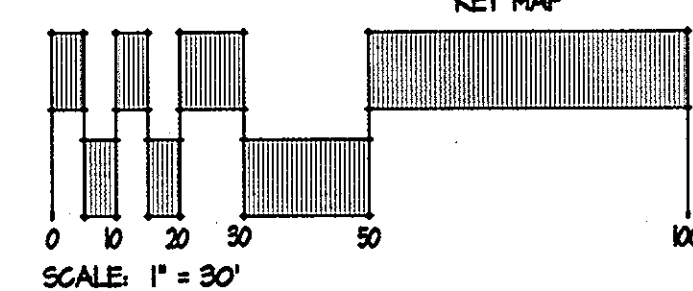
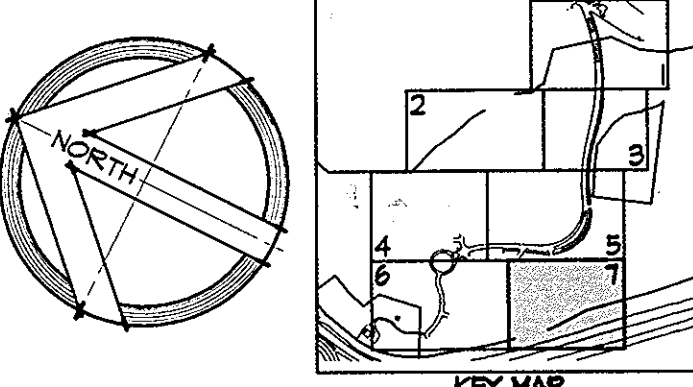
TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1"=30'  
 LI.06  
 SHEET 51 OF 64  
 SDP-II-003





MATCHLINE - SEE SHEET LI.06

MATCHLINE - SEE SHEET LI.05

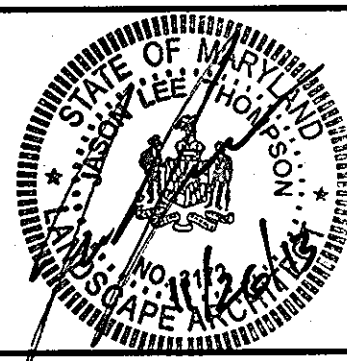


NOTE:  
SEE SHEET L2.01 FOR PLANT  
SCHEDULE AND DETAILS

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Paul A. Ujelle* 1/2/13  
 DIRECTOR DATE  
*Chad Edwards* 12-13-13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Vat Shelton* 12-18-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ADDRESS / PERMIT INFORMATION  
 PARCELS: 341, 343, 342, 338, 180, 185, 186 LOT A-21, 189 LOT A-22  
 ADDRESS: 6450 HANSON LANE  
 LOTS: F144, L1008B / F191, L12206 / F190, L1198 / F1600,  
 L1641 / F178, L1483 / F141, L1485 / F140, L1489 / F140  
 GRID: F141 & 180, ZONE: 14-1, TAX MAP NO. 21  
 2ND ELECTION DISTRICT: CENSUS TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 2152200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 315-2100  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE: (410) 315-2100

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 14115 Arrettonville Pike • Poolesville, Maryland 21131  
 (410) 682-2888 • fax (410) 682-3389



DES: KPR	SRI: 2	ADD SPORTS FIELDS & PARKING LOTS	11/26/13
DRN: AM			
CHK: AFE			
DATE: 08/12/12	BY: NO.	REVISION	DATE

600' SCALE MAP NO.	51	BLOCK NO.	16
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PLANTING PLAN

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22  
 CAPITAL PROJECT NO. N-3457  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1"=30'  
 LI.07  
 SHEET 60 OF 64  
 SDP-II-003

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**PLANTING SCHEDULE**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
<b>SHADE TREES</b>					
48	AR	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	2 1/2" CAL.	FULL CROWN, CENTRAL LEADER
30	GT	GLEDETISIA TRIACANTHOS VAR. INERMIS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	2 1/2" CAL.	FULL CROWN, EVENLY BRANCHED
32	PA	PLATANUS X ACERIFOLIA 'COLUMBIA'	COLUMBIA LONDON PLANETREE	2 1/2" CAL.	FULL CROWN, CENTRAL LEADER
7	GA	QUERCUS ALBA	WHITE OAK	2 1/2" CAL.	FULL CROWN, CENTRAL LEADER
29	GFA	QUERCUS PALUSTRIS	PIN OAK	2 1/2" CAL.	FULL CROWN, CENTRAL LEADER
44	ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2 1/2" CAL.	FULL CROWN, EVENLY BRANCHED
<b>ORNAMENTAL TREES</b>					
25	BN	BETULA NIGRA 'DURA-HEAT'	DURA-HEAT RIVER BIRCH	10' HT.	MULTI-STEM, 3 STEM MIN.
3	CF	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY REDBUD	2" CAL.	SINGLE STEM
8	LN	LAGERSTROEMIA INDICA 'NATCHEZ'	NATCHEZ CRAPMYRTLE	10' HT.	MULTI-STEM, 3 STEM MIN, HEAVY FOLIAGE
<b>EVERGREEN TREES</b>					
21	IO	ILEX OPACA 'SATYR HILL'	SATYR HILL AMERICAN HOLLY	5' HT.	FULL TO GROUND, EVENLY BRANCHED, CENTRAL LEADER, HEAVY FOLIAGE, NO SUBSTITUTIONS
9	PP	PICEA PENSILVANA 'HOOPSII'	HOOPSII COLORADO SPRUCE	6' HT.	FULL TO GROUND, EVENLY BRANCHED, CENTRAL LEADER, HEAVY FOLIAGE
17	TO	TAXUS X 'GREEN GIANT'	GREEN GIANT ARBORVITAE	6' HT.	FULL TO GROUND, EVENLY BRANCHED, CENTRAL LEADER, HEAVY FOLIAGE
<b>PERENNIALS / ORNAMENTAL GRASSES</b>					
207	ANA	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	4" POT	PLANT 36" O.C.
247	EDLJ	EUPATORIUM DUBIUM 'LITTLE JOE'	DWARF JOE PYE NEED	4" POT	PLANT 36" O.C.
4310	IR	IRIS VERSICOLOR/IRIS PSEUDOCORUS	BLUE FLAG IRIS/YELLOW FLAG IRIS	4" POT	PLANT 18" O.C., MIX 50/50 WITHIN EACH PLANTING BED
2250	PV	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	4" POT	PLANT 30" O.C.

**SCHEDULE A - PERIMETER LANDSCAPE EDGE\***

CATEGORY	ADJACENT TO RESIDENCE (PERIMETER P-1)	ADJACENT TO ROADWAYS (PERIMETER P-2)	ADJACENT TO NON-RESIDENTIAL (PERIMETER P-3)	TOTAL
	LANDSCAPE TYPE	TYPE C (1 SHADE TREE PER 40 L.F. & 1 EVERGREEN PER 20 L.F.)	TYPE B (1 SHADE TREE PER 50 L.F. & 1 EVERGREEN PER 40 L.F.)	
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	438 LF	1,078 LF	225 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES, 328 LF	YES, 225 LF	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	
NUMBER OF PLANTS REQUIRED				
SHADE TREES	11	15	0	26
EVERGREEN TREES	22	14	0	41
SHRUBS	0	0	0	0
NUMBER OF PLANTS PROVIDED				
SHADE TREES	7	15	0	22
EVERGREEN TREES	22	14	0	41
OTHER TREES (2:1 SUBSTITUTION)	6	0	0	6
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0

NOTE: 8 ORNAMENTALS (2:1) HAVE BEEN USED AS SUBSTITUTES FOR 4 REQUIRED SHADE TREES NOT USED.  
\* SEE GENERAL PLANTING NOTE #11.

**STREET TREE LANDSCAPING**

5746 LF OF PRIVATE ROADWAY (BOTH SIDES)

REQUIRED: 145 STREET TREES REQUIRED IF PLACED 40 APART  
148 STREET TREES REQUIRED IF PLACED 30 APART

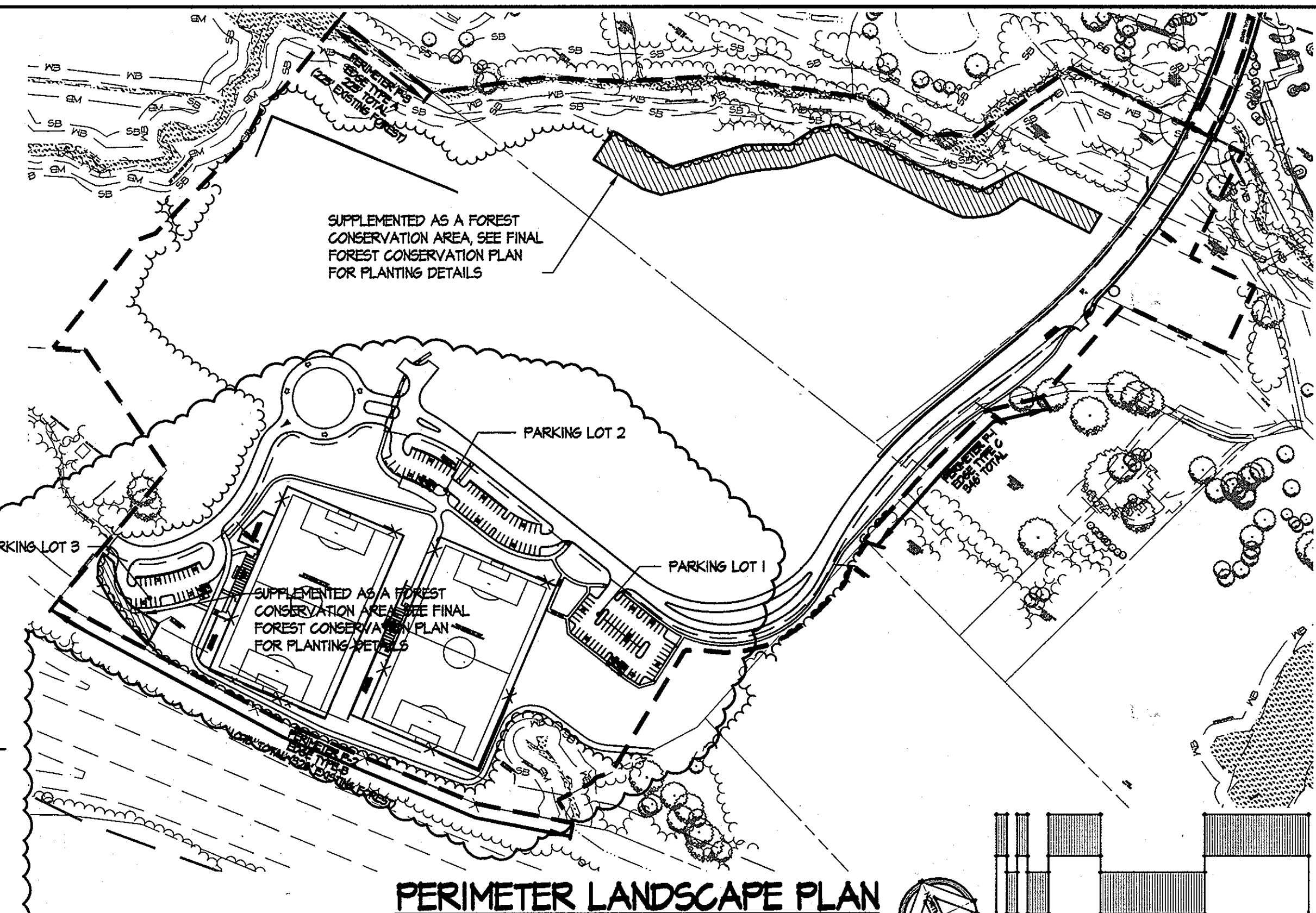
PROVIDED: 154 LARGE TREES  
12 SMALL TREES

**PARKING LOT INTERNAL LANDSCAPING**

PARKING LOT 1: 63 PARKING SPACES  
REQUIRED: 3 SHADE TREES AND 3 ISLANDS  
PROVIDED: 7 SHADE TREES AND 4 ISLANDS

PARKING LOT 2: 55 PARKING SPACES  
REQUIRED: 3 SHADE TREES AND 3 ISLANDS  
PROVIDED: 8 SHADE TREES AND 6 ISLANDS

PARKING LOT 3: 28 PARKING SPACES  
REQUIRED: 1 SHADE TREE AND 1 ISLAND  
PROVIDED: 5 SHADE TREES AND 2 ISLANDS



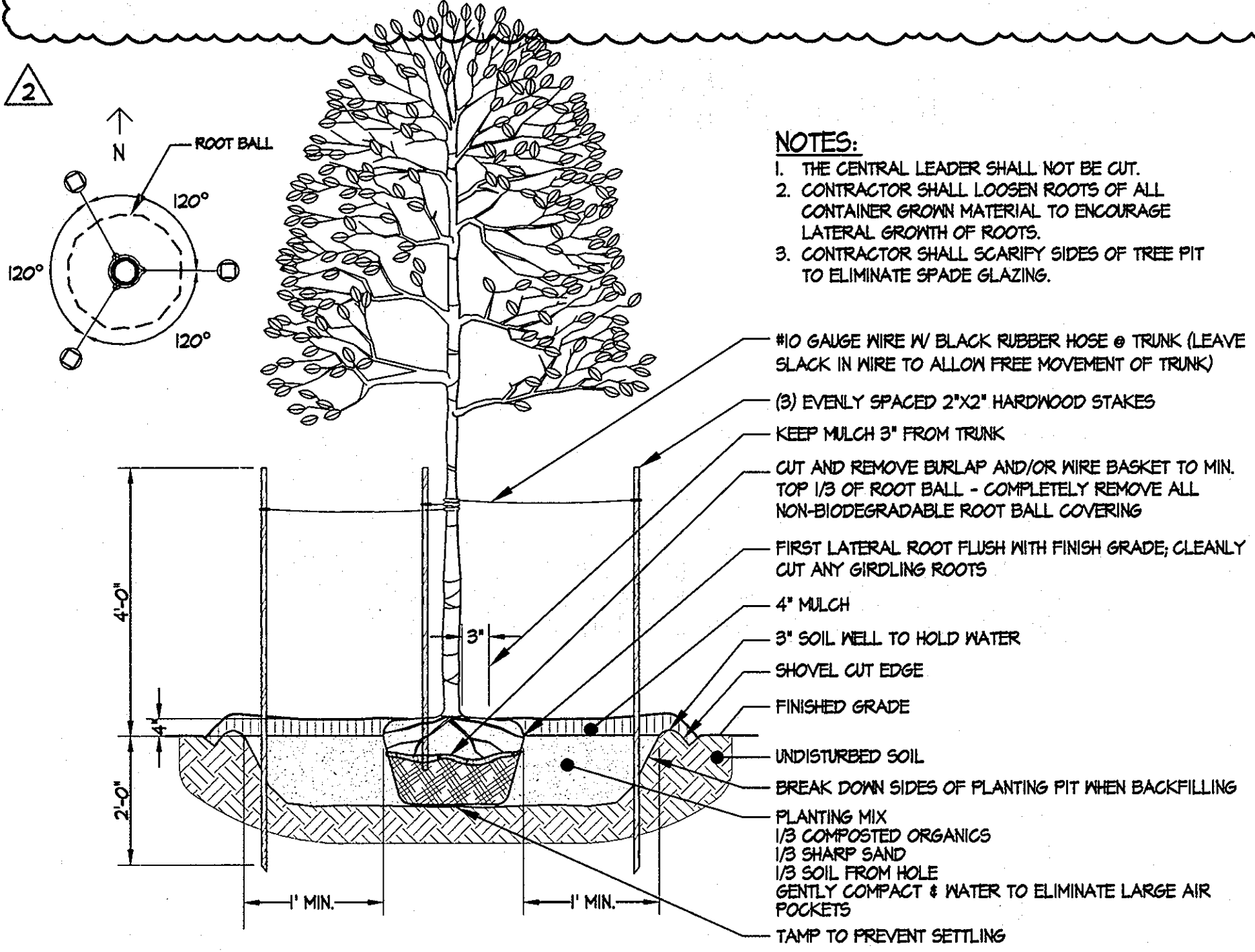
**PERIMETER LANDSCAPE PLAN**

**LANDSCAPING NOTES**

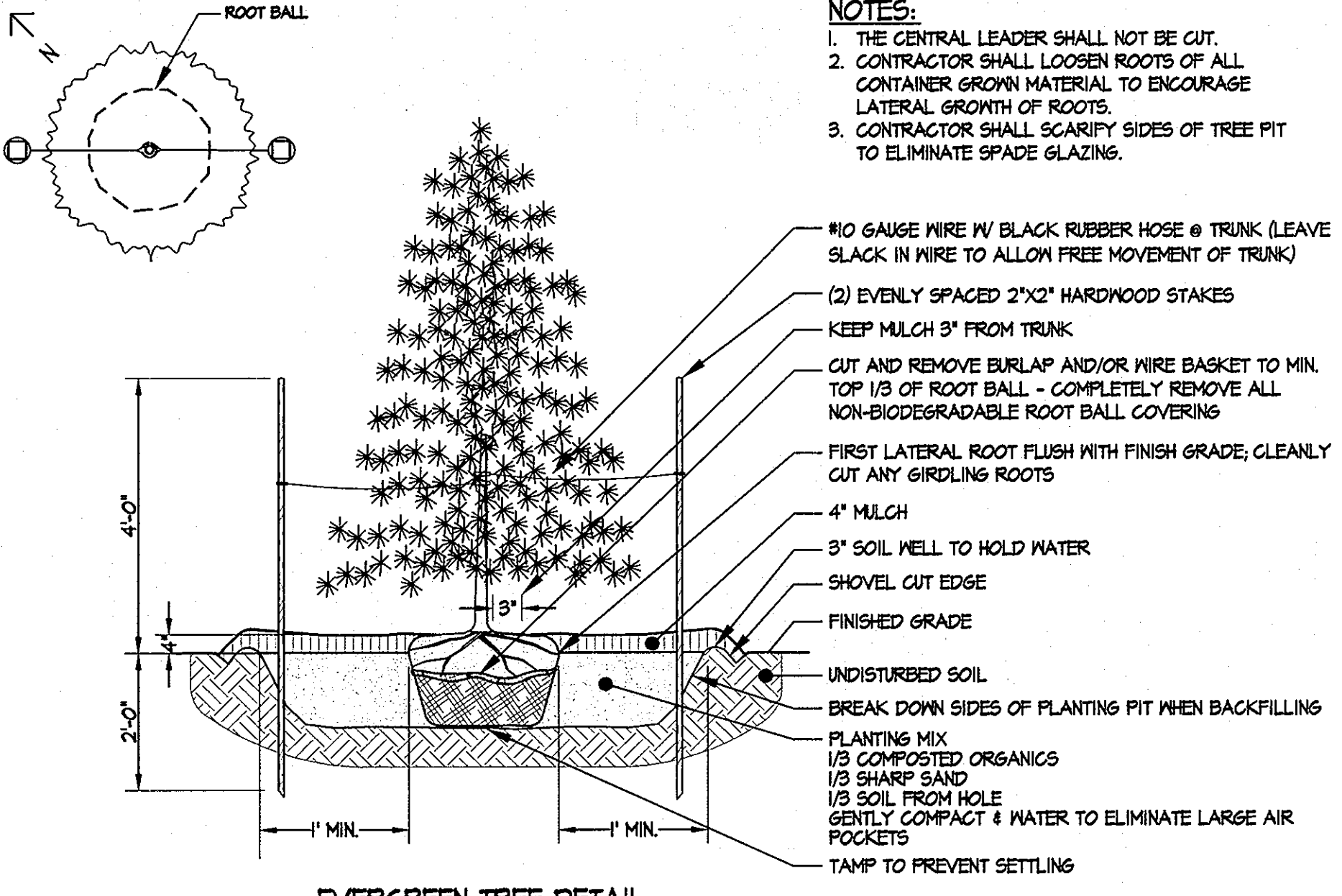
- QUANTITIES SHOWN ON THE PLANT LIST ARE ESTIMATES ONLY; THE CONTRACTOR IS REQUIRED TO INSTALL THE QUANTITIES LABELED IN PLAN VIEW. CONTRACTOR SHALL NOTIFY SITE RESOURCES OF ANY DISCREPANCY BETWEEN THE QUANTITIES LISTED IN THE CHART AND QUANTITIES SHOWN IN PLAN VIEW.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-251-TTTT A MINIMUM OF TWO WORKING DAYS PRIOR TO BEGINNING PLANTING AND CONSTRUCTION.
- DAMAGE TO EXISTING CONDITIONS AND UTILITIES SHALL BE REPAIRED AND RESTORED AT THE EXPENSE OF THE CONTRACTOR.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE, THE LANDSCAPE MANUAL.
- ANY WIRE BASKETS USED TO SECURE PLANT ROOT BALLS SHOULD BE COMPLETELY REMOVED PRIOR TO PLANT INSTALLATION.
- THIS PROJECT IS EXEMPT FROM SWM AREA LANDSCAPE MANUAL REQUIREMENTS, HOWEVER, THE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE 2007 SWM MANUAL.
- LANDSCAPE SURETY FOR THE REQUIRED PLANTING MATERIAL IS NOT REQUIRED FOR COUNTY CAPITAL PROJECTS.

**GENERAL PLANTING NOTES**

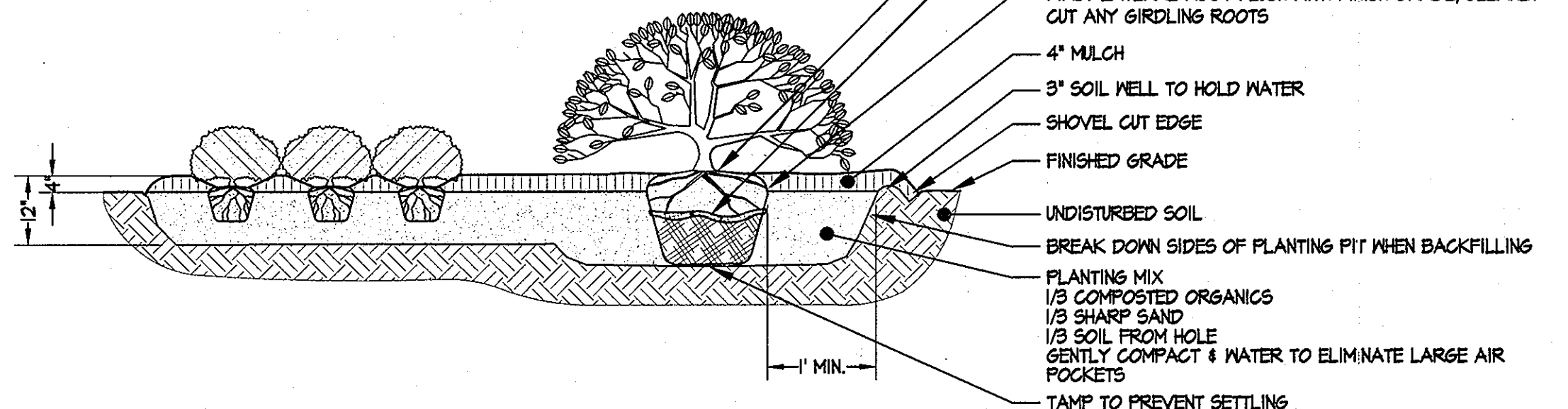
- PLANT MATERIAL SUBSTITUTIONS ARE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT.
- PLANT MATERIAL SHALL BE TAGGED AT THE SOURCE BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE UNLESS THE REQUIREMENT IS SPECIFICALLY MAILED.
- LOCATIONS OF ALL PLANT MATERIAL SHALL BE STAKED FOR APPROVAL BY THE OWNER'S REPRESENTATIVE.
- ALL SHRUB AND GROUND COVER AREAS SHALL BE PLANTED IN CONTINUOUS PREPARED BEDS, MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILED AND SPECIFIED.
- PLANTING BEDS SHALL HAVE POSITIVE DRAINAGE WITH A MINIMUM 2 PERCENT SLOPE EXCEPT IN ESQ AREAS.
- CONTRACTOR SHALL VERIFY ACCURACY OF BASE INFORMATION AND EXISTING CONDITIONS IN THE FIELD TO HIS OWN SATISFACTION. BID SHALL BE BASED ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.
- ALL PLANT MATERIAL SHALL BE NURSERY GROWN AND SHALL CONFORM TO AMERICAN NURSERMEN ASSOCIATION STANDARDS.
- ALL PLANTING PROCEDURES SHALL CONFORM TO THE LATEST EDITION OF LANDSCAPE CONTRACTOR ASSOCIATION GUIDELINES FOR THE BALTIMORE/WASHINGTON METROPOLITAN AREA AND THE PROJECT SPECIFICATIONS.
- SEE GRADING & UTILITY DRAWINGS FOR EXISTING & PROPOSED GRADES AND UTILITIES. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS TO HIS OWN SATISFACTION.
- SEE PREVIOUS SHEETS FOR PLANTING PLAN.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREMITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN DIE, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES, AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED, AS NEEDED, IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS. STABILIZE ALL DISTURBED AREAS AS SOON AS FINAL GRADING HAS BEEN COMPLETED. ALL DISTURBED AREAS SHALL BE SEEDDED WITH THE EXCEPTION OF PLANTING BEDS.
- INSTALL TREE PROTECTION FENCING ALONG THE LIMITS OF DISTURBANCE (LOD) OF ALL EXISTING WOODS TO REMAIN (SEE ESC PLANS). ALL SITE GRADING, PLANTING BED PREPARATION, AND TREE AND SHRUB PLANTING MUST BE DONE OUTSIDE OF THE DRIP LINE OF EXISTING TREES TO BE PRESERVED, UNLESS OTHERWISE NOTED, IN ORDER TO MAINTAIN AND PROTECT THE ROOT SYSTEM. TREES ARE NOT TO BE INSTALLED CLOSER THAN 6' TO ANY EDGE OF PAVEMENT, CURB OR SIDEWALK, UNLESS OTHERWISE NOTED.
- PER THE LANDSCAPE MANUAL, LANDSCAPING IS NOT REQUIRED BETWEEN INTERNAL LOTS OR PARCELS WITHIN THE SAME DEVELOPMENT, THEREFORE PARCEL A-21 IS EXEMPT BECAUSE IT IS PART OF THE TROY HILL CORPORATE CENTER SUBDIVISION. PERIMETER LANDSCAPING FOR THE REMAINING TROY PARK PROJECT WILL BE REQUIRED WITH FUTURE PHASES OF DEVELOPMENT.



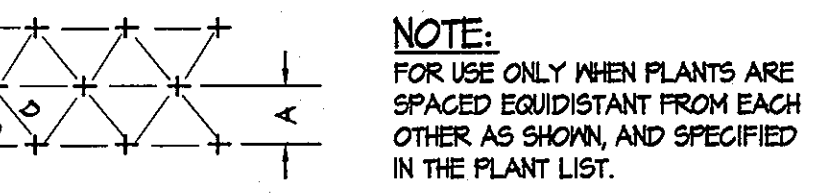
**DECIDUOUS TREE DETAIL**



**EVERGREEN TREE DETAIL**



**SHRUB/PERENNIAL DETAIL**



NOTE: FOR USE ONLY WHEN PLANTS ARE SPACED EQUIDISTANT FROM EACH OTHER AS SHOWN, AND SPECIFIED IN THE PLANT LIST.

SPACING 'D'	ROW 'A'	PLANTS / S.F.
6' O.C.	5.20'	4.61
8' O.C.	6.93'	2.60
10' O.C.	8.66'	1.66
12' O.C.	10.40'	1.15
15' O.C.	15.00'	.70
18' O.C.	19.60'	.51
24' O.C.	20.80'	.40
30' O.C.	26.00'	.35
36' O.C.	30.00'	.32

**PLANT SPACING CHART**

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 DIRECTOR: [Signature] DATE: 12/14/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 12-18-13

ADDRESS / PERMIT INFORMATION  
 PARCEL: 541, 545, 542, 536, 150, 159, 157 LOT A-21, 156 LOT A-22  
 ADDRESS: 6400 HANSON LANE  
 L571 / F.44, L1255 / F.51, L1225 / F.940, L5185 / F.600,  
 L541 / F.15, L483 / F.481, L483 / F.640, L483 / F.640  
 GRID 11 LOCATION, ZONE: M4, TAX 14, 15  
 2ND ELECTION DISTRICT: COLUMBIA TRACT 802.02  
 WATER CODE: 400, SEWER CODE: 282200  
 OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 315-2100  
 DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 1100 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 315-2100

**SITE RESOURCES**  
 INCORPORATED  
 Comprehensive Land Planning & Site Design Services  
 14315 Arrettsville Pike • Pikesville, Maryland 21115  
 (410) 683-3388 • fax (410) 683-3389

DES: JLT	SRI: 2	ADD. SPORTS FIELDS & PARKING LOTS	11/26/13
DRN: JLT			
CHK: REM			
DATE: 08/12/12	BY: NO.	REVISION	DATE

600' SCALE MAP NO. 51 BLOCK NO. 16  
 CAPITAL PROJECT NO. N-3451  
 HOWARD COUNTY, MARYLAND

**PLANTING NOTES AND DETAILS**

**TROY PARK - PHASE ONE**  
 PART OF TROY HILL CORPORATE CENTER PHASE IIIB PARCELS A-21 AND A-22

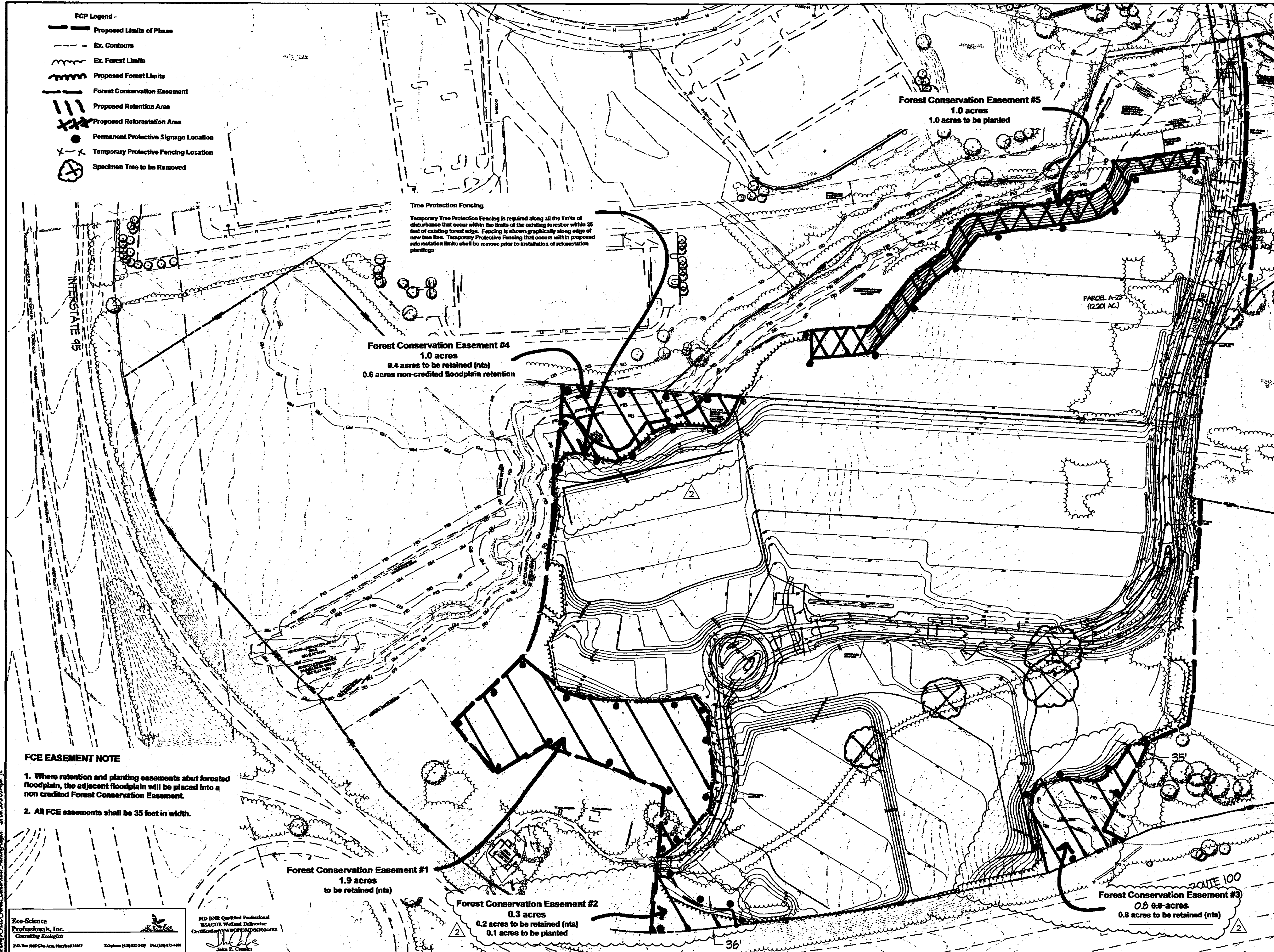
SCALE: AS SHOWN  
 L2.01  
 SHEET 61 OF 64  
 SDF-II-003

PREPARED BY: JASON L. THOMPSON, PLA  
 STATE OF MARYLAND  
 REGISTERED LANDSCAPE ARCHITECT  
 REGISTRATION NO. 3112

**DEVELOPER/BUILDER'S CERTIFICATE**  
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Subdivision and Land Development Regulations and the Landscape Manual. I/We further certify that upon completion a letter of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

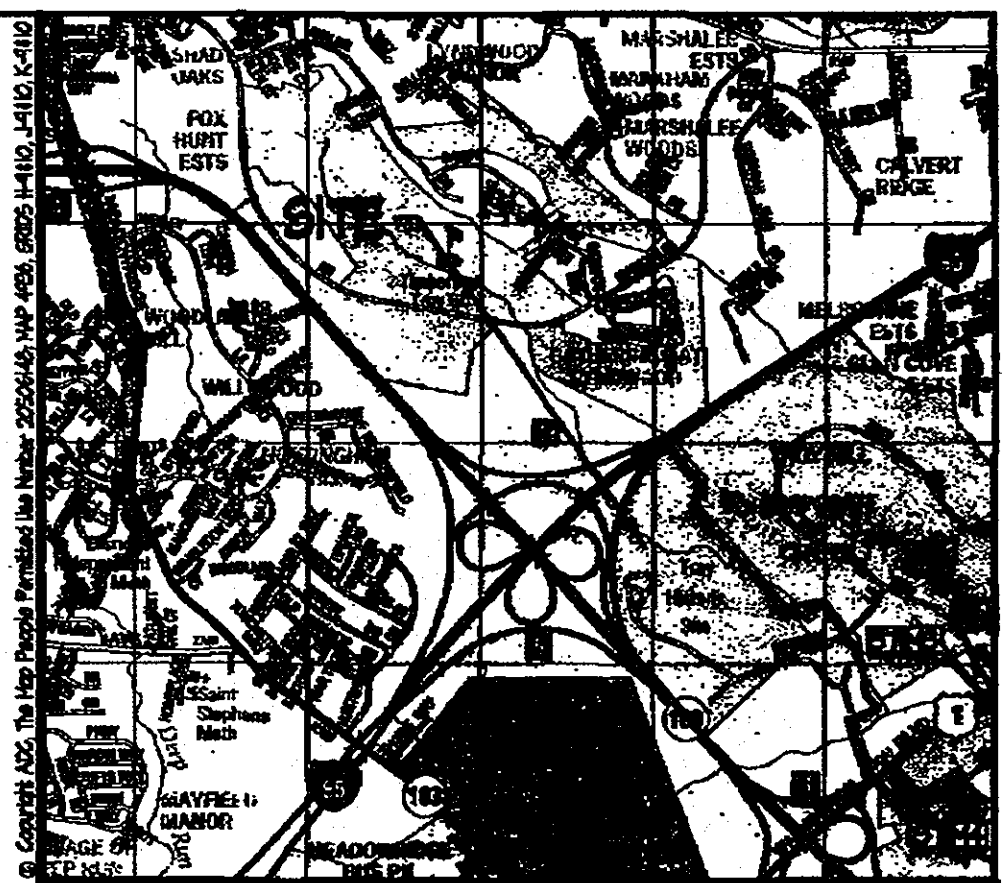
Name: N/A Date: \_\_\_\_\_





**FCE EASEMENT NOTE**

- Where retention and planting easements abut forested floodplain, the adjacent floodplain will be placed into a non credited Forest Conservation Easement.
- All FCE easements shall be 35 feet in width.



**LEGEND**

PROPERTY LINE	PROPERTY LINE
EXISTING TREELINE	EXISTING TREELINE
EXISTING FOREST BUFFER	EXISTING FOREST BUFFER
EXISTING TREES	EXISTING TREES
EXISTING SHRUBS	EXISTING SHRUBS
EXISTING WALK	EXISTING WALK
EXISTING ROAD	EXISTING ROAD
EXISTING CURB	EXISTING CURB
EXISTING STORM DRAIN	EXISTING STORM DRAIN
EXISTING WATER	EXISTING WATER
EXISTING SANITARY SEWER	EXISTING SANITARY SEWER
EXISTING GAS	EXISTING GAS
EXISTING TELEPHONE	EXISTING TELEPHONE
EXISTING OVERHEAD ELECTRIC	EXISTING OVERHEAD ELECTRIC
EXISTING CABLE TV	EXISTING CABLE TV
EXISTING FENCE	EXISTING FENCE
EXISTING GUARDRAIL	EXISTING GUARDRAIL
EXISTING BUILDING	EXISTING BUILDING
EXISTING WETLANDS	EXISTING WETLANDS
25' WETLAND BUFFER	25' WETLAND BUFFER
EXISTING STREAM	EXISTING STREAM
EXISTING STREAM BUFFER	EXISTING STREAM BUFFER
EXISTING FLOODPLAIN	EXISTING FLOODPLAIN
PROPOSED WOODLINE	PROPOSED WOODLINE
PROPOSED WALK	PROPOSED WALK

MATCHLINE - SEE SHEET FCI.02

SEAL OF THE STATE OF MARYLAND  
JAMES H. HOGAN, JR.  
GOVERNOR

FOR REVISION 2 ITEMS ONLY

KEY MAP

SCALE 1" = 100'

**APPROVED: DEPARTMENT OF PLANNING & ZONING**

10/9/10  
DATE

10/13/10  
DATE

10/09/13  
DATE

**ADDRESS / PERMIT INFORMATION**  
PARCEL A-22 (2.221 AC), 125 LOT A-22, 125 LOT A-21, 125 LOT A-20, 125 LOT A-19, 125 LOT A-18, 125 LOT A-17, 125 LOT A-16, 125 LOT A-15, 125 LOT A-14, 125 LOT A-13, 125 LOT A-12, 125 LOT A-11, 125 LOT A-10, 125 LOT A-9, 125 LOT A-8, 125 LOT A-7, 125 LOT A-6, 125 LOT A-5, 125 LOT A-4, 125 LOT A-3, 125 LOT A-2, 125 LOT A-1, 125 LOT A-0

**OWNER:**  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 326-2100

**DEVELOPER:**  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
1200 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 326-2100

**SITE RESOURCES**  
CORPORATE LAND PLANNING & SITE DESIGN SERVICES

1430 Broadwater Blvd • Towson, Maryland 21286  
(410) 483-3300 • Fax (410) 483-3300

DESIGNER	DATE	REVISION	DATE
GRI	2	Revised per County Comment	8/11/10
		ADD RETAINING WALLS & REVISE REFORESTATION AREAS	07/18/10

**FOREST CONSERVATION PLAN**

DATE: 01/05/12

BY: NO.

REVISION

DATE: 600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3457

HOWARD COUNTY, MARYLAND

SCALE: 1"=100'

FCI.01

SHEET 62 OF 64

SDP-11-005





MATCHLINE - SEE SHEET FC1.0

**FOREST CONSERVATION OVERVIEW BY PHASE**

Phase	Gross Acreage	Net Tract Area	Existing Forest (mta)	Forest to be Cleared	Forest to be Retained	Afforestation Required	Reforestation Required/Provided	Retention in excess of BEP*
I	48.0	34.9	33.9	30.6	3.3	0	14.1/1.1	0

\*forest retained in excess of BEP may be credited toward retention requirements of other phases

**FOREST CONSERVATION WORKSHEET**  
Version 1.0

Project: Troy Park  
Date: August 2, 2012

NET TRACT AREA		Whole Site ACRES	Phase 1 ACRES	Future Phases ACRES
A. Total tract area		100.6	48.0	52.6
B. Area within Exempt Lots A-21 and A-22		16.1	12.5	3.6
C. Area within 100 year floodplain outside Lots A21 and A 22		10.9	0.6	10.3
D. Net Tract Area		73.6	34.9	38.7

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)		IDA	IDA	IDA
ARA	MDR	IDA	HDR	MPD
E. Afforestation Threshold (percentage)	15% / 15%	11.0	5.2	5.8
F. Conservation Threshold (percentage)	20% / 15%	14.7	7.0	7.7

EXISTING FOREST COVER:				
G. Existing forest cover (excluding floodplain)		70.7	33.9	36.8
H. Area of forest above afforestation threshold		58.7	28.7	31.0
I. Area of forest above conservation threshold		56.0	26.9	29.1

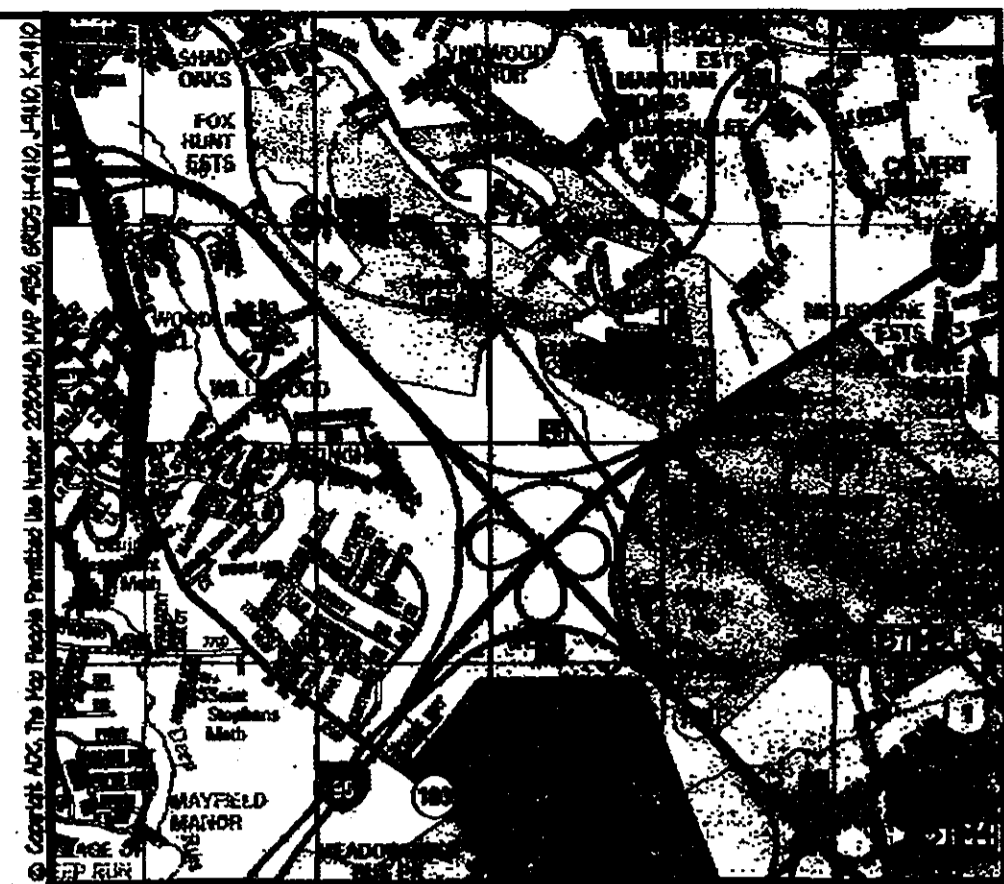
BREAK EVEN POINT:				
J. Forest retention above threshold with no mitigation		11.2	5.4	5.8
	Break-Even Point	25.9	12.4	13.5
K. Clearing permitted without mitigation		44.8	21.5	23.3

PROPOSED FOREST CLEARING:				
L. Total area of forest to be Cleared or Retained Outside FCE			30.6	
M. Total area of forest to be Retained in FCE			3.3	

PLANTING REQUIREMENTS:				
N. Reforestation for clearing above Conservation Threshold			6.7	
P. Reforestation for clearing below Conservation Threshold			7.4	
Q. Credit for retention above conservation threshold			0	
R. Total reforestation required			14.1	
S. Total afforestation required			0	
T. Total reforestation and afforestation required			14.1	



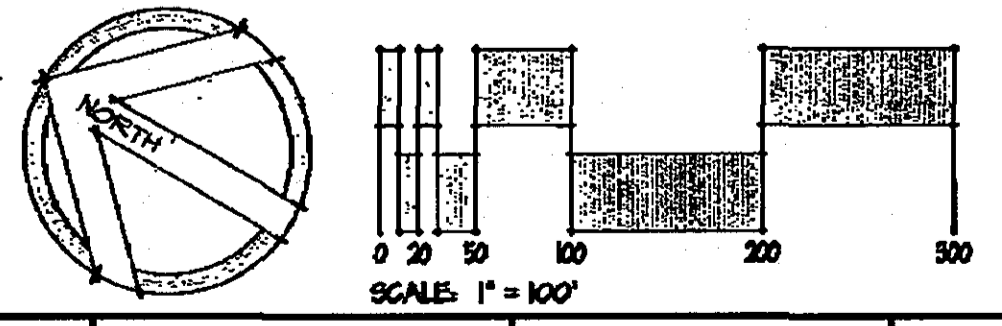
VICINITY MAP 1"=2000'

**FCP NOTES**

- A waiver (Waiver petition file WP-10-173) was granted July 6, 2010 to allow the Forest Conservation requirement for this project to be reviewed in phases rather than under one submission for the entire County Park.
- A waiver has been granted to allow for the temporary deferral for submission and recording of the Plat of FCE until the last phase of the development for the County Park.
- A waiver has been granted to allow for the removal of four specimen trees within Phase I of the project.
- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Limits of disturbance shall be restricted to areas within the limit of temporary fencing.
- There shall be no clearing, grading, construction or disturbance of vegetation beyond the depicted limits of disturbance, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as non-disturbance areas.
- Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed forest retention limits.
- Development on Lots A21 and A-22 are exempt from the Forest Conservation Act as they are part of the Troy Hill Corporate Center which is a planned business park of at least 75 acres which received approval prior to 12/31/82 in accordance with Section 16.1202 (b)(1)(v) of the Howard County Code.
- This phase of the project proposes 3.3 acres of forest retention within an easement. The associated forest clearing on this phase creates an (4.7 acre reforestation obligation. Phase I onsite reforestation will equal (1.5) acres. The outstanding reforestation obligation will be re-evaluated upon the preparation of development plans for future phases of the project. It is possible that retention credit for future phases could offset reforestation obligations for this phase of the project. If reforestation is required for the overall project, it is likely that a portion of this obligation will be met in an offsite location.
- The forest conservation assessment has been established to fulfill the requirements of section 16.1200 of the Howard County code and the Forest Conservation Act. No clearing, grading or construction is permitted within the forest conservation easements. However, forest management practices defined in the Deed of Forest Conservation Easement area allowed.

Eco-Science Professionals, Inc. Consulting Ecologists  
P.O. Box 3888 Glen Burnie, Maryland 21061  
Telephone (410) 832-2400 Fax (410) 832-2488

MD DNR Qualified Professional  
TRADESHOW Wetland Submittal  
Certification # WD000010041004 012  
John P. Crivello



APPROVED: DEPARTMENT OF PLANNING & ZONING  
Director: [Signature]  
Date: 10/13/12  
Chief, Development Engineering Division: [Signature]  
Date: 10/13/12  
Chief, Division of Land Development: [Signature]  
Date: 10/13/12

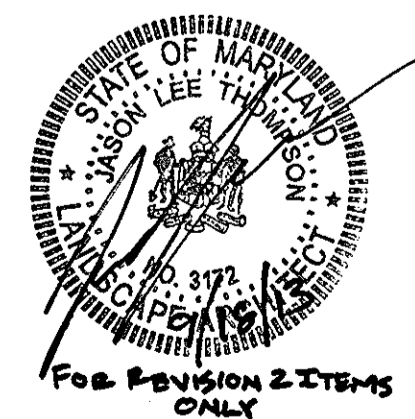
ADDRESS / PERMIT INFORMATION  
PARCELS: 346, 318, 312, 306, 300, 294, 288 LOT A-21, 282 LOT A-22  
ADDRESS: 420 HANCOCK LANE  
LOT 11 PARCELS 112028 / 112029 / 112030 / 112031 LOTS 112032 / 112033 / 112034 / 112035 / 112036 / 112037 / 112038 / 112039 / 112040 LOTS 112041 / 112042  
GRID 11 & 12 ZONE: HH TAX MAP NO. 07  
2ND ELECTION DISTRICT: CONSERVATION TRACT 60422  
WATER CODE: 400, SEWER CODE: 282200  
OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
1230 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 312-1700  
DEVELOPER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
1230 OAKLAND HILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 312-1222



DES.	DATE	REVISION
SRI	10/12/12	Revised per County Comment
	10/12/12	REVISE REFORESTATION QTY
DRN		
CHK		
DATE: 01/05/12	BY: NO.	REVISION

**FOREST CONSERVATION PLAN & NOTES AND DETAILS**  
600' SCALE MAP NO. 51 BLOCK NO. 16

**TROY PARK - PHASE ONE**  
PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22  
CAPITAL PROJECT NO. N-3457  
HOWARD COUNTY, MARYLAND  
SHEET 63 OF 64  
SDP-11-003





# PLANTING SCHEDULE

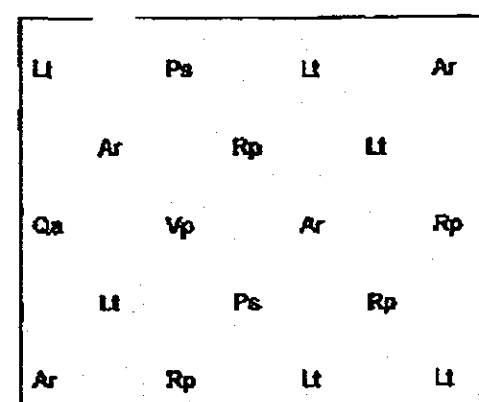
**FCE # 2 - 0.1 acre planting area**  
 Planting units Required: 70  
 Planting units Provided: 70

Qty	Species	Size	Spacing	Total FCA Units
2	Coronilla canadensis - Red bud	2" cal.	20' o.c.	
4	Cornus florida - Flowering dogwood	2" cal.	20' o.c.	
2	Liriodendron tulipifera - Yellow poplar	2" cal.	20' o.c.	
2	Quercus alba - White oak	2" cal.	20' o.c.	
Total FCA Units = 70				

**FCE # 3 - 0.1 acre planting area**  
 Planting units Required: 700  
 Planting units Provided: 700

Qty	Species	Size	Spacing	Total FCA Units
15	Liriodendron tulipifera - Yellow poplar	1" cal.	15' o.c.	
25	Quercus rubra - Red oak	1" cal.	15' o.c.	
40	Total FCA Units = 140			
35	Acer rubrum - Red maple	2-3" whip	11' o.c.	
35	Cornus florida - Flowering dogwood	2-3" whip	11' o.c.	
20	Liriodendron tulipifera - Yellow poplar	2-3" whip	11' o.c.	
10	Prunus serotina - Black cherry	2-3" whip	11' o.c.	
10	Rhododendron - Black hazel	2-3" whip	11' o.c.	
55	Viburnum plicatum - Blackhaw	2-3" whip	11' o.c.	
280	Total whip plantings x 2 units Area = FCA Unit Credit			560
Total FCA Units = 700				

## Typical Planting Layout



This diagram shows a typical spacing of species within planting area. The spacing shall be in accordance with the approved planting schedule. Where the size of the planting stock varies, the planting units shall be adjusted at averaged species to provide approximately uniform coverage.

### Planting Notes:

- Planting density based spacing requirements: 1" caliper trees @ 15' on center, whips with shelter @ 11' on center.
- 1" caliper trees should be staggered along the perimeter of the planting area to serve as demarcation of the boundary as indicated on the plan. Actual spacing may be greater than spacing credit shown in planting schedule chart. Spacing credit is used to determine square foot credit per planting unit and may not define actual spacing in the field.
- Planting may be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance.
- Mulch or coarse-textured brush mulch material may be acquired prior to installation of planting.
- All whips are required to be installed with tree shelters per Howard County FCA requirements.
- Planting units defined by the spacing requirements established in the FCA Manual. One plant unit is defined as 1 seedling or whip without shelter, or 200 1" caliper trees, or 350 whips without shelter, or 350 1" caliper trees, or 200 2" caliper trees, or 350 whips with shelter. By convention it has been determined that a seedling or whip without shelter = 1 unit, whip with shelter = 2 units, 1" caliper tree = 3.5 units and 2" caliper tree = 7 units. The use of plant units simplifies the plant density calculations when making stock sizes.

### Planting/Soil Specifications

- Installation of bare-rooting plant stock shall take place between March 15 - April 20; B&B container stock March 15 - May 30 or September 15 - November 15. Fall planting of B&B stock is not recommended.
- Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
- Bare-root plants shall be installed so that the top of root mass is level with the top of existing grade. Roots shall be dipped in an anti-desiccant gel prior to planting. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.
- Fertilizer shall consist of Agrifon 22-8-2, or equivalent, applied as per manufacturer's specifications, for woody plants. Herbaceous plant shall be fertilized with Osmocote 8-6-12.
- Plant material shall be transported to the site in a tarp or covered truck. Plants shall be kept moist prior to planting.
- The contractor shall remove all non-organic debris associated with the planting operation from the site.

### Sequence of Construction

- Sediment control shall be installed in accordance with general construction plan for site.
- Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
- Upon completion of the planting, signage shall be installed as shown.
- Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

### Maintenance of Plantings

- Maintenance of plantings shall last for a period of two years.
- Plantings must receive 2 gallons of water, either through precipitation or watering, weekly during the 1st growing season, as needed. During second growing season, once a month during May-September, if needed.
- Invasive species and noxious weeds will be removed, as required, from planting areas mechanically and/or with limited herbicide. Old field successional species will be retained.
- Plants shall be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.
- Dead branches will be pruned from plantings.

### Guarantee Requirements

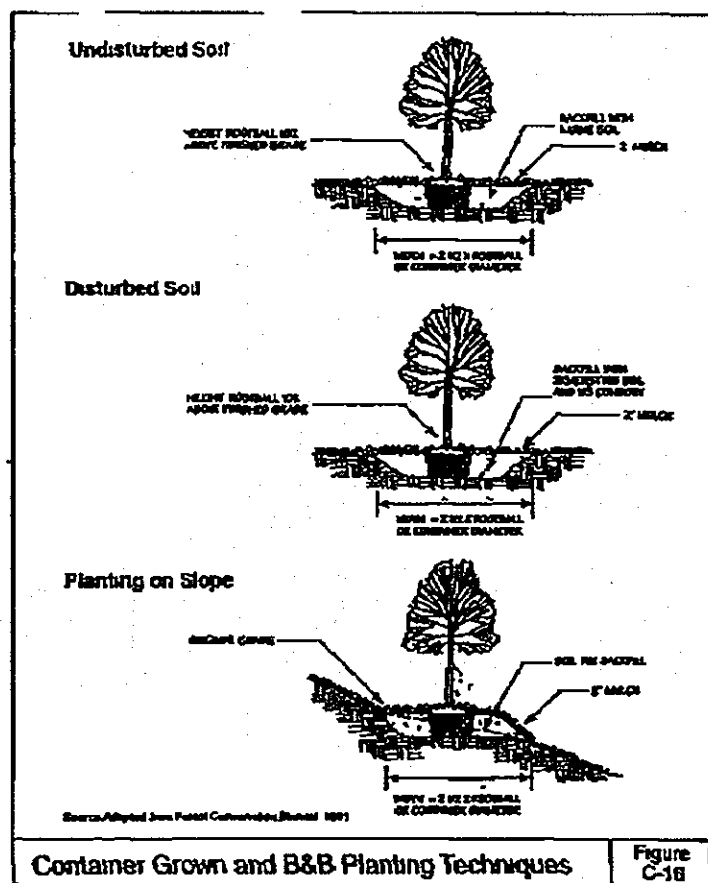
- A 90 percent survival rate of the reforestation plantings will be required after one growing season. All plant material below the 90 percent survival threshold will be replaced at the beginning of the second growing season. At the end of the second growing season, a 75 percent survival rate will be required. All plant material below the 75 percent survival threshold will be replaced by the beginning of the next growing season.

### Education of New Occupants

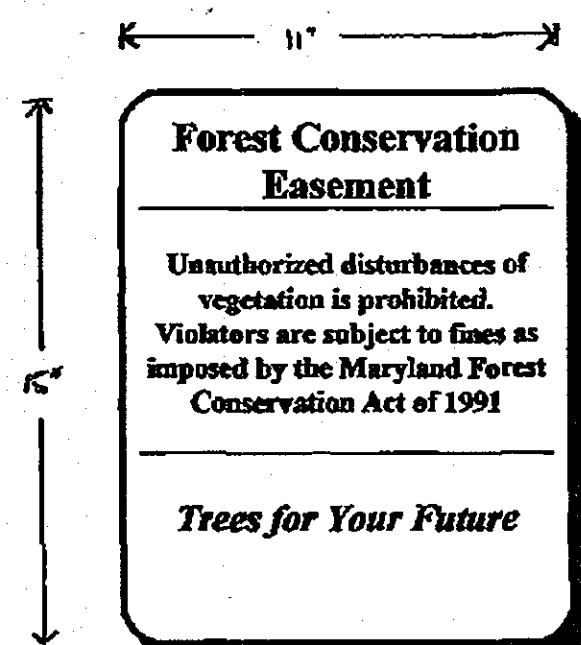
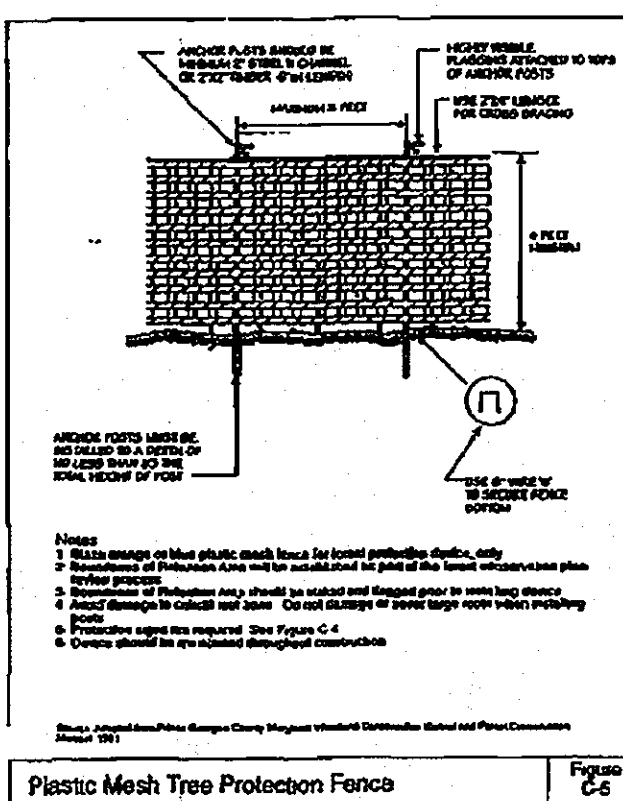
- The developer shall provide educational information to all property owners within the new development/home about the proper use of forest conservation areas.

### Final Inspection and Release of Obligations

- At the end of the post-construction management and protection period the developer shall submit a certification to the County that all forest conservation areas have remained intact or have been restored to appropriate condition, that the stipulated survival rates have been achieved, and that any permanent protection measures required by the plan are in place. Upon review and acceptance, the County will inform the developer of their release the development of future obligations related to the Forest Conservation Act.



Container Grown and B&B Planting Techniques Figure C-18



## REFORESTATION PLAN

The retention/reforestation areas shown hereon will be placed into a Forest Conservation Easement.

### A. Planting Plan and Methods

Plant species selection was based on our knowledge regarding plant communities in Maryland's Piedmont Plateau and information provided in the soil survey on typical vegetation for the soil type on the planting site. Species selection was also based on our knowledge of plant availability in the nursery industry.

Reforestation will be accomplished through a mixed planting of whips and branched transplants. Container grown stock is recommended but bare-root stock may be used to help control reforestation costs. If bare-root stock is used the root systems of all plants will be dipped in an anti-desiccant gel prior to planting to improve moisture retention in the root systems.

Prior to planting the proposed Forest Conservation Easements all multiflora rose in the planting area shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained whenever possible. Herbicide treatments shall occur on 2 month intervals during the first growing season and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturers specifications. Care should be taken not to spray planted trees or naturally occurring native brush/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.

### B. Planting and Soil Specifications

Plant material will be installed in accordance with the Planting Detail and Planting Specifications shown on the Forest Conservation Plan.

Amendments to existing soil will be in accordance with the Planting Specifications shown on the Forest Conservation Plan. Soil disturbance will be limited to individual planting locations.

### C. Storage Facilities/Equipment Cleaning

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas outside of the proposed Forest Conservation Easement. Cleaning of equipment will be limited to area within the LOD of the proposed homesites. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into environmentally sensitive areas.

### D. Sequence of Construction

The following timetable represents the proposed timetable for development. The items outlined in the Forest Conservation Plan will be enacted within two (2) years of subdivision approval.

Below find a proposed sequence of construction.

- Install all signage and sediment control devices.
- Hold pre-construction meeting between developer, contractor and County inspector.
- Build access roads, install well and septic systems, and construct houses. Stabilize all disturbed areas accordingly.
- Begin multiflora rose removal. Install permanent protective signage for Easements and initiate plantings in accordance with Forest Conservation Plan. Plantings will be completed within two (2) years of subdivision approval.
- Remove sediment control.
- Hold post-construction meeting with County inspectors to assure compliance with FCP. Submit Certification of Installation.
- Monitor and maintain plantings for 2 years.

### E. Construction Monitoring

Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan.

### F. Post-Construction Meeting

Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that plantings have been installed.

### D. Guarantee Requirements

A 90 percent survival rate of the reforestation plantings will be required after one growing season. All plant material below the 90 percent survival threshold will be replaced at the beginning of the second growing season. At the end of the second growing season, a 75 percent survival rate will be required. All plant material below the 75 percent survival threshold will be replaced by the beginning of the next growing season.

### E. Security for Reforestation

Section 16-1209 of the Howard County Forest Conservation Act requires that a developer shall post a security (bond, letter of credit, etc.) with the County to insure that all work is done in accordance with the FCP. Security is not required for County Capital Projects.

## CONSTRUCTION PERIOD PROTECTION PROGRAM

### A. Forest Protection Techniques

#### 1. Soil Protection Area (Critical Root Zone)

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface. Temporary fencing shall be placed around the critical root zone of the forest in areas where the forest limits occur within 25 feet of the limit of disturbance.

#### 2. Fencing and Signage

Existing forest limits occurring within 25 feet of the limits of disturbance shall be protected using temporary protective fencing. Permanent signage shall be placed around the reforestation area prior to plant installation, as shown on the plan.

### B. Pre-Construction Meeting

Upon staking of limits of disturbance a pre-construction meeting will be held between the developer, contractor and appropriate County inspector. The purpose of the meeting will be to verify that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

## POST-CONSTRUCTION MANAGEMENT PLAN

Howard County requires a two year post-construction management plan be prepared as part of the forest conservation plan. The plan goes into effect upon acceptance of the construction certification of completion by the County. Eco-Science Professionals, or another qualified professional designated by the developer, will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan:

### A. Fencing and Signage

Permanent signage indicating the limits of the retention/reforestation area shall be maintained.

### B. General Site Inspections/Maintenance of Plantings

Site inspections will be performed a minimum of three times during the growing season. The purpose of the inspections will be to assess the health of the reforestation plantings. Appropriate measures will be taken to rectify any problems which may arise.

In addition, maintenance of the reforestation plantings will involve the following steps:

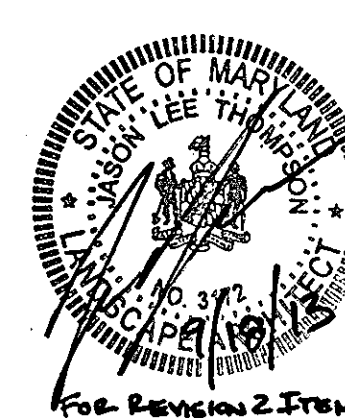
- Watering - All plant material shall be watered twice a month during the 1st growing season, more or less frequently depending on weather conditions. During the second growing season, once a month during May-September, if needed.
- Removal of invasive exotics and noxious weeds. Old field successional species will be retained.
- Identification of serious plant pests and diseases, treatment with appropriate agent.
- Pruning of dead branches.
- After 12 and 24 months, replacement of plants, if required, in accordance with the Guarantee Requirements shown on the FCP.

### C. Education

The developer will provide appropriate materials to property owners informing them of the location and purpose of the reforestation area. Materials may include site plans and information explaining the intent of the forest conservation law.

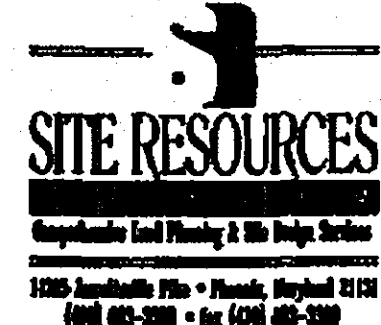
### D. Final Inspection

At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/reforestation/forestation requirements have been met.



Eco-Science Professionals, Inc.  
 Consulting Ecologists  
 P.O. Box 2024 Glen Arden, Maryland 21117  
 Telephone: (410) 832-3480 Fax: (410) 832-2488

MD DNR Qualified Professional  
 USACE/USFWS Qualified Professional  
 Certification # WD02P31M0261004482  
 John F. Chastain



DES:	DRN:	GJK:	DATE:	BY:	NO.:	REVISION:	DATE:
KFR	CMF	AFE	07/14/10				

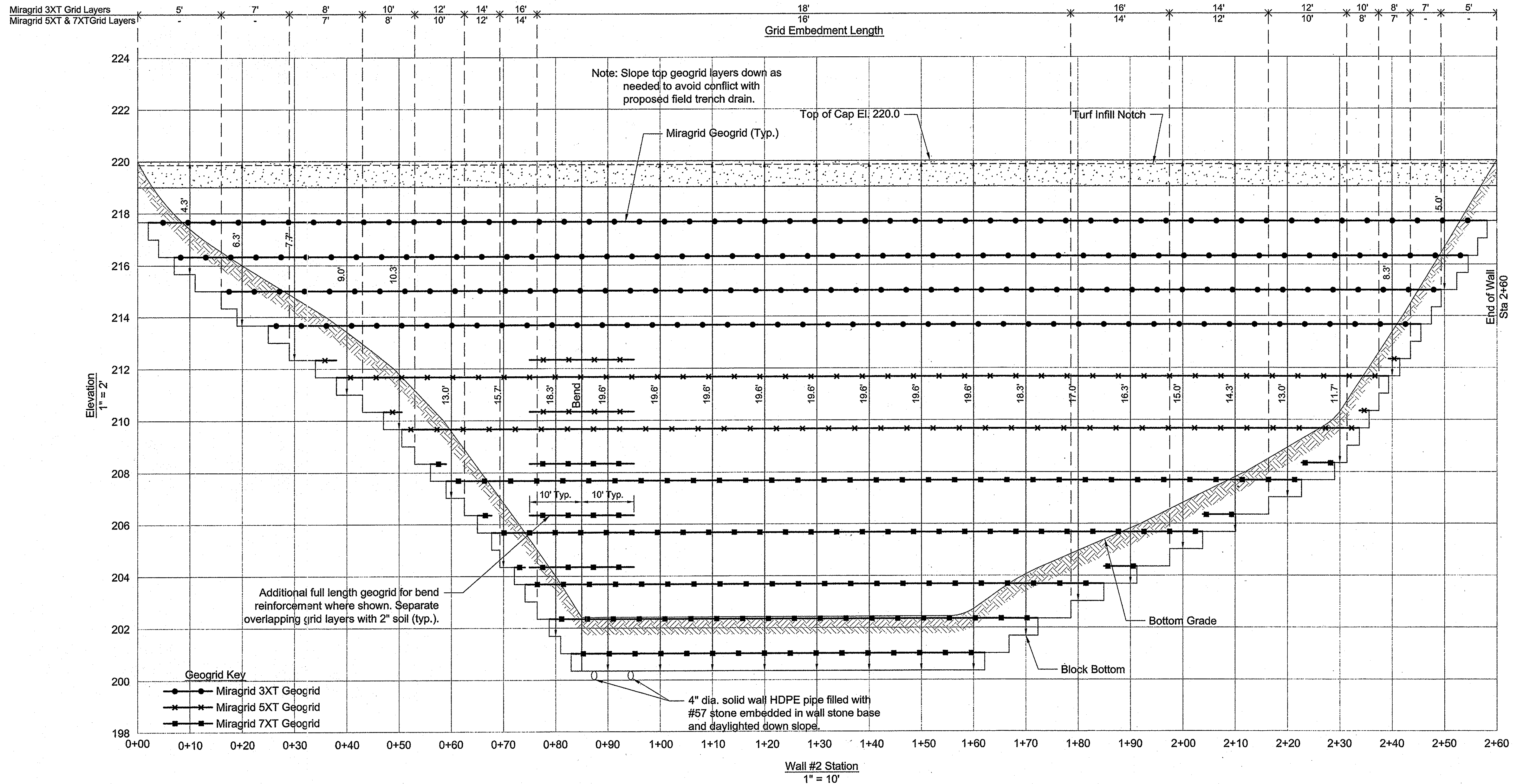
Revised per County Consent  
 REMOVE REFORESTATION PLANT SCHEDULES  
 2/18/13

FINAL FOREST CONSERVATION PLAN & NOTES AND DETAILS  
 SCALE: AS SHOWN  
 TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22  
 FCI.03  
 SHEET 03 OF 04  
 CAPITAL PROJECT NO. N-2451  
 HOWARD COUNTY, MARYLAND  
 SDP-11-003

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Director: [Signature]  
 Date: 10/13/13  
 Chief, Development Engineering Division: [Signature]  
 Date: 10/13/13  
 Chief, Division of Land Development: [Signature]  
 Date: 10/13/13

ADDRESS / PERMIT INFORMATION  
 PARCEL 456A, ADDRESS: 6500 MANSON DRIVE  
 L5T1/F 4H, GRID NO 16, ZONE: M4, TAX MAP NO 31  
 3RD ELECTION DISTRICT, GENESIS TRACT 6012  
 WATER CODE 400, SEWER CODE: 252200  
 OWNER: HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 3430 COURTHOUSE DRIVE, ELLICOTT CITY, MARYLAND 21043  
 PHONE (410) 319-2100

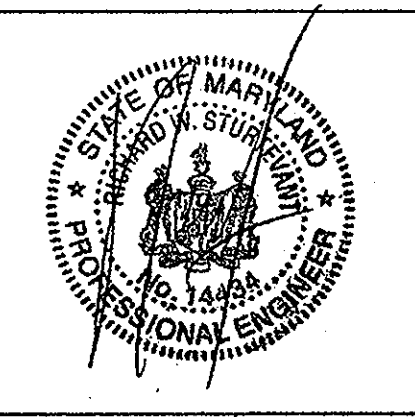




Note:  
Field survey location of wall to align with field geometric lay-out per project plans.

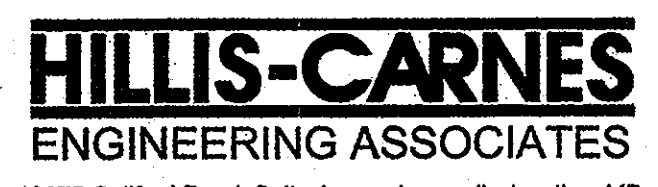
WALL #2 ELEVATION

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434, EXPIRATION DATE: 05/13/15.



APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Wanda M. Leight* 10/9/13  
 DIRECTOR  
*Michael J. Deane* 10/9/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION &  
 CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
 PARCEL 261, 345, 342, 336, 190, 185, 155 LOT A-21, 135 LOT A-22  
 ADDRESS: 6455 MANSION LANE  
 L577 / F.414, L. 10585 / F.357, L. 12205 / F.380, L.5783 / F.600,  
 L.5341 / F.78, L.1233 / F.437, L.6163 / F.690, L.6135 / F.690  
 GRID T7 & 15, ZONE: M-1, TAX MAP NO. 37  
 2nd ELECTION DISTRICT, CENSUS TRACT 6012.02  
 WATER CODE: 400, SEWER CODE: 2152200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 313-2700  
 DEVELOPER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21046  
 PHONE (410) 313-2700



10975 Guilford Road, Suite A Annapolis Junction, MD  
 (410) 880-4788 Fax: (410) 880-4098

DES:	HM			
DRN:	HM			
CHK:	RWS			
DATE:	06/27/13			
BY:	NO.	REVISION	DATE	

600' SCALE MAP NO. 51 BLOCK NO. 16

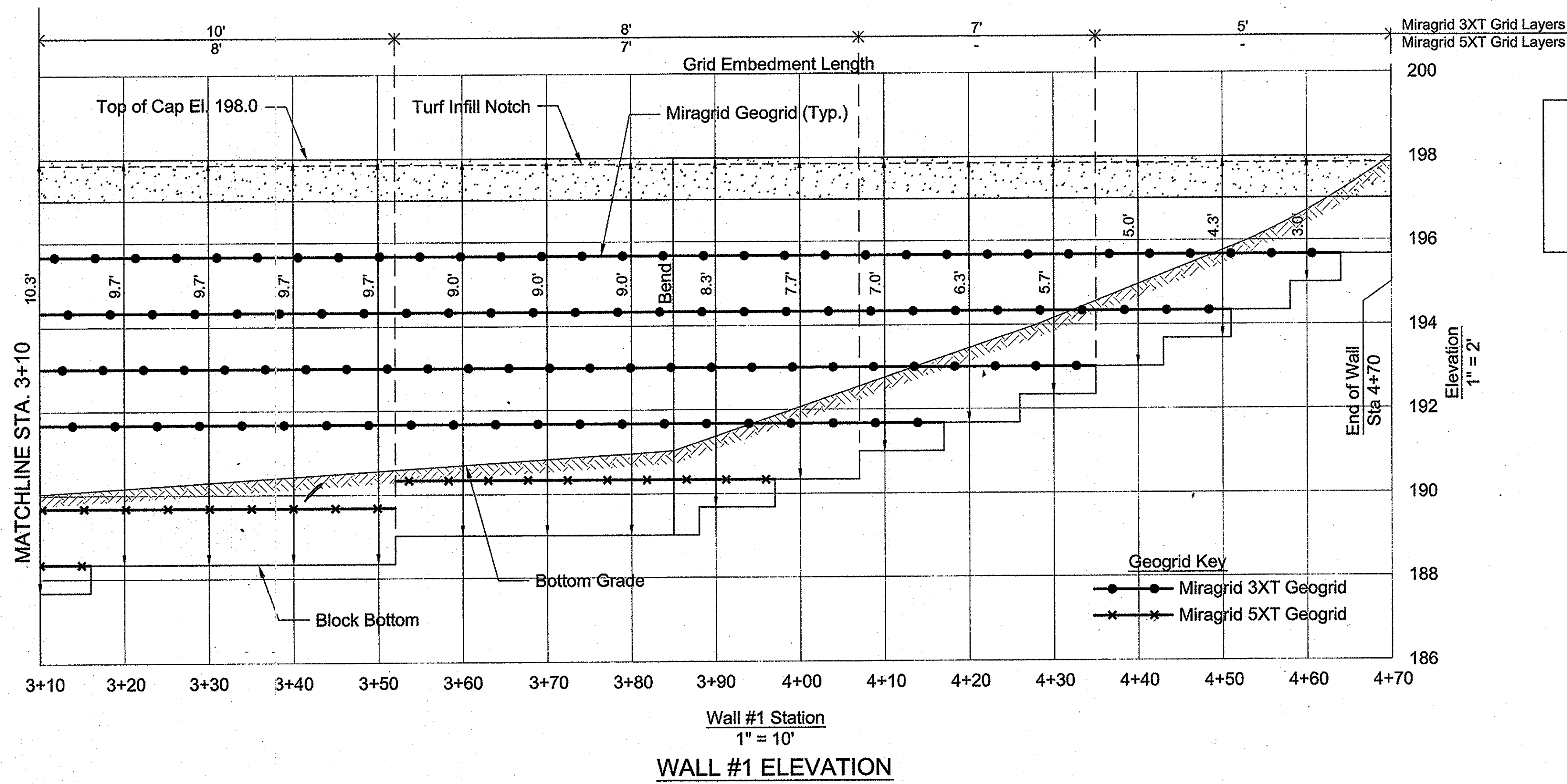
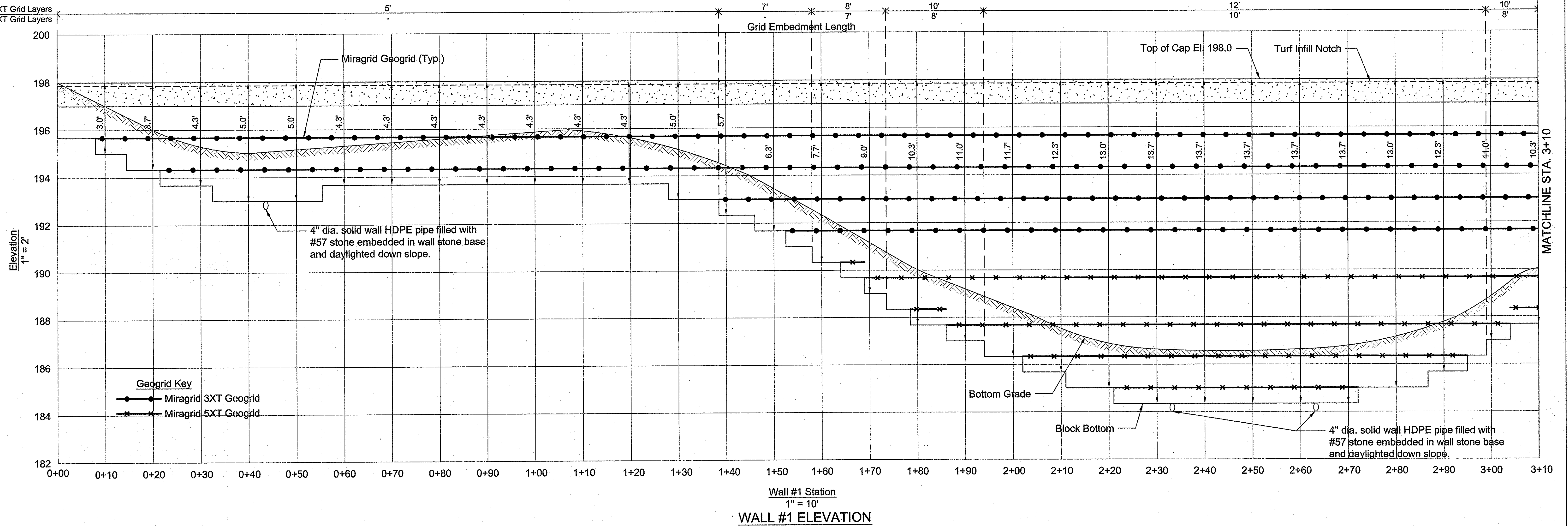
RETAINING WALL #2 ELEVATION  
 TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE III PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3857 HCEA PROJECT NO. 13279-A HOWARD COUNTY, MARYLAND

S1.03  
 SHEET  
 64c of 64



Miragrid 3XT Grid Layers  
Miragrid 5XT Grid Layers



Note:  
Field survey location of wall to align with  
field geometric lay-out per project plans.

APPROVED: DEPARTMENT OF PLANNING & ZONING  
*Wanda McLaughlin* 10/19/15  
DIRECTOR  
*West* 10/21/15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*West* 10/21/15  
CHIEF, DIVISION OF LAND DEVELOPMENT

ADDRESS / PERMIT INFORMATION  
PARCEL 961, 245, 342, 355, 195, 195, 195 LOT A-21, 135 LOT A-22  
ADDRESS: 9410 MANSION LANE  
L377 / F414, L10585 / F3357, L12225 / F3360, L5763 / F600,  
L5241 / F778, L4933 / F437, L16153 / F650, L6158 / F650  
GRID 17 & 18, ZONE: M-1, TAX MAP NO. 33  
2ND ELECTION DISTRICT, CENSUS TRACT 6012.02  
WATER CODE: 400, SEWER CODE: 2152200  
OWNER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
7120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 313-2700  
DEVELOPER:  
HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
7120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21046  
PHONE (410) 313-2700

**HILLIS-CARNES**  
ENGINEERING ASSOCIATES

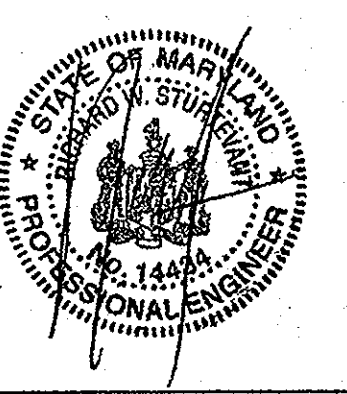
10975 Guilford Road, Suite A Annapolis Junction, MD  
(410) 880-4788 Fax: (410) 880-4098

DES: HM					
DRN: HM					
CHK: RWS					
DATE: 06/27/13	BY	NO.	REVISION	DATE	

600' SCALE MAP NO. 51 BLOCK NO. 16

**RETAINING WALL #1 ELEVATION**  
**TROY PARK - PHASE ONE**  
PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3957 HCEA PROJECT NO. 13279-A HOWARD COUNTY, MARYLAND



S1.02  
SHEET  
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# SPECIFICATIONS

## KEYSTONE MODULAR CONCRETE BLOCK RETAINING WALL

### PART 1: GENERAL

- 1.01 Description**  
**A.** Work shall consist of furnishing and construction of a KEYSTONE Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.  
**B.** Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.  
**C.** Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

### 1.02 Delivery, Storage and Handling

- A.** Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.  
**B.** Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

### PART 2: PRODUCTS

#### 2.01 Modular Concrete Retaining Wall Units

- A.** Modular concrete units shall conform to the following architectural requirements:  
 face color - concrete gray - standard manufacturer's color may be specified by the Owner.  
 face finish - sculptured rock face in angular tri-planer configuration. Other face finishes will not be allowed without written approval of Owner.  
 bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.  
 exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.  
**B.** Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.  
**C.** Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:  
 compressive strength = 3000 psi minimum;  
 absorption = 8 % maximum (6% in northern states) for standard weight aggregates;  
 dimensional tolerances = ± 1/8" from nominal unit dimensions not including rough split face, ± 1/16" unit height - top and bottom planes;  
 unit size - 8" (H) x 18" (W) x 12" (D) minimum;  
 unit weight - 75 lbs/unit minimum for standard weight

- aggregates;  
 inter-unit shear strength - 1000 pif minimum at 2 psi normal pressure;  
 geogrid/unit peak connection strength - 1000 pif minimum at 2 psi normal force.  
**D.** at 2 psi normal force.  
 Modular concrete units shall conform to the following constructability requirements:  
 vertical setback = near vertical;  
 alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;  
 maximum horizontal gap between erected units shall be - 1/2 inch.

#### 2.02 Shear Connectors

- A.** Shear connectors shall be 1/2 inch diameter thermoset isophthalic polyester resin-primed fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 103 degrees F.  
**B.** Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

#### 2.03 Base Leveling Pad Material

- A.** Material shall consist of a compacted #57 crushed stone base as shown or the construction drawings.

#### 2.04 Unit Drainage Fill

- A.** Unit drainage fill shall consist of #57 crushed stone

#### 2.05 Geogrid Reinforced Backfill

- A.** Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:
- | Sieve Size | Percent Passing |
|------------|-----------------|
| 2 inch     | 100-75          |
| 3/4 inch   | 100-75          |
| No. 40     | 0-60            |
| No. 200    | 0-35            |
- Plasticity Index (PI) <10 and Liquid Limit <40 per ASTM D-4318.  
**B.** requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

#### 2.06 Geogrid Soil Reinforcement

- A.** Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.

#### 2.07 Drainage Pipe

- A.** The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

### PART 3 EXECUTION

#### 3.01 Excavation

- A.** Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

#### 3.02 Base Leveling Pad

- A.** Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 12 inches and extend laterally a minimum of 12" in front and behind the modular wall unit.  
**B.** Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

#### 3.03 Modular Unit Installation

- A.** First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.  
**B.** Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.  
**C.** Install shear/connecting devices per manufacturer's recommendations.  
**D.** Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.  
**E.** Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

#### 3.04 Structural Geogrid Installation

- A.** Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.  
**B.** Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.  
**C.** The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to

- backfill placement on the geogrid.  
**D.** Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

#### 3.05 Reinforced Backfill Placement

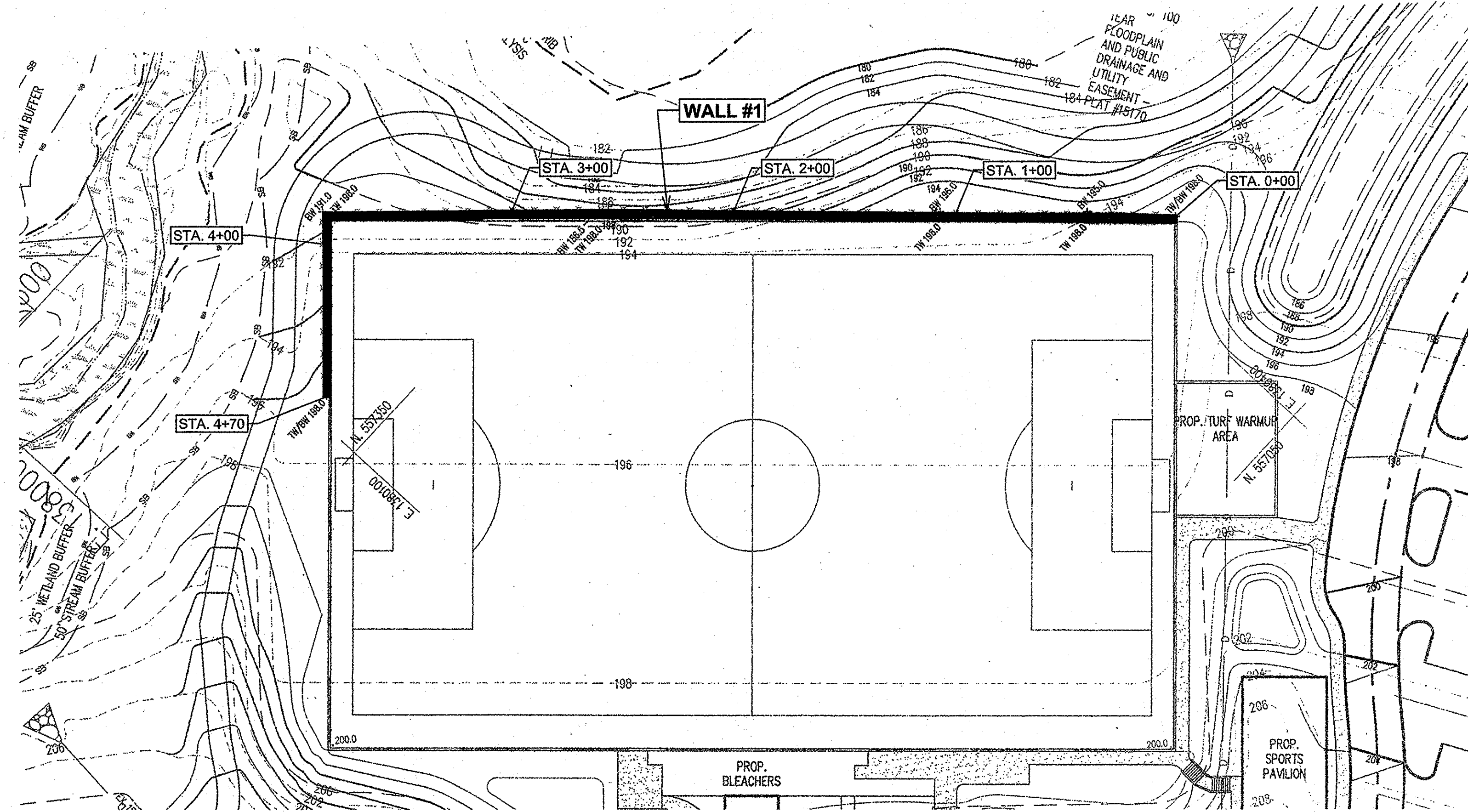
- A.** Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.  
**B.** Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8-10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.  
**C.** Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.  
**D.** Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.  
**E.** Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.  
**F.** Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.  
**G.** At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

#### 3.06 Cap Installation

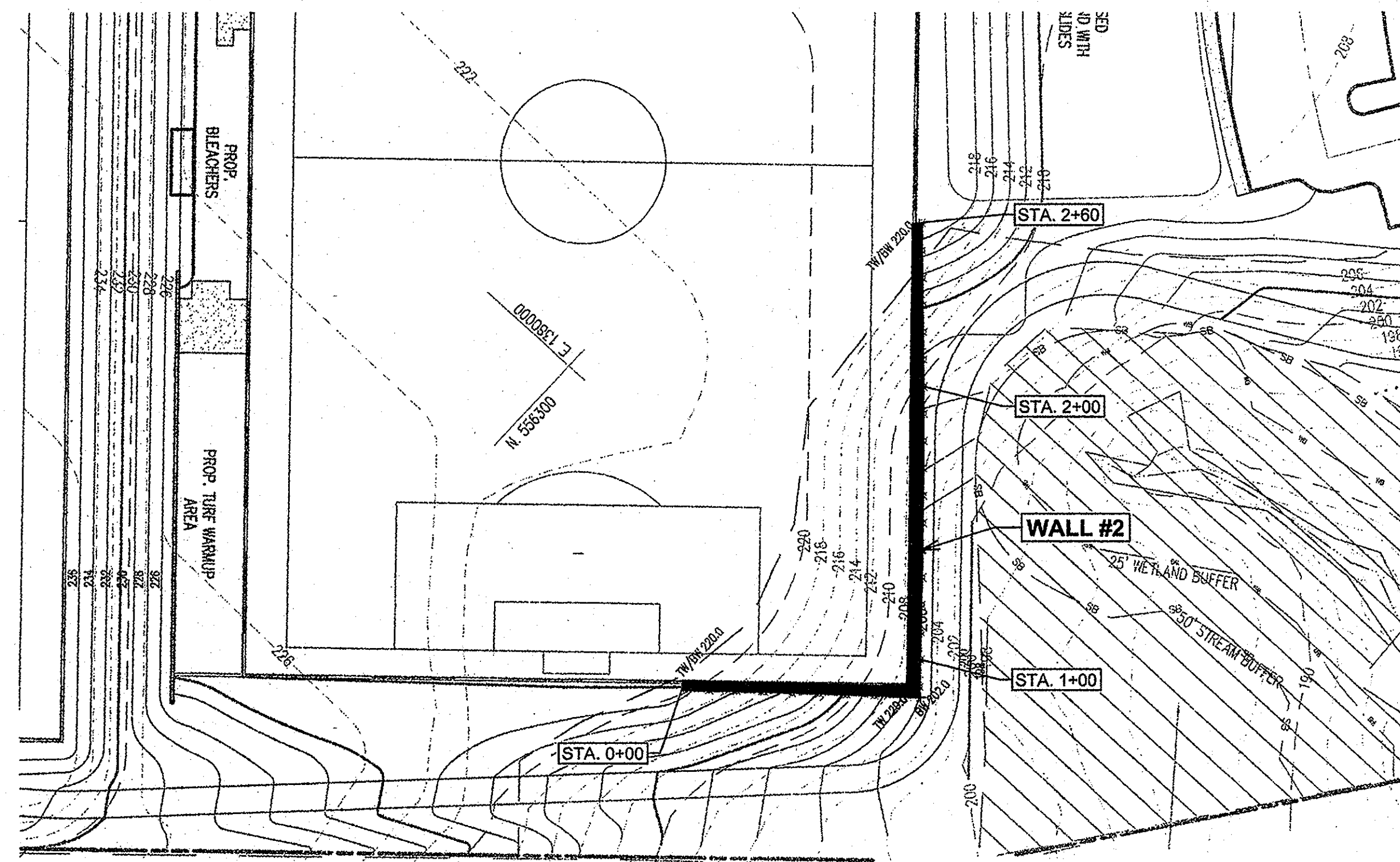
- A.** Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

#### 3.07 Field Quality Control

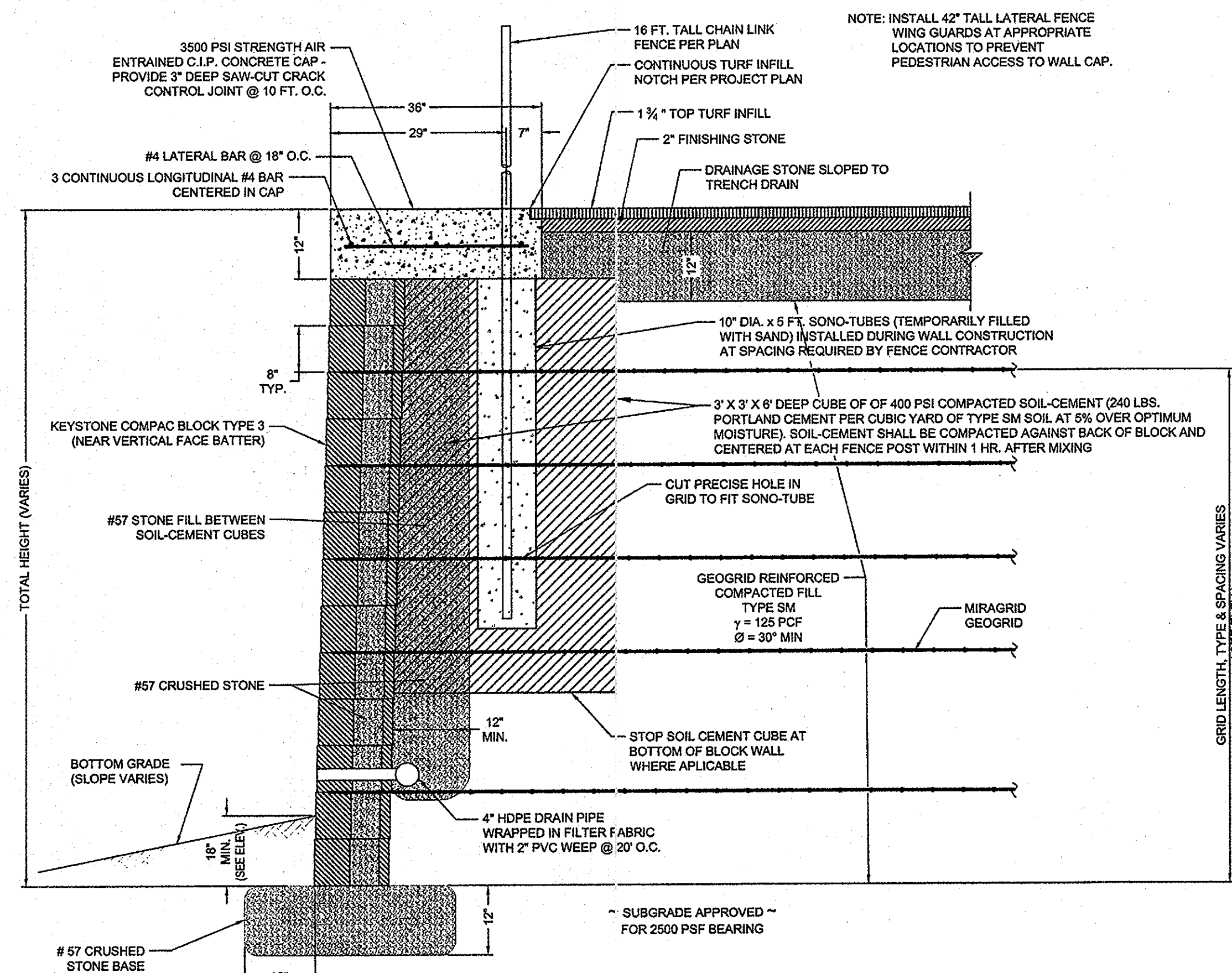
- A.** The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.  
**B.** As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.



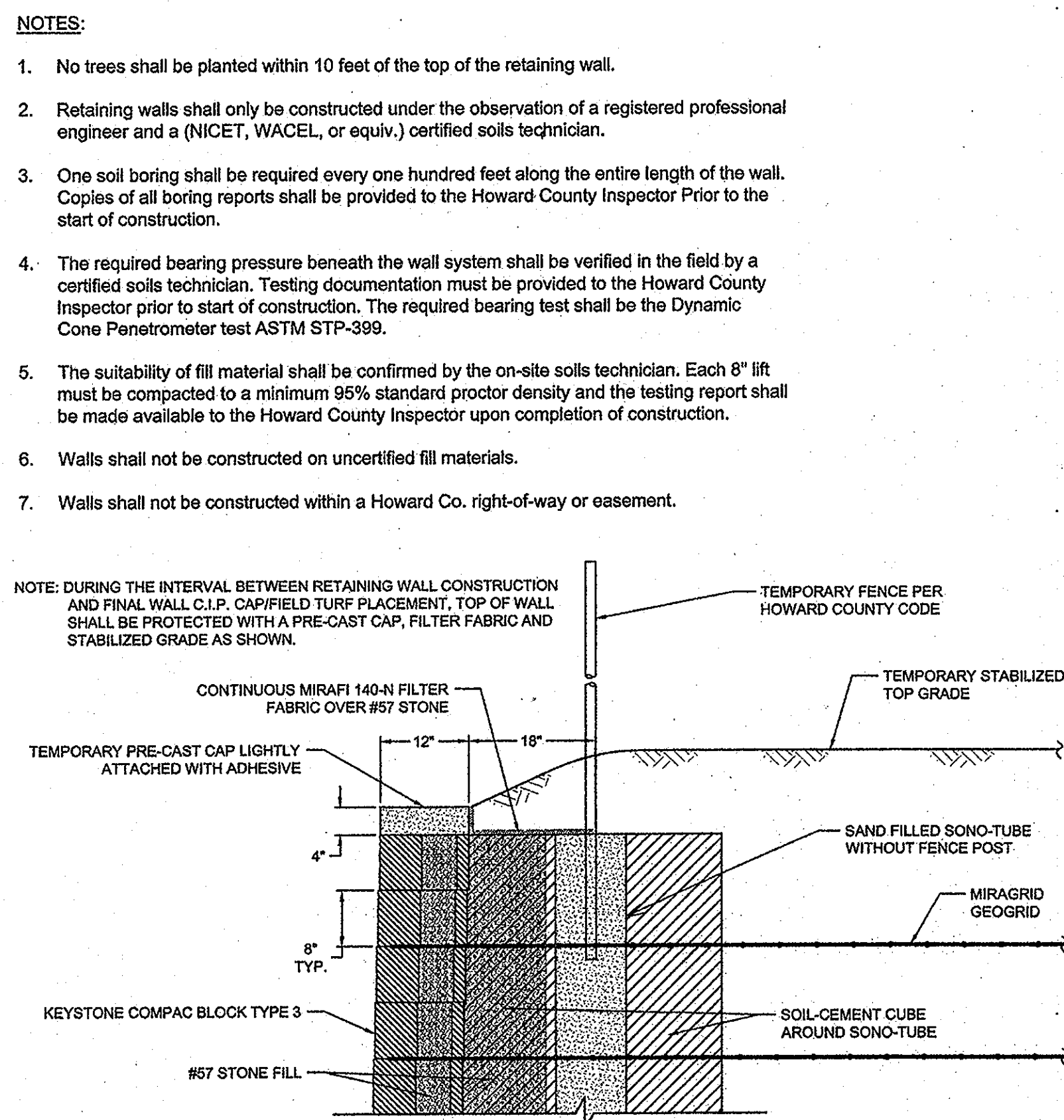
WALL #1 LOCATION PLAN  
1" = 40'



WALL #2 LOCATION PLAN  
1" = 40'



TYPICAL WALL SECTION  
N.T.S.



TEMPORARY TOP WALL SECTION  
N.T.S.

- NOTES:**
- No trees shall be planted within 10 feet of the top of the retaining wall.
  - Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
  - One soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
  - The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
  - The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
  - Walls shall not be constructed on uncertified fill materials.
  - Walls shall not be constructed within a Howard Co. right-of-way or easement.

- NOTE:** DURING THE INTERVAL BETWEEN RETAINING WALL CONSTRUCTION AND FINAL WALL C.I.P. CAP/FIELD TURF PLACEMENT, TOP OF WALL SHALL BE PROTECTED WITH A PRE-CAST CAP, FILTER FABRIC AND STABILIZED GRADE AS SHOWN.
- TEMPORARY FENCE PER HOWARD COUNTY CODE
  - TEMPORARY STABILIZED TOP GRADE
  - CONTINUOUS MIRAFI 140-N FILTER FABRIC OVER #57 STONE
  - TEMPORARY PRE-CAST CAP LIGHTLY ATTACHED WITH ADHESIVE
  - SAND FILLED SONO-TUBE WITHOUT FENCE POST
  - MIRAFI GEOTEXTILE
  - KEYSTONE COMPAC BLOCK TYPE 3
  - #57 STONE FILL
  - SOIL-CEMENT CUBE AROUND SONO-TUBE

APPROVED: DEPARTMENT OF PLANNING & ZONING

*Mark A. Coyle*  
 DIRECTOR  
 DATE: 10/13/13  
*Kevin J. ...*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 10/13/13

ADDRESS / PERMIT INFORMATION  
 PARCEL: 184, 318, 342, 336, 185, 133, 107 A-21, 135 LOT A-22  
 ADDRESS: 8451 MANSION LANE  
 L577 / F.414, L1058 / F.337, L12205 / F.290, L6783 / F.600,  
 L584 / F.78, L1093 / F.437, L18153 / F.690, L6155 / F.600  
 GRID 17 & 18, ZONE: M-1, TAX MAP NO. 37  
 2ND ELECTION DISTRICT, CENSUS TRACT 8012.02  
 WATER CODE: 400, SEWER CODE: 2192200  
 OWNER:  
 HOWARD COUNTY MARYLAND DEPARTMENT OF RECREATION AND PARKS  
 7120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21048  
 PHONE (410) 3-2-2700  
 DEVELOPER:  
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 7120 OAKLAND MILLS ROAD, COLUMBIA, MARYLAND 21048  
 PHONE (410) 3-2-2700

**HILLIS-CARNES**  
 ENGINEERING ASSOCIATES

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 (410) 880-4788 Fax: (410) 880-4098

DES: HM					
DRN: HM					
CHK: RWS					
DATE: 06/27/13	BY	NO.	REVISION	DATE	600' SCALE MAP NO. 51 BLOCK NO. 16

## RETAINING WALL CONSTRUCTION DETAILS

TROY PARK - PHASE ONE  
 PART OF TROY HILL CORPORATE CENTER PHASE IIB PARCELS A-21 AND A-22

CAPITAL PROJECT NO. N-3957 HCEA PROJECT NO. 13279-A HOWARD COUNTY, MARYLAND

S1.01  
 SHEET 64a of 64



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE  
 PREPARED OR APPROVED BY ME, AND THAT I AM A  
 DULY LICENSED PROFESSIONAL ENGINEER UNDER  
 THE LAWS OF THE STATE OF MARYLAND, LICENSE  
 NO. 14434, EXPIRATION DATE: 05/13/15.