N 524,999.357 E 1,357.925.680

1. ALL CONSTRUCTION PLANS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSH

3. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1 (800) 257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.

HOWARD COUNTY BUREAU OF UTILITIES....

4. SITE ANALYSIS: TOTAL BUILDINGS COVERAGE ON SITE - 18.860 S.F. OR 0.43 AC, OR 17.14% OF GROSS AREA AREA OF LANDSCAPE - 1.00 AC (46610 S.F.) LIMIT OF DISTURBANCE - 1.90 AC.

LOCATION - HOWARD COUNTY, MARYLAND TAX MAP 50, BLOCK 4, PARCEL 488, PLOT 6589 ZONING - B-2, RECORDED PLAT #6589 SITE AREA - 2.509 ACRES

6. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (41

11. ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES

13, ALL STORM DRAIN PIPE BEDDING TO BE CLASS 'C' AS SHOWN IN VOLUME I OF THE HOWARD COUNTY DESIGN MANUAL

14. UNDERGROUND STORMWATER MANAGEMENT PROVIDED WITH THIS PLAN IS OWNED AND MAINTAINED BY DAYS INN HOTEL.

15. COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENTS 50BA AND 50B5.

16. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

17. EXISTING TOPOGRAPHY IS FROM A TOPOGRAPHIC SURVEY PERFORMED BY EBA ENGINEERINGRPOSE OF COOD. IN NOVEMBER, 2002.

18. WATER FOR THIS PROJECT IS PUBLIC. EXISTING 2" WATER CONNECTION WILL BE UPGRADED TO 6". EXISTING MAIN WATER LINE CONTRACT No.

19. SEWER FOR THIS PROJECT IS PUBLIC. PROPOSED 4" SANITARY WILL BE CONECTED TO EXISTING 6" SANITARY SEWER ALREADY ON SITE. EXISTING 6" SANITARY CONECTED TO EXISTING 8" SANITARY CONTRACT No. H08295176 (OLD SANITARY LINE CONTRACT NO.29-S).

20, ALL PAVING TO BE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER (SEE DETAIL).

21. ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD CONCRETE OR BITUMINOUS (SEE DETAIL, SHEET 4), LIMITS AS SHOWN ON PLAN.

22. PROPOSED PAVING SECTIONS TO BE CONFIRMED BY PROJECT GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

23, PROJECT GEOTECHNICAL ENGINEER TO MONITOR WALL CONSTRUCTION, BACKFILL AND COMPACTION.

24. PROJECT GEOTECHNICAL ENGINEER TO APPROVE PAVING SUBBASE PRIOR TO INSTALLATION OF PAVING SECTION AND SWM CONTROL STRUCTURE.

25. ALL OUTDOOR LIGHTING TO CONFORM TO SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS

26. CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS ROUTES IN ACCORDANCE WITH CURRENT ADA

27. WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.

28. ANY EXISTING TREES DAMAGE OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.

29, ALL 3:1 AND STEEPER SLOPES TO BE STABILIZED WITH SOD. SLOPES FLATTER THAN 3:1 TO BE STABILIZED WITH SEED AND MULCH.

30. THERE ARE NO KNOWN CEMETERIES LOCATED ON THIS SITE.

31. METES AND BOUNDS, ADJACENT PROPERTY INFORMATION PER RECORD PLAT PREPARED BY LESLIE CURTIS HOPKINS, PROPERY LINE SURVEYOR #274 DATED 9-11-85 AND RECORDED AS PLAT #6589; FILE #F-86-52.

32. PARKING REQUIRED: 85 (1 FOR EACH ROOM PER HOWARD COUNTY) PARKING REQUIRED: 91 (1.1 FOR EACH ROOM PER DAYS INN HOTEL) PARKING PROVIDED: 94 HANDICAP SPACES PROVIDED: 5

33. ZONING BOARDING CASE No. 1015M WAS APPROVED BY ZONING BOAR OF HOWARD COUNTY, MARYLAND ON MARCH 27, 2001 IT WAS REQUEST REZONING OF 1.1 ACRES OF THE ENTIRE 2.5 ACRES PARCEL FROM THE R-SC ZONING DISTRICT TO THE B-2 ZONING DISTRICT.

34. APFO HAS BEEN PREPARE BY BRUDIS & ASSOCIATES, INC.

35. NO FLOODPLAIN EXISTS ON SITE.

36. SIGHT DISTANCE ON ROUTE 1 IS IN ACCORDADANCE WITH MDSHA REQUIREMENTS

37. EXISTING 2" WATER METERS ARE LOCATED INSIDE OF EXISTING BUILDINGS. PROPOSED WATER MEETER WILL BE LOCATED INSIDE NEW BUILDING.

38. THIS SITE IS QUALIFIED AS REDEVELOPMENT AND HAS BEEN DESIGNED TO MEET: WATER QUALITY (2 FILTERRA INLETS AND GRASS CHANNEL) RECHARGE VOLUME (STONE UNDER SWM STRUCTURE) WAIVER FOR 36" DIAMETER PIPES AND MASS CENTROID SHIFT TIME HAS BEEN APPROVED BY HOWARD COUNTY

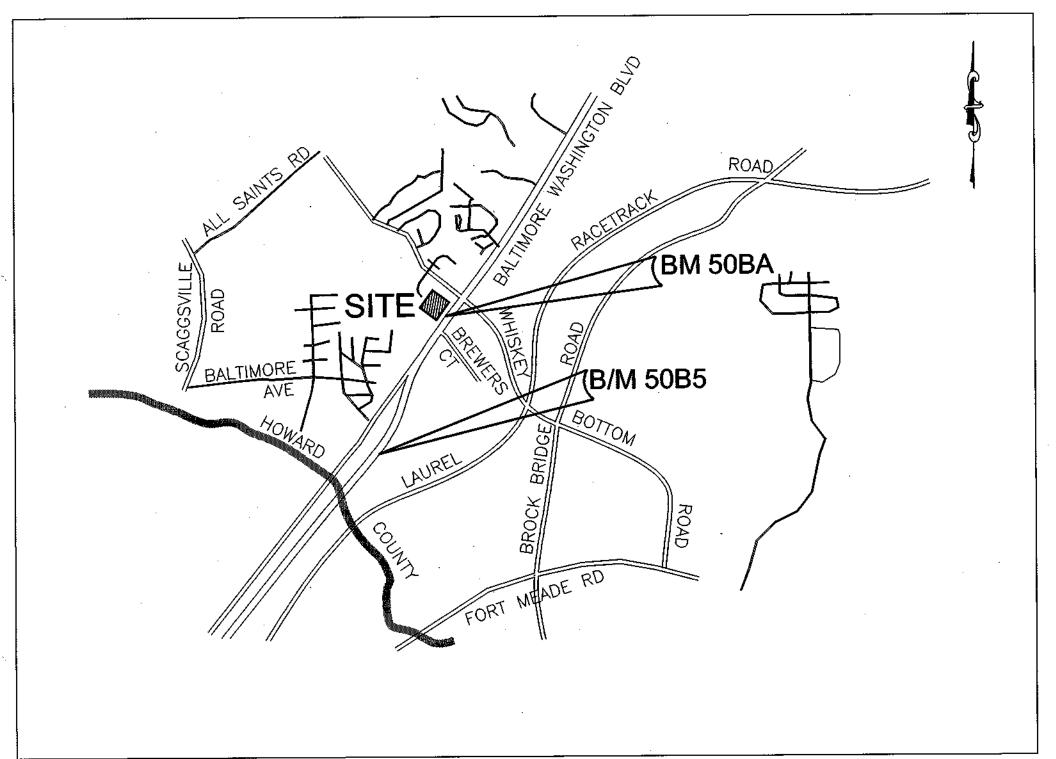
OF THE HOWARD COUNTY CODE. REFER TO SDP-86-42 APPROVED BY PLANNING AND ZONING 2/13/86. THE ENTIRE SITE "PARCEL A" WAS DEVELOPED PRIOR TO DECEMBER 31, 1992 AND ALL PROPOSED WORK IS WITHIN THE LIMITS OF THIS

40. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF

PINDELL PROPERTY, PARCEL A DAYS INN HOTEL

9860 WASHINGTON BLVD. HOWARD COUNTY LAUREL, MARYLAND

SITE DEVELOPMENT PLANS



VICINITY MAP SCALE: 1"=2000'

LEGEND:

LIGHT POLE

TREE LINE SANITARY SEWER MANHOLE STORM DRAIN MANHOLE ---SAN ----- EXISTING SANITARY SANITARY CLEANOUT PROPOSED CONTOURS x EXISTING SPOT ELEVATIONS + PROPOSED SPOT ELEVATIONS △ SURVEY CONTROL PROPOSED WATER

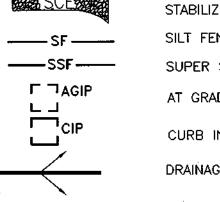
—— SAN —— PROPOSEĎ SANITARY

"The proposed project is exempt from the Forest Conservation requirements under section 16.1202(b) of the Howard County Code. Refer to SDP-86-42 approved by planning and zoning 2/13/86. The entire site 'Parcel A' was developed prior to December 31, 1992 and all proposed work is within the limits of this previously developed Parcel 'A'."

STATE HIGHWAY ADMINISTRATION CONTRACT No. H08295176 U.S. ROUTE 1 FROM BREWERS COURT TO WHISKEY BOTTOM ROAD.

ON GOING COORDINATION WITH MARYLAND

EROSION AND SEDIMENT CONTROL LEGEND:



STABILIZED CONSTRUCTION ENTRANCE SILT FENCE SUPER SILT FENCE

AT GRADE INLET PROTECTION CURB INLET PROTECTION DRAINAGE DIVIDE

FROM HOWARD COUNTY SOIL MAP (SHEET 33,34,31)

"B" SOIL

TABLE OF CONTENTS

SHEET DESCRIPTION **EXISTING CONDITIONS PLAN DEMOLITION PLAN** SITE LAYOUT PLAN SITE GRADING PLAN SITE DETAILS STORMWATER MANAGEMENT PROFILES AND DETAILS STORMWATER MANAGEMENT DETAILS AND SANITATY PROFILE WATER LINE PROFILE **SOIL AND DRAINAGE AREA MAP**

EROSION AND SEDIMENT CONTROL PLAN EROSION AND SEDIMENT CONTROL DETAILS

EROSION AND SEDIMENT CONTROL NOTES

LANDSCAPING DETAILS

MIISCELLANEOUS NOTES MIISCELLANEOUS NOTES LANDSCAPING PLAN



DEBRIS IS TO BE KEPT OUT OF THE PROPOSED SWM FACILITY DURING AND AFTER CONSTRUCTION.

WATER QUALITY STRUCTURE: I-1, I-2, GRASS CHANNEL AND TRIPLE 34 L.F.- 48" ACMP STORMWATER CONTAINMENT FACILITY -TO BE PRIVATELY OWNED AND MAINTAINED.

REVISION OWNER / DEVELOPER: SURESH D. PATEL 9860, WASHINGTON BLVD LAUREL, MARYLAND 20723 APPROVED: STREET ADDRESS

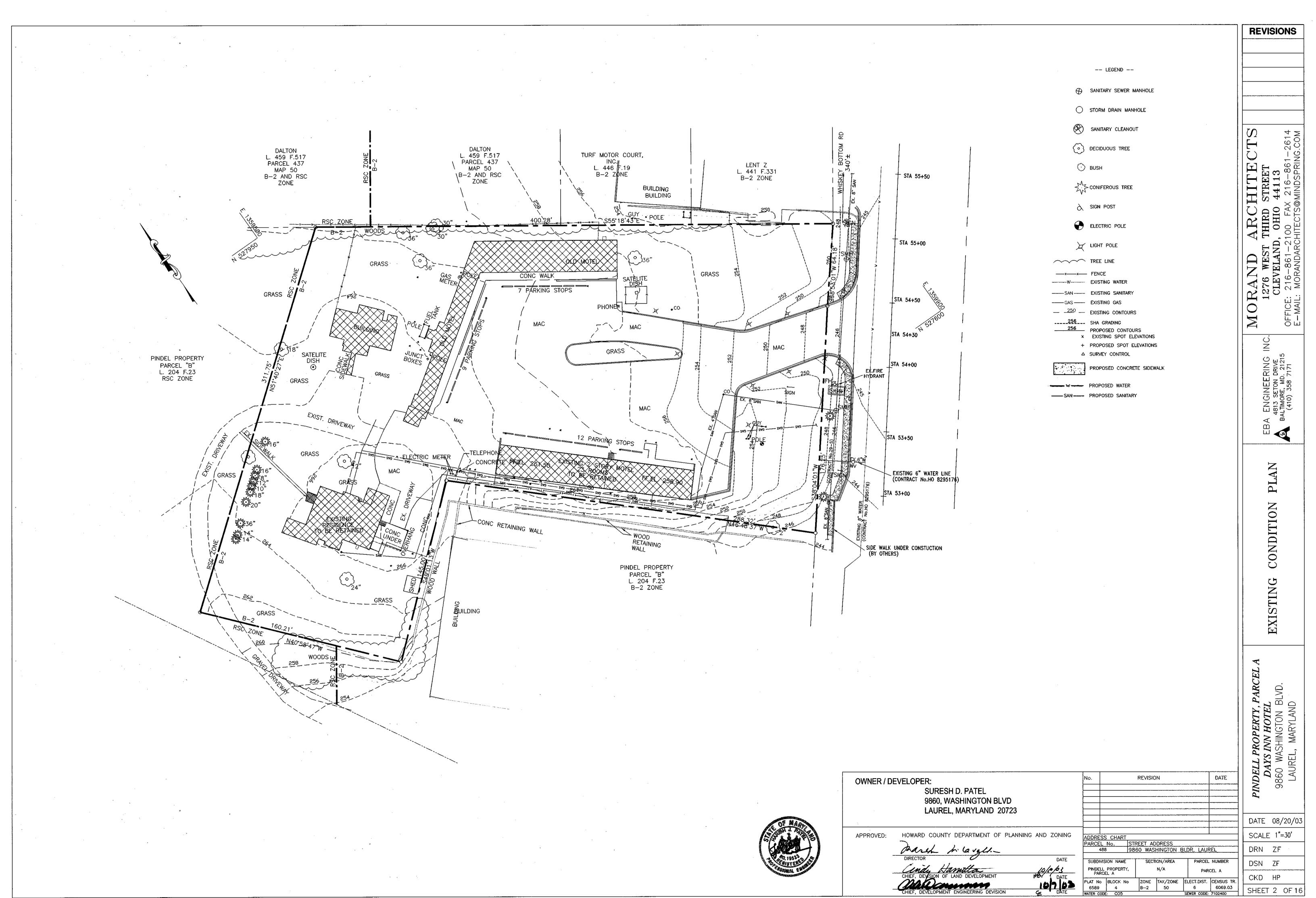
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| Chillowan | 15/7/6 | | T No 589 | BLOCK No | ZONE B-2 | TAX/ZONE 50 | ELECT.DIST. | CENSUS TR. 6069.03 |
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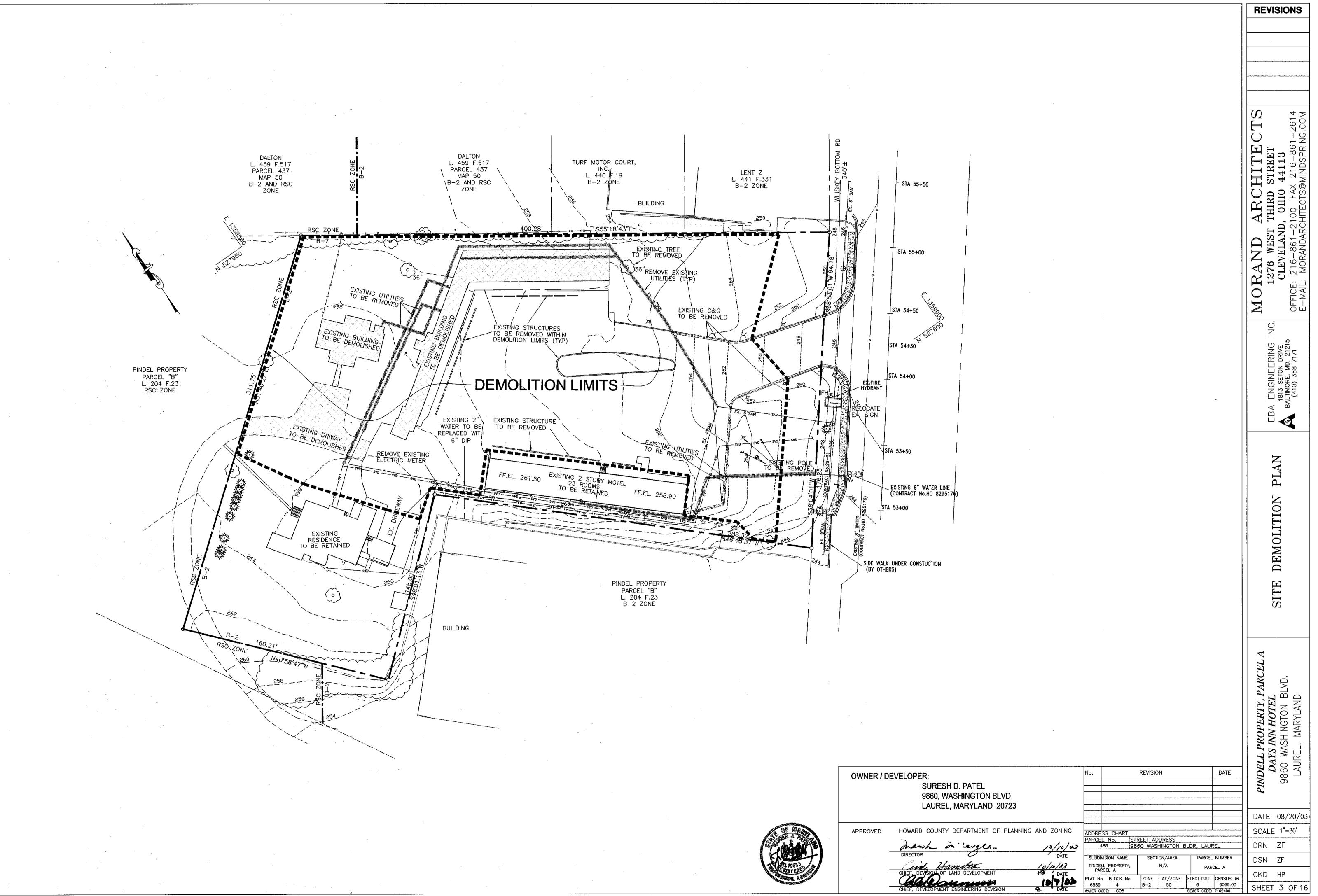
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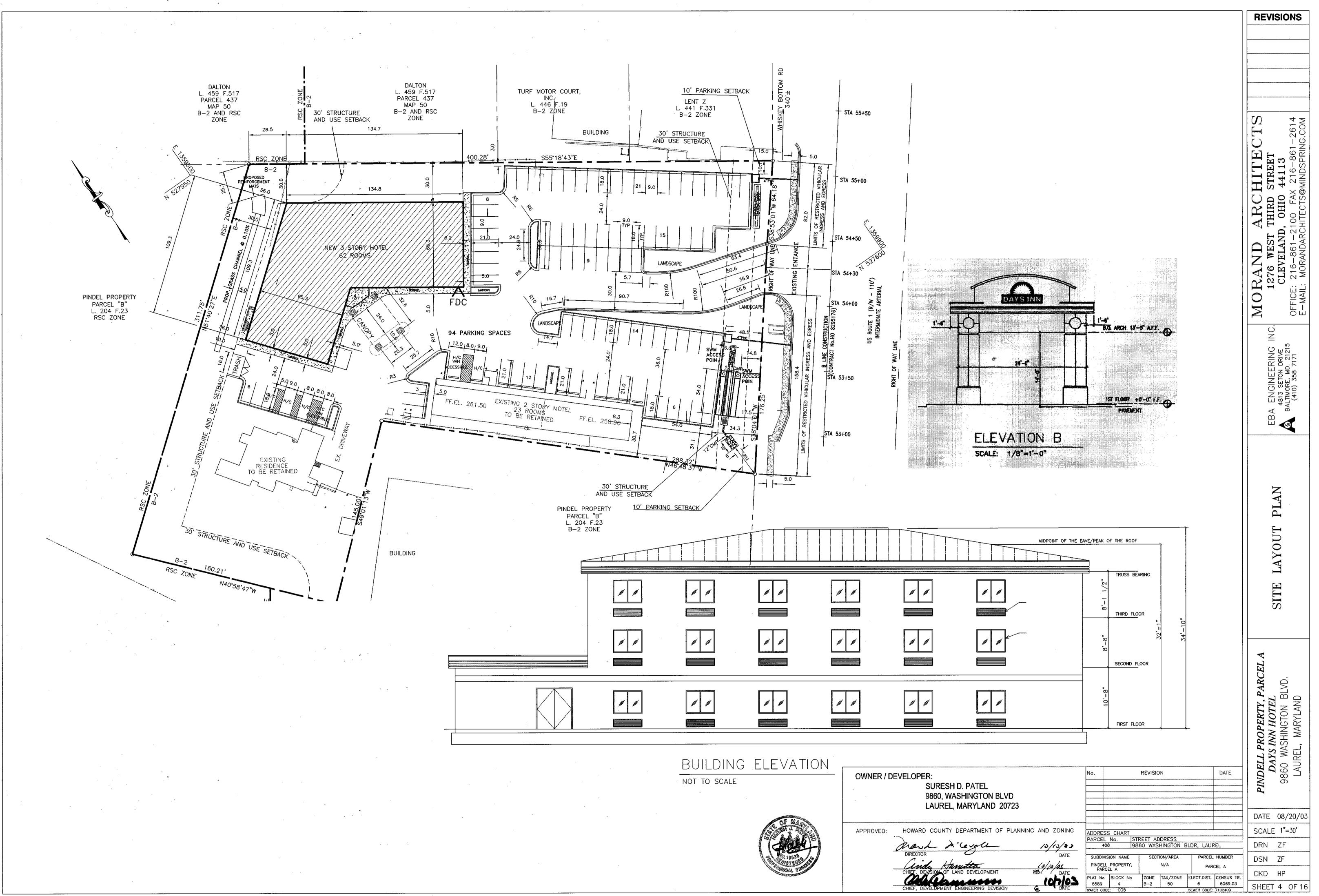
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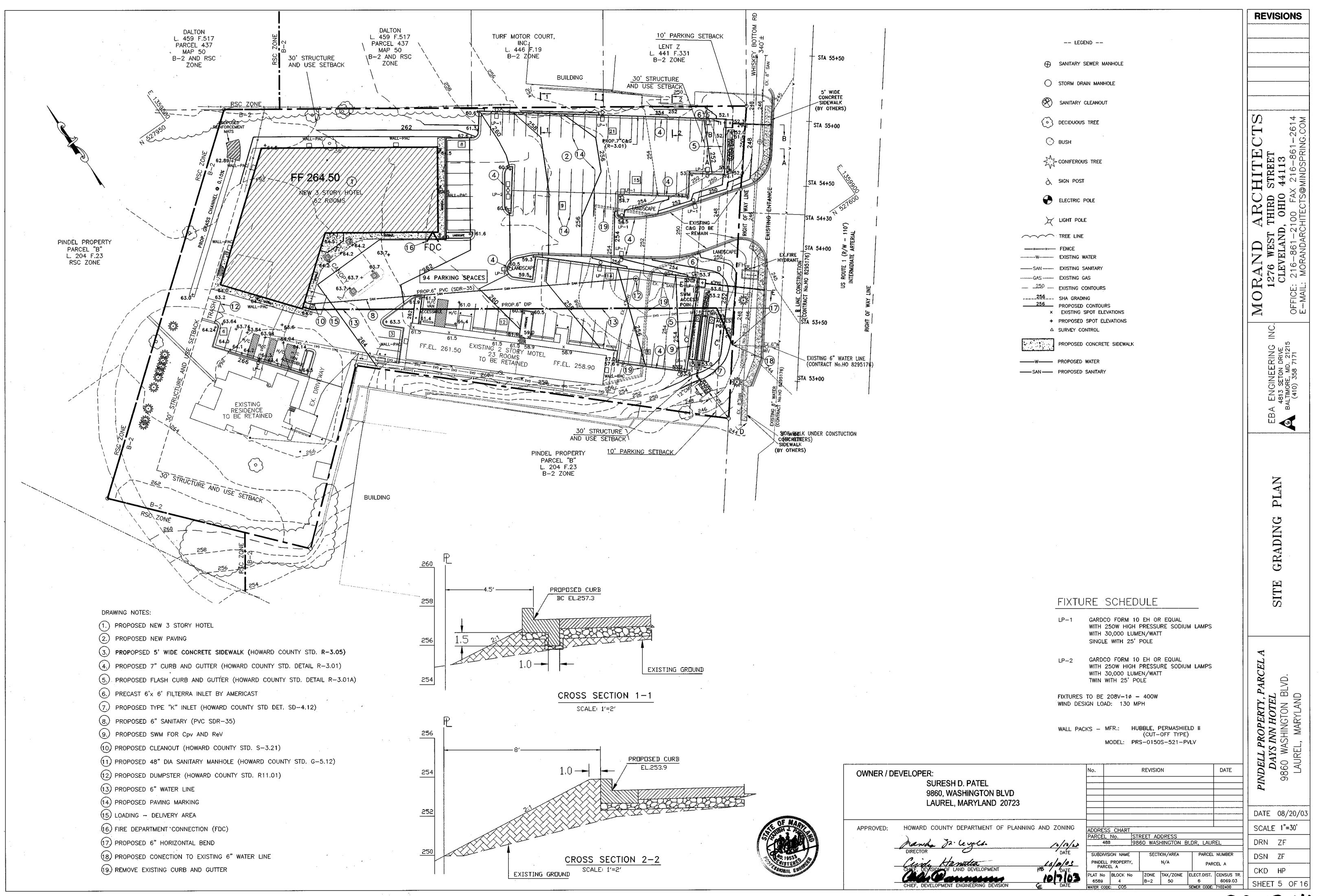
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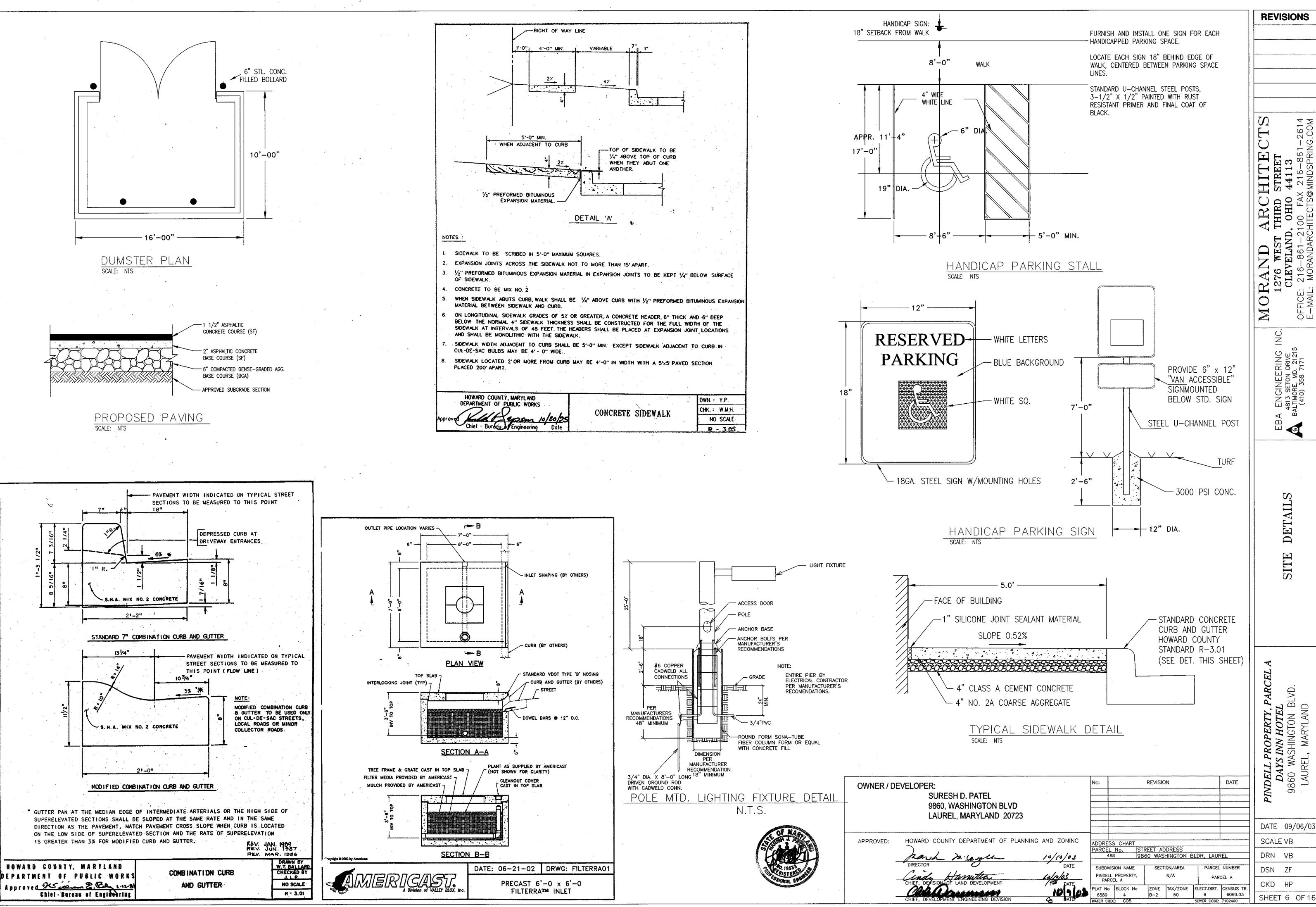
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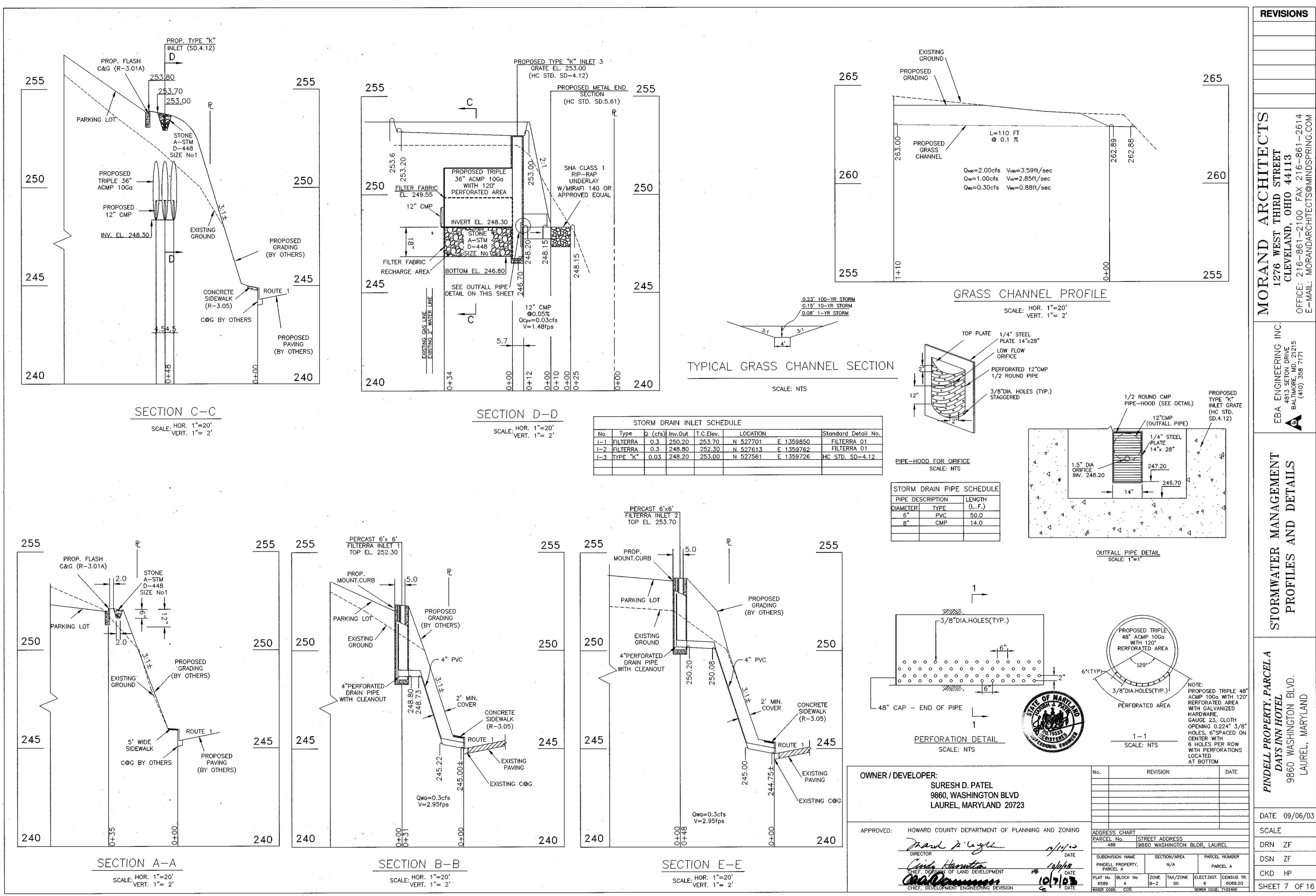


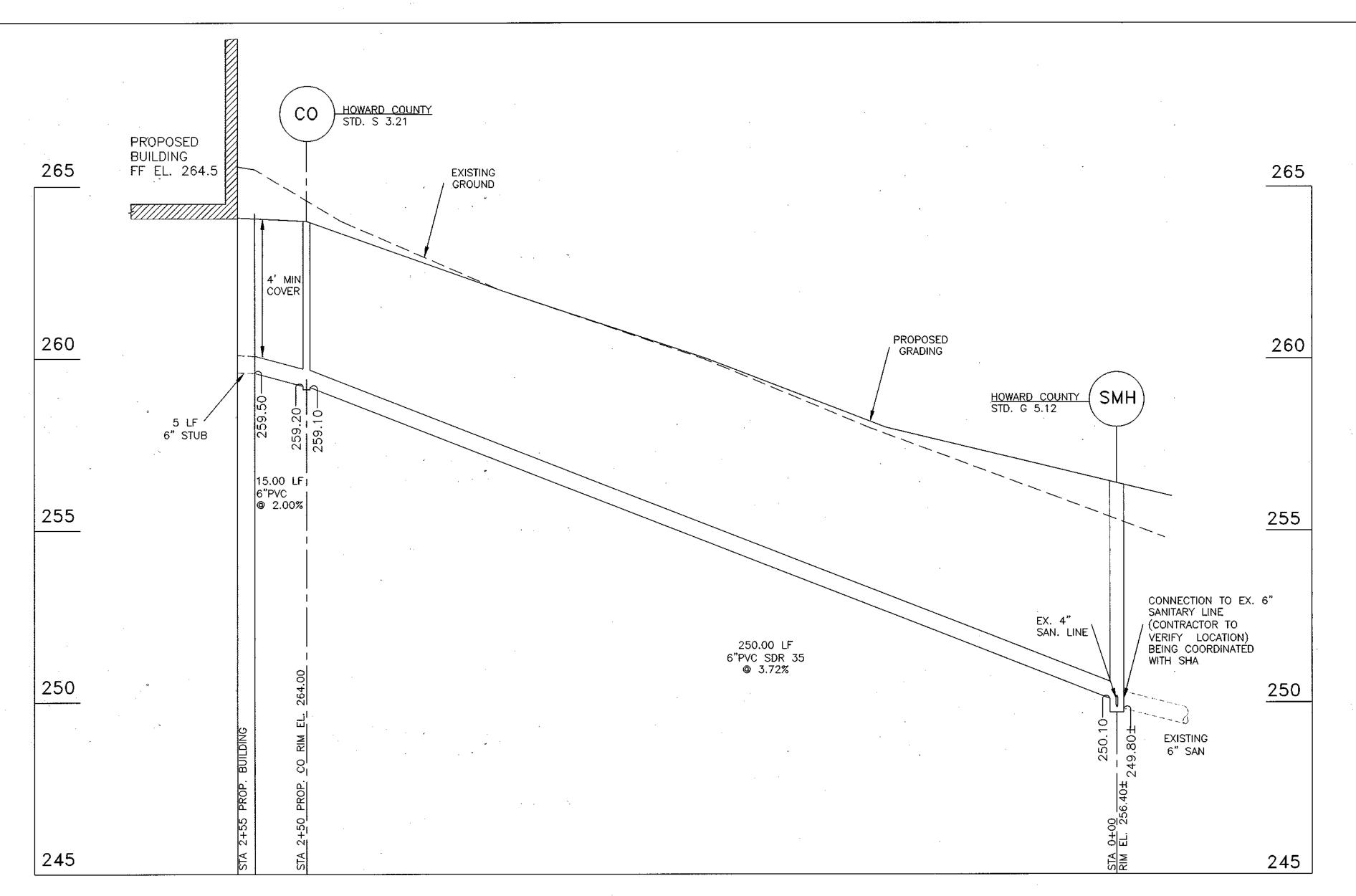




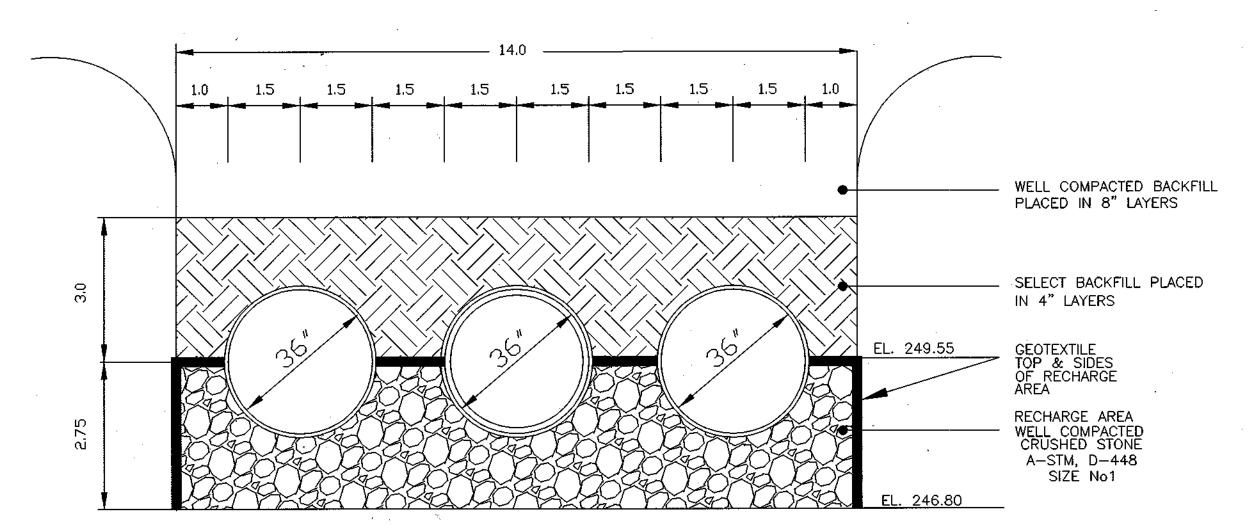








PROPOSED SANITARY LINE PROFILE SCALE: HOR. 1"=20' VERT. 1"= 2'



NOTE: EXCAVATION AND BACKFILL AS PER GEOTECHNICAL REPORT

SWM STORAGE PIPE DETAIL SCALE: 1" = 2'



A. Installation, Operation, and Maintenance Plan (IOM Plan) The Contractor shall submit the manufacturer's approved FilterraTM installation, operation, and maintenance plan for the system. It will be the responsibility of the unit owner/operator or their contractor to ensure that the unit is nstalled, operated, and maintained in accordance with the IOM plan.

The Contractor shall be provided dimensional drawings and, when specified, utilize these drawings to show details foronstruction, materials, specifications, reinforcing, pipe joints and any appurtenances. A Professional Engineer shall certify design alculations and drawings.

C. Manufacturer's Certification

The manufacturer shall submit documentation sealed by a egistered professional engineer, which certifies all components of the unit have been manufactured and assembled to meet the requirements of these specifications and the approved drawings.

V .Materials and Design

Each unit shall consist of a precast and fully constructed unit composed of a concrete container with appropriately sized and placed inlet and outlets, an under drain system, filter media, plant materials and an appropriate grate landscape cover where

A. Concrete for precast unit shall conform to ASTM Designation C 857 and C 858 and meet the following additional requirements:

1. The wall thickness shall not be less than 6 inches or as shown on the dimensional drawings. In all cases the wall thickness shall be no less than the minimum thickness necessary to meet loading requirements of the application as determined by a Licensed Professional Engineer.

2. The precast concrete unit shall be cured by an approved method. The unit shall not be shipped until the concrete has attained 85 % of its designed compressive strength. 3. Vault joints to be sealed with an Engineer approved non-shrink

4. Dimensions to meet the requirements of the approved drawings. B. Pipe connections shall be provided to accept pipes of the

specified size(s) and material(s). C. Frames, covers, and grates to be as recommended by the Supplier and subject to review of the Engineer for compatibility with site

D. Plant type and size shall meet the requirements of the approved drawings and the plant materials will be supplied by a nursery that grows stock materials in conformance with the specifications of American Nursery Association Standards.

E. Filter media shall be as directed by Americast which meets the performance criteria described in Section VI. F. The under drain system shall be constructed using perforated PVC

pipe of sufficient capacity to freely accept the design flows of the unit without clogging or restricting flows. Access must be provided for inspection and cleaning of the under drain pipe. VI. Performance Criteria

A. The unit shall have a minimum flow rate 250 cubic feet / hour for a container with a surface area of 36 square feet.

B. The unit shall remove 80 % total suspended solids. C. The unit shall remove 70 % total phosphorous, 60 % total nitrogen, 90% heavy metals (Cu, Pb, Zn) and 50% hydrocarbon for oil/grease. D. The unit (of 36 square feet surface area) shall filter and treat a minimum of 80% of the annual volume of runoff from a 100% total impervious area of Y4 acre. Higher efficiency rates can be achieved

with larger filters or more filters / unit area. E. The unit shall be dewatered to 50 % soil moisture content within 12 hours through a process of gravity flow and evapotranspiration. F. The unit shall be designed to ensure that high flow events shall by-pass the filter media preventing erosion and resupension of

G. The filtered effluent shall be discharged to an appropriate storm drainage system in accordance with the approved drawings. H. The unit shall support vigorous plant and microbe growth. I. In areas were salt (NaCI) is used for deicing the filter shall continue to function to remove pollutants and support vigorous plant growth provided that adequate drainage / filtration rates are maintained to flush residual salt concentrations out of the filter

J. Contractor / Owner's strict compliance with the IOM Plan is critical to achieving performance criteria.

VII. Construction

A. Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.

B. The unit shall be placed on a level compacted subbase with a 6-inch gravel base. Compact undisturbed sub-grade materials to 95 % of maximum density at + 1-2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to site engineer's approval.

C. Inlet and outlets connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions.

D. Once the unit is set, backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6" lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of filter unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility

Structures". VIII. Maintenance

A. Each FilterraTM system is to be maintained by Americast, or an Americast approved contractor for a minimum period of 2 years. The cost of this service to be included in the price of each FilterraTM system. Annual maintenance consists of a maximum of (2) scheduled visit. Each maintenance visit consists of the following tasks. 1. Foreign debris removal

2. Excess silt removal

3. Plant health evaluation and pruning or replacement as necessary 4. Media evaluation and recharge as necessary

5. Addition of mulch as necessary 6. Disposal of all maintenance refuse items

B. The beginning and ending date of Supplier obligation to maintain the installed system shall be determined by the time the system is placed in operation. Owner must the Supplier of any damage to the plant(s), which integral part of the bioretention technology . The

provide a sign or tag for each unit warning not the plant(s).

| OWNER / D | EVELOPER: SURESH D. PATEL 9860, WASHINGTON BLVD LAUREL, MARYLAND 20723 | | No. | | |
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| APPROVED: | HOWARD COUNTY DEPARTMENT OF PLANNING | AND ZONING | ADDRES PARCEL | | STR 986 |
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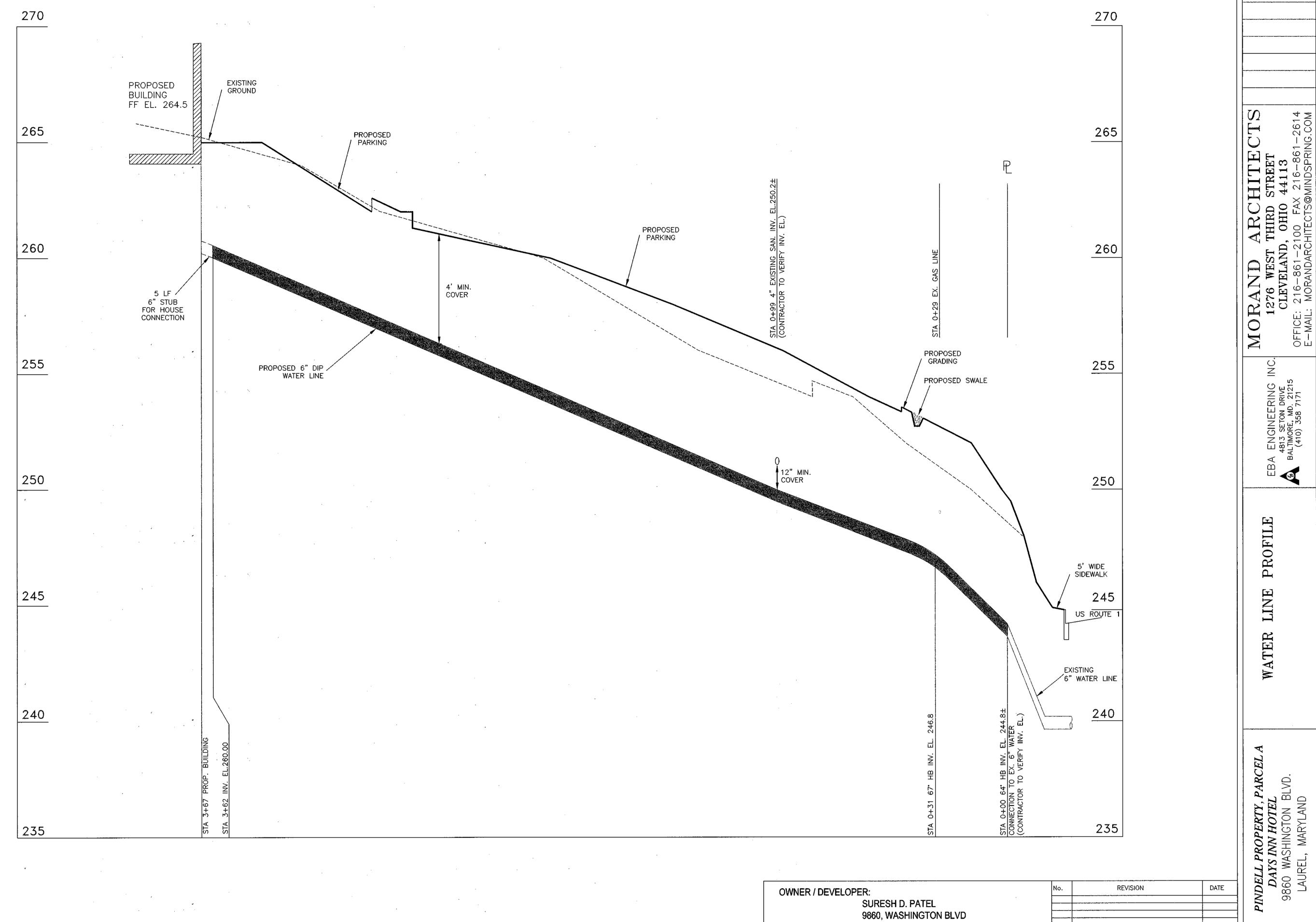
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PROPOSED WATER LINE PROFILE SCALE: HOR. 1"=20' VERT. 1"= 2'

| OWNER / D | EVELOPER: SURESH D. PATEL | No. | | REVISI | ON |
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| | 9860, WASHINGTON BLVD LAUREL, MARYLAND 20723 | | | | |
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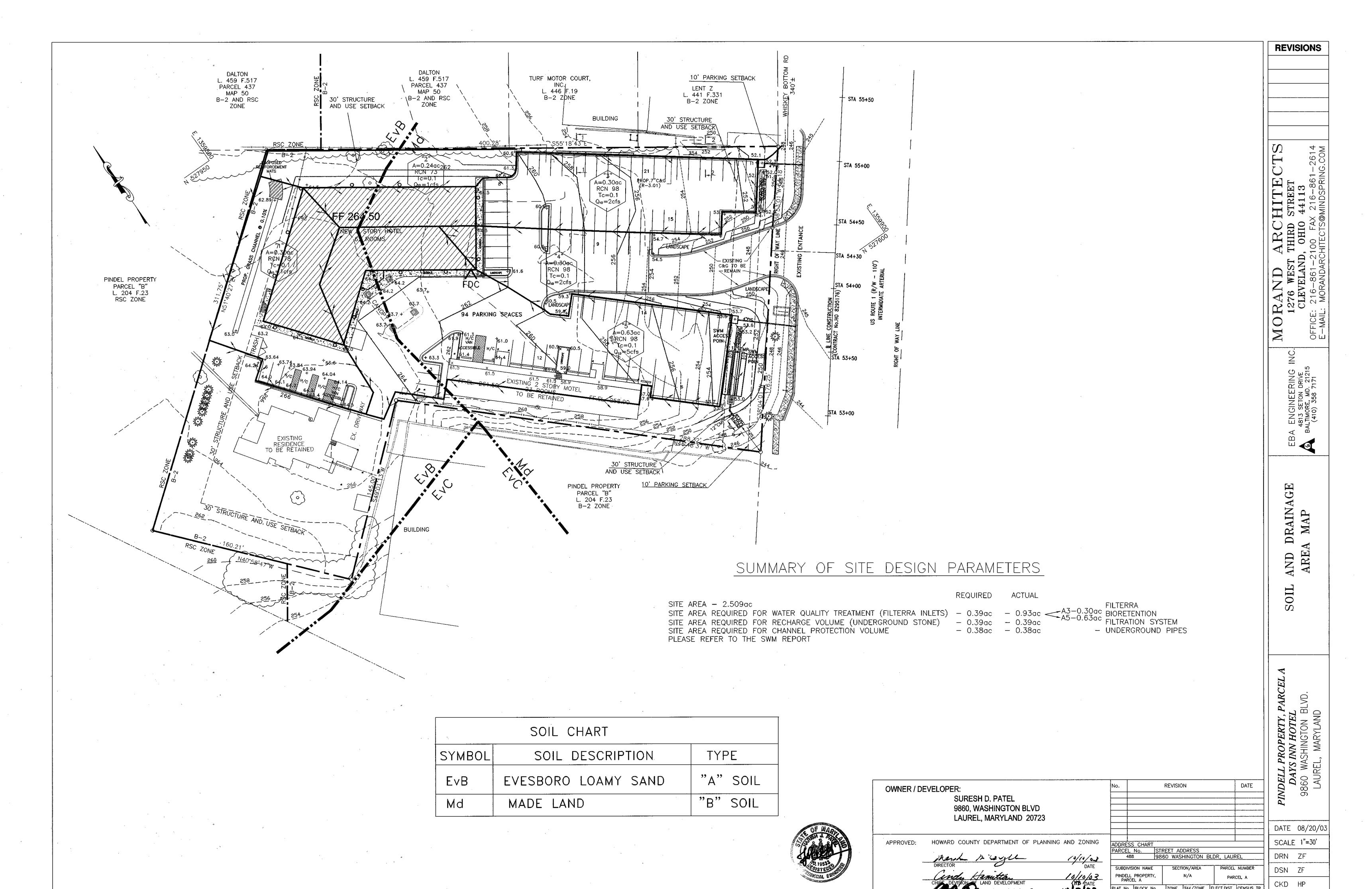
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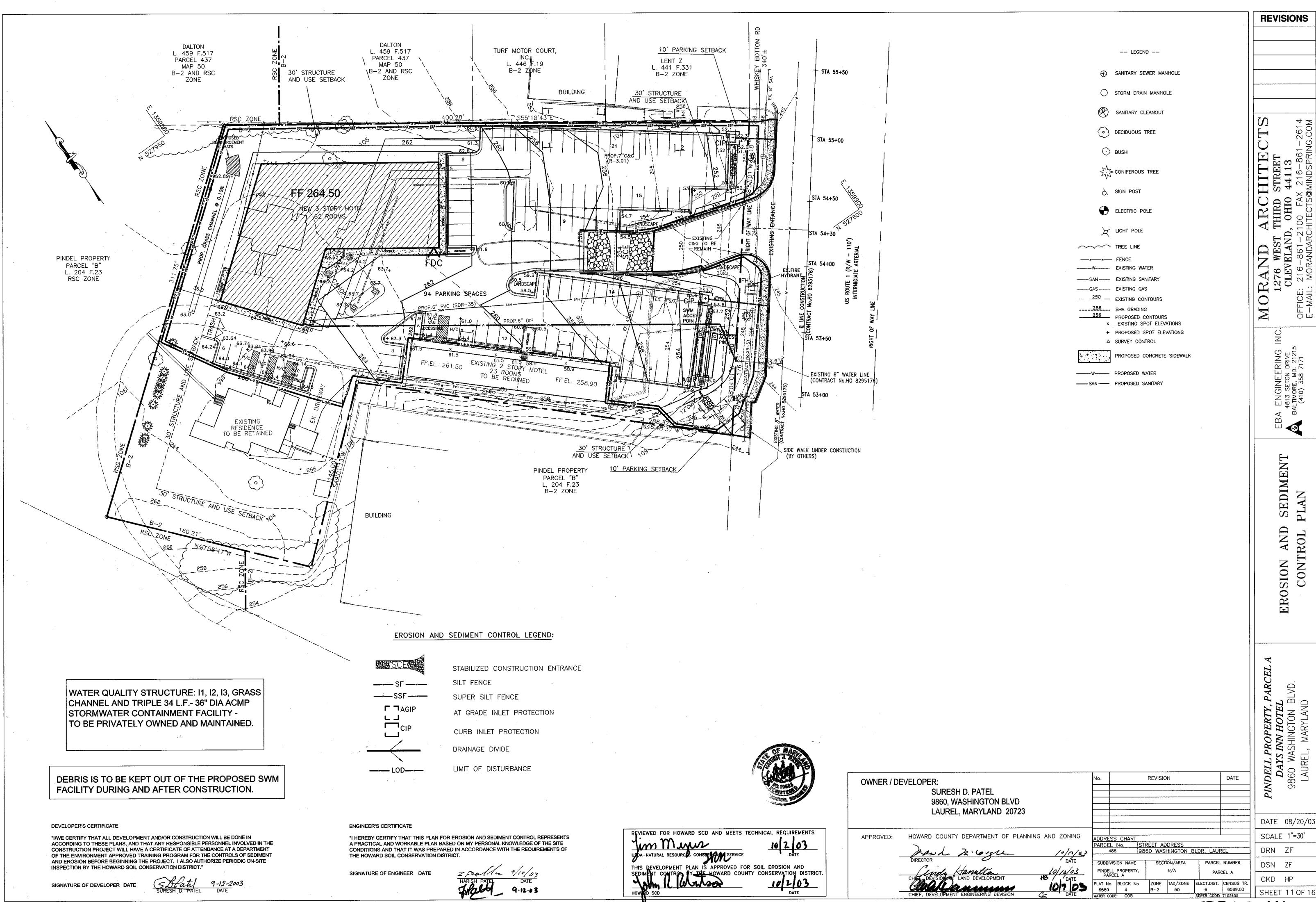
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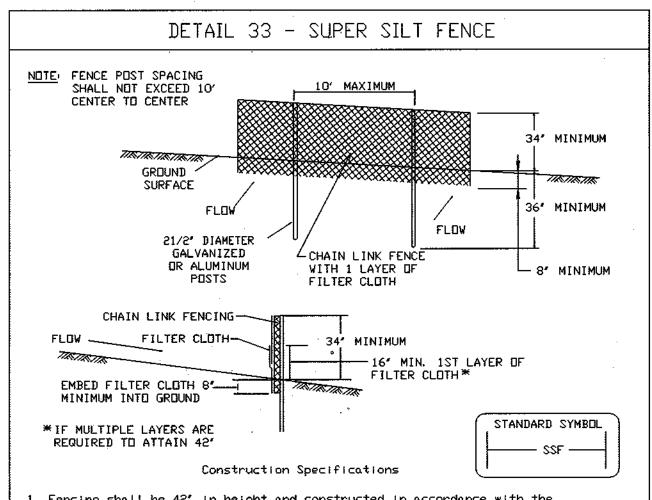
SHEET 9 OF 16

EBA ENGINEERING IN 4813 SETON DRIVE BALTIMORE, MD. 21215 (410) 358 7171



SHEET 10 OF 16





- 1. Fencing shall be 42' in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42' fabric and 6' length posts.
- 2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- 3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24° at the top and mid section.
- 4. Filter cloth shall be embedded a minimum of 8' into the ground.
- 5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- 6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height
- 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

| Tensile Strength | Ç |
|----------------------|---|
| Tensile Modulus | ä |
| Flow Rate | 4 |
| Filtering Efficiency | • |

U.S. DEPARTMENT OF AGRICULTURE

SBIL CONSERVATION SERVICE

50 lbs/in (min.) 20 (bs/in (min.) 75% (min.)

Test: MSMT 509 Test: MSMT 509 0.3 gal/ft2/minute (max.) Test: MSMT 322 Test: MSMT 322 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

36" MINIMUM LENGTH FENCE POST, 10' MAXIMUM CENTER TO DRIVEN A MINIMUM OF 16" INTO -- CENTER ___ GROUND 16" MINIMUM HEIGHT OF GEOTEXTILE CLASS F ₩ 8' MINIMUM DEPTH IN GROUND FLOW 36" MINIMUM FENCE-PERSPECTIVE VIEW POST LENGTH FILTER CLOTH * FENCE POST SECTION MINIMUM 20" ABOVE FLOW GROUND TISTISTISTISTISTISTISTISTIS UNDISTURBED TRANSTIKA TIKATIKA EMBED GEOTEXTILE CLASS F A MINIMUM OF 8' VERTICALLY TOP VIEW - FENCE POST DRIVEN A MINIMUM OF 16" INTO INTO THE GROUND POSTS _ THE GROUND CROSS SECTION SECTION A STANDARD SYMBOL _____SF ____ JOINING TWO ADJACENT SILT FENCE SECTIONS Construction Specifications 1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1,00 pond per linear foot, 2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class Fi Test: MSMT 509

DETAIL 22 - SILT FENCE

Tensile Strength 50 (bs/in (min.) 20 (bs/in (min.) Tensile Modulus 0.3 gal ft²/ minute (max.) Test: MSMT 322 Flow Rate

Filtering Efficiency 75% (min.)

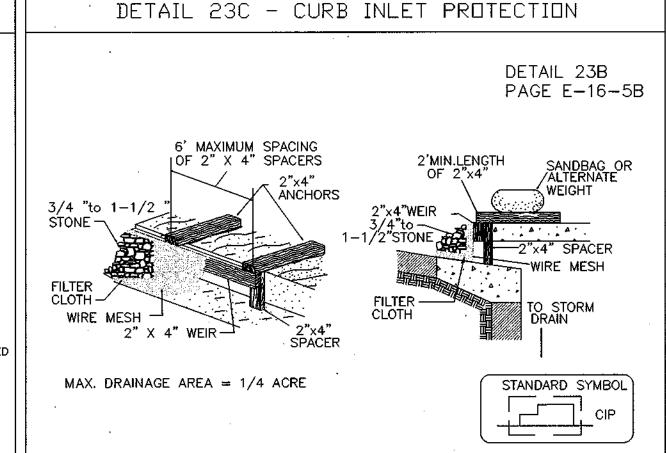
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

Test: MSMT 509

Test: MSMT 322

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

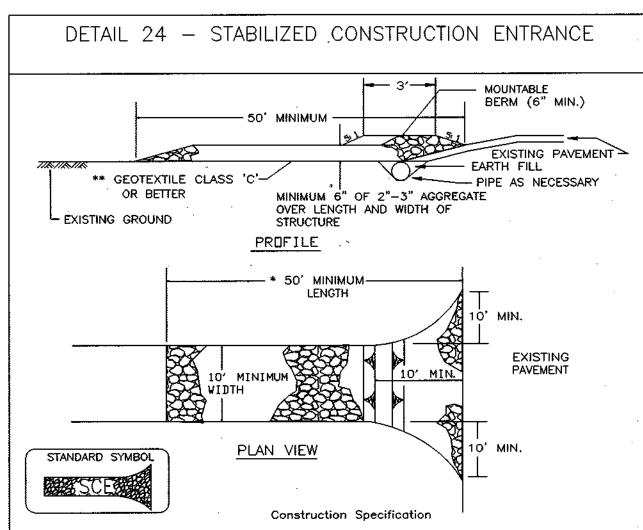


CONSTRUCTION SPECIFICATIONS

- 1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
- 2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
- 3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).
- 4. Place the assembly against the inlet throat and nail (min. 2' lengths of 2"x 4" to the top of the weir at spacer locations). These 2"x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
- 5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- 6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" to 1-1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
- 7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- 8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

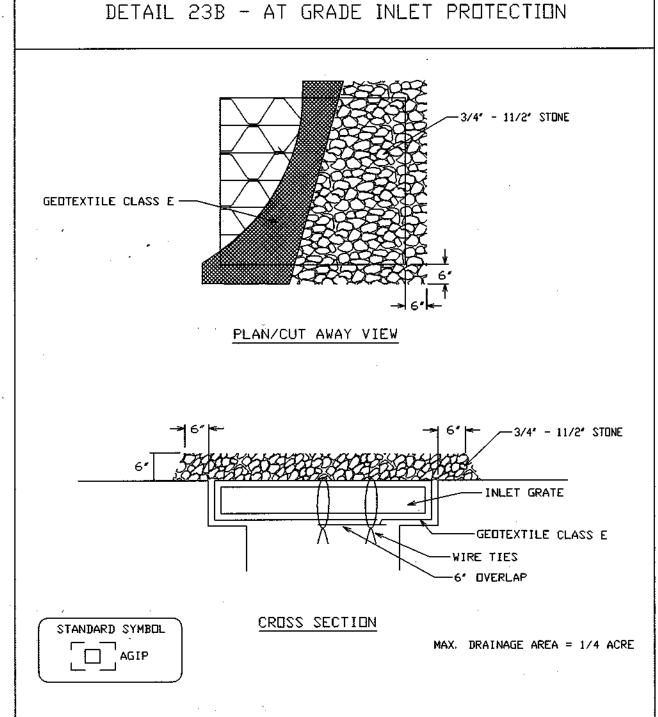


- 1. Length minimum of 50' (*30' for single residence lot).
- 2. Width 10' minimum, should be flared at the existing road to provide a turning radius,
- 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
- 4. Stone crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- 5. Surface Water all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- 6. Location A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

F - 17 - 3 WATER MANAGEMENT ADMINISTRATION

QWNER/DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN 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 CONTROLS OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION



Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.

2. Place 3/4' to 11/2' stone, 4'-6' thick on the grate to secure the fabric and provide additional filtration.

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL

REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL

KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACC

WITH THE REQUIREMENTS OF THE HOWARD SQIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE

DETAIL 30 - EROSION CONTROL MATTING CROSS-SECTION 4' OVERLAP OF MATTING STRIPS WHERE TWO OR MORE STRIP WIDTHS ARE REQUIRED, ATTACH STAPLES ON 18' CENTERS TYPICAL STAPLES NO. 11 GAUGE WIRE

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS 10.203

IS APPROVED FOR SOIL EROSION AND HE AHOWARD COUNTY CONSERVATION DISTRICT. 10.2-03

OWNER / DEVELOPER:

SURESH D. PATEL

9860, WASHINGTON BLVD LAUREL, MARYLAND 20723

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.

GREATER THAN 3:1.

2. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.

3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1 WEEK).

4. INSTALL SUPER SILT FENCE AS PROPOSED (1 WEEK)

5. PERFORM DEMOLITION OF THE BUILDINGS AS SHOWN (2 WEEK).

7. INSTALL SITE UTILITIES AND BEGIN BUILDING CONSTRUCTION (4 WEEK).

GRADE SITE TO FINAL SUB-GRADE AND PREPARE BUILDING PAD (4 WEEK).

8. CONSTRUCT PARKING LOT BASE PAVING AND STORM DRAIN SYSTEM (4 WEEK).

9. INSTALL LANDSCAPING AND SEED AND MULCH ALL REMAINING DISTURBED AREAS. INSTALL FINAL PAVING (8 WEEK).

10. DURING GRADING AND AFTER EACH RAINFALL. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE INSTALLED SEDIMENT AND EROSION CONTROL MEASURES.

11. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a. 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, SWALES AND ALL SLOPES

b. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.

12. UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL STRUCTURES AND STABILIZE THE DISTURBED

SUPER SILT FENCE Design Criteria Slope Length Silt Fence Length Steepness (maximum) (maximum) Stope 0 - 10 1 0 - 10% Unlimited Unlimited 1,500 feet 10 - 20% 10(1 - 5)1200 feet 20 - 33% 5 1 - 3 1 100 feet 1,000 feet 33 - 50% 3:1 - 2:1 100 feet 500 feet 50% -2:1+ 50 feet 250 feet U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE

PARCEL

DATE REVISION SCALE STREET ADDRESS DRN ZF <u>9860 WASHINGTON BLDR, LAUREI</u> SECTION/AREA PARCEL NUMBER

ZONE TAX/ZONE B-2 50 ELECT.DIST. CENSUS TR. 6 6069.03 SEWER CODE: 7102400

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REVISIONS

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PINDELL PROPERTY, P DAYS INN HOTEL 9860 WASHINGTON BL

DATE 09/06/03

DSN ZF CKD HP

SUBDIVISION NAME

PARCEL A

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EROSION AND SEDIMENT CONTROL NOTES

- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS AT (410) 982-2447 SEVEN (7) DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE ADMINISTRATION, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF WATER MANAGEMENT ADMINISTRATION (WMA).
- THE CONTRACTOR MUST NOTIFY WATER MANAGEMENT ADMINISTRATION (WMA) IN WRITING AND BY TELEPHONE AT THE FOLLOWING POINTS:
 - THE REQUIRED PRE-CONSTRUCTION MEETING.
 - FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
 - DURING THE INSTALLATION OF SEDIMENT BASINS (TO BE CONVERTED INTO PERMANENT STORMWATER MANAGEMENT STRUCTURES) AT THE REQUESTED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION OF EACH STEP IS MANDATORY.
 - PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
 - PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES
 - PRIOR TO FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND, SHALL HAVE THEM INSPECTED AND APPROVED BY THE AGENCY INSPECTOR OR WMA INSPECTOR PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE WMA INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM WMA INSPECTOR AND AGENCY INSPECTOR. THE CONTRACTOR MUST OBTAIN PRIOR AGENCY AND WMA APPROVAL FOR CHANGES TO THE SEDIMENT CONTROL PLAN AND/OR SEQUENCE OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.
- THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN AN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM WMA INSPECTOR AND AGENCY INSPECTOR.
- ALL SEDIMENT BASINS, TRAP EMBANKMENTS AND SLOPES. PERIMETER DIKES, SWALES AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SOD OR SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES, AS SOON AS POSSIBLE BUT NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. (REQUIREMENT FOR STABILIZATION MAY BE REDUCED TO THREE (3) DAYS FOR SENSITIVE AREAS).
- THE CONTRACTOR SHALL APPLY SOD OR SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS AND STOCKPILES WITHIN FOURTEEN (14) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED IN THE AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. (REQUIREMENT MAY BE REDUCED TO SEVEN (7) DAYS FOR SENSITIVE AREAS).
- PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE AND HAVE ESTABLISHED PERMANENT STABILIZATION FOR ALL CONTRIBUTORY DISTURBED

AREAS USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHERE THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE, BUT NO LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY MARCH 15 OR EARLIER IF GROUND AND WEATHER CONDITIONS ALLOW.

- THE SITE'S APPROVAL LETTER, APPROVED EROSION AND SEDIMENT CONTROL PLANS, DAILY LOG BOOKS AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF WMA AND AGENCY RESPONSIBLE FOR PROJECT.
- SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING PROTECTIVE DEVICES TO LOWER THE WATER DOWNSLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. PROTECTIVE METHODS MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.
- PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING, RIPRAP OR BY OTHER APPROVED STABILIZATION MEASURES.
- TEMPORARY SEDIMENT CONTROL DEVICES MAY BE REMOVED, WITH PERMISSION OF WMA INSPECTOR AND AGENCY INSPECTORS WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.
- NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NON-MAINTENANCE AREAS PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.
- FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO: PREVENT WATER FROM STANDING ON THE SURFACE MORE THAN TWENTY-FOUR (24) HOURS AFTER THE END OF A RAINFALL EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS WHICH MAY DRAIN AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL, AREAS DESIGNED TO HAVE STANDING WATER SHALL NOT BE REQUIRED TO MEET THIS REQUIREMENT.
- SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A FOUNDATION WHICH IS EXISTING OR UNDER CONSTRUCTION. NO STRUCTURE MAY BE CONSTRUCTED WITHIN 20 FEET OF AN ACTIVE SEDIMENT TRAP OR BASIN.
- THE WMA INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SAFETY OR SEDIMENT CONTROL MEASURES. IF DEEMED NECESSARY.
- ALL TRAP DEPTH DIMENSIONS ARE RELATIVE TO THE OUTLET ELEVATION. ALL TRAPS MUST HAVE A STABLE OUTFALL. ALL TRAPS AND BASINS SHALL HAVE STABLE INFLOW POINTS.
 - VEGETATION STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL REFER TO APPROPRIATE

- SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING AND GROUND COVERS.
- TEMPORARY SEDIMENT TRAP(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A POINT OF ONE HALF (1/2) THE DEPTH BETWEEN THE OUTLET CREST AND THE BOTTOM OF THE TRAP SEDIMENT BASINS SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO ONE HALF (1/2) THE DEPTH BETWEEN THE DEWATERING ELEVATION AND THE BOTTOM OF THE BASIN.
- SEDIMENT REMOVED FROM TRAPS (AND BASINS) SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN, WETLAND OR TREE-SAVE AREA. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE MUST BE DIRECTED TO A SEDIMENT TRAPPING DEVICE PRIOR TO RELEASE FROM THE SITE. A SUMP PIT MAY BE USED IF SEDIMENT TRAPS THEMSELVES ARE BEING PUMPED OUT.
- WHERE DEEMED APPROPRIATE BY THE ENGINEER OR INSPECTOR. SEDIMENT BASINS AND TRAPS MAY NEED TO BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE MUST CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE DEVELOPER OR OWNER SHALL CHECK WITH LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZES AND TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE MUST BE MADE OF WELDED WIRE AND AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN 2 INCHES IN WIDTH AND 4 INCHES IN HEIGHT WITHIN A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES.
- SEDIMENT CONTROL FOR UTILITY CONSTRUCTION FOR AREAS OUTSIDE OF DESIGNATED CONTROLS OR AS DIRECTED BY ENGINEER OR WATER MANAGEMENT ADMINISTRATION (WMA) INSPECTOR
 - (A) CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK.
 - EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
 - TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAN CAN BE COMPLETED THE SAME DAY, UNLESS;
 - TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED FOR MORE THAN ONE DAY.
 - OFF-SITE SPOIL OR BORROW AREAS ON STATE OR FEDERAL PROPERTY MUST HAVE PRIOR APPROVAL BY WMA AND OTHER APPLICABLE STATE, FEDERAL AND LOCAL AGENCIES OTHERWISE. APPROVAL MUST BE GRANTED BY THE LOCAL AUTHORITIES. ALL WASTE AND BORROW AREAS OFF-SITE MUST BE PROTECTED BY SEDIMENT CONTROL MEASURES AND STABILIZED.
- SITES WHERE INFILTRATION DEVICES ARE USED FOR THE CONTROL OF STORMWATER, EXTREME CARE MUST BE TAKEN TO PREVENT RUNOFF FROM UNSTABILIZED AREAS FROM ENTERING THE STRUCTURE DURING CONSTRUCTION. SEDIMENT CONTROL DEVICES PLACED IN INFILTRATION AREAS MUST HAVE BOTTOM ELEVATIONS AT LEAST TWO (2) FEET HIGHER THAN THE FINISH GRADE BOTTOM ELEVATION OF THE INFILTRATION PRACTICE. WHEN CONVERTING A SEDIMENT TRAP TO AN INFILTRATION DEVICE ALL ACCUMULATED SEDIMENT MUST BE REMOVED AND DISPOSED OF PRIOR TO FINAL GRADING OR INFILTRATION DEVICE.
- ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS IN UNPAVED AREA SHALL BE STABILIZED AND PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS.

10-2-03

10-2-03

HE WARD COUNTY CONSERVATION DISTRICT.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

WHEN A STORM DRAIN SYSTEM OUTFALL IS DIRECTED TO A SEDIMENT TRAP OR SEDIMENT BASIN AND THE SYSTEM IS TO BE USED FOR TEMPORARILY CONVEYING SEDIMENT LADEN WATER. ALL STORM DRAIN INLETS IN NON-SUMP AREAS SHALL HAVE TEMPORARY ASPHALT BERMS CONSTRUCTED AT THE TIME OF BASE PAVING TO DIRECT GUTTER FLOW INTO THE INLETS TO AVOID SURCHARGING AND OVERFLOW OF INLETS IN SUMP AREAS.

SITE INFORMATION (NOT TO BE USED FOR BIDDING PURPOSES):

TOTAL AREA OF SITE **ACRES** $2.509 \pm$ AREA DISTURBED $1.90 \pm$ **ACRES** ACRES AREA TO BE ROOFED OR PAVED 1.51

QWNER/DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN 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 CONTROLS OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION

SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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.



9.6.03

STANDARD STABILIZATION NOTE:

"FOLLOWING INITIAL SOIL DISTURBANCE OF REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND FOURTEEN (14) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE."

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REVISIONS

EROSION CONT

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APPROVED:

OWNER / DEVELOPER:

LAUREL, MARYLAND 20723 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 10/1./03

9860. WASHINGTON BLVD

SURESH D. PATEL

STANDARDS AND SPECIFICATIONS

VEGETATIVE STABILIZATION

Section I - Vegetative Stabilization Methods and Materials

A. Site Preparation

- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
- ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- ii. Fertilizers shall be uniformed in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade or trademark and warrantee of the producer.
- iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98 - 100% will pass through a #20 mesh sieve.
- iv. Incorporate time and fertilizer into the top 3-5" of soil by disking or other suitable means.

C. Seedbed Preparation

Temporary Seeding

- a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
- b. Apply fertilizer and lime as prescribed on the plans.
- c. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

ii. Permanent Seedina

- a. Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0
 - Soluble saits shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (<30% silt plus clay) would be
 - 4. Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - 6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
- b. Areas previously graded on conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
- Apply soil amendments as per soil test or as included on the plans.
- Mix soil amendments into the top 3 5 of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top I - 3 " of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

- i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
- Seed tags shall be made available to the inspector to verify type and rate of seed used.

ii. Inoculant - The inoculant for treating legume seed in the seed mixture shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80 degrees F. can weaken bacteria and make the inoculant less effective.

E. Methods of Seeding

- i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.
 - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous): 200 lbs/ac; K20 (Potassium): 200 lbs/ac.
 - Lime use only ground agricultural limestone, (Up to 3 tones per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
- ii. Dry Seeding: This includes use of conventional drop or broadcast
 - Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seedina: Mechanized seeders that apply and cover seed with soil.

- a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
- Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

Mulch Specifications (In order of preference)

Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

ii. Wood Cellulose Fiber Mulch (WCFM)

- a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
- WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
- WCFM, including dye, shall contain no germination or growth inhibiting factors.
- d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedings.
- WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
- WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.
- Only sterile straw mulch should be used in areas where one species of grass is
- Mulching Seeded Areas Mulch shall be applied to all seeded areas immediately
 - i. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season
 - ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

returns and seeding can be performed in accordance with these specifications.

- iii. Wood cellulose fibber used as a mulch shall be applied at a net dry weight of 1.500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
- Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
- i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

- ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. The remainder of area should be appear uniform after binder application. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tack II, Terra Tack ARE or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
- iv. Lightweight plastic netting may be stabled over the mulch according to manufacturer s recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

I. Incremental Stabilization — Cut Slopes

i. All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.

ii. Construction sequences:

- a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
- Perform phase 1 excavation, dress and stabilize.
- Perform phase 2 excavation, dress and stabilize. Overseed phase 1 areas as necessary.
- d. Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.
- Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.
- J. Incremental Stabilization of Embankments Fill Slopes
 - Embankments shall be constructed in lifts as prescribed on the plans.
 - ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15', or when grading operation ceases as prescribed in
 - iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.

iv. Construction sequence:

- a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct Slope Silt Fence on low side of fill, unless other methods shown on the plans address this area.
- Place phase 1 embankment, dress and stabilize.
- Place phase 2 embankment, dress and stabilize.
- Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.
- Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary

Section II - Temporary Seeding

Vegetation — annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed Mixtures - Temporary Seeding

- See Temporary Seeding Summary
- Section III Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

- A. Seed Mixtures Permanent Seeding
 - See Permanent Seeding Summary.
 - ii. For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
 - iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2lbs/1000 sq.ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, performed at the time of seeding.

Section IV — Sod — To provide quick cover on disturbed areas (2:1 grade or flatter).

A. General specifications

- Class of turfgrass sod shall be Maryland or Virginia State Certified or Approved. Sod labels shall be made available to the job foreman and
- Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be

- iii. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- iv. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- v. Sod shall be harvested, delivered and installed with a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

B. Sod Installation

- During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the
- ii. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- iii. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, peaged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
- iv. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.
- C. Sod Maintenance
- In the absence of adequated rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.
- ii. After the first week, sod watering is required as necessary to maintain adequate moisture content.
- iii. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2' and 3" unless otherwise specified.

PERMANENT SEEDING SUMMARY

| | Seed Mixture (Hardiness Zone <u>6b</u>) From Table 25 | | | | | rtilizer Ra 0-20-20 | Lime | | |
|-----|---|----------------------------|-------------------|-------------------|---------------|------------------------|----------------|--------------------|--|
| No. | Species | Application Rate(Ib/ac) | Seeding Dates | Seeding Depths | N | P205 | K20 | Rate | |
| 3 | Tall Fescue (85%) Perennial | 125 | 3/1-5/15 | 1/4 to | Fertilizer an | d Lime rate | s will be ba | sed on soil tests. | |
| | Ryegrass (10%) | 15 | and 8/15-10/15 | 1/2 in | Recommend | lations shall | be followed | and a copy shall | |
| | Kentucky Bluegrass (5%) | 10 | | | be furnishe | d to Sedime | ent Control Ir | spector. | |
| | Tall Fescue (83%) | 110 | 5/16-8/14 | 1/4 to | | | | | |
| 7 | Weeping Lovegrass (2%) Plus | . 3 | 5/16-8/14 | 1/2 in | | | | | |
| | Serecia Lespedeza (15%) | 20 | | | | | | | |

TEMPORARY SEEDING SUMMARY

| : | Seed Mixture (Hardiness Zone <u>6b</u>) From Table 26 | | | | | | Lime Rate |
|-----|---|----------------------------|-------|-----------|-------------------|---------------|----------------|
| No. | Species | Application Rate(lb/ac) | | Dates | Seeding Depths | (10-10-10) | |
| 1 | Barley or Rye plus Foxtail | 150 | 3/1-1 | * 1/30 | 1 in. | 600lb/ac | 2 tons/ac. |
| | Millet | | | | | (15lb/1000sf) | (100lb/1000sf) |
| | (*) 10-15 for | Barley. | | | | | |

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REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS 10-2-03 HAMARD COUNTY CONSERVATION DISTRICT (0·2-03

| OWNER / DEVELOPER: | No. REVISION | | | DA |
|--|-------------------------|--|--------------------------------|-----------------------|
| SURESH D. PATEL 9860, WASHINGTON BLVD LAUREL, MARYLAND 20723 | | | | |
| APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING | ADDRESS C PARCEL No. | | REET ADDRESS | |
| DIRECTOR DATE | 488 SUBDIVISION | | 60 WASHINGTON BLI SECTION/AREA | DR, LAUREL PARCEL NUM |
| Cively Humitton 10/10/03 | PINDELL PRO PARCEL A | | N/A | PARCEL A |

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REVISIONS

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PARCEL PINDELL PROPERTY, PARC DAYS INN HOTEL 9860 WASHINGTON BLVD. LAUREL, MARYLAND

DATE 09/06/03 SCALE

DRN ZF DSN ZF CKD HP PLAT No BLOCK No ZONE TAX/ZONE ELECT.DIST. CENSUS TR

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH. AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 25 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT, AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER.

MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE "EMBANKMENT.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

<u>COMPACTION</u> — THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE. YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN ±2% OF THE OPTIMUM, EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION, ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T99 (STANDARD PROCTOR).

CUT OFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR FXCAVATION. WITH THE MINIMUM WIDTH BEING FOUR FEET, THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

EMBANKMENT CORE - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10 YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 100200 PSI; 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 2,000 OHMCM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER AND, ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDUITS. AVERAGE SLUMP OF THE FILL SHALL BE 7" TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE. WHEN USING FLOWABLE FILL, ALL METAL PIPE SHALL BE BITUMINOUS COATED, ANY ADJOINING SOIL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL VOIDS ADJACENT TO THE FLOWABLE FILL ZONE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE — ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:

1. MATERIALS (POLYMER COATED STEEL PIPE) -- STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M245 & M246 WITH WATERTIGHT COUPLING BANDS OR FLANGES.

MATERIALS - (ALUMINUM COATED STEEL PIPE) THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M274 WITH WATERTIGHT COUPLING BANDS OR FLANGES ALUMINUM COATED STEEL PIPE, WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M190 TYPE A. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT.

MATERIALS (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M196 OR M211 WITH WATERTIGHT COUPLING BANDS OR FLANGES. ALUMINUM PIPE. WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT FOR INCREASED DURABILITY. SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION "M190 TYPE A. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT, HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE SURROUNDING SOILS SHALL BE BETWEEN 4 AND 9.

2. COUPLING BANDS, ANTISEEP COLLARS, END SECTIONS, ETC., MUST BE COMPOSED OF THE SAME MATERIAL AND COATINGS AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATERTIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTISEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATERTIGHT. DIMPLE BANDS ARE NOT CONSIDERED TO BE WATERTIGHT.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE REROLLED AN ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BANDWIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24 INCHES IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE WITH A CIRCULAR ? INCH CLOSED CELL NEOPRENE GASKET, PREPUNCHED TO THE FLANGE BOLT CIRCLE, SANDWICHED BETWEEN ADJACENT FLANGES; A 12 INCH WIDE STANDARD LAP TYPE BAND WITH 12 INCH WIDE BY ? INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET: AND A 12INCH WIDE HUGGER TYPE BAND WITH ORING GASKETS HAVING A MINIMUM DIAMETER OF ? INCH GREATER THAN THE CORRUGATION DEPTH. PIPES 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG ANNULAR CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) RODS AND LUGS, 2 ON EACH CONNECTING PIPE END. A 24 INCH WIDE BY ? INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED WITH 12 INCHES ON THE END OF EACH PIPE. FLANGED JOINTS WITH ? INCH CLOSED CELL GASKETS THE FULL WIDTH OF THE FLANGE IS ALSO ACCEPTABLE.

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

4. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".

6. OTHER DETAILS (ANTISEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C361.

2. BEDDING - REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING /CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING / CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADLE IS NOT NEEDED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRAVEL BEDDING IS NOT PERMITTED.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL"

5. OTHER DETAILS (ANTISEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC

1. MATERIALS - PVC PIPE SHALL BE PVC1120 OR PVC1220 CONFORMING TO ASTM D1785 OR ASTM D2241. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4" - 10" INCH PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252 TYPE S, AND 12" THROUGH 24" INCH SHALL MEET THE REQUIREMENTS OF AASHTO M294 TYPE S.

2. JOINTS AND CONNECTIONS TO ANTISEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.

3. BEDDING -THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED. ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL"

5. OTHER DETAILS (ANTISEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

DRAINAGE DIAPHRAGMS - WHEN A DRAINAGE DIAPHRAGM IS USED, A REGISTERED PROFESSIONAL ENGINEER WILL SUPERVISE THE DESIGN AND CONSTRUCTION INSPECTION.

CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414, MIX NO. 3.

ROCK RIPRAP

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 311.

GEOTEXTILE SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTI ON AND MATERIALS, SECTION 921.09, CLASS C.

CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES.

OPERATION AND MAINTENANCE

AN OPERATION AND MAINTENANCE PLAN IN ACCORDANCE WITH LOCAL OR STATE REGULATIONS WILL BE PREPARED FOR ALL PONDS. AS A MINIMUM, THE DAM INSPECTION CHECKLIST LOCATED IN APPENDIX A SHALL BE INCLUDED AS PART OF THE OPERATION AND MAINTENANCE PLAN AND PERFORMED AT LEAST ANNUALLY. WRITTEN RECORDS OF MAINTENANCE AND MAJOR REPAIRS NEEDS TO BE RETAINED IN A FILE. THE ISSUANCE OF A MAINTENANCE AND REPAIR PERMIT FOR ANY REPAIRS OR MAINTENANCE THAT INVOLVES THE MODIFICATION OF THE DAM OR SPILLWAY FROM ITS ORIGINAL DESIGN AND SPECIFICATIONSIS REQUIRED. A PERMIT IS ALSO REQUIRED FOR ANY REPAIRS OR RECONSTRUCTION THAT INVOLVE A SUBSTANTIAL PORTION OF THE STRUCTURE. ALL INDICATED REPAIRS ARE TO BE MADE AS SOON AS PRACTICAL.

OPERA TION AND MAINTENANCE SCHEDULE FOR **UNDERGROUND FACILITIES**

I. THE UNDERGROUND STORMWATER MANAAEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN IT'S OPERATION AND FUNCTION.

2. THE UNDERGROUND STORMWATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.

3. WHEN SEDIMENT ACCUMULATION OFMORC THAN 2" IA OBSERVED OR ANY DEBRIS THAT MIAHT OBSTRUCT THE OUTFAIL IS OBSERVED, THE FACILITY SHALL BE CLEANED.

4. THE FACILITY SHALL BY CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHA11 CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.

5. THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORMWATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.

6. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THO OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.

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REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS HOWARD COUNTY CONSERVATION DISTRICT DATE

| OWNER / DEVELOPER: | No. REVISION DATE |) 0 0 0 1 |
|---|---|-----------------------|
| SURESH D. PATEL | | 0 |
| 9860, WASHINGTON BLVD | | |
| LAUREL, MARYLAND 20723 | DATE | |
| | - DATE | |
| APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING | ADDRESS CHART SCALE | |
| DIRECTOR DATE | PARCEL No. STREET ADDRESS 488 9860 WASHINGTON BLDR, LAUREL DRN | ZF |
| Cinda Hanuttan 6/10/03 | SUBDIVISION NAME SECTION/AREA PARCEL NUMBER DSN PINDELL PROPERTY, N/A PARCEL A | ZF |
| CHIEF, DEVISION OF LAND DEVELOPMENT HB DATE | PINDELL PROPERTY, PARCEL A CKD PLAT NO BLOCK NO ZONE TAX/ZONE ELECT.DIST. CENSUS TR. | HP |
| CHIEF, DEVELOPMENT ENGINEERING DEVISION DATE | 6589 4 B-2 50 6 6069.03 SHEET | 15 |

HITE STREET 44113 × 216-861 ARC THIRD THIRD OHIO AND 276 WEST 7. LEVELAND, 216-861-21

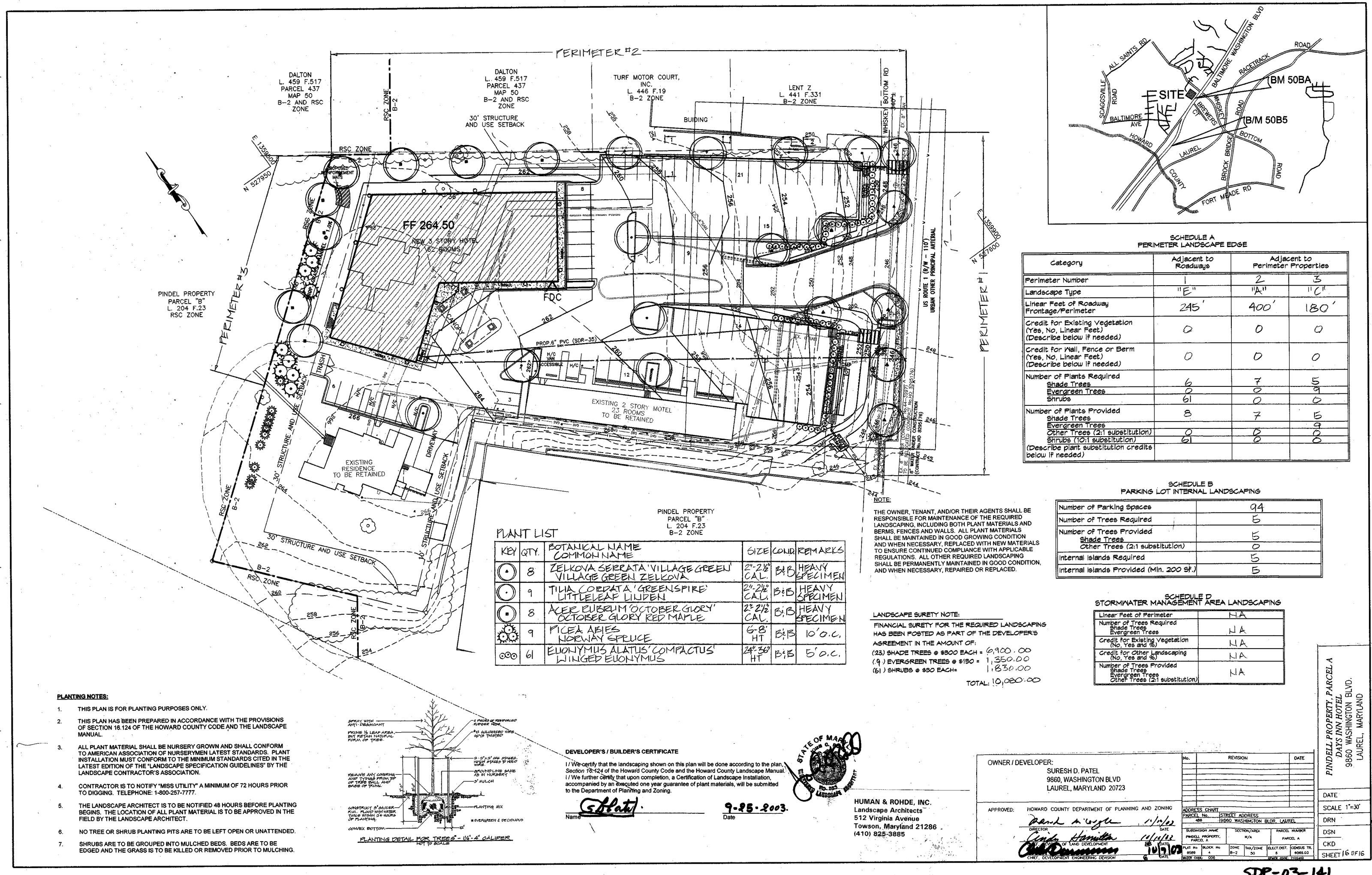
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PARCI

9/06/03



N 524,999.357 E 1,357,925.680

ED GENERAL NOTES

PRESENT ZONING - B-2

1. ALL CONSTRUCTION PLANS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA

2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1 (800) 257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK

3. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS MISS UTILITY ... BELL ATLANTIC .. HOWARD COUNTY BUREAU OF UTILITIES AT&T CABLE LOCATION DIVISION....

B.G.&E. CO. UNDERGROUND DAMAGE CONTROL...(410) 787-4620 4. SITE ANALYSIS: AREA OF PARCEL - 2.509 ACRES

TOTAL BUILDINGS COVERAGE ON SITE - 18,860 S.F. OR 0.43 AC. OR 17.14% OF GROSS AREA AREA OF LANDSCAPE - 1.00 AC (46610 S.F.) LIMIT OF DISTURBANCE - 1.90 AC.

5. PROJECT BACKGROUND: LOCATION - HOWARD COUNTY, MARYLAND TAX MAP 50, BLOCK 4, PARCEL 488, PLOT 6589 ZONING - B-2, RECORDED PLAT #6589 SITE AREA - 2.509 ACRES

6. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410)

10. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC

11. ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.

13. ALL STORM DRAIN PIPE BEDDING TO BE CLASS 'C' AS SHOWN IN VOLUME I OF THE HOWARD COUNTY DESIGN MANUAL

14. UNDERGROUND STORMWATER MANAGEMENT PROVIDED WITH THIS PLAN IS OWNED AND MAINTAINED BY DAYS INN HOTEL

15. COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENTS 50BA AND 50B5.

16. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

17. EXISTING TOPOGRAPHY IS FROM A TOPOGRAPHIC SURVEY PERFORMED BY EBA ENGINEERINGRPOSE OF c□□□.INC IN NOVEMBER, 2002.

18. WATER FOR THIS PROJECT IS PUBLIC. EXISTING 2" WATER CONNECTION WILL BE UPGRADED TO 6". EXISTING MAIN WATER LINE CONTRACT No.

19. SEWER FOR THIS PROJECT IS PUBLIC. PROPOSED 4" SANITARY WILL BE CONECTED TO EXISTING 6" SANITARY SEWER ALREADY ON SITE. EXISTING 6" SANITARY CONECTED TO EXISTING 8" SANITARY CONTRACT No. H08295176 (OLD SANITARY LINE CONTRACT NO.29-S).

20. ALL PAVING TO BE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER (SEE DETAIL).

21. ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD CONCRETE OR BITUMINOUS (SEE DETAIL, SHEET 4), LIMITS AS SHOWN ON PLAN.

22. PROPOSED PAVING SECTIONS TO BE CONFIRMED BY PROJECT GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

23. PROJECT GEOTECHNICAL ENGINEER TO MONITOR WALL CONSTRUCTION, BACKFILL AND COMPACTION.

24. PROJECT GEOTECHNICAL ENGINEER TO APPROVE PAVING SUBBASE PRIOR TO INSTALLATION OF PAVING SECTION AND SWM CONTROL STRUCTURE.

25. ALL OUTDOOR LIGHTING TO CONFORM TO SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.

26. CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS ROUTES IN ACCORDANCE WITH CURRENT ADA

27. WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.

28. ANY EXISTING TREES DAMAGE OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.

29. ALL 3:1 AND STEEPER SLOPES TO BE STABILIZED WITH SOD. SLOPES FLATTER THAN 3:1 TO BE STABILIZED WITH SEED AND MULCH.

30. THERE ARE NO KNOWN CEMETERIES LOCATED ON THIS SITE.

31. METES AND BOUNDS, ADJACENT PROPERTY INFORMATION PER RECORD PLAT PREPARED BY LESLIE CURTIS HOPKINS, PROPERY LINE SURVEYOR

32. PARKING REQUIRED: 8 (1 FOR EACH ROOM PER HOWARD COUNTY) PLUS ONE PER TWO EMPLOYEES PARKING REQUIRED: 91 (1.1 FOR EACH ROOM PER DAYS INN HOTEL) PARKING PROVIDED: 94

HANDICAP SPACES PROVIDED: 5

33. ZONING BOARDING CASE No. 1015M WAS APPROVED BY ZONING BOAR OF HOWARD COUNTY, MARYLAND ON MARCH 27, 2001 IT WAS REQUEST REZONING OF 1.1 ACRES OF THE ENTIRE 2.5 ACRES PARCEL FROM THE R-SC ZONING DISTRICT TO THE B-2 ZONING DISTRICT.

34. APFO HAS BEEN PREPARE BY BRUDIS & ASSOCIATES, INC.

35. NO FLOODPLAIN EXISTS ON SITE.

36. SIGHT DISTANCE ON ROUTE 1 IS IN ACCORDADANCE WITH MDSHA REQUIREMENTS.

37. EXISTING 2" WATER METERS ARE LOCATED INSIDE OF EXISTING BUILDINGS. PROPOSED WATER MEETER WILL BE LOCATED INSIDE NEW BUILDING.

38. THIS SITE IS QUALIFIED AS REDEVELOPMENT AND HAS BEEN DESIGNED TO MEET: WATER QUALITY (2 FILTERRA INLETS AND GRASS CHANNEL)

RECHARGE VOLUME (STONE UNDER SWM STRUCTURE) CHANNEL PROTECTION (SWM STRUCTURE) WAIVER FOR 36" DIAMETER PIPES AND MASS CENTROID SHIFT TIME HAS BEEN APPROVED BY HOWARD COUNTY (LETTER DATED JUNE 26, 2003)

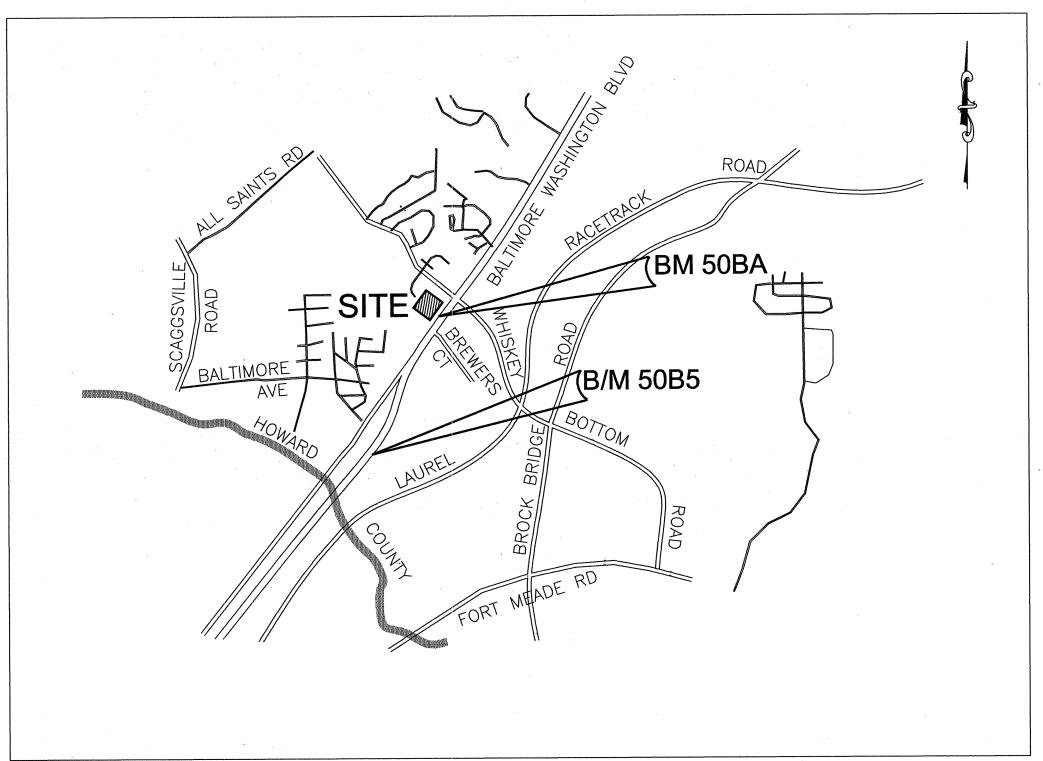
39. THE PROPOSED PROJECT IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.1202(B) OF THE HOWARD COUNTY CODE. REFER TO SDP-86-42 APPROVED BY PLANNING AND ZONING 2/13/86. THE ENTIRE SITE "PARCEL A" WAS DEVELOPED PRIOR TO DECEMBER 31, 1992 AND ALL PROPOSED WORK IS WITHIN THE LIMITS OF THIS

40. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1880.

PINDELL PROPERTY, PARCEL A DAYS INN HOTEL

9860 WASHINGTON BLVD. HOWARD COUNTY LAUREL, MARYLAND

SITE DEVELOPMENT PLANS





LEGEND:

SIGN POST

LIGHT POLE

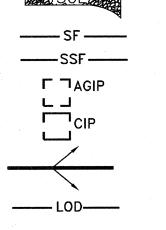
SANITARY SEWER MANHOLE STORM DRAIN MANHOLE -W---- EXISTING WATER PROPOSED CONTOURS × EXISTING SPOT ELEVATIONS + PROPOSED SPOT ELEVATIONS △ SURVEY CONTROL

> "The proposed project is exempt from the Forest Conservation requirements under section 16.1202(b) of the Howard County Code. Refer to SDP-86-42 approved by planning and zoning 2/13/86. The entire site 'Parcel A' was developed prior to December 31, 1992 and all proposed work is within the limits of this previously developed Parcel 'A'."

STATE HIGHWAY ADMINISTRATION CONTRACT No. H08295176 U.S. ROUTE 1 FROM BREWERS COURT TO WHISKEY BOTTOM ROAD.

ON GOING COORDINATION WITH MARYLAND

EROSION AND SEDIMENT CONTROL LEGEND:



STABILIZED CONSTRUCTION ENTRANCE SILT FENCE SUPER SILT FENCE AT GRADE INLET PROTECTION CURB INLET PROTECTION

DRAINAGE DIVIDE

SOIL MAP SCALE: 1"=500"

FROM HOWARD COUNTY SOIL MAP (SHEET 33,34,31)

EVESBORO LOAMY SAND

"B" SOIL

TABLE OF CONTENTS

| | SHEET NO. | SHEET DESCRIPTION |
|----|-----------|--|
| | 1 | COVER SHEET |
| | 2 | EXISTING CONDITIONS PLAN |
| | 3 | DEMOLITION PLAN |
| ٠. | 4 | SITE LAYOUT PLAN |
| | 5 | SITE GRADING PLAN |
| | 6 | SITE DETAILS |
| | 7 | STORMWATER MANAGEMENT PROFILES AND DETAILS |
| | 8 | STORMWATER MANAGEMENT DETAILS AND SANITATY PROFILE |
| | 9 | WATER LINE PROFILE |
| | 10 | SOIL AND DRAINAGE AREA MAP |
| | 11 | EROSION AND SEDIMENT CONTROL PLAN |
| | 12 | EROSION AND SEDIMENT CONTROL DETAILS |
| | 13 | EROSION AND SEDIMENT CONTROL NOTES |

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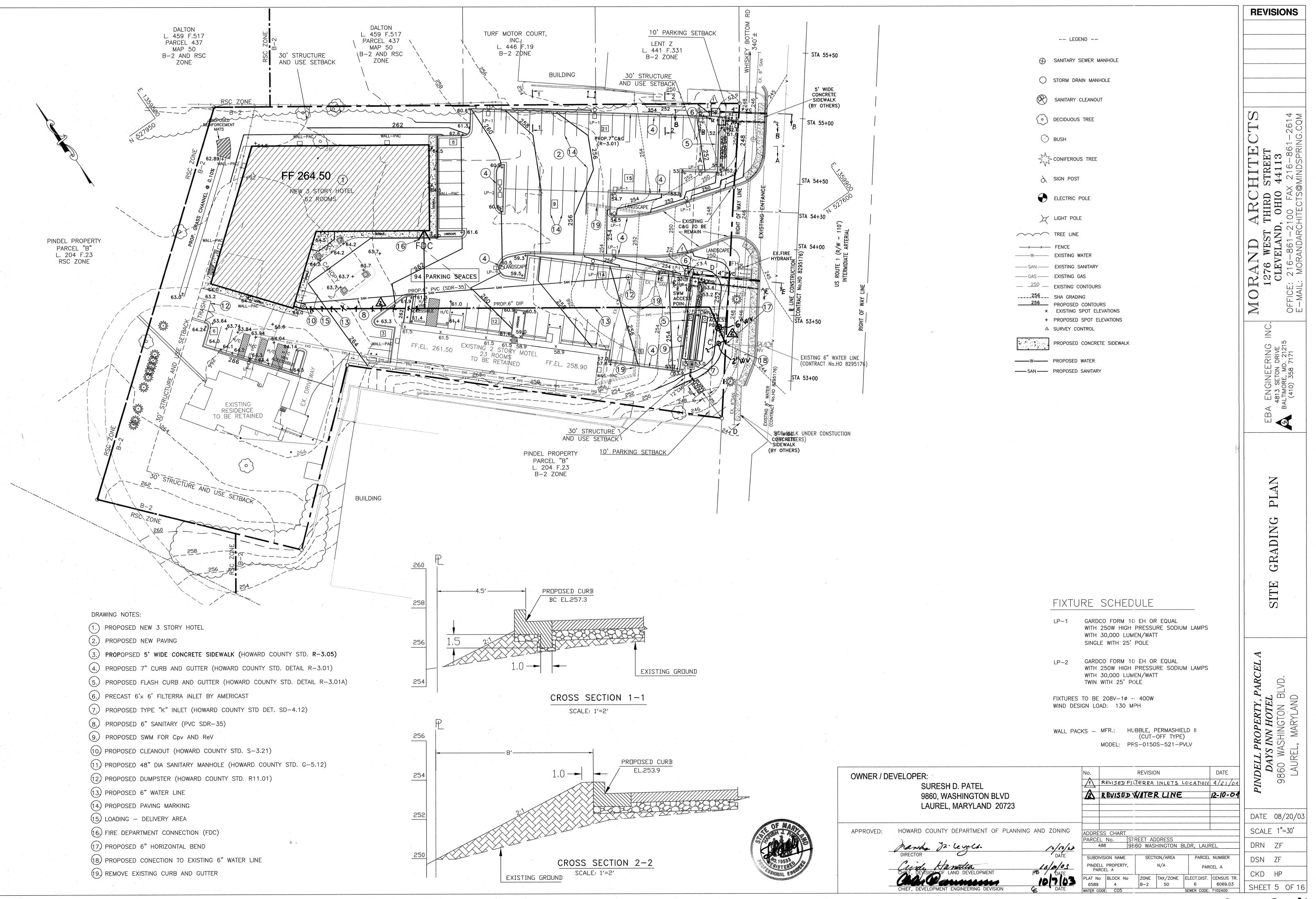
DEBRIS IS TO BE KEPT OUT OF THE PROPOSED SWM FACILITY DURING AND AFTER CONSTRUCTION.

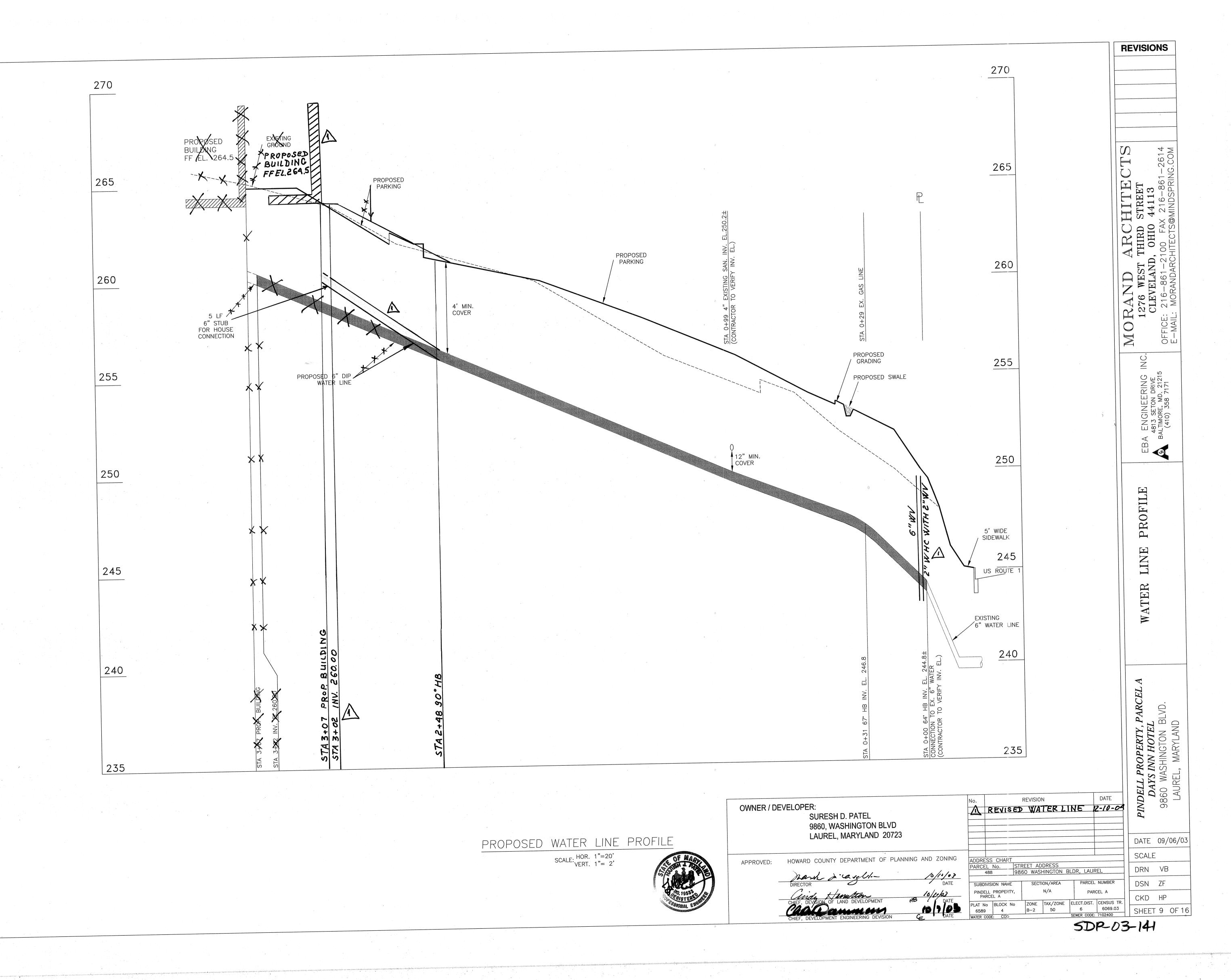
WATER QUALITY STRUCTURE: I-1, I-2, GRASS CHANNEL AND TRIPLE 34 L.F.- 48" ACMP STORMWATER CONTAINMENT FACILITY -TO BE PRIVATELY OWNED AND MAINTAINED.

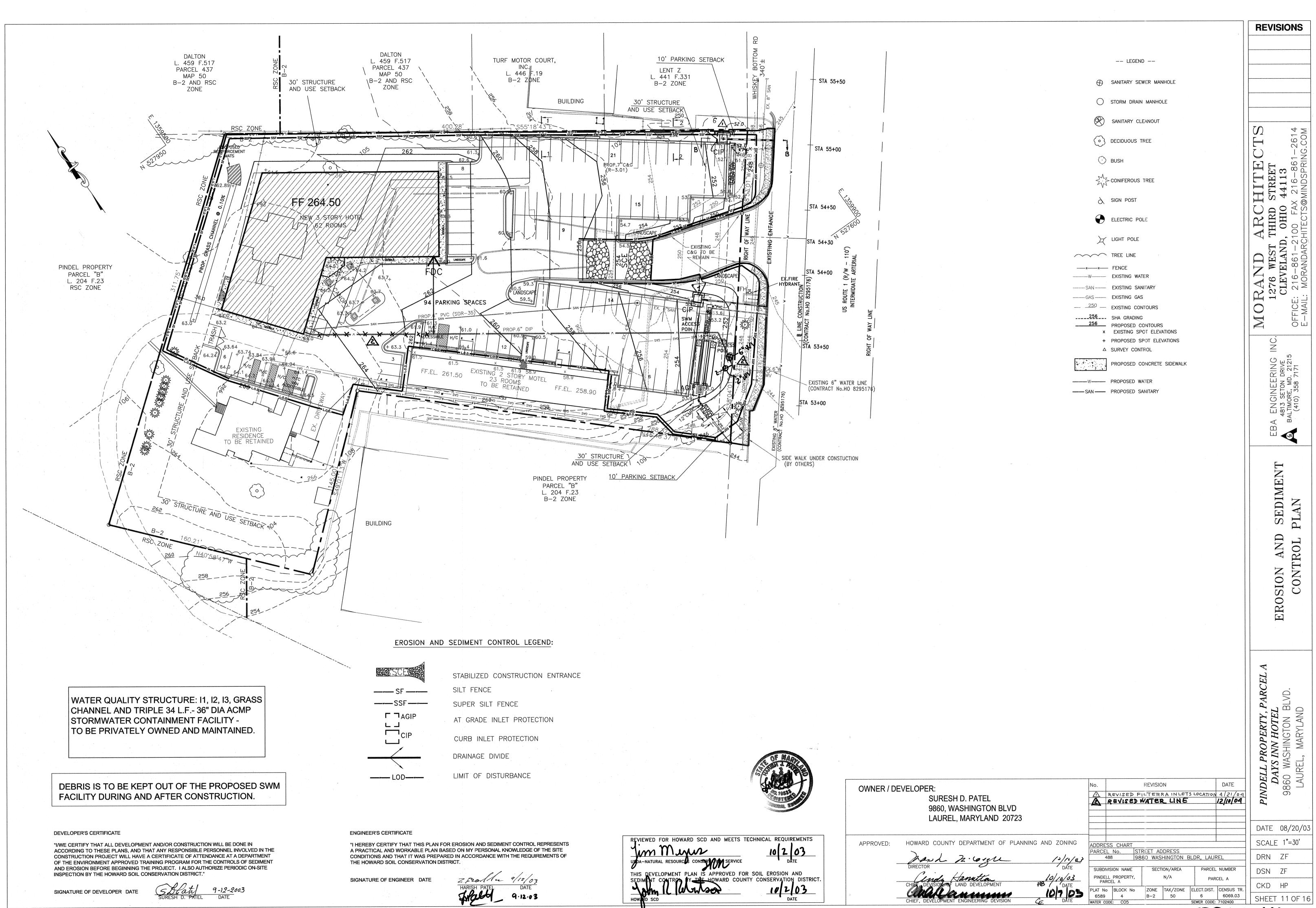
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| OWNER / DEVELOPER: SURESH D. PATEL 9860, WASHINGTON BLVD | ⚠ Rev | ised t | he pa | irkings | edriice | 12-03-04 | PINDE | 98 |
| LAUREL, MARYLAND 20723 | | | | | | | DATE | 09/0 |
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| marche à carelle 10/10/03 | PARCEL No. STREET ADDRESS 488 9860 WASHINGTON BLDR, LAUREL | | | | REL | DRN | ZF | |
| DIRECTOR DATE | SUBDIVISION PINDELL PRO | | SECTION/AREA N/A | | | NUMBER | DSN | ZF |
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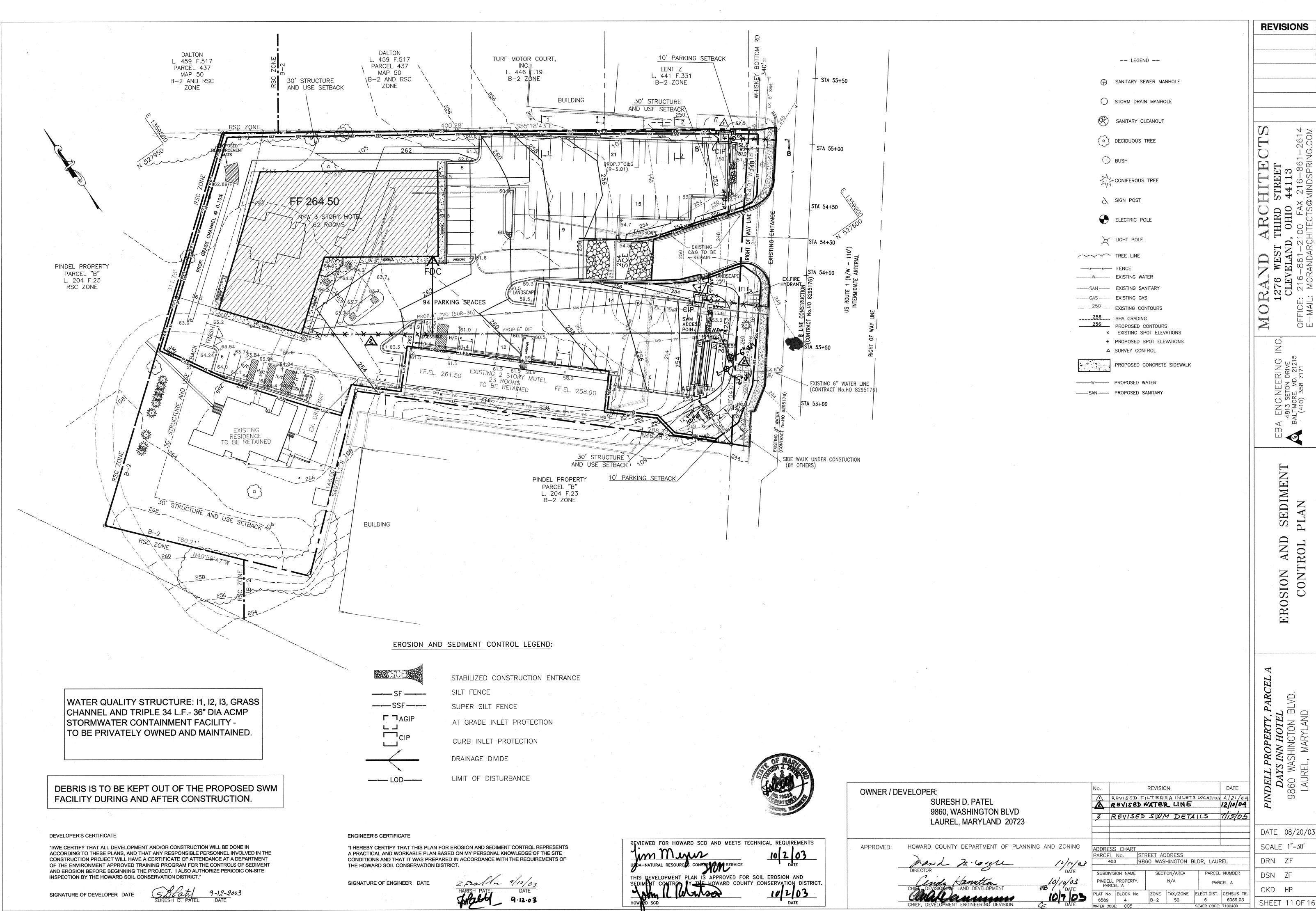
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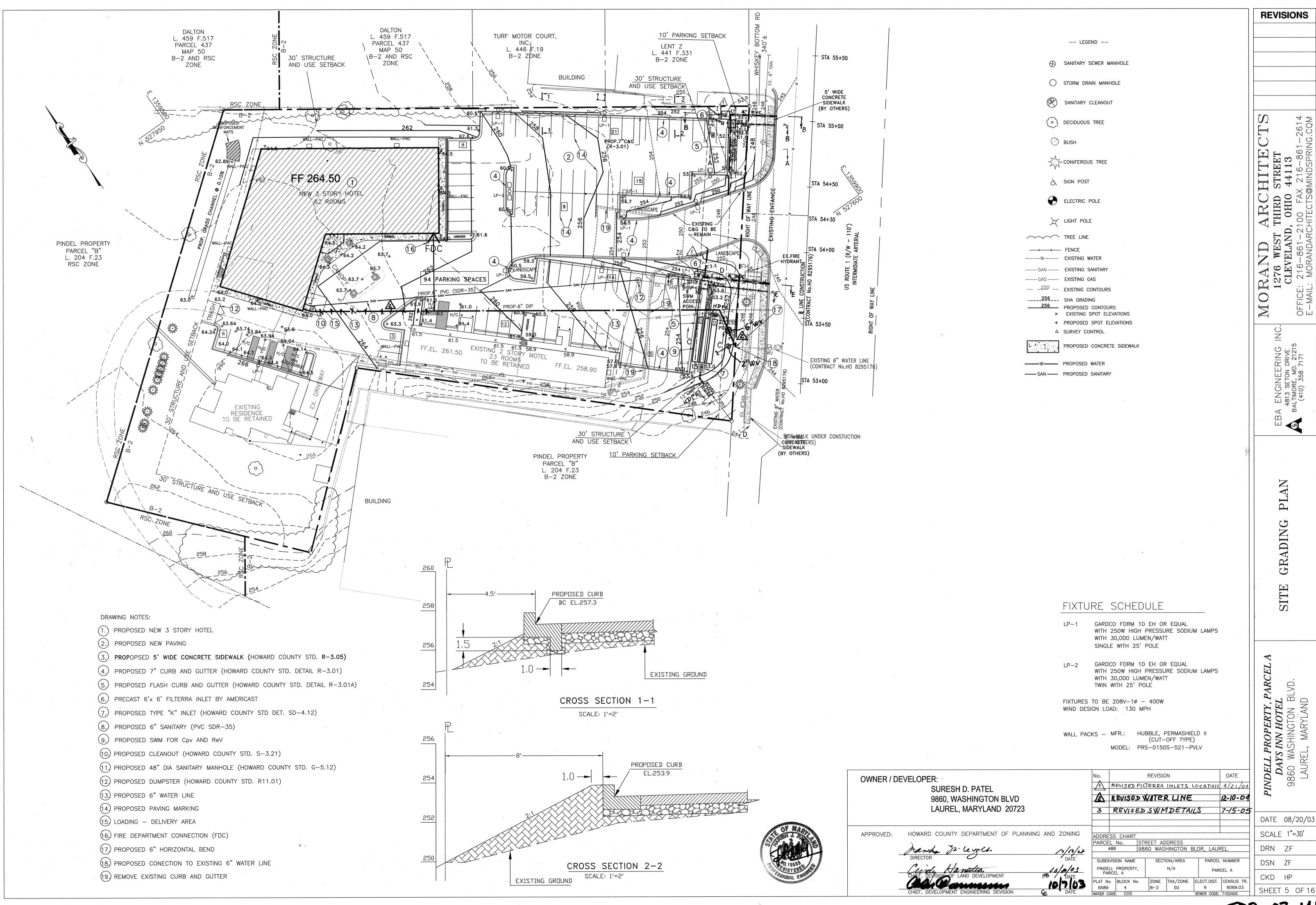
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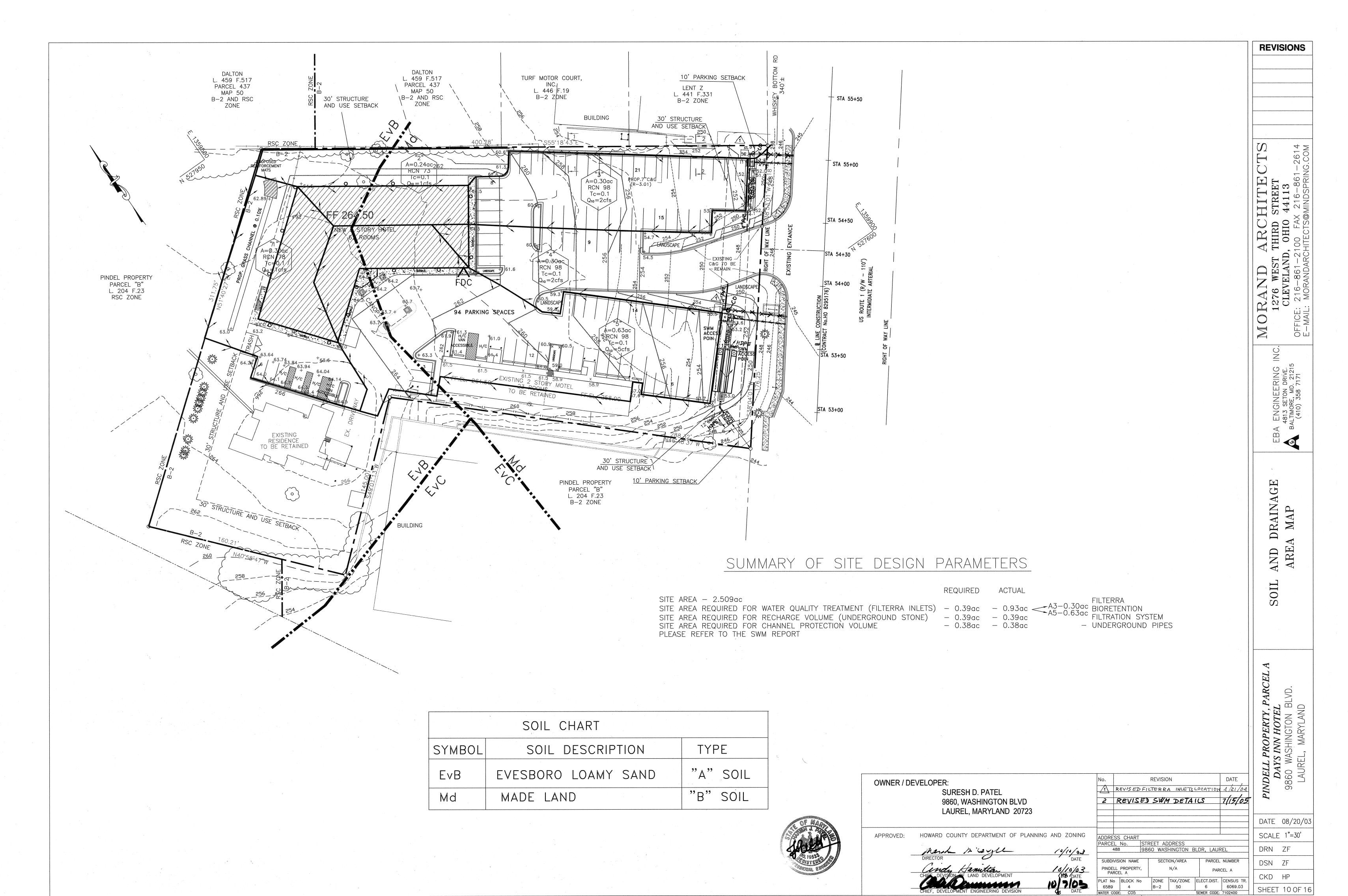


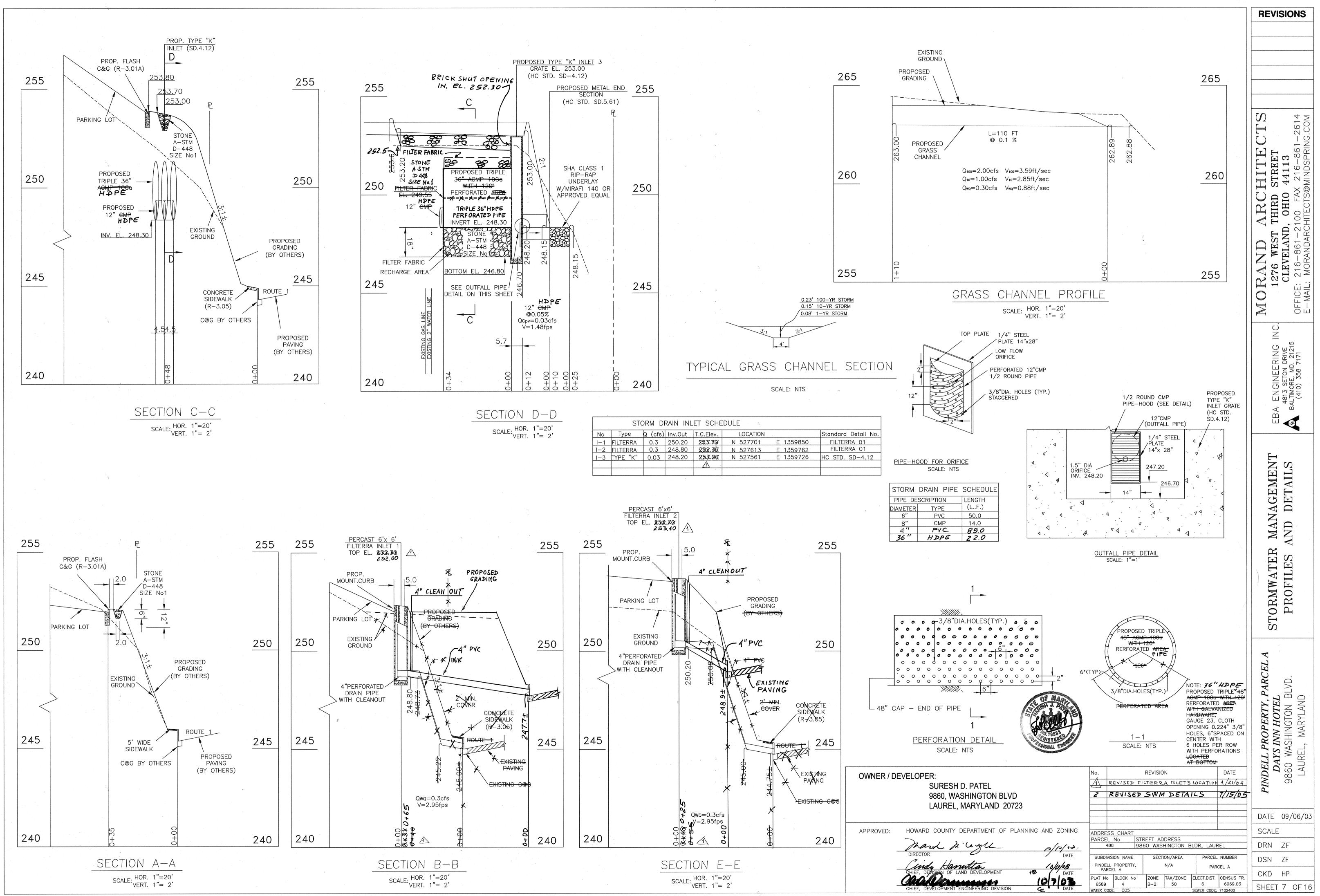


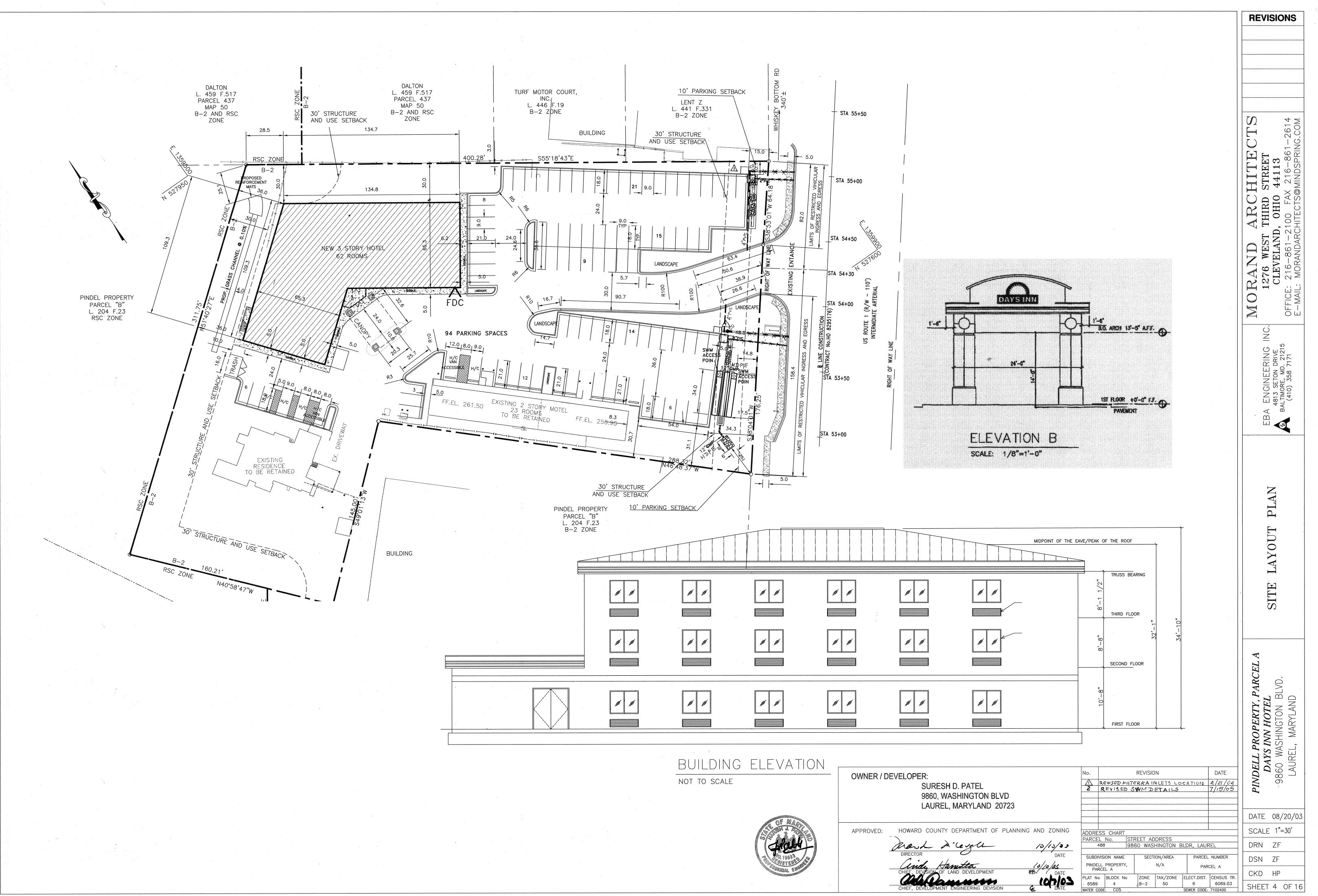


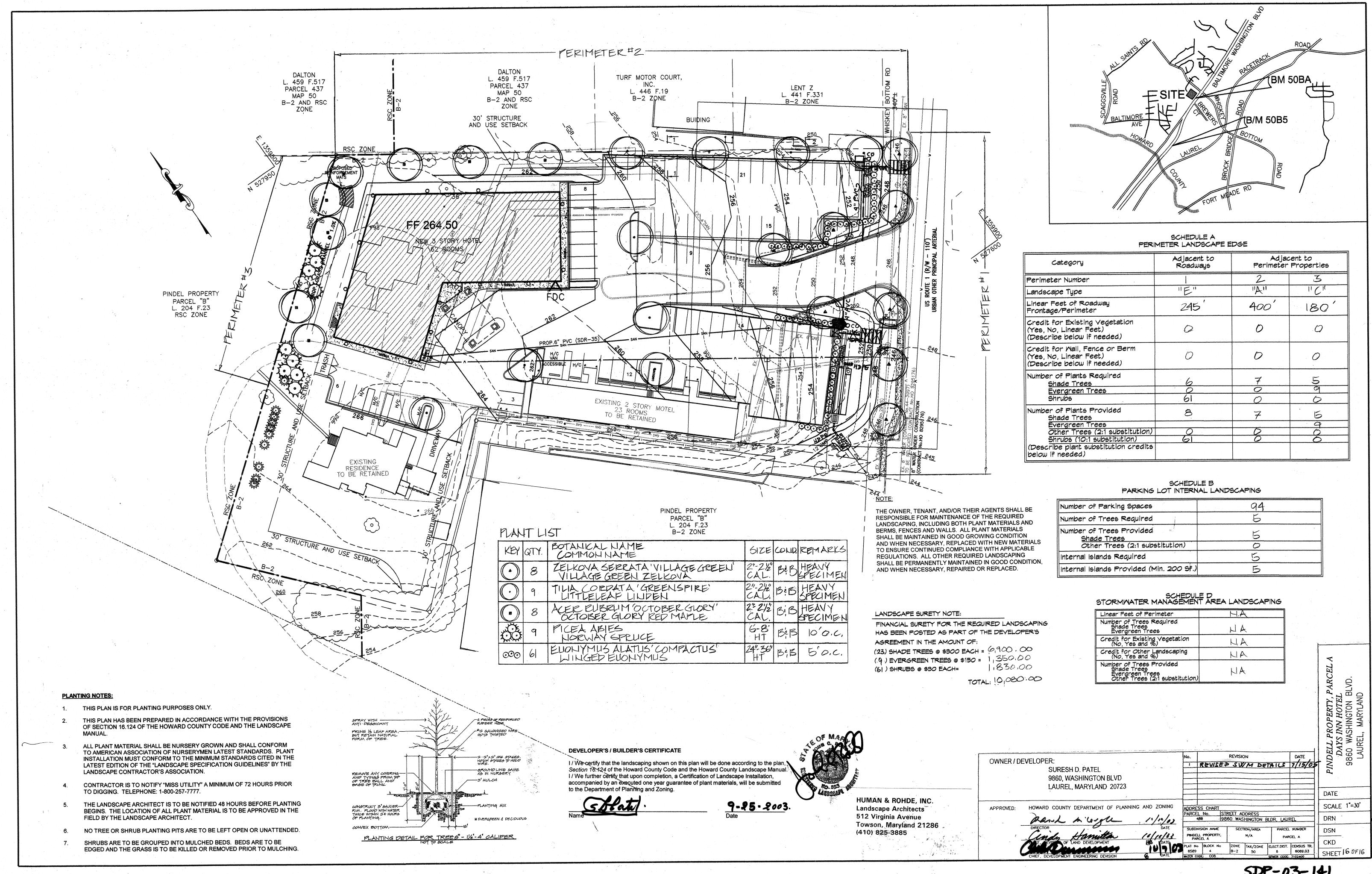




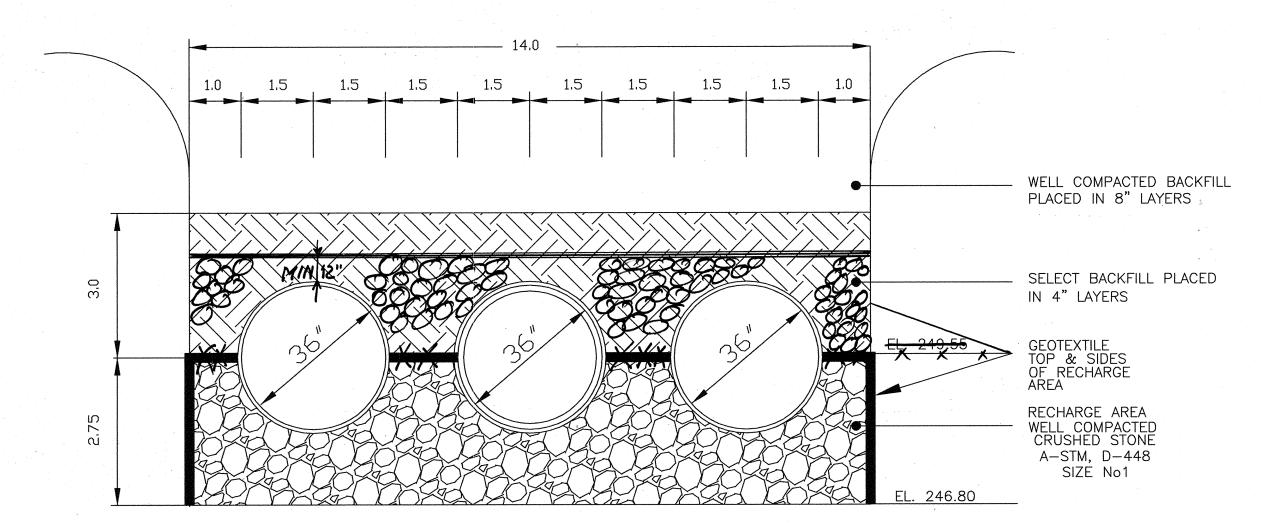








PROPOSED SANITARY LINE PROFILE SCALE: HOR. 1"=20' VERT. 1"= 2'



NOTE: EXCAVATION AND BACKFILL AS PER GEOTECHNICAL REPORT

SWM STORAGE PIPE DETAIL SCALE: 1" = 2'



A. Installation, Operation, and Maintenance Plan (IOM Plan) The Contractor shall submit the manufacturer's approved FilterraTM installation, operation, and maintenance plan for the system. It will be the responsibility of the unit owner/operator or their contractor to ensure that the unit is nstalled, operated, and maintained in accordance with the IOM plan.

B. Drawings

The Contractor shall be provided dimensional drawings and, when specified, utilize these drawings to show details foronstruction, materials, specifications, reinforcing, pipe joints and any appurtenances. A Professional Engineer shall certify design alculations and drawings.

C. Manufacturer's Certification

professional engineer, which certifies all components of the unit have been manufactured and assembled to meet the requirements of these specifications and the approved drawings.

V .Materials and Design Each unit shall consist of a precast and fully constructed unit composed of a concrete container with appropriately sized and placed inlet and outlets, an under drain system, filter media, plant materials and an appropriate grate landscape cover where applicable.

A. Concrete for precast unit shall conform to ASTM Designation C 857 and C 858 and meet the following additional requirements:

1. The wall thickness shall not be less than 6 inches or as shown on the dimensional drawings. In all cases the wall thickness shall be no less than the minimum thickness necessary to meet loading requirements of the application as determined by a Licensed Professional Engineer.

2. The precast concrete unit shall be cured by an approved method. The unit shall not be shipped until the concrete has attained 85 % of its designed compressive strength.

3. Vault joints to be sealed with an Engineer approved non-shrink

4. Dimensions to meet the requirements of the approved drawings. B. Pipe connections shall be provided to accept pipes of the specified size(s) and material(s).

C. Frames, covers, and grates to be as recommended by the Supplier and subject to review of the Engineer for compatibility with site specific conditions.

D. Plant type and size shall meet the requirements of the approved drawings and the plant materials will be supplied by a nursery that grows stock materials in conformance with the specifications of American Nursery Association Standards.

E. Filter media shall be as directed by Americast which meets the performance criteria described in Section VI. F. The under drain system shall be constructed using perforated PVC pipe of sufficient capacity to freely accept the design flows of the unit without clogging or restricting flows. Access must be provided for inspection and cleaning of the under drain pipe. VI. Performance Criteria

A. The unit shall have a minimum flow rate 250 cubic feet / hour for a container with a surface area of 36 square feet. B. The unit shall remove 80% total suspended solids. C. The unit shall remove 70% total phosphorous, 60% total nitrogen, 90% heavy metals (Cu, Pb, Zn) and 50% hydrocarbon for oil/grease. D. The unit (of 36 square feet surface area) shall filter and treat a minimum of 80% of the annual volume of runoff from a 100% total impervious area of Y4 acre. Higher efficiency rates can be achieved with larger filters or more filters / unit area.

E. The unit shall be dewatered to 50 % soil moisture content within 12 hours through a process of gravity flow and evapotranspiration. F. The unit shall be designed to ensure that high flow events shall by-pass the filter media preventing erosion and resupension of oollutants.

G. The filtered effluent shall be discharged to an appropriate storm drainage system in accordance with the approved drawings. H. The unit shall support vigorous plant and microbe growth. I. In areas were salt (NaCI) is used for deicing the filter shall continue to function to remove pollutants and support vigorous plant growth provided that adequate drainage / filtration rates are maintained to flush residual salt concentrations out of the filter

J. Contractor / Owner's strict compliance with the IOM Plan is critical to achieving performance criteria.

VII. Construction A. Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.

B. The unit shall be placed on a level compacted subbase with a 6-inch gravel base. Compact undisturbed sub-grade materials to 95 % of maximum density at + 1- 2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to site engineer's

C. Inlet and outlets connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions.

D. Once the unit is set, backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6" lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of filter unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility

Structures". VIII. Maintenance

A. Each FilterraTM system is to be maintained by Americast, or an Americast approved contractor for a minimum period of 2 years. The cost of this service to be included in the price of each FilterraTM system. Annual maintenance consists of a maximum of (2) scheduled visit. Each maintenance visit consists of the following tasks. 1. Foreign debris removal 2. Excess silt removal

3. Plant health evaluation and pruning or replacement as necessary

4. Media evaluation and recharge as necessary

5. Addition of mulch as necessary 6. Disposal of all maintenance refuse items

B. The beginning and ending date of Supplier obligation to maintain the installed system shall be determined by the Supplier at the time the system is placed in operation. Owner must promptly notify the Supplier of any damage to the plant(s), which constitute(s) an integral part of the bioretention technology .The Supplier shall provide a sign or tag for each unit warning not to cut or damage the plant(s).

| OWNER / D | EVELOPER: SURESH D. PATEL 9860, WASHINGTON BLVD LAUREL, MARYLAND 20723 | | No. 1 K | ?EV/SED | SWM | | ILS | |
|-----------|--|----------------|-------------------------------|-----------|---------|-----------|------------|--|
| APPROVED: | HOWARD COUNTY DEPARTMENT OF PLANNING | AND ZONING | ADDRESS | S CHART | | | · | |
| | | | PARCEL | No. ST | REET AD | DDRESS | | |
| - | DIRECTOR 2. Cayll | 10/10/13 | 488 | 3 98 | 860 WAS | HINGTON E | BLDR, LAL | |
| | DIRECTOR | DATE | SUBDIVIS | SION NAME | SECT | ION/AREA | PARCE | |
| | CINEL LAND DEVELOPMENT | HB / DATE | PINDELL PROPERTY, PARCEL A | | N/A | | PA | |
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The manufacturer shall submit documentation sealed by a egistered

REVISIONS

AGEMEN MANAG S AND PROFII STORMWATER DETAILS SANITARY

DATE 09/06/03 SCALE DRN VB

DSN ZF CKD HP