INDEX OF SHEETS
SEE SHEET 2

SHA

Maryland Department of Transportation

STATE HIGHWAY ADMINISTRATION
PLANS OF PROPOSED HIGHWAY

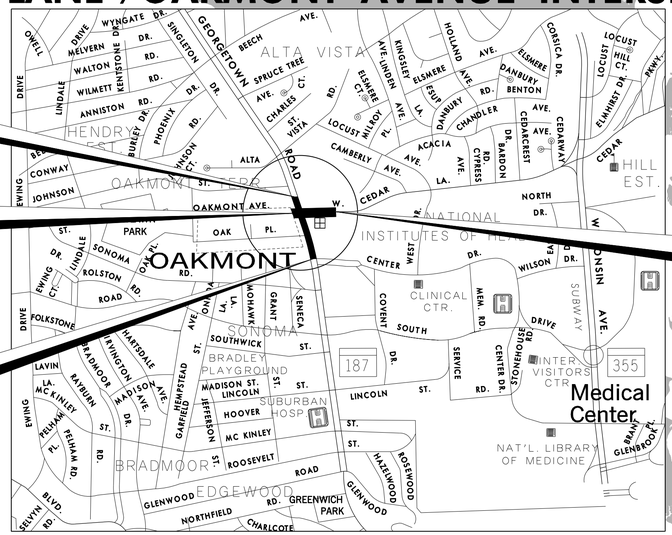
S.H.A. CONTRACT NO. MO5935370
F.A.P NO.

BRAC INTERSECTIONS NEAR NATIONAL NAVAL MEDICAL CENTER
MD 187 AT CEDAR LANE /OAKMONT AVENUE INTERSECTION IMPROVEMENTS

LIMIT OF WORK
MO5935370
MD 187
STA. 18+08.24

LIMIT OF WORK
MO5935370
OAKMONT AVE.
STA. 198+50

LIMIT OF WORK
MO5935370
MD 187
STA. 6+00



LIMIT OF WORK
MO5935370
W. CEDAR LANE
STA. 204+75

MONTGOMERY COUNTY

LENGTH OF PROJECT:
MD. 187 (OLD GEORGETOWN ROAD) = 0.23 miles
W. CEDAR LANE = 0.09 miles

SCALE: 1" = 1000 '

1000 0 1000 2000 feet

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

HORIZONTAL DATUM	NAD 83 /91
VERTICAL DATUM	NAVD 88

Maryland Department of Transportation
State Highway Administration
OHD
Office of Highway Development
Semi–Final Review
DATED NOVEMBER, 2009

CENTURY ENGINEERING
CONSULTING ENGINEERS – PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

R–O–W PLAT NUMBERS	*SURVEY BOOK NUMBERS*
	31283

DESIGN DESIGNATION

ROADWAY	MD 187		WEST CEDAR LANE/OAKMONT AVENUE	
CONTROLS / YEARS	2008	2011	2008	2011
AVERAGE DAILY TRAFFIC (A.D.T.)	49,950	53,000	12,275	14,250
DESIGN HOURLY VOLUME (D.H.V.)	9%	9%	11%	11%
DIRECTIONAL DISTRIBUTION	62%	62%	71%	71%
% TRUCKS – A.D.T.	5%	5%	4%	4%
% TRUCKS – D.H.V.	5%	5%	3%	3%
DESIGN SPEED M. P. H.	45		35	
FUNCTIONAL CLASSIFICATION	URBAN OTHER PRINCIPAL ARTERIAL		URBAN MINOR ARTERIAL	
CONTROL OF ACCESS	NONE		NONE	
INTENSITY OF DEVELOPMENT	URBAN		URBAN	
TERRAIN	FLAT		FLAT	
ANTICIPATED POSTED SPEED	40		25	

REVISIONS
NOTE: See Sheet No. 2 for List of Revised Sheet Numbers

AASHTO DESIGN CRITERIA

THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE 2001 PUBLICATION OF AASHTO'S "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS."

STANDARD SPECIFICATIONS BOOK, BOOK OF STANDARDS AND MUTCD

ALL WORK ON THIS PROJECT SHALL CONFORM TO: THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATIONS SPECIFICATIONS ENTITLED STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2008 REVISIONS THEREOF OR ADDITIONS THERETO; THE SPECIAL PROVISIONS INCLUDED IN THE INVITATION FOR BIDS BOOK; THE ADMINISTRATIONS BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES AND THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

RIGHT OF WAY

RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL FOR OFFICIAL FEE RIGHT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT OF WAY PLATS.

UTILITIES

THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE ACCURACY OF SAID LOCATIONS.

ENVIROMENTAL INFORMATION

MDE # 09–SF–0197

ALL STORMWATER MANAGEMENT FACILITIES CONSTRUCTED FOR CONTRACT NO. MO5935370 SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATIONS BEST MANAGEMENT PRACTICES (BMP) INSPECTION AND REMEDIATION PROGRAM.

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION.

OWNERS / DEVELOPERS CERTIFICATION :

I / WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT OF WAY ENTRY FOR PERIODIC ON–SITE EVALUATION BY STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS.

COMPLETENESS OF DOCUMENTS

THE STATE HIGHWAY ADMINISTRATION SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM THE STATE HIGHWAY ADMINISTRATION'S CASHIER'S OFFICE. FAILURE TO ATTACH ADDENDA MAY CAUSE THE BID TO BE IRREGULAR.

ADA COMPLIANCE

THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES FOR THE ELDERLY AND HANDICAPPED IN COMPLIANCE WITH THE STATE AND FEDERAL LEGISLATION

REVIEWED AND APPROVAL RECOMMENDED DATE
CHIEF, HIGHWAY DESIGN DIVISION

APPROVAL RECOMMENDED DATE
DIRECTOR, OFFICE OF HIGHWAY DEVELOPMENT

APPROVED DATE
DEPUTY ADMINISTRATOR – PLANNING, ENGINEERING, REAL ESTATE AND ENVIRONMENT.

SURVEY BOOK NO.	$FILE$ $DATETIME$	INDEXED

BY: $USERNAME$

ABBREVIATIONS

AASHTO	American Association of State Highway Transportation Officials
ADT	Average Daily Traffic
AHD	Ahead
APPROX.	Approximate
℄ or ℄L	Baseline
BK	Back / Book
BIT.	Bituminous
B.C.	Bituminous Concrete
B.M.	Bench Mark
BOT.	Bottom
C.C.	Center of Curve
CAP	Corrugated Aluminum Pipe
CAPA	Corrugated Aluminum Pipe Arch
CATV	Cable Television
C.B.R.	California Bearing Ratio
℄ or ℄L	Centerline
CL.	Class
CLF	Chainlink Fence
CMP	Corrugated Metal Pipe
C.O.	Cleanout
COMB.	Combination
CONC.	Concrete
CONSTR.	Construction
COR.	Corner
CORR.	Correction
CPP–S	Corrugated Polyethylene Pipe – Type 'S'
CSP	Corrugated Steel Pipe – Aluminized Type 2
CSPA	Corrugated Steel Pipe Arch – Aluminized Type 2
DC	Degree of Curve
D.H.V.	Design Hourly Volume
D.I.	Drop Inlet
DIA.	Diameter
D.O.	Double Opening
E	East
E	Electric
E	External Distance
EA	Each
EB	Eastbound
ELEV	Elevation
ES	End Section
EX or EXIST	Existing
FT	Feet
F or FL	Flowline
F.B.D.	Flat Bottom Ditch
F.H.	Fire Hydrant
FWD.	Forward
G	Gas
G.V.	Gas Valve
H.B.	Handbox
HDPE	High Density Polyetheylene
HDWL.	Headwall
HERCP	Horizontal Ellipitical Reinforced Concrete Pipe
HP	High Point
IN	Inch
I.S.T.	Inlet Sediment Trap
INV.	Invert
J.B.	Junction Box
K	K Inlet
L	Length
LF	Linear Feet
L.L.	Liquid Limit
LP	Low Point
L.P.	Light Pole
LT.	Left
MAC.	Macadam
M.C.	Moisture Content
MAX.	Maximum
M.D.D.	Maximum Dry Content
MOD.	Modified
MIN.	Minimum
N	North
NB	Northbound
NE	Northeast
N.P.	Non–Plastic
O.C.	On Center
OHE	Overhead Electric
O.M.	Optimum Moisture
PAV'T.	Pavement
PC	Point of Curvature
PCC	Point of Compound Curvature
P/C	Point of Crown
P/GE	Profile Grade Elevation
P.G.E.	Profile Ground Elevation
P.G.L.	Profile Grade Line
P/GL	Profile Ground Line
P/R	Point of Rotation
P.I.	Plasticity Index
PI	Point of Intersection
POC	Point On Curve
POT	Point On Tangent
PPWP	Polyvinyl Chloride Profile Wall Pipe
PROP	Proposed
PRC	Point of Reverse Curve
PT	Point
PT	Point of Tangency
PVC	Point of Vertical Curve
PVC	Polyvinyl Chloride
PVI	Point of Vertical Intersection
PVRC	Point of Vertical Reverse Curve
PVT	Point of Vertical Tangency
R	Radius
R.F.	Rock Fragments
RT	Right
RW or R/W	Right of Way
RCP	Reinforced Concrete Pipe
RCPP	Reinforced Concrete Pressure Pipe
R.Q.D.	Rock Quality Designation
R.M.	Rootmat
S	South
SAN.	Sanitary Sewer
SB or S/B	Southbound
S.D.	Storm Drain
S.D.D.	Surface Drain Ditch
S/E	Super Elevation
SF	Silt Fence
SF	Square Feet
SHT.	Sheet
SPP	Structural Steel Plate Pipe
SPPA	Structural Steel Plate Pipe Arch
S.P.T.	Standard Penetration Testing
SRP	Steel Spiral Rib Pipe – Aluminized Type 2
SRPA	Steel Spiral Rib Pipe Arch – Aluminized Type 2
SSD	Stopping Sight Distance
SSF	Super Silt Fence
STD.	Standard
STA.	Station
SO.	Single Opening
SY	Square Yards
SWM	Stormwater Management
T	Tangent
T	Telephone
T.C.	Top of Cover
T.G.	Top of Grate
T or TL	Traverse Line
T.M.	Top of Manhole
TRAV.	Traverse
TS	Temporary Swale
T.S.	Top of Slab
T.S.	Topsoil
TYP.	Typical
U.D.	Under Drain
U.G.	Underground
U.P.	Utility Pole
USDA	United States Department of Agriculture
VCL	Vertical Clearance
V.C.L.	Vertical Curve Length
W	Water
W	West
WB	Westbound
WB	Wetland Buffer
W.M.	Water Meter
W.S.	Wrapped Steel
WUS	Waters of the United States
W.V.	Water Valve

CONVENTIONAL SIGNS

PROPOSED MEDIAN BARRIER

ELECTRICAL HAND BOX – SIGNALS

FLOW LINE

STATE, COUNTY OR CITY LINES

PROPOSED TRAFFIC BARRIER

EXISTING TRAFFIC BARRIER

PROPOSED FENCE LINE

EXISTING FENCE LINE

RIGHT OF WAY LINE

EXISTING ROADWAY

RAILROAD

BASE LINE OR SURVEY LINE

FIRE HYDRANT

HISTORIC BOUNDARY

EXISTING SIGN

PROPOSED PIPE / CULVERT

EXISTING PIPE / CULVERT

EXISTING DROP INLET

UTILITY POLE

WETLAND

WETLAND BUFFER

WATERS OF THE U.S.

HEDGE / TREE LINE

BUSH / TREE

CONIFEROUS TREE

REMOVE EXISTING TREES

GROUND ELEVATION

GRADE ELEVATION

BURIED UTILITY LINES & NO. OF CABLES

EXISTING TOP OF BANK

EXISTING TOE OF FILL

EXISTING CURB

PROPOSED CURB

PROPOSED TOP OF CUT

PROPOSED TOE OF FILL

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

BY: $USERNAME$

INDEX OF SHEETS

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO EXCAVATION FOR MARKING AND LOCATION OF UTILITIES.

2. ALL EXISTING UTILITY FRAMES AND GRATES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR AND OTHERS SHALL PERFORM ALL WORK IN A MANNER THAT WILL ENSURE THE LEAST PRACTICABLE OBSTRUCTION TO TRAFFIC AND BE CONSISTENT WITH SAFETY.

5. ALL INVERT ELEVATIONS ARE APPROXIMATE AND MAY BE MODIFIED TO MEET CONDITIONS ENCOUNTERED DURING INSTALLATION OF DRAINAGE STRUCTURES, EXCEPT STORMWATER MANAGEMENT FACILITIES.

6 USABLE SURVEY DATUM:
THE CONTRACTOR, IN THE CONSTRUCTION-ALIGNMENT PROCESS AND FOR ALL SURVEY OPERATIONS, SHALL USE ONLY BENCHMARKS NOTED AS "NAD 83-91" (HORIZONTAL DATUM) AND "NAVD 88" (VERTICAL DATUM) ON THE CONSTRUCTION PLANS AND IN THE CONSTRUCTION STAKEOUT INFORMATION FOR HORIZONTAL AND VERTICAL LAYOUT. CONTROL POINTS NOT LISTED AS SUCH SHALL BE USED ONLY UPON PRIOR APPROVAL FROM THE MARYLAND STATE HIGHWAY ADMINISTRATION.

7. ALL BENCHMARKS AND COORDINATES SHOWN ON THE CONTRACT PLANS ARE "NAD 83-91" AND "NAVD 88".

8. DIMENSIONS SHOWN ON THE PLANS REGARDING CURB & GUTTER ARE TO THE FACE OF THE CURB.

9. ALL MEASUREMENTS FOR OFFSETS AND STATIONS WERE TAKEN FROM THE CENTER OF MANHOLE BASE FOR MANHOLES AND CENTER OF THE BASE STRUCTURE, AT THE FACE OF CURB, FOR INLETS.

DATUM: NAD 8391 Horizontal
NAVD 88 Vertical

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY DESIGN DIVISION

BRAC INTERSECTION IMPROVEMENT
MD 187 AND CEDAR LANE / OAKMONT AVENUE

REVISIONS

NOTES AND ABBREVIATIONS SHEET

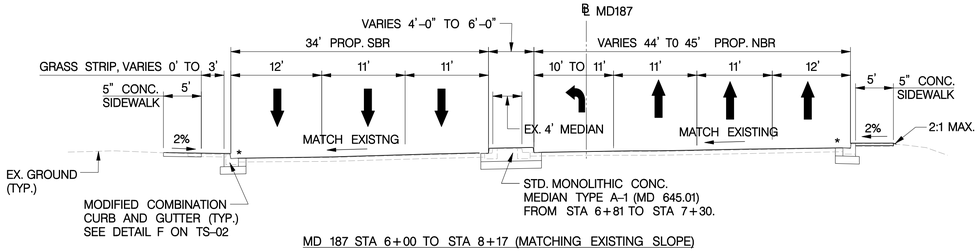
SCALE NTS ADVERTISED DATE _____ CONTRACT NO. MO5935370

DESIGNED BY HQ
DRAWN BY JP
CHECKED BY JW
F.A.P. NO. SEE TITLE SHEET

COUNTY MONTGOMERY
LOGMILE _____
HORIZONTAL SCALE _____
VERTICAL SCALE _____

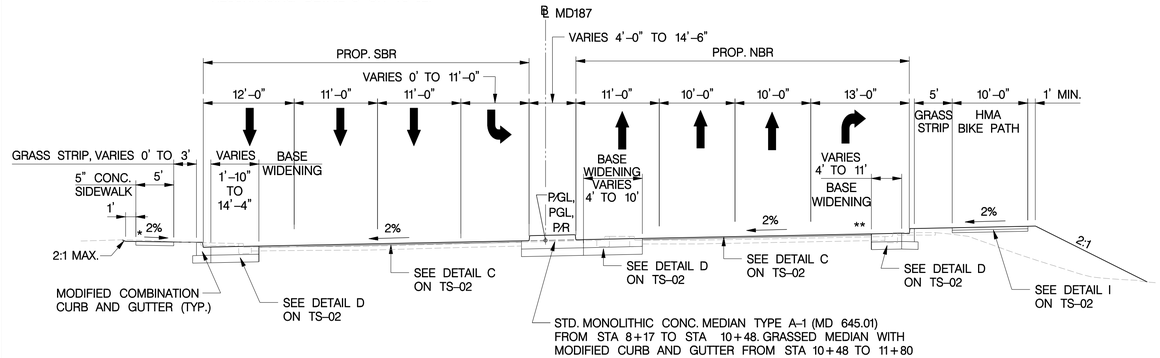
DRAWING NO. AB-01 OF 01 SHEET NO. 2 OF 39

PLOTTED: $DATETIME$
FILE: $FILE$



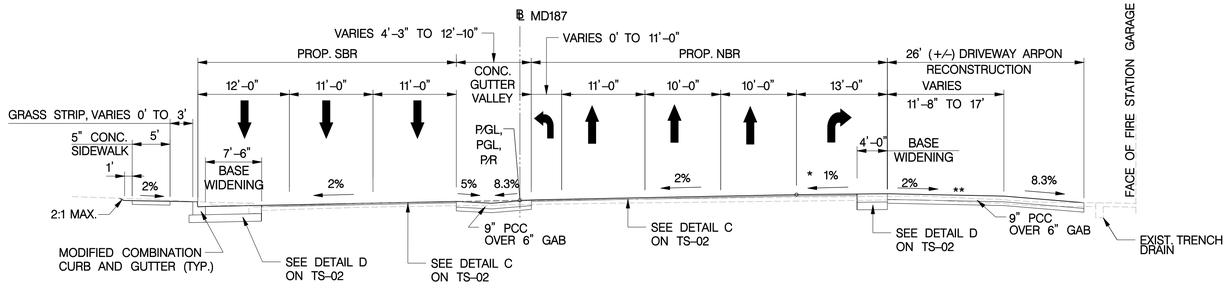
MD 187 STA 6+00 TO STA 8+17 (MATCHING EXISTING SLOPE)

NOTE:
* RECONSTRUCTION OF SIDEWALK AND COMBINATION CURB AND GUTTER ALONG THE WEST SIDE OF MD 187 BEGINS FROM STA. 7+12.6 LT AND EAST SIDE FROM STA. 7+08.6 RT. FOR SECTIONS WHERE SIDEWALK AND C&G ARE NOT TO BE RECONSTRUCTED, USE PAVEMENT RESURFACING DETAIL C ON TS–02.



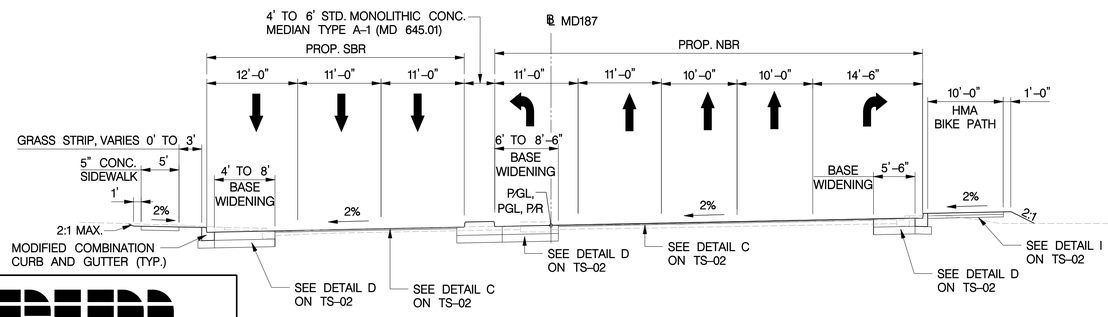
MD 187 STA 8+17 TO STA 11+80 (SUPERELEVATED)

NOTES:
* RECONSTRUCTION OF SIDEWALK AND COMBINATION CURB AND GUTTER ALONG THE WEST SIDE OF MD 187 STARTS FROM STA. 7+84.35 LT.
** PCC BUS PAD TO BE INSTALLED FROM STA 9+42 RT TO STA 10+22 RT, SEE PAVEMENT DETAIL H ON DWG. TS–02



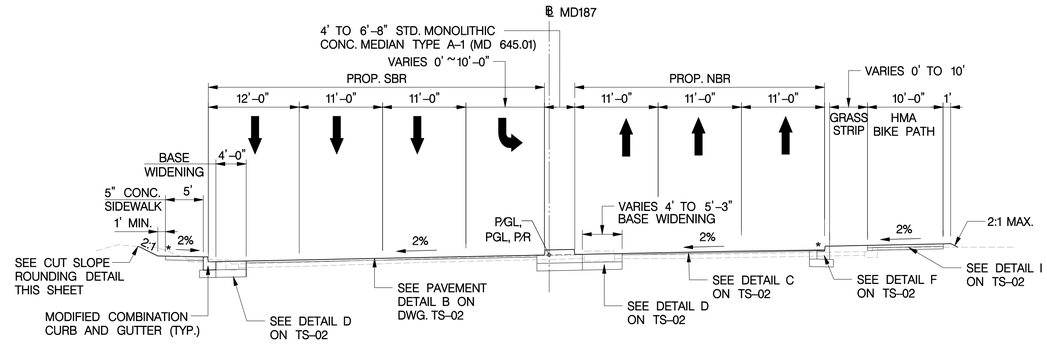
MD 187 STA 11+80 TO STA 12+44 (SUPERELEVATED)

NOTE:
* CROSS SLOPE ON NORTHBOUND RIGHT–TURN LANE TRANSITIONS FROM 2% TO 1% BETWEEN STA 11+80 AND STA 11+90.
**CROSS SLOPE TRANSITIONS FROM 2% TOWARD CURB TO 2% TOWARD FIRE STATION COMPLETE WITHIN THE ADJACENT RAMPS.



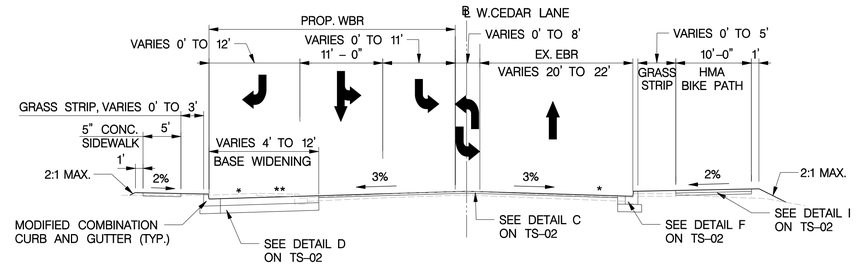
MD 187 STA 12+44 TO STA 13+68 (SUPERELEVATED)

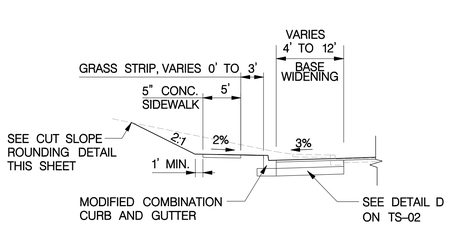
NOTE:
FOR ROADSIDE AREAS FLATTER THAN 2:1, PLACE 4" TOPSOIL, SEED AND MULCH.
FOR ROADSIDE AREAS WITH SLOPES 2:1 PLACE 2" TOPSOIL, SEED AND MULCH.



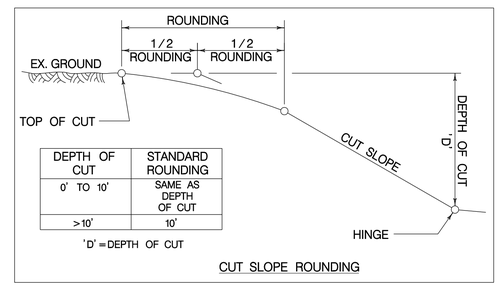
MD 187 STA 14+54 TO STA 17+25 (SUPERELEVATED)

NOTE:
* RECONSTRUCTION OF SIDEWALK RAMP AND COMBINATION CURB ANG GUTTER BETWEEN STA. 17+25 AND 18+08.24 SHALL BE IN ACCORDANCE WITH DETAIL F ON TS–02.





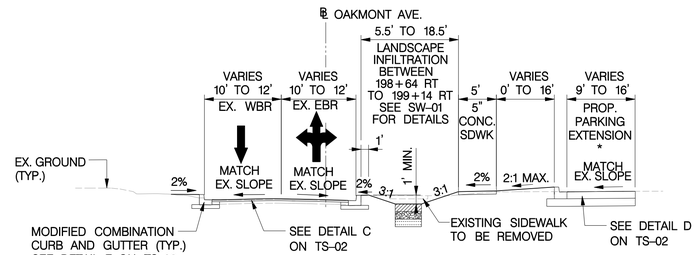
STA 203+60 TO 204+34



CUT SLOPE ROUNDING

WEST CEDAR LANE STA 200+50 TO 204+75

* PCC BUS PAD TO BE INSTALLED FROM STA 201+23 RT TO 202+03 RT AND FROM STA 201+92 LT TO 202+72 LT. SEE PAVEMENT DETAIL H ON DWG. TS–02
** BASE WIDENING ON WEST CEDAR LANE LT ENDS AT STA. 204+16. SIDEWALK AND C&G CONSTRUCTION ENDS AT STA. 204+34.



OAKMONT AVE. STA 198+80 TO STA 199+25 (CROWNED)

* NO PARKING EXTENSION BETWEEN STA. 198+92.2 AND 199+11.8 RT. NEW COMBINATION CURB AND GUTTER SHALL BE INSTALLED AT THE BACK OF SIDEWALK ON EXISTING PAVEMENT PER DETAIL F ON TS–02.

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY HYDRAULICS DIVISION

BRAC INTERSECTION IMPROVEMENT
MD 187 AND CEDAR LANE / OAKMONT AVENUE

REVISIONS

TYPICAL SECTIONS

SCALE NTS ADVERTISED DATE _____ CONTRACT NO. MO5935370

DESIGNED BY J.P.
DRAWN BY J.P.
CHECKED BY J.W.
F.A.P. NO. SEE TITLE SHEET

COUNTY MONTGOMERY
LOGMILE _____

DRAWING NO. TS – 01 OF 02 SHEET NO. 03 OF 39

PLOTTED: $DATETIME$
FILE: $FILE$

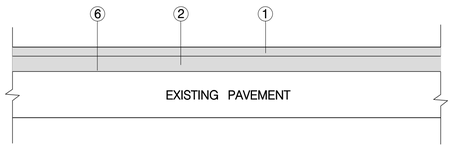
BY: $USERNAME$

BORDER REV: DATE: March 27, 2007

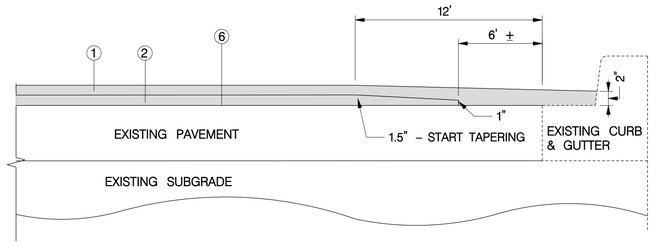
DRILL HOLES

DRILL HOLES

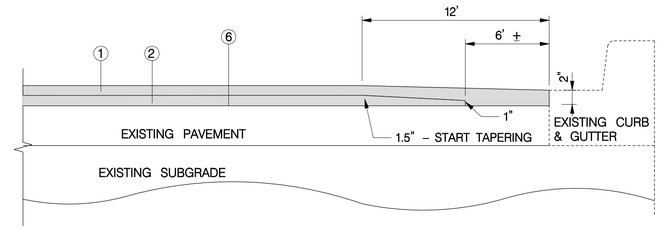
DRILL HOLES



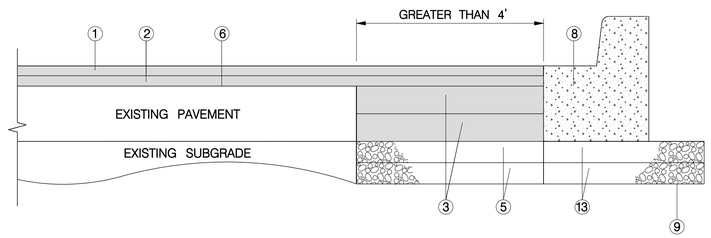
MD 187/CEDAR LANE/OAKMONT LANE: GRIND 2" AND RESURFACE 3" – DETAIL A



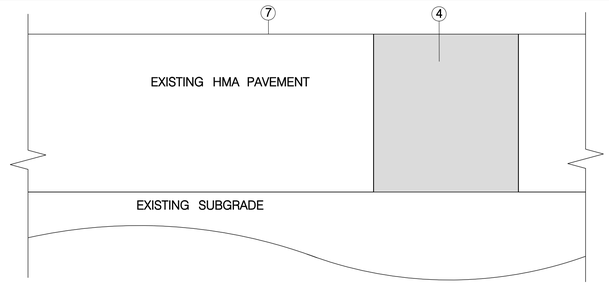
MD 187 (NORTH OF MD 187/CEDAR LANE/OAKMONT AVE INTERSECTION): GRIND AND RESURFACE EXISTING CURB & GUTTER – DETAIL B



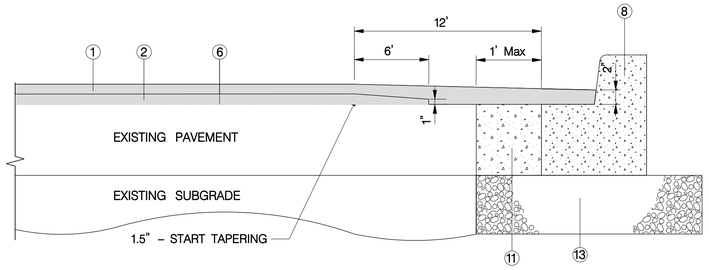
MD 187 (SOUTH OF MD 187/CEDAR LANE/OAKMONT AVE. INTERSECTION): GRIND AND RESURFACE – DETAIL C



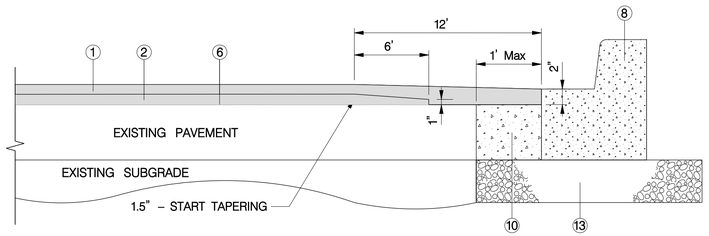
MD 187/CEDAR LANE/OAKMONT AVENUE: HMA BASE WIDENING, GRINDING & RESURFACING – DETAIL D



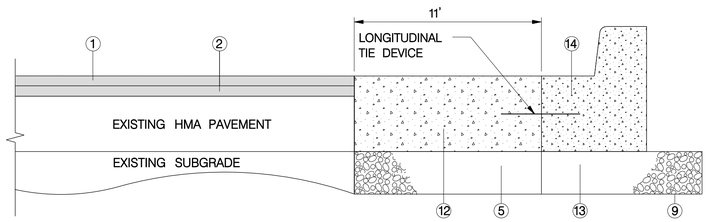
MD 187/CEDAR LANE/OAKMONT AVENUE: FULL DEPTH PATCHING – DETAIL E



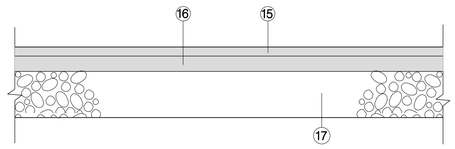
MD 187 (NORTH OF MD 187/CEDAR LANE/OAKMONT AVE INTERSECTION): NEW CURB & CUTTER PLACEMENT – DETAIL F



MD 187 (SOUTH OF MD 187/CEDAR LANE/OAKMONT AVENUE INTERSECTION)/CEDAR LANE: NEW CURB & CUTTER PLACEMENT – DETAIL G



MD 187: PCC BUS PAD, GRINDING, AND RESURFACING – DETAIL H



MD 187: HMA BIKE PATH – DETAIL I

PAVEMENT LEGEND

1. 1.5" HOT MIX ASPHALT SUPERPAVE 9.5 mm – PG 76–22, 8 PV LEVEL 4
2. 1.5" HOT MIX ASPHALT SUPERPAVE 9.5 mm FOR BASE – PG 76–22, LEVEL 4
3. 5" HOT MIX ASPHALT SUPERPAVE 25.0 mm FOR BASE – PG 64–22, LEVEL 2
4. VARIABLE DEPTH HOT MIX ASPHALT SUPERPAVE 25.0 mm for FULL DEPTH PATCHING – PG 64–22, LEVEL 2
5. 6" GRADED AGGREGATE BASE COURSE
6. EXISTING PAVEMENT SURFACE AFTER 2" CARBIDE GRINDING
7. EXISTING PAVEMENT SURFACE PRIOR TO 2" CARBIDE GRINDING
8. MODIFIED COMBINATION CURB AND GUTTER ALL OTHER DIMENSIONS COMPLY WITH MD STD 620.02, 13" GUTTER PAN DEPTH.
9. TOP OF SUBGRADE AND LIMIT OF EXCAVATION
10. 11" PCC MIX #3 (SEE NOTE 3)
11. 13" PCC MIX #3 (SEE NOTE 3)
12. 13" JOINTED PLAIN PORTLAND CEMENT CONCRETE, MODIFIED MIX # 6 (SEE NOTE 4)
13. 6" GRADED AGGREGATE BASE COURSE INCIDENTAL TO CURB AND GUTTER
14. STANDARD COMBINATION CURB AND GUTTER
15. 1.5" HOT MIX ASPHALT SUPERPAVE 9.5 MM FOR SURFACE–PG 64–22, LEVEL 1
16. 2.5" HOT MIX ASPHALT SUPERPAVE 9.5 MM FOR BASE–PG 64–22, LEVEL 1
17. 4" GRADED AGGREGATE BASE COURSE

NOTES:

1. IF NECESSARY, USE THE FOLLOWING ITEM FOR WEDGE/LEVEL, AS DIRECTED BY THE ENGINEER: VARIABLE DEPTH HOT MIX ASPHALT SUPERPAVE 9.5mm FOR WEDGE/LEVEL, PG 76–22, 8 PV, LEVEL 4 (MINIMUM LIFT 1" AND MAXIMUM LIFT 2").
2. INFORMATION FROM THE CONSTRUCTION HISTORY AND PAVEMENT BORINGS INDICATES THAT THE FOLLOWING EXISTING PAVEMENT STRUCTURE: MD187–APPROXIMATELY 4.5" TO 6.5" OF HMA OVER 4.0" OF DGSA W/CEMENT.
3. THIS WORK IS TO BE DONE AT THE CONTRACTOR'S OPTION. AN ADDITIONAL 1' WIDTH (MAXIMUM) EXCAVATION MAYBE USED FOR CURB AND GUTTER FORM PLACEMENT. THE ADDITIONAL EXCAVATION WIDTH IS TO BE FILLED WITH A MINIMUM OF 6" GAB AND JOINTED PLAIN PORTLAND CEMENT CONCRETE MIX #3, TO THE BOTTOM OF THE FINAL HMA COURSE. PAYMENT SHALL BE INCIDENTAL TO THE LINEAR FOOT ITEM FOR CURB AND GUTTER. THE TRANSVERSE JOINTS SHALL MATCH THOSE OF THE CURB AND GUTTER. DOWEL BARS ARE NOT NECESSARY.
4. ITEM USED AT BUS STOP LOCATIONS ONLY. LOAD TRANSFER DEVICES – #8 DOWEL BAR, 18" LONG, PLACED ON 12" CENTER LONGITUDINAL TIE DEVICES (AT LONGITUDINAL JOINTS AND SLAB /CURB INTERFACE) – #4 "J" BAR, 14" LONG, PLACED ON 36" CENTER. MAXIMUM JOINT SPACING 15 FT. PCC BUS PAD DIMENSION: 80' LONG X 11' WIDE.

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY HYDRAULICS DIVISION

BRAC INTERSECTION IMPROVEMENT
MD 187 AND CEDAR LANE / OAKMONT AVENUE

PAVEMENT DETAILS

SCALE NONE /VERTISED DATE CONTRACT NO. MO5935370

DESIGNED BY J.P. COUNTY MONTGOMERY
DRAWN BY J.P. LOGMILE
CHECKED BY J.W.
F.A.P. NO. SEE TITLE SHEET

DRAWING NO. TS – 02 OF 02 SHEET NO. 04 OF 39

PLOTTED: $DATETIME$
FILE: $FILE$

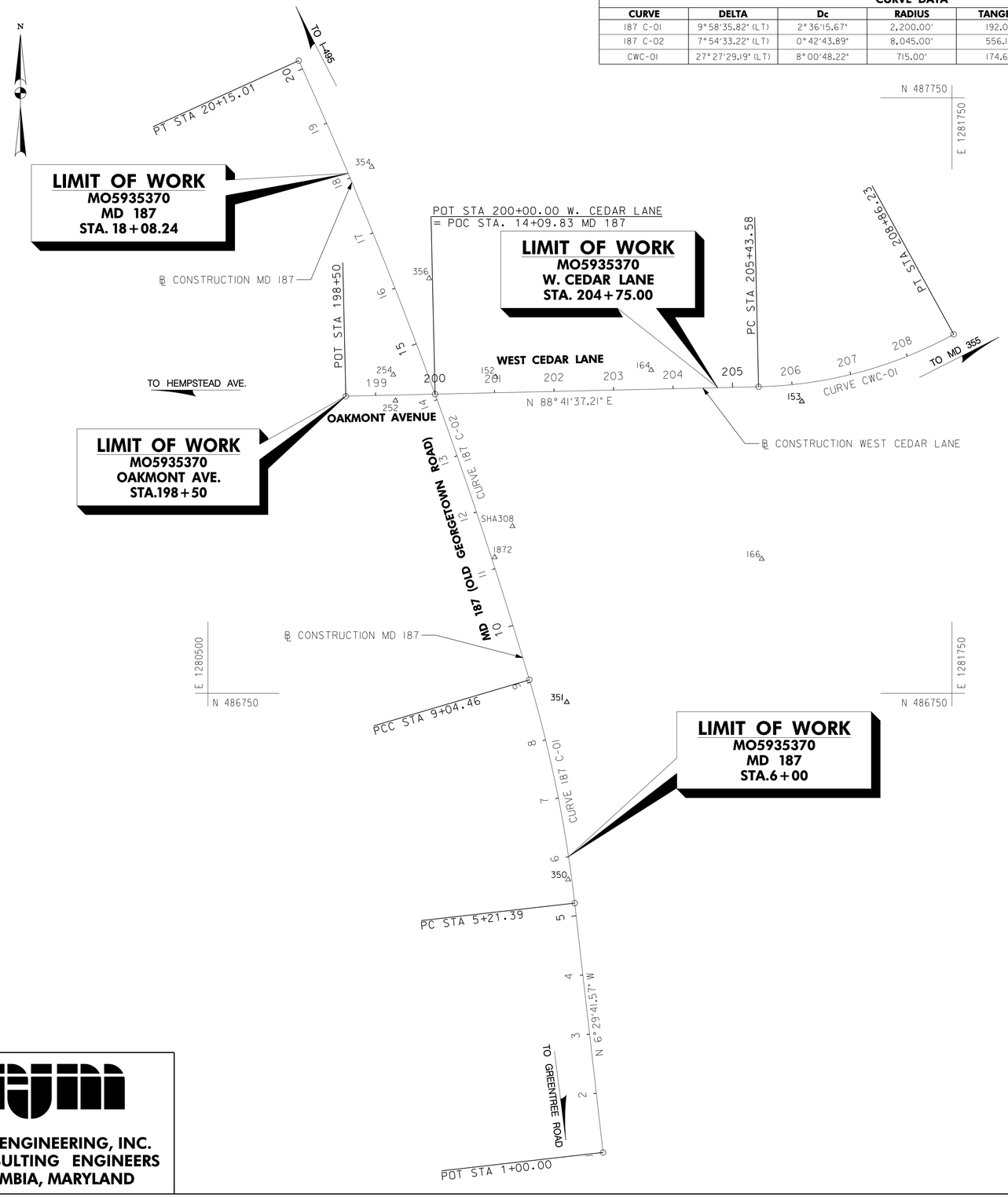
DRILL HOLES

BORDER REV: DATE: March 27, 2007

CURVE DATA						
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
187 C-01	9°58'35.82" (LT)	2°36'15.67"	2,200.00'	192.02'	383.07'	8.36'
187 C-02	7°54'33.22" (LT)	0°42'43.89"	8,045.00'	556.16'	1,110.55'	19.20'
CWC-01	27°27'29.19" (LT)	8°00'48.22"	715.00'	174.68'	342.65'	21.03'

TRAVERSE POINTS				
POINT NO.	NORTH	EAST	ELEVATION	REMARKS
152	487281.4040	1280983.2810	371.98	-
153	487240.2251	1281497.8167	366.40	-
164	487292.7677	1281244.5480	370.16	-
166	486975.7088	1281430.2341	347.56	-
252	487241.3573	1280815.0358	373.57	-
254	487284.9257	1280811.2672	373.24	-
308	487030.5083	1281011.4656	292.77	-
350	486437.3376	1281105.1431	367.98	-
351	486735.0865	1281102.8454	371.39	-
354	487634.0198	1280775.2336	373.71	-
356	487446.8564	1280871.5513	374.66	-
1872	486978.4920	1280981.5170	372.53	-

BASELINE CONSTRUCTION CONTROL POINTS					
LOCATION	POINT NO.	STATION	NORTH	EAST	BEARING
MD187	POT	STA. 1+00.00	485,978.9934	1,281,163.8244	N 6° 29' 41.57" W
	PC	STA. 5+21.39	486,397.6757	1,281,116.1595	N 6° 29' 41.57" W
	PI	STA. 7+13.41	486,588.4660	1,281,094.4389	
	CC		486,148.8239	1,278,930.2792	
	PCC	STA. 9+04.46	486,772.6083	1,281,039.9931	N 16° 28' 17.39" W
	PI	STA. 14+60.62	487,305.9418	1,280,882.3011	
	CC		484,491.5423	1,280,652.7203	
	PT	STA. 20+15.01	487,812.5028	1,273,325.1527	N 24° 22' 50.62" W
W. CEDAR LANE	POT	STA. 198+50.00	487,248.9975	1,280,731.6191	
	POT	STA. 200+00.00 = STA. 14+09.83	487,252.4172	1,280,881.5801	N 88° 41' 37.21" E
	PC	STA. 205+43.58	487,264.8096	1,281,425.0190	
	PI	STA. 207+18.26	487,268.7920	1,281,599.6560	
	CC		487,979.6238	1,281,408.7186	
	PT	STA. 208+86.23	487,352.8508	1,281,752.7835	N 61° 14' 08.02" E



DATUM: NAD 83\91 Horizontal
NAVD 88 Vertical

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

BY: $USERNAME$

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY HYDRAULICS DIVISION

BRAC INTERSECTION IMPROVEMENT
MD 187 AND CEDAR LANE / OAKMONT AVENUE

REVISIONS

GEOMETRIC LAYOUT

SCALE 1" = 100' ADVERTISED DATE _____ CONTRACT NO. MO5935370

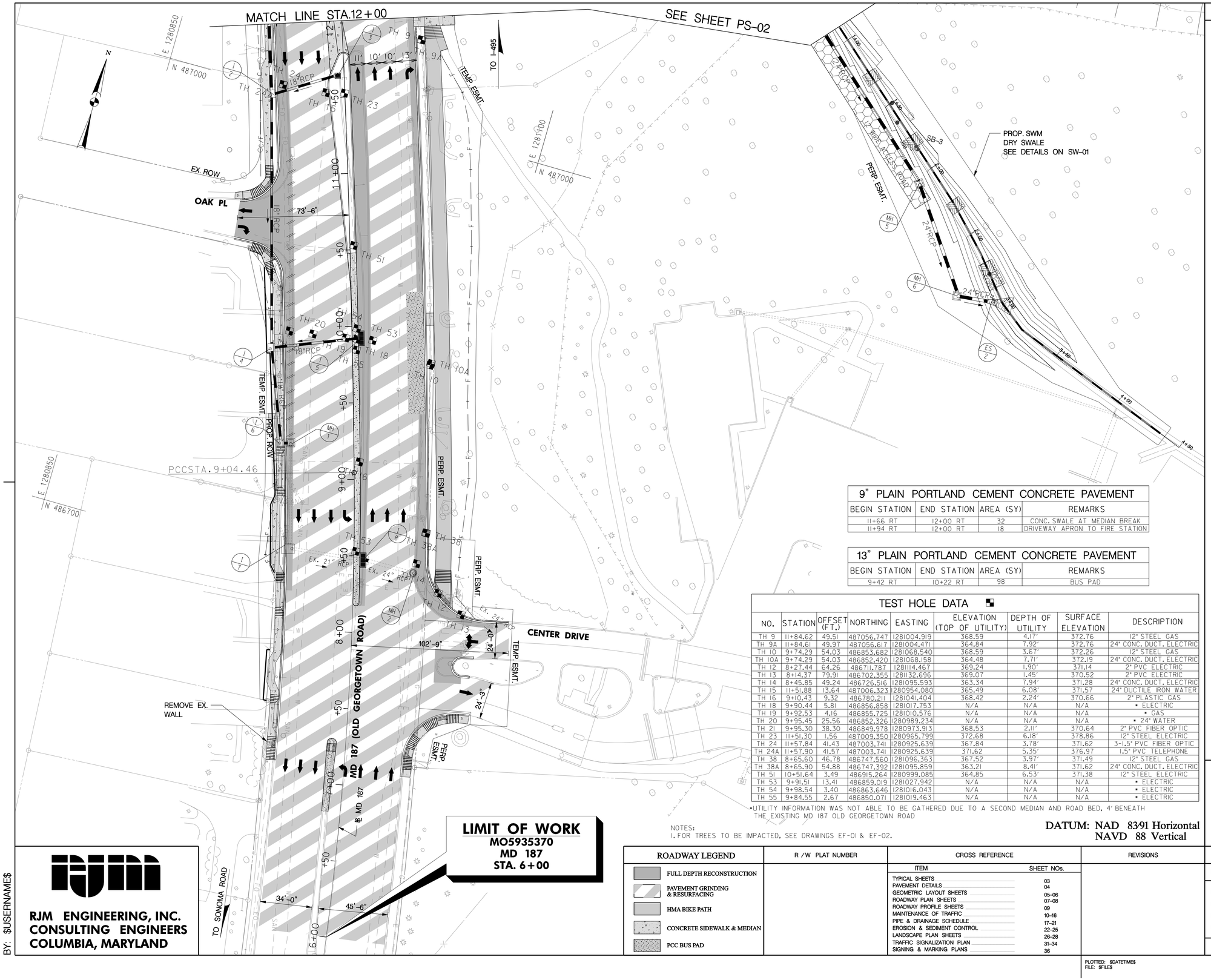
DESIGNED BY JW
DRAWN BY ST
CHECKED BY JW
F.A.P. NO. SEE TITLE SHEET

COUNTY MONTGOMERY
LOGMILE
HORIZONTAL SCALE
VERTICAL SCALE

DRAWING NO. GS - 01 OF 02

SHEET NO. 05 OF 39

PLOTTED: $DATETIME$
FILE: $FILE$



QUANTITY NOTES

5 INCH CONCRETE SIDEWALK

BEGIN STATION	END STATION	AREA (SF)
7+12, 46' LT	10+56, 63' LT	1735
10+86, 74' LT	12+00, 49' LT	650
7+08, 38' RT	7+50, 79' RT	300

SIDEWALK RAMP DETECTABLE WARNING SURFACE (MD STD 655.40)

STATION	OFFSET	AREA (SF)
7+24	46' LT	10
7+24	12' LT	10
7+24	6' LT	10
7+24	40' RT	13
7+50	62' RT	13
8+28	58' RT	35
10+52	55' LT	12
10+91	54' LT	12

STD. MONOLITHIC CONCRETE MEDIAN 4 FEET 0 INCH WIDE TYPE A-1 (MD 645.01)

BEGIN STATION	END STATION	LENGTH (LF)
8+17 RT	9+80 RT	163

STD. MONOLITHIC CONCRETE MEDIAN VARIABLE 4 FEET TO 6 FEET WIDE TYPE A-1 (MD 645.01)

BEGIN STATION	END STATION	LENGTH (LF)
6+81 LT	7+30 LT	49
9+80 RT	10+48 RT	68

MODIFIED COMBINATION CURB AND GUTTER

BEGIN STATION	END STATION	LENGTH (LF)
7+08, 38' RT	7+50, 79' RT	70
7+12, 46' LT	10+60, 76' LT	368
7+75, 78' RT	7+88, 80' RT	32
8+09, 103' RT	11+94, 47' RT	426
10+48 TO 11+89 AROUND GRASS MEDIAN		270
10+84, 71' LT	12+00, 44' LT	130

REMOVAL OF EXISTING MASONRY

STATION	OFFSET	QUANTITY (CY)	REMARKS
11+15	35' LT	4	INLET
7+23	51' LT	3	EX. WALL

REMOVE EXISTING PIPE CULVERT

BEGIN STATION	END STATION	LENGTH (LF)	REMARKS
9+22, 41' LT	11+12, 37' LT	189	18" RCP

SIDEWALK RAMP

STATION	OFFSET	REFERENCE
7+24	46' LT	DETAIL-01, GS-02
7+24	9' LT	MD 655.21
7+24	40' RT	MD 655.12
7+50	62' RT	MD 655.12
8+25	58' RT	MD 655.11
10+52	55' LT	DETAIL-02, GS-02
10+91	54' LT	DETAIL-03, GS-02

DRIVEWAY ENTRANCE

BEGIN STATION	END STATION	REFERENCE
7+27 LT	7+56 LT	DETAIL-01, GS-02
8+09 LT	8+37 LT	MD 630.01
8+89 LT	9+22 LT	MD 630.01

GRIND HMA PAVEMENT 0 TO 2 INCHES

BEGIN STATION	END STATION	AREA (SY)
6+00	12+00	5045

9" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT

BEGIN STATION	END STATION	AREA (SY)	REMARKS
11+66 RT	12+00 RT	32	CONC. SWALE AT MEDIAN BREAK
11+94 RT	12+00 RT	18	DRIVEWAY APRON TO FIRE STATION

13" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT

BEGIN STATION	END STATION	AREA (SY)	REMARKS
9+42 RT	10+22 RT	98	BUS PAD

TEST HOLE DATA

NO.	STATION	OFFSET (FT.)	NORTHING	EASTING	ELEVATION (TOP OF UTILITY)	DEPTH OF UTILITY	SURFACE ELEVATION	DESCRIPTION
TH 9	11+84.62	49.51	487056.747	1281004.919	368.59	4.17'	372.76	12" STEEL GAS
TH 9A	11+84.61	49.97	487056.617	1281004.471	364.84	7.92'	372.76	24" CONC. DUCT. ELECTRIC
TH 10	9+74.29	54.03	486853.682	1281068.540	368.59	3.67'	372.26	12" STEEL GAS
TH 10A	9+74.29	54.03	486852.420	1281068.158	364.48	7.71'	372.19	24" CONC. DUCT. ELECTRIC
TH 12	8+27.44	64.26	486711.787	1281114.467	369.24	1.90'	371.14	2" PVC ELECTRIC
TH 13	8+14.37	79.91	486702.355	1281132.696	369.07	1.45'	370.52	2" PVC ELECTRIC
TH 14	8+45.85	49.24	486726.516	1281095.593	363.34	7.94'	371.28	24" CONC. DUCT. ELECTRIC
TH 15	11+51.88	13.64	487006.323	1280954.080	365.49	6.08'	371.57	24" DUCTILE IRON WATER
TH 16	9+10.43	9.32	486780.211	1281041.404	368.42	2.24'	370.66	2" PLASTIC GAS
TH 18	9+90.44	5.81	486856.858	1281017.753	N/A	N/A	N/A	• ELECTRIC
TH 19	9+92.53	4.16	486855.725	1281010.576	N/A	N/A	N/A	• GAS
TH 20	9+95.45	25.56	486852.326	1280989.234	N/A	N/A	N/A	• 24" WATER
TH 21	9+95.30	38.30	486849.978	1280973.913	368.53	2.11'	370.64	2" PVC FIBER OPTIC
TH 23	11+51.30	1.56	487009.350	1280965.799	372.68	6.18'	378.86	12" STEEL ELECTRIC
TH 24	11+57.84	41.43	487003.741	1280925.639	367.84	3.78'	371.62	3-1.5" PVC FIBER OPTIC
TH 24A	11+57.90	41.57	487003.741	1280925.639	371.62	5.35'	376.97	1.5" PVC TELEPHONE
TH 38	8+65.60	46.78	486747.560	1281096.363	367.52	3.97'	371.49	12" STEEL GAS
TH 38A	8+65.90	54.88	486747.392	1281095.859	363.21	8.41'	371.62	24" CONC. DUCT. ELECTRIC
TH 51	10+51.64	3.49	486915.264	1280999.085	364.85	6.53'	371.38	12" STEEL ELECTRIC
TH 53	9+91.51	13.41	486859.019	1281027.942	N/A	N/A	N/A	• ELECTRIC
TH 54	9+98.54	3.40	486863.646	1281016.043	N/A	N/A	N/A	• ELECTRIC
TH 55	9+84.55	2.67	486850.071	1281019.463	N/A	N/A	N/A	• ELECTRIC

•UTILITY INFORMATION WAS NOT ABLE TO BE GATHERED DUE TO A SECOND MEDIAN AND ROAD BED, 4' BENEATH THE EXISTING MD 187 OLD GEORGETOWN ROAD

NOTES:
1. FOR TREES TO BE IMPACTED, SEE DRAWINGS EF-01 & EF-02.

DATUM: NAD 83\91 Horizontal
NAVD 88 Vertical

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY DESIGN DIVISION

BRAC INTERSECTION IMPROVEMENT
MD 187 AND CEDAR LANE / OAKMONT AVENUE

ROADWAY PLAN

SCALE 1" = 30' ADVERTISED DATE _____ CONTRACT NO. MO5935370

DESIGNED BY JW COUNTY MONTGOMERY
DRAWN BY ST LOGMILE _____
CHECKED BY JW HORIZONTAL SCALE _____
F.A.P. NO. SEE TITLE SHEET VERTICAL SCALE _____

DRAWING NO. PS-01 OF 02 SHEET NO. 07 OF 39

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

BY: $USERNAME$

ROADWAY LEGEND

- FULL DEPTH RECONSTRUCTION
- PAVEMENT GRINDING & RESURFACING
- HMA BIKE PATH
- CONCRETE SIDEWALK & MEDIAN
- PCC BUS PAD

R / W PLAT NUMBER

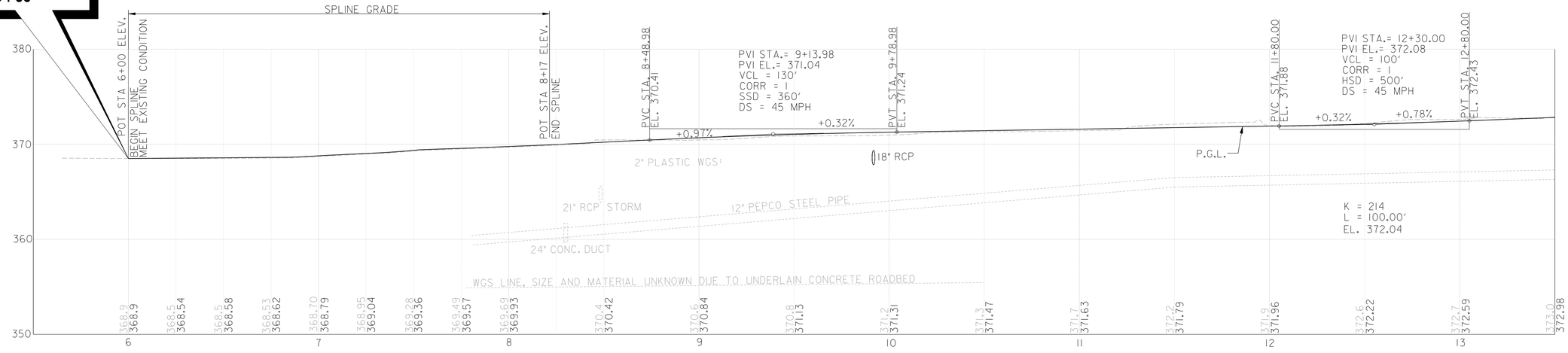
CROSS REFERENCE

ITEM	SHEET NOs.
TYPICAL SHEETS	03
PAVEMENT DETAILS	04
GEOMETRIC LAYOUT SHEETS	05-06
ROADWAY PLAN SHEETS	07-08
ROADWAY PROFILE SHEETS	09
MAINTENANCE OF TRAFFIC	10-16
PIPE & DRAINAGE SCHEDULE	17-21
EROSION & SEDIMENT CONTROL	22-25
LANDSCAPE PLAN SHEETS	26-28
TRAFFIC SIGNALIZATION PLAN	31-34
SIGNING & MARKING PLANS	36

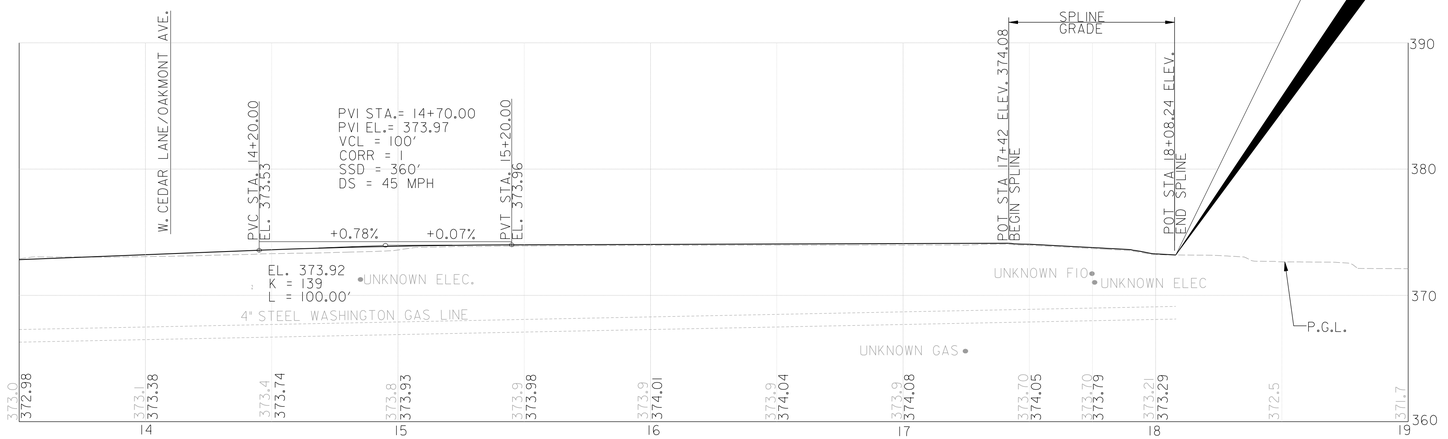
REVISIONS

PLOTTED: $DATETIME$
FILE: $FILE$

LIMIT OF WORK
MO5935370
MD 187
STA. 6+00



LIMIT OF WORK
MO5935370
MD 187
STA. 18+08.24



MD 187 (OLD GEORGETOWN ROAD)

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

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

BY: $USERNAME$

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY DESIGN DIVISION

BRAC INTERSECTION IMPROVEMENT
MD 187 AND CEDAR LANE / OAKMONT AVENUE

REVISIONS

ROADWAY PROFILE

SCALE AS SHOWN ADVERTISED DATE _____ CONTRACT NO. MO5935370

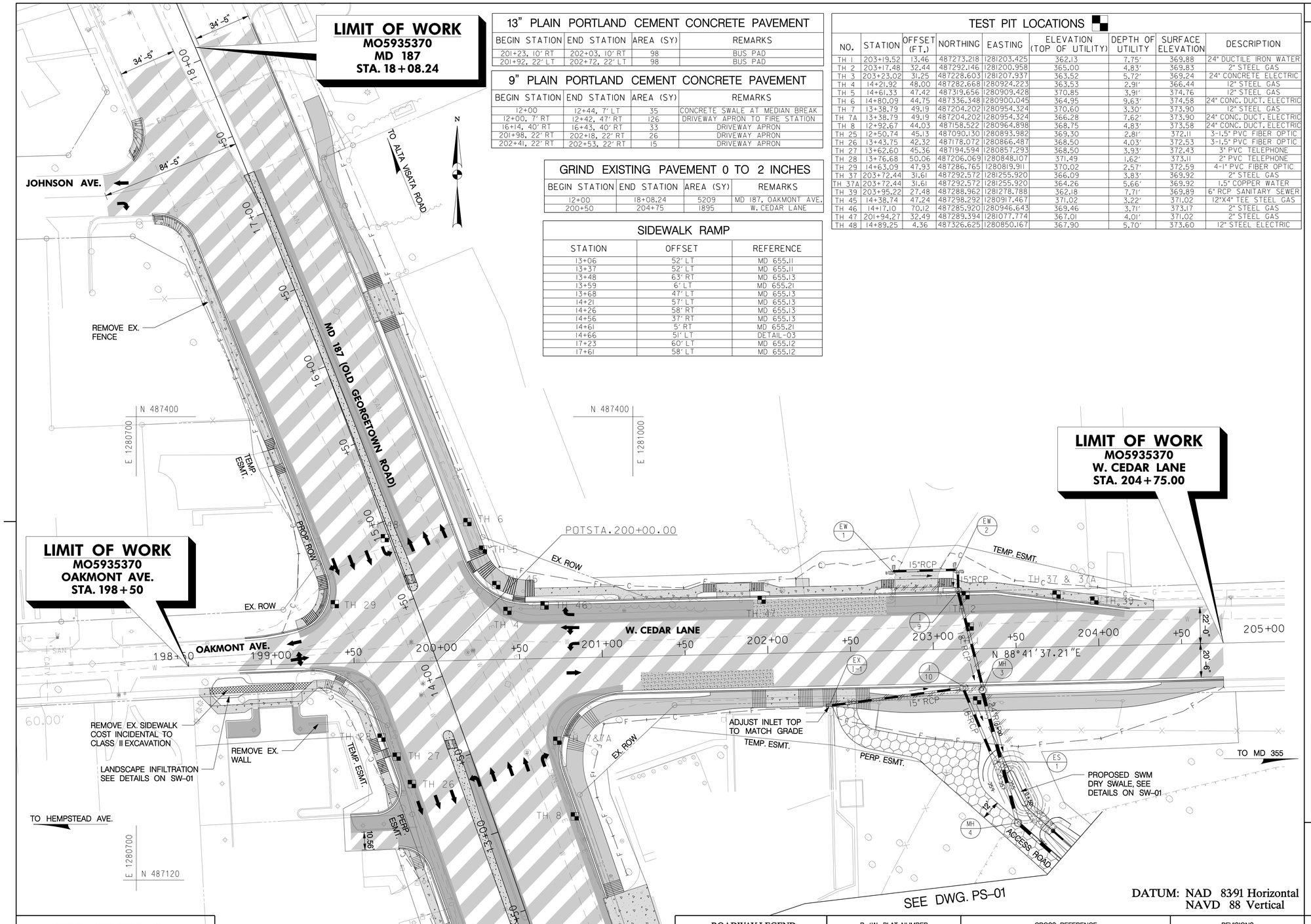
DESIGNED BY JP
DRAWN BY JP
CHECKED BY JW
F.A.P. NO. SEE TITLE SHEET

COUNTY MONTGOMERY
LOGMILE _____

DRAWING NO. PR-01 OF 01

SHEET NO. 09 OF 39

PLOTTED: $DATETIME$
FILE: $FILE$



13" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT			
BEGIN STATION	END STATION	AREA (SY)	REMARKS
201+23, 10' RT	202+03, 10' RT	98	BUS PAD
201+92, 22' LT	202+72, 22' LT	98	BUS PAD

9" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT			
BEGIN STATION	END STATION	AREA (SY)	REMARKS
12+00	12+44, 7' LT	35	CONCRETE SWALE AT MEDIAN BREAK
12+00, 7' RT	12+42, 47' RT	126	DRIVEWAY APRON TO FIRE STATION
16+14, 40' RT	16+43, 40' RT	33	DRIVEWAY APRON
201+98, 22' RT	202+18, 22' RT	26	DRIVEWAY APRON
202+41, 22' RT	202+53, 22' RT	15	DRIVEWAY APRON

GRIND EXISTING PAVEMENT 0 TO 2 INCHES			
BEGIN STATION	END STATION	AREA (SY)	REMARKS
12+00	18+08.24	5209	MD 187, OAKMONT AVE.
200+50	204+75	1895	W. CEDAR LANE

SIDEWALK RAMP		
STATION	OFFSET	REFERENCE
13+06	52' LT	MD 655.11
13+37	52' LT	MD 655.11
13+48	63' RT	MD 655.13
13+59	6' LT	MD 655.21
13+68	47' LT	MD 655.13
14+21	57' LT	MD 655.13
14+26	58' RT	MD 655.13
14+56	37' RT	MD 655.13
14+61	5' RT	MD 655.21
14+66	51' LT	DETAIL-03
17+23	60' LT	MD 655.12
17+61	58' LT	MD 655.12

TEST PIT LOCATIONS								
NO.	STATION	OFFSET (FT.)	NORTHING	EASTING	ELEVATION (TOP OF UTILITY)	DEPTH OF UTILITY	SURFACE ELEVATION	DESCRIPTION
TH 1	203+19.52	13.46	487273.218	1281203.425	362.13	7.75'	369.88	24" DUCTILE IRON WATER
TH 2	203+17.48	32.44	487292.146	1281200.958	365.00	4.83'	369.83	2" STEEL GAS
TH 3	203+23.02	31.25	487228.603	1281207.937	363.52	5.72'	369.24	24" CONCRETE ELECTRIC
TH 4	14+21.92	48.00	487282.668	1280924.223	363.53	2.91'	366.44	12" STEEL GAS
TH 5	14+61.33	47.42	487319.656	1280909.428	370.85	3.91'	374.76	12" STEEL GAS
TH 6	14+80.09	44.75	487336.348	1280900.045	364.95	9.63'	374.58	24" CONC. DUCT. ELECTRIC
TH 7	13+38.79	49.19	487204.202	1280954.324	370.60	3.30'	373.90	12" STEEL GAS
TH 7A	13+38.79	49.19	487204.202	1280954.324	366.28	7.62'	373.90	24" CONC. DUCT. ELECTRIC
TH 8	12+92.67	44.03	487158.522	1280964.898	368.75	4.83'	373.58	24" CONC. DUCT. ELECTRIC
TH 25	12+50.74	45.13	487090.130	1280893.982	369.30	2.81'	372.11	3-1.5" PVC FIBER OPTIC
TH 26	13+43.75	42.32	487178.072	1280866.487	368.50	4.03'	372.53	3-1.5" PVC FIBER OPTIC
TH 27	13+62.60	45.36	487194.594	1280857.293	368.50	3.93'	372.43	3" PVC TELEPHONE
TH 28	13+76.68	50.06	487206.069	1280848.107	371.49	1.62'	373.11	2" PVC TELEPHONE
TH 29	14+63.09	47.93	487286.765	1280819.911	370.02	2.57'	372.59	4-1" PVC FIBER OPTIC
TH 37	203+72.44	31.61	487292.572	1281255.920	366.09	3.83'	369.92	2" STEEL GAS
TH 37A	203+72.44	31.61	487292.572	1281255.920	364.26	5.66'	369.92	1.5" COPPER WATER
TH 39	203+95.22	27.48	487288.962	1281278.788	362.18	7.71'	369.89	6" RCP SANITARY SEWER
TH 45	14+38.74	47.24	487298.292	1280917.467	371.02	3.22'	371.02	12"X4" TEE STEEL GAS
TH 46	14+17.10	70.12	487285.920	1280946.643	369.46	3.71'	373.17	2" STEEL GAS
TH 47	201+94.27	32.49	487289.594	1281077.774	367.01	4.01'	371.02	2" STEEL GAS
TH 48	14+89.25	4.36	487326.625	1280850.167	367.90	5.70'	373.60	12" STEEL ELECTRIC

QUANTITY NOTES

5 INCH CONCRETE SIDEWALK		
BEGIN STATION	END STATION	AREA (SF)
12+00 LT	13+09 LT	557
13+35 LT	198+05 RT	914
14+57 LT	17+24 LT	1400
17+61 LT	17+82 LT	111
200+60 LT	204+34 LT	2072

SIDEWALK RAMP DETECTABLE WARNING SURFACE (MD 655.40)		
STATION	OFFSET	WARNING SURFACE (SF)
13+60	7' LT	10
13+60	11' LT	10
13+46	63' RT	30
13+68	47' LT	10
14+21	58' LT	10
14+26	59' RT	15
14+56	40' RT	15
14+61	4' RT	10
14+61	0' RT	10
14+66	52' LT	35
17+22	60' LT	12
17+62	58' LT	12

STD. MONOLITHIC CONCRETE MEDIAN 4 FEET 0 INCH WIDE TYPE A-1 (MD645.01)		
BEGIN STATION	END STATION	LENGTH (LF)
12+44 LT	12+50 LT	6
16+00 RT	17+25 RT	125

STD. MONOLITHIC CONCRETE MEDIAN VARIABLE WIDTH 4 FEET TO 6 FEET, TYPE A-1 (MD645.01)		
BEGIN STATION	END STATION	LENGTH (LF)
12+50 LT	13+50 LT	100
14+68 RT	16+00 RT	132

STD. MONOLITHIC CONCRETE MEDIAN 6 FEET 0 INCH WIDE TYPE A-1 (MD645.01)		
BEGIN STATION	END STATION	LENGTH (LF)
13+50 LT	13+68 LT	18
14+54 RT	14+68 RT	14

REMOVAL OF EXISTING MASONRY			
STATION	OFFSET	QUANTITY (CY)	REMARKS
202+75	37' LT	0.45	ENDWALL
203+04	37' LT	0.45	ENDWALL
203+18	35' LT	0.59	ENDWALL
203+16	23' LT	2.50	INLET
199+30	36' RT	2.00	EX. WALL

REMOVAL OF EXISTING PIPE CULVERT			
BEGIN STATION	END STATION	LENGTH (LF)	REMARKS
202+75, 37' LT	203+04, 37' LT	29	12" RCP
203+18, 35' LT	203+19, 26' LT	10	15" RCP
203+19, 23' LT	203+29, 23' RT	47	15" RCP
203+30, 25' RT	203+46, 60' RT	39	15" RCP

MODIFIED COMBINATION CURB AND GUTTER		
BEGIN STATION	END STATION	LENGTH (LF)
12+00, 44' LT	13+11, 60' LT	117
13+39, 81' LT	198+81, 4' RT	179
198+84, 16' LT	17+24, 62' LT	322
17+61, 59' LT	17+80, 47' LT	24
18+09, 37' RT	204+34, 22' RT	777
12+42, 49' RT	204+75, 22' RT	513

DRIVEWAY ENTRANCE		
BEGIN STATION	END STATION	REFERENCE
11+86 RT	12+50 RT	MD 630.02
15+49 LT	15+71 LT	MD 630.01
16+06 RT	16+41 RT	MD 630.02
201+62 LT	201+98 LT	MD 630.02
201+90 RT	202+26 RT	MD 630.01
202+33 RT	202+61 RT	MD 630.01
202+70 LT	203+12 LT	MD 630.02

DATUM: NAD 8391 Horizontal
NAVD 88 Vertical

ROADWAY LEGEND
FULL DEPTH RECONSTRUCTION
PAVEMENT GRINDING & RESURFACING
HMA BIKE PATH
CONCRETE SIDEWALK & MEDIAN
PCC BUS PAD

R /W PLAT NUMBER

CROSS REFERENCE	
ITEM	SHEET NOs.
TYPICAL SHEETS	03
PAVEMENT DETAILS	04
GEOMETRIC LAYOUT SHEETS	05-06
ROADWAY PLAN SHEETS	07-08
ROADWAY PROFILE SHEETS	09
MAINTENANCE OF TRAFFIC	10-16
PIPE & DRAINAGE SCHEDULE	17-21
EROSION & SEDIMENT CONTROL	22-25
LANDSCAPE PLAN SHEETS	26-28
TRAFFIC SIGNALIZATION PLAN	31-34
SIGNING & MARKING PLANS	36

REVISIONS

RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

BY: $USERNAME$

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ROADWAY PLAN

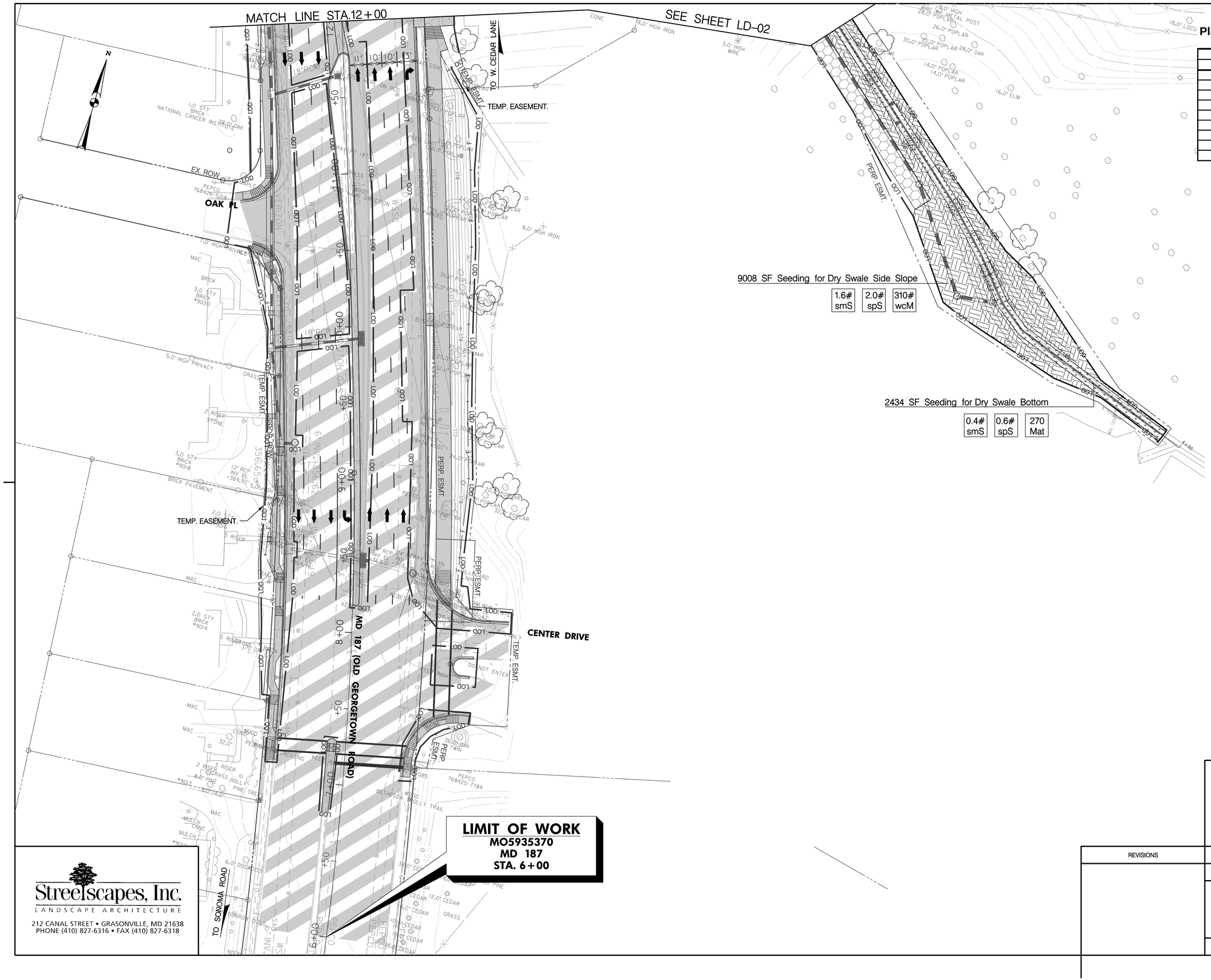
SCALE 1" = 30' ADVERTISED DATE _____ CONTRACT NO. MO5935370

DESIGNED BY JW
DRAWN BY ST
CHECKED BY JW
F.A.P. NO. SEE TITLE SHEET

COUNTY MONTGOMERY
LOGMILE _____
HORIZONTAL SCALE _____
VERTICAL SCALE _____

DRAWING NO. PS-02 OF 02 SHEET NO. 08 OF 39

PLOTTED: $DATETIME$
FILE: $FILE$



Plant Schedule LD-01

Qty.	Key	Botanical Name / Common Name	Size, Root / Comments
270	Mat	Square Yards of Type A Matting	Use on swale bottom
2.0	smS	Pounds of Stormwater Management Seed Mix	8 pounds per acre
2.6	spS	Pounds of Special Purpose Seed Mix	See SP for Seed Mix
310	wcM	Pounds of Wood Cellulose Mulch	10 pounds per acre

Landscape Legend

- Existing Tree to be Protected
- Seeding with Wood Cellulose Mulch
- Seeding with Type A Soil Stabilization Matting
- LOD — Limit of Disturbance

Note: Refer to Drawing No. LD–03 for Master Plant Schedule and General Landscape Notes.

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LANDSCAPE PLANS

SCALE 1" = 30' ADVERTISED DATE _____ CONTRACT NO. MO5935370

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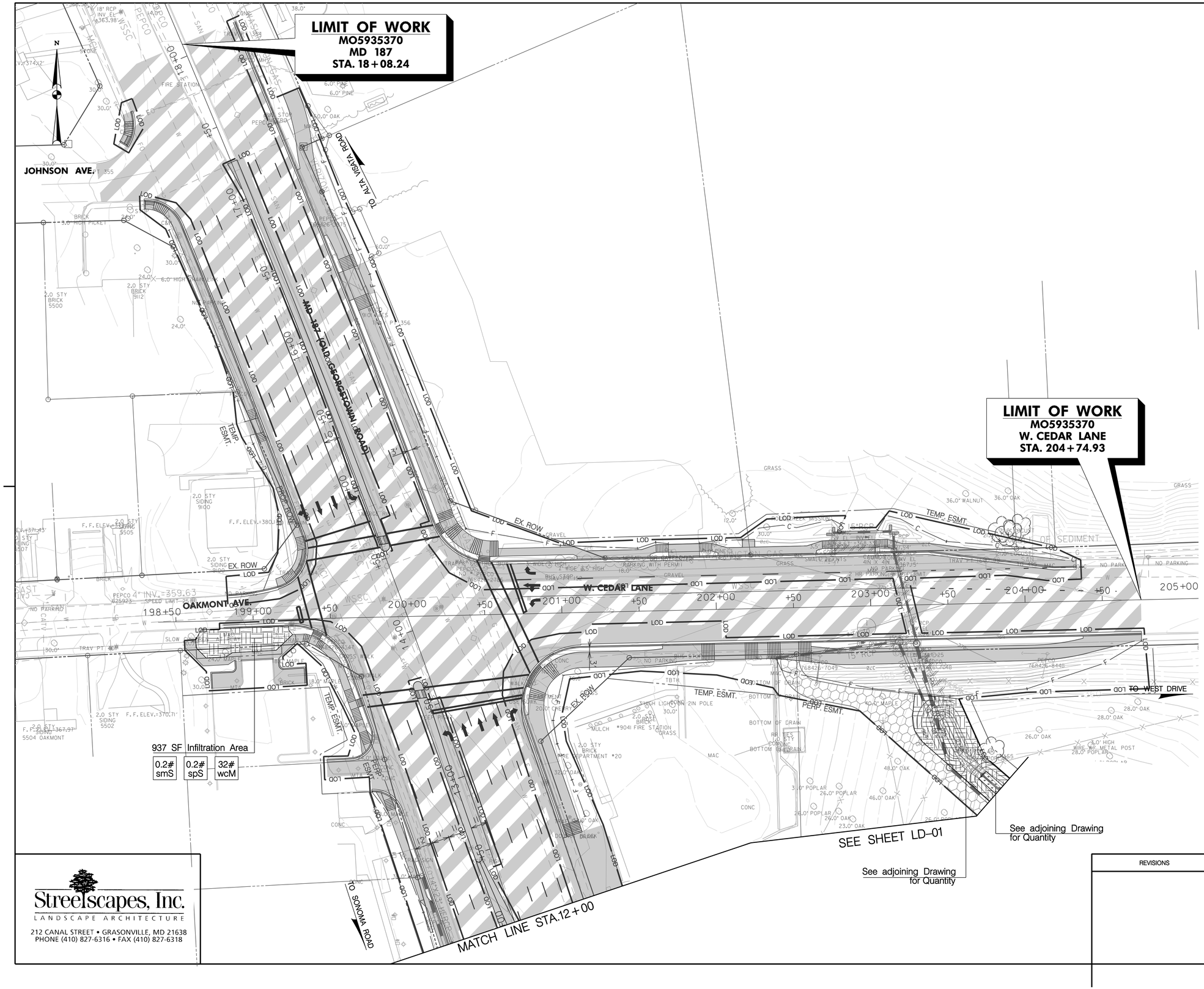
COUNTY MONTGOMERY
LOGMILE _____

DRAWING NO. LD – 01 OF 03

SHEET NO. 26 OF 39



Plant Schedule LD-02

Qty.	Key	Botanical Name / Common Name	Size, Root / Comments
0.2	smS	Pounds of Stormwater Management Seed Mix	8 pounds per acre / See SP for Seed Mix
0.2	spS	Pounds of Special Purpose Seed Mix	10 pounds per acre
32	wcM	Pounds of Wood Cellulose Mulch	1500 pounds per acre

Note: Refer to Drawing No. LD-03 for Master Plant Schedule and General Landscape Notes.

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DRAWING NO. LD – 02 OF 03

SHEET NO. 27 OF 39

Master Plant Schedule

Refer to LD Drawings

Total Qty.	Key	Botanical Name / Common Name	Size, Root / Comments
270	Mat	Square Yards of	Use on swale bottom
		Type A Matting	
2.2	smS	Pounds of Stormwater	8 pounds per acre
		Management Seed Mix	See SP for Seed Mix
2.8	spS	Pounds of Special	10 pounds per acre
		Purpose Seed Mix	
342	wcM	Pounds of Wood Cellulose	1500 pounds per acre
		Mulch	

Master Materials Schedule

Refer to EF Drawings

Total Qty.	Key	Unit of Measure / Item Description	Comments
467	OCF	Linear Feet of Temporary	Use to protect existing
		Orange Construction Fence	trees

General Landscape Notes:

1. Plans are for Landscape purposes only. As– built highway conditions may vary. Contractor shall verify field condition and inform the project engineer of any discrepancies or potential problems prior to performing work. Dimensions shall be field verified between the contractor and the project engineer regarding deviation from dimensions as shown on the plans, prior to commencement of work.
2. The contractor shall verify the location of existing utilities prior to any plant installation. The contractor shall contact Miss Utility (1–800–257–7777) a minimum of 48 hours prior to any plant installation.
3. Areas that are damaged during construction shall be repaired by the contractor at no cost to the State Highway Administration.
4. No planting shall occur within 7'0" of the centerline of swales or within 10'–0" of the centerline of gas utility and sanitary sewer lines.
5. Existing and proposed lighting and signage shall be field verified. The contractor shall notify the project engineer of conflicts between sign visibility and planting location prior to plant installation.
6. The contractor shall field verify significant tree locations and provide tree preservation as directed by the project engineer.
7. Plant material shall be offset 7'0" minimum off the back of w–beam traffic barriers, concrete barriers and retaining walls, as applicable.
8. The contractor shall use the master plant schedule as measurement of plant quantities for lump sum (LS) calculation as per lump sum item of Tree, Shrub and Perennial Installation and Establishment. This includes total of all plant species and quantities as listed in this Master Plant Schedule excluding bulbs.
9. Any request to substitute plants of different species, cultivars, size, growth habit, or planting stock type shall be submitted in writing to the engineer as a substitution request. Substitution will not be permitted without written approval from the landscape architect.
10. All plants (B&B or Container) shall be properly identified by weather proof labels securely attached there to before delivery to project site. Labels shall not be removed until the final inspections by the Landscape Operations Division.
11. Same day stabilization. It is anticipated that the landscape operations including planting and seeding will require minor disturbance and all areas shall be stabilized at the end of each work day using mulch. When the disturbed areas can not be stabilized at the end of each work day then it is the responsibility of the contractor to construct and utilize erosions and sediment control measures such as, but not limited to, silt fence, inlet protection, stone outlet structures, and dewatering devices as instructed in the general sediment control notes and as directed by the engineer.

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REVISIONS

LANDSCAPE PLANS

SCALE 1" = 30' ADVERTISED DATE _____ CONTRACT NO. MO5935370

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COUNTY MONTGOMERY
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DRAWING NO. LD – 03 OF 03

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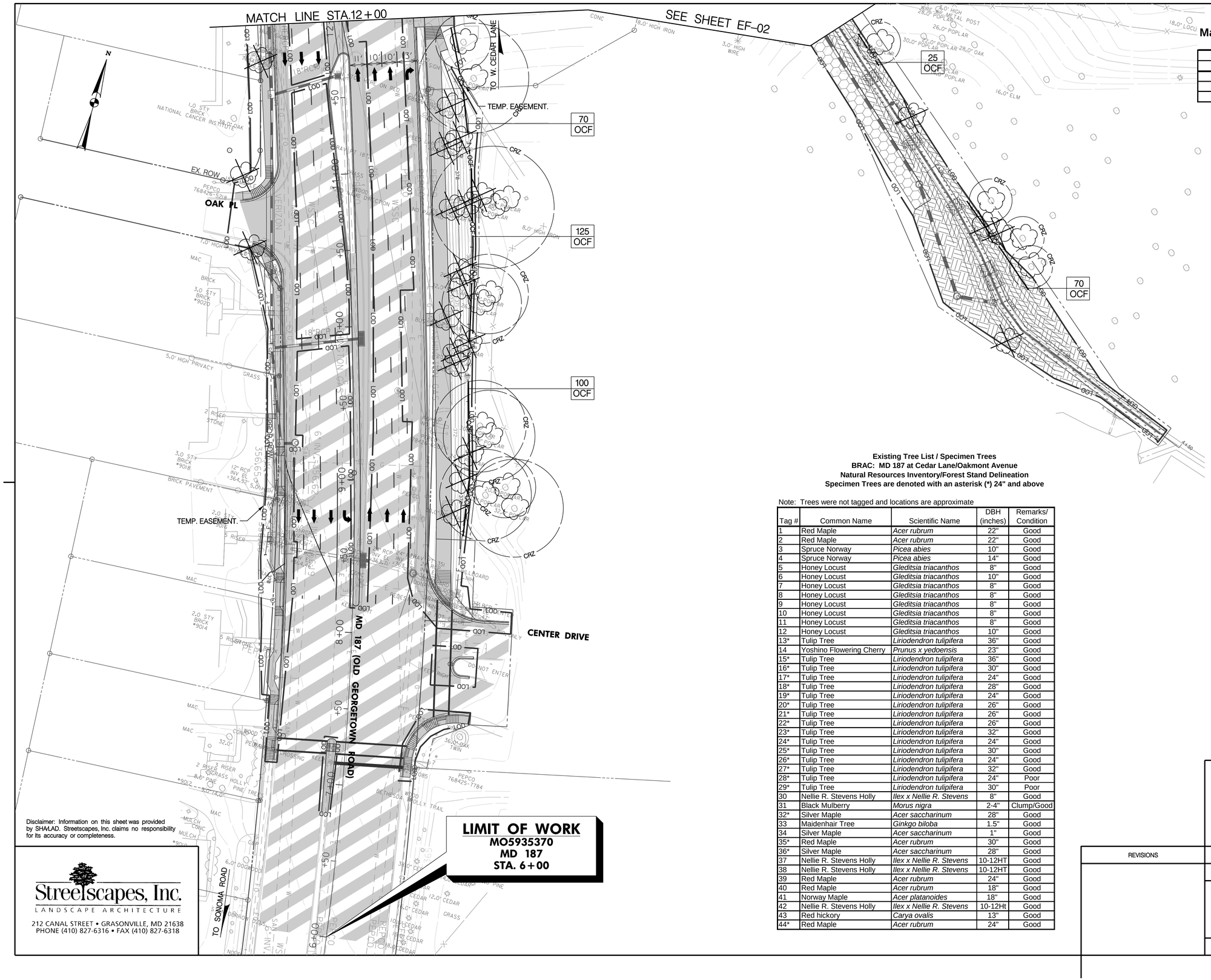

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Materials Schedule EF-01

Total Qty.	Key	Unit of Measure Item Description	Comments
390	OCF	Linear Feet of Temporary Orange Construction Fence	Use to protect existing trees

Existing Tree List / Specimen Trees
BRAC: MD 187 at Cedar Lane/Oakmont Avenue
Natural Resources Inventory/Forest Stand Delineation
Specimen Trees are denoted with an asterisk (*) 24" and above

Note: Trees were not tagged and locations are approximate

Tag #	Common Name	Scientific Name	DBH (inches)	Remarks/ Condition
1	Red Maple	*Acer rubrum*	22"	Good
2	Red Maple	*Acer rubrum*	22"	Good
3	Spruce Norway	*Picea abies*	10"	Good
4	Spruce Norway	*Picea abies*	14"	Good
5	Honey Locust	*Gleditsia triacanthos*	8"	Good
6	Honey Locust	*Gleditsia triacanthos*	10"	Good
7	Honey Locust	*Gleditsia triacanthos*	8"	Good
8	Honey Locust	*Gleditsia triacanthos*	8"	Good
9	Honey Locust	*Gleditsia triacanthos*	8"	Good
10	Honey Locust	*Gleditsia triacanthos*	8"	Good
11	Honey Locust	*Gleditsia triacanthos*	8"	Good
12	Honey Locust	*Gleditsia triacanthos*	10"	Good
13*	Tulip Tree	*Liriodendron tulipifera*	36"	Good
14	Yoshino Flowering Cherry	*Prunus x yedoensis*	23"	Good
15*	Tulip Tree	*Liriodendron tulipifera*	36"	Good
16*	Tulip Tree	*Liriodendron tulipifera*	30"	Good
17*	Tulip Tree	*Liriodendron tulipifera*	24"	Good
18*	Tulip Tree	*Liriodendron tulipifera*	28"	Good
19*	Tulip Tree	*Liriodendron tulipifera*	24"	Good
20*	Tulip Tree	*Liriodendron tulipifera*	26"	Good
21*	Tulip Tree	*Liriodendron tulipifera*	26"	Good
22*	Tulip Tree	*Liriodendron tulipifera*	26"	Good
23*	Tulip Tree	*Liriodendron tulipifera*	32"	Good
24*	Tulip Tree	*Liriodendron tulipifera*	24"	Good
25*	Tulip Tree	*Liriodendron tulipifera*	30"	Good
26*	Tulip Tree	*Liriodendron tulipifera*	24"	Good
27*	Tulip Tree	*Liriodendron tulipifera*	32"	Good
28*	Tulip Tree	*Liriodendron tulipifera*	24"	Poor
29*	Tulip Tree	*Liriodendron tulipifera*	30"	Poor
30	Nellie R. Stevens Holly	*Ilex x Nellie R. Stevens*	8"	Good
31	Black Mulberry	*Morus nigra*	2-4"	Clump/Good
32*	Silver Maple	*Acer saccharinum*	28"	Good
33	Maidenhair Tree	*Ginkgo biloba*	1.5"	Good
34	Silver Maple	*Acer saccharinum*	1"	Good
35*	Red Maple	*Acer rubrum*	30"	Good
36*	Silver Maple	*Acer saccharinum*	28"	Good
37	Nellie R. Stevens Holly	*Ilex x Nellie R. Stevens*	10-12HT	Good
38	Nellie R. Stevens Holly	*Ilex x Nellie R. Stevens*	10-12HT	Good
39	Red Maple	*Acer rubrum*	24"	Good
40	Red Maple	*Acer rubrum*	18"	Good
41	Norway Maple	*Acer platanoides*	18"	Good
42	Nellie R. Stevens Holly	*Ilex x Nellie R. Stevens*	10-12Ht	Good
43	Red hickory	*Carya ovalis*	13"	Good
44*	Red Maple	*Acer rubrum*	24"	Good

Environmental Features Legend

- Existing Tree to be Protected
- Existing Tree to be Removed
- LOD — Limit of Disturbance
- OCF — Temporary Orange Construction Fence adjacent to Existing Trees to be Protected
- CRZ — Critical Root Zone of Existing Tree to be Protected

Refer to Drawing LD–03 for Master Materials Schedule.

Refer to Section 120 – Tree Preservation of the Standard Specifications for information regarding the protection of existing trees.

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REVISIONS

TREE / PRESERVATION PLAN

SCALE 1" = 30' ADVERTISED DATE _____ CONTRACT NO. MO5935370

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COUNTY MONTGOMERY
LOGMILE _____

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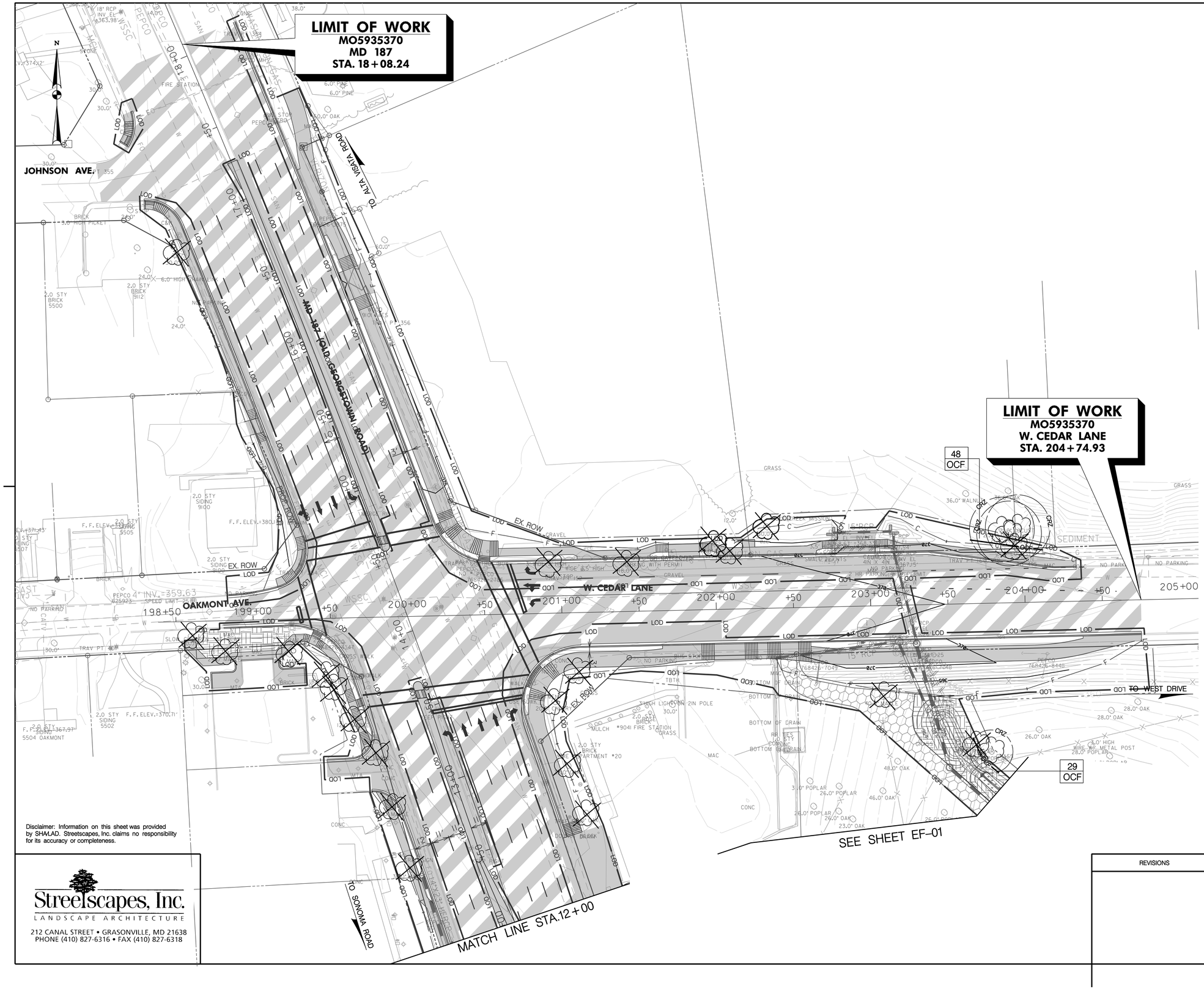

Materials Schedule EF-02

Total Qty.	Key	Unit of Measure Item Description	Comments
77	OCF	Linear Feet of Temporary Orange Construction Fence	Use to protect existing trees

Environmental Features Legend

- Existing Tree to be Protected
- Existing Tree to be Removed
- LOD — Limit of Disturbance
- OCF — Temporary Orange Construction Fence adjacent to Existing Trees to be Protected
- CRZ — Critical Root Zone of Existing Tree to be Protected

Refer to Drawing EF–01 for Specimen Tree List Natural Resources Inventory/Forest Stand Delineation

Refer to Drawing LD–03 for Master Materials Schedule.

Refer to Section 120 – Tree Preservation of the Standard Specifications for information regarding the protection of existing trees.

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