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Federal Aid Project No.- TAP-3(533)E State Contract No.- MO4665112

SIDEWALK DESIGN ALONG LINCOLN AVENUE FROM JACKSON AVENUE TO ELM AVENUE

GEOMETRIC DESIGN CRITERIA

THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE 2011 PUBLICATION OF AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS."

STANDARD SPECIFICATIONS BOOK, BOOK OF STANDARDS AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

ALL WORK ON THIS PROJECT SHALL CONFORM TO: THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION (MDOT SHA) SPECIFICATIONS ENTITLED "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" DATED MAY 2017 REVISIONS THEREOF OR ADDITIONS THERETO; THE SPECIAL PROVISIONS INCLUDED IN THE INVITATION FOR BIDS BOOK; THE ADMINISTRATION'S "BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES" AND THE LATEST ADOPTED 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.

ADA COMPLIANCE

THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES TO ACCOMMODATE PERSONS WITH DISABILITIES IN COMPLIANCE WITH STATE AND FEDERAL REQUIREMENTS.

ENVIRONMENTAL INFORMATION

PRD N/A

ALL STORMWATER MANAGEMENT FACILITIES CONSTRUCTED FOR THIS CONTRACT SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE MDT SHA BEST MANAGEMENT PRACTICES (BMP) INSPECTION AND REMEDIATION PROGRAM.

STANDARD STABILIZATION NOTE:

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) 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 SEVEN DAYS (7) AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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 (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY MDE COMPLIANCE INSPECTORS.

EXISTING STRUCTURES PLANS

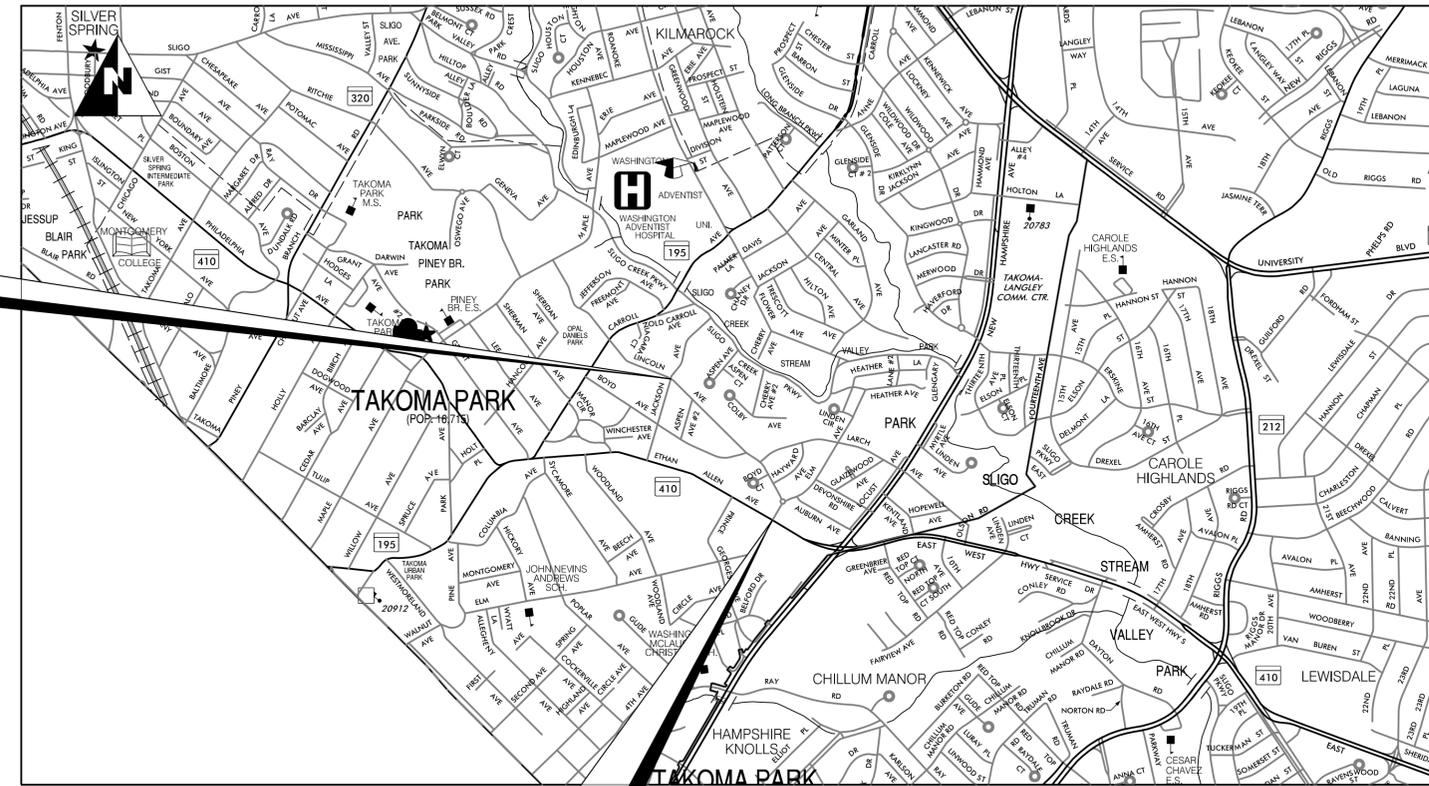
FOR THE CONVENIENCE AND INFORMATION OF BIDDERS, PRINTS OF PLANS OF EXISTING PERTINENT STRUCTURE(S) ARE INCLUDED WITH THIS CONTRACT. NO RESPONSIBILITY FOR THEIR ACCURACY OR COMPLETENESS IS ASSUMED BY THE MDT SHA. DIMENSIONS, DETAILS, ETC., AS SHOWN THEREON MAY NOT BE AS BUILT.

DRILL HOLES

DRILL HOLES

DRILL HOLES

LIMIT OF WORK
CONTR. NO TBD
LINCOLN AVENUE
STA. 0 + 37

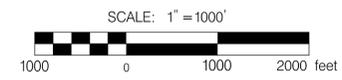


MONTGOMERY COUNTY, MD

HORIZONTAL DATUM	NAD 83 /91
VERTICAL DATUM	NAD 88

LIMIT OF WORK
CONTR. NO TBD
LINCOLN AVENUE
STA. 20 + 45

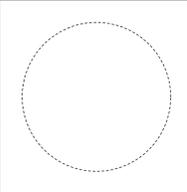
LENGTH OF PROJECT:
LINCOLN AVENUE = 0.40 MILES



WRA Whitman, Requardt & Associates, LLP
Engineers · Architects · Environmental Planners Est. 1915

SHEET NOS. AND OTHER CLARIFICATIONS

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.
MD LICENSE NO. _____ EXPIRATION DATE: _____



TRAFFIC CONTROL GENERAL NOTES

TEMPORARY TRAFFIC CONTROL REQUIREMENTS

1. MAINTAIN ACCESS TO ALL ROADWAYS AND DRIVEWAY ENTRANCES AT ALL TIMES UNLESS PERMISSION IS GRANTED BY THE PROPERTY OWNER. ACCESSIBILITY FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
2. THE CONTRACTOR/PERMITEE MUST HAVE AN SHA "CERTIFIED" TRAFFIC CONTROL MANAGER ON SITE DURING ALL PHASES OF CONSTRUCTION AT ALL TIMES.
3. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST VERSION OF THE MUTCD AS WELL AS MDSHA'S 'BOOK OF STANDARDS'. ALL SIGNS TRAFFIC DRUMS AND CONES SHALL BE FULLY REFLECTORIZED WITH HIGH INTENSITY, REFLECTIVE SHEETING AS PER THE MUTCD.
4. CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED OFF THE TRAVEL LANES AND PEDESTRIAN FACILITIES AT ALL TIMES. NO HAZARDOUS MATERIAL SHALL BE STORED WITHIN PUBLIC RIGHT-OF-WAY.
5. CONSTRUCTION ACTIVITY, LOADING OR UNLOADING OF EQUIPMENT SHALL NOT BLOCK ANY TRAFFIC LANE OTHER THOSE DELINEATED WITHIN THE WORK ZONE.
6. ALL TEMPORARY SIGNS SHALL BE INSTALLED IN ACCORDANCE TO THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION (MDSHA) STANDARD SPECIFICATIONS FOR CONSTRUCTION MATERIALS SECTION 104.08 AND SHALL MEET CURRENT MDSHA MATERIAL AND REFLECTIVITY REQUIREMENTS.
7. IF ANY TEMPORARY CONTROL SIGNS ARE TO BE PLACED ALONG A MSHA ROADWAY OR WITHIN THE LIMITS OF AN INCORPORATED AREA, THE CONTRACTOR/PERMITEE SHALL NOTIFY THE APPROPRIATE AGENCY OF SIGNAGE TO BE INSTALLED.
8. ALL EXISTING TRAFFIC CONTROL DEVICES(I.E. SIGNS, MARKINGS, ETC.) THAT MUST BE REMOVED SHALL BE REPLACED IN THEIR PROPER LOCATION PRIOR TO THE COMPLETION OF THE PROJECT. COST FOR THE REPLACEMENT AND/OR REPAIR OF DEVICES DAMAGED AS A RESULT OF THE PROJECT SHALL BE ASSESSED TO THE CONTRACTOR/PERMITEE.
9. IN ORDER TO MINIMIZE IMPACTS TO RESIDENTS, CONTRACTOR SHALL SEQUENCE CONSTRUCTION SUCH THAT WORK WITHIN A BLOCK IS COMPLETED PRIOR TO PROCEEDING TO THE NEXT BLOCK.
10. WHEN POSSIBLE, TWO-WAY TRAFFIC SHALL BE MAINTAINED, OTHERWISE, FLAGGERS SHALL BE USED TO CONTROL TRAFFIC AS PER SHA STD. NOS. MD 104.02-10, MD 104.02-14, MD 104.06-27.
11. PARKING RESTRICTIONS SHALL BE AT THE DISCRETION OF THE CONTRACTOR/PERMITEE IN ORDER TO MAINTAIN A MINIMUM TRAVEL LANE WIDTH OF 10'. PARKING RESTRICTIONS SHALL BE COORDINATED WITH THE CITY OF TAKOMA PARK AND RESIDENTS SHALL BE PROVIDED AT LEAST 48 HOURS NOTICE PRIOR TO ANY PARKING RESTRICTIONS ALONG LINCOLN AVE. OR ELM AVE.
12. AS DIRECTED BY THE ENGINEER, CONTRACTOR/PERMITEE SHALL RESTRICT PARKING ON THE OPPOSITE SIDE OF THE STREET FROM THE WORK AREA TO MAINTAIN PEDESTRIAN TRAFFIC AS PER SHA STD. MD 104.06-09A.

PAVEMENT DROP-OFF

1. ANY EXCAVATION(S) IN THE ROADWAY SHALL BE PAVED TO LEVEL GRADE OR PLATED AND THE ROADWAY REOPENED TO ITS FULL CROSS-SECTION PRIOR TO THE END OF EACH WORKDAY. "STEEL PLATES" (W95-5(1)) SIGNS SHALL BE PLACED APPROXIMATELY 250' IN ADVANCE OF ANY STEEL PLATE.
2. TRAFFIC SHALL NOT BE PERMITTED WITHIN TEN(10) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN FIVE(5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS PROTECTED BY TEMPORARY CONCRETE BARRIERS OR RAMPED WITH AGGREGATE MATERIAL AT 3:1 OR FLATTER SLOPE FROM THE EDGE OF PAVEMENT. WHEN RAMPING IS UTILIZED, TEMPORARY TRAFFIC CONTROL DRUMS SHALL BE POSITIONED ADJACENT TO THE EDGE OF THE WORK AREA ON THE TRAFFIC SIDE OF THE STREET.
3. TRAFFIC SHALL NOT BE PERMITTED WITHIN TWO(2) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN TWO(2) INCHES BUT NO MORE THAN FIVE(5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS EITHER RAMPED WITH AGGREGATE MATERIAL AT 3:1 SLOPE OR FLATTER SLOPE, PROVIDED WITH ABUTTING EDGE BITUMINOUS MATERIAL AT 3:1 OR FLATTER SLOPE OR PROTECTED BY TRAFFIC CONTROL DRUMS
4. IN AREAS WHERE A DROP-OFF IN THE LEVEL OF PAVEMENT IS TWO(2) INCHES OR LESS, TRAFFIC MAY BE ALLOWED TO FREELY CROSS UNDER THE FOLLOWING CONDITIONS:
 - WHERE LONGITUDINAL PAVING JOINTS OF TWO(2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, WARNING SIGNS BE POSTED INDICATING "UNEVEN LANES" (W8-11). THESE SIGNS SHOULD BE PLACED 250 FEET IN ADVANCE OF THE UNEVEN JOINT AND BE SPACED AT APPROPRIATE INTERVALS THROUGHOUT THE AREA OF THE UNEVEN JOINT.
 - WHERE LATERAL PAVING JOINTS OF TWO(2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, A "BUMP" (W8-1) SIGN SHALL BE POSTED 100 FEET IN ADVANCE OF THE JOINT.
 - WHEN MILLED PAVEMENT IS LEFT EXPOSED TO TRAFFIC A "ROUGH ROAD" (W8-8) OR "GROOVED PAVEMENT" (W8-8A) SIGN SHALL BE PLACED 250 FEET IN ADVANCE OF THE MILLED AREA.

MISCELLANEOUS

1. ALL TEMPORARY TRAFFIC CONTROL(TTC) DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TTC DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERD.
2. AT THE COMPLETION OF WORK ACTIVITIES, CONDITIONS WITHIN THE PUBLIC SPACE SHALL BE FULLY RESTORED TO THE THOSE THAT EXISTED PRIOR TO THE WORK ACTIVITY.

GN-02

**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

TRAFFIC CONTROL GENERAL NOTES

AUGUST 2017



Whitman, Requardt & Associates, LLP
801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK

31 OSWEGO AVENUE
SILVER SPRING, MD 20910

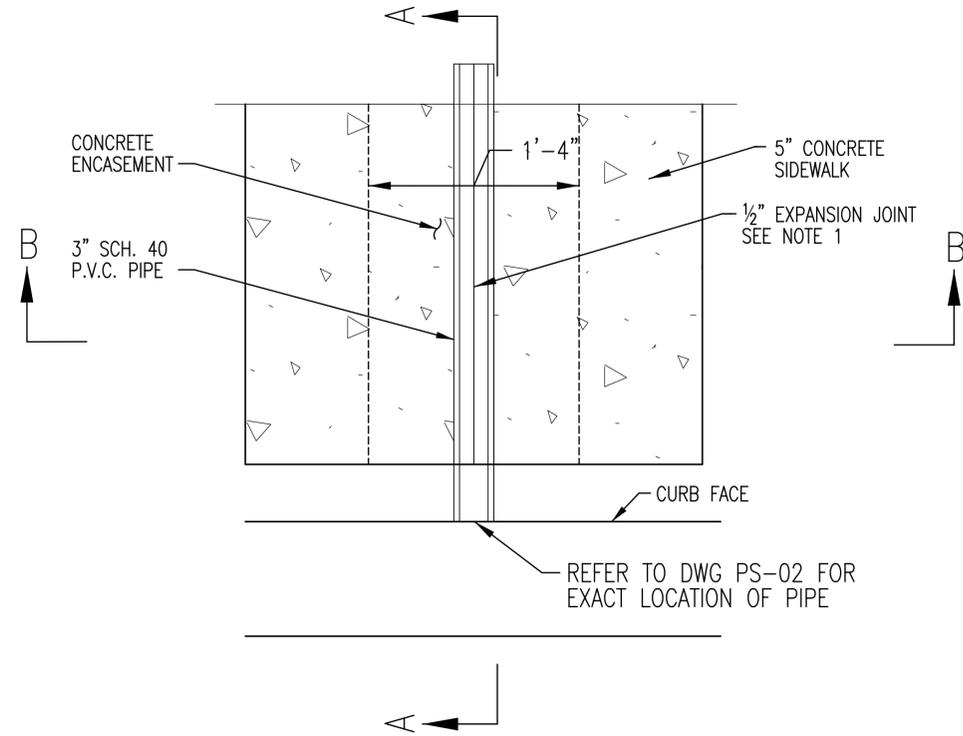
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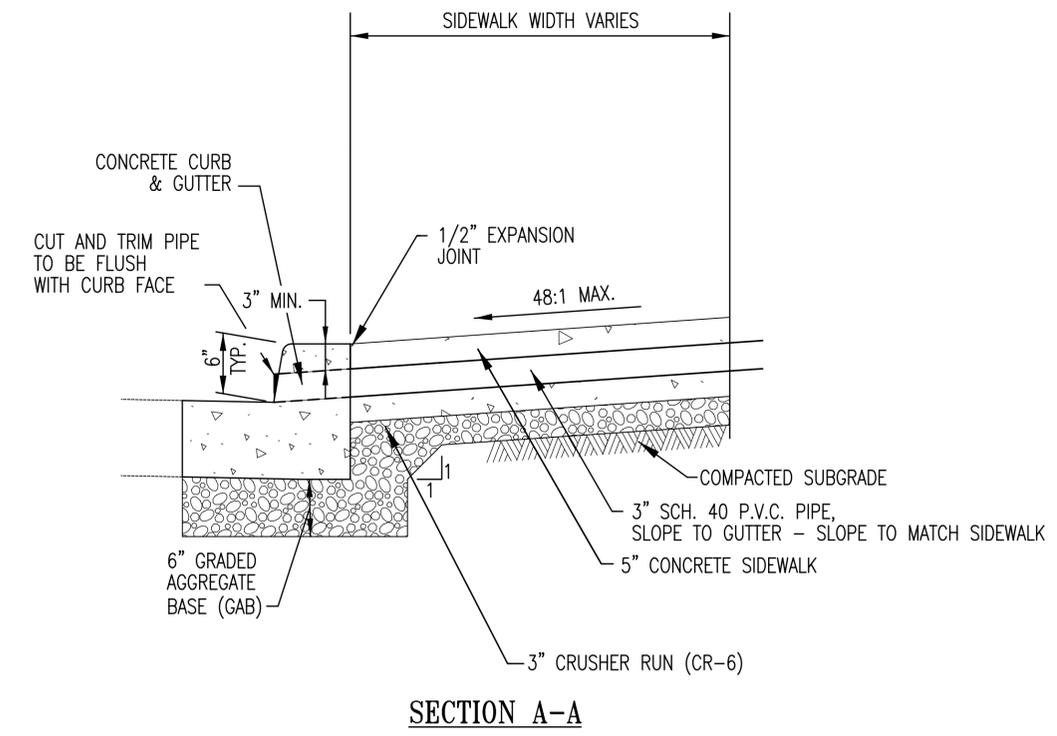
SHEET 03 OF 30

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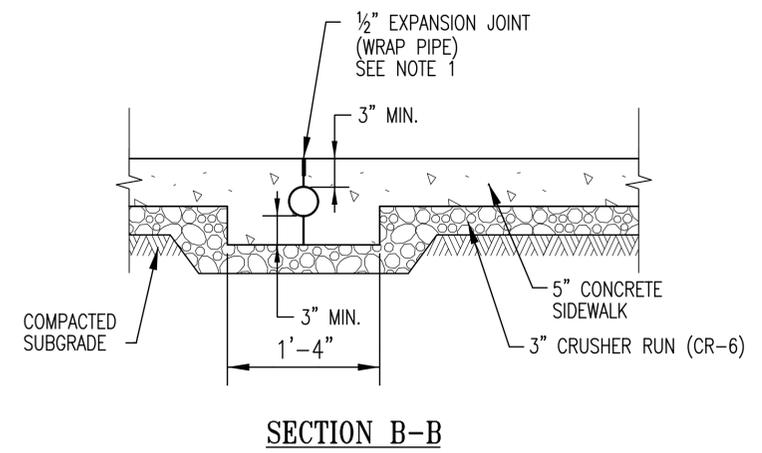
NOTES:
 1. EXPANSION JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING:
 -MDSHA STD. NO. MD-655.01 SIDEWALK EXPANSION JOINTS
 -MDSHA SPEC 602.03 FOR CURB AND COMB CURB AND GUTTER
 -MD SHA SPEC 603.03 FOR SIDEWALKS AND DRIVEWAYS



OUTFALL PIPE THROUGH CURB DETAIL
PLAN VIEW



SECTION A-A



SECTION B-B

W:\2005-06\CAD\pdt-002 Lincoln Ave.dgn
 11/2/2017

PD-02

WRA
 Whitman, Reardon & Associates, LLP
 801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK
 31 OSWEGO AVENUE
 SILVER SPRING, MD 20910

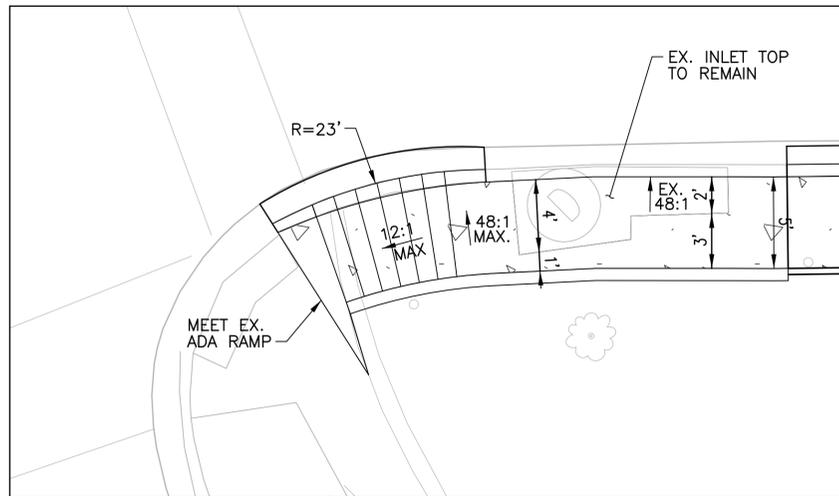
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**SIDEWALK ALONG LINCOLN AVENUE
 FROM JACKSON AVENUE TO ELM AVENUE**

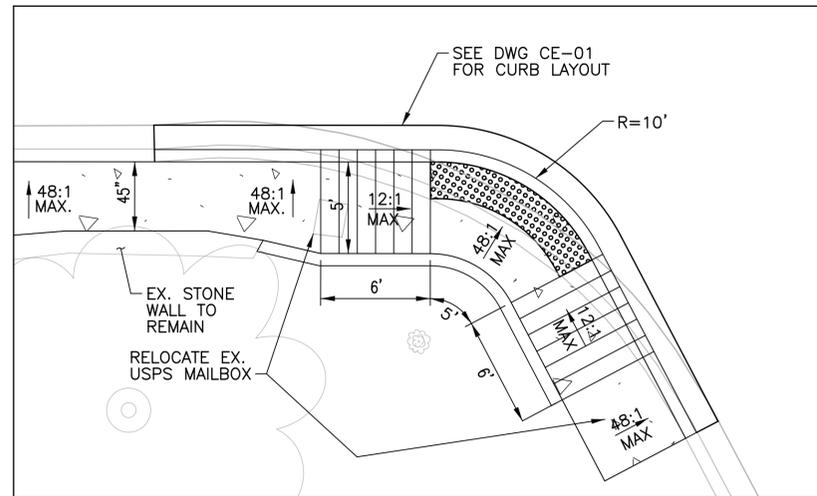
PAVEMENT DETAILS

AUGUST 2017

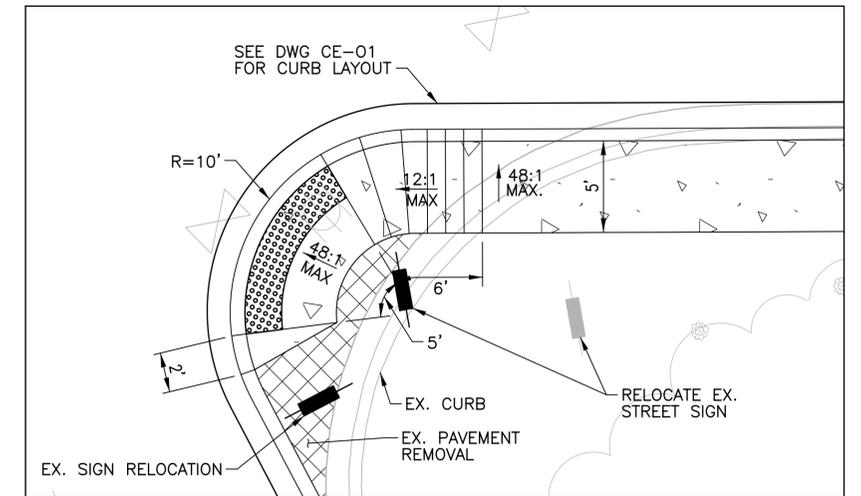
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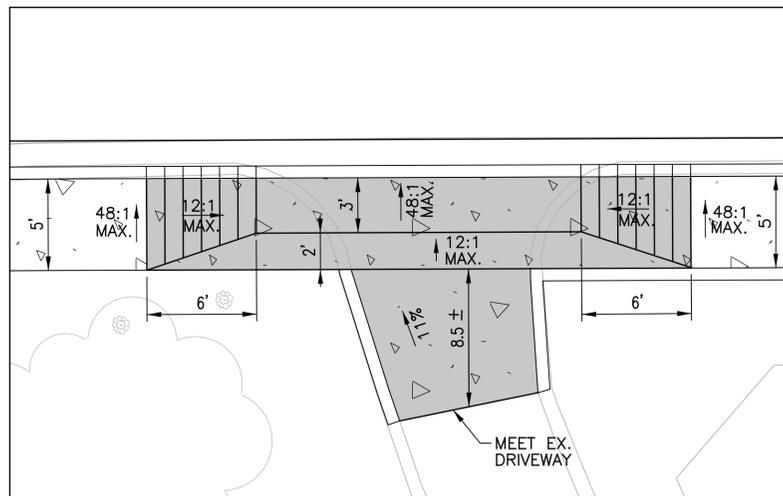
MOD. PARALLEL RAMP
 STA. 0+44, RT.
 (SEE MD 655.12)



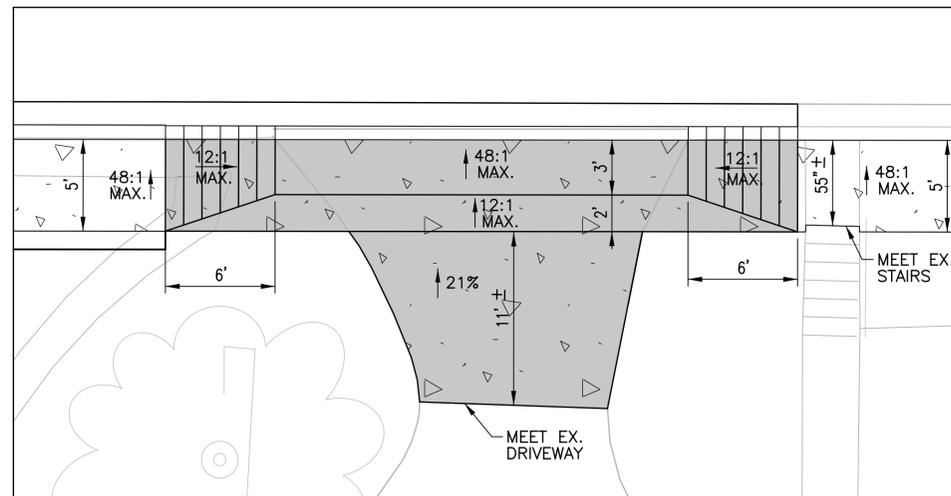
MOD. PARALLEL RAMP
 STA. 3+23, RT.
 (SEE MD 655.12)



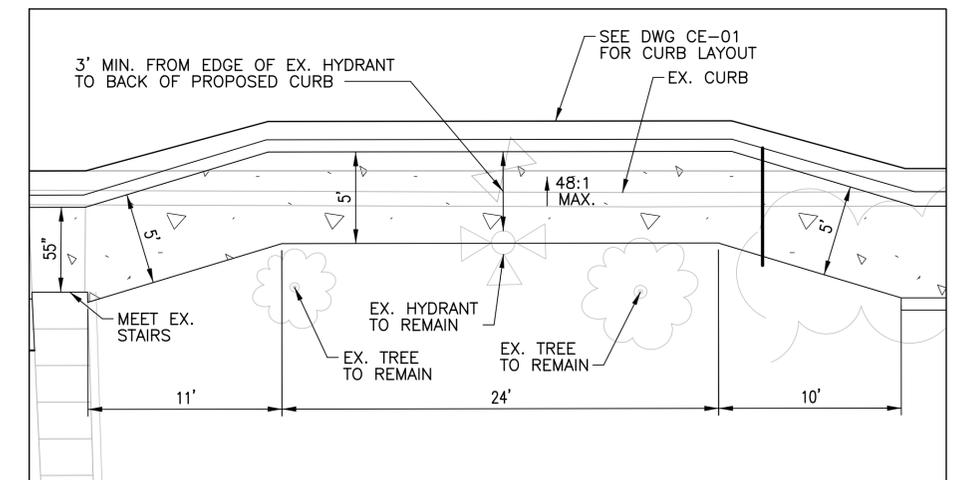
MOD. PARALLEL RAMP
 STA. 3+62, RT.
 (SEE MD 655.12)



MOD. STD. ENTRANCE NO. 1
 STA. 4+10, RT.
 (SEE MD 630.01)



MOD. STD. ENTRANCE NO. 1
 STA. 8+95, RT.
 (SEE MD 630.01)



BUMPOUT AROUND HYDRANT
 STA. 7+69, RT.

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 11/2/2017

ADA-01

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK
 31 OSWEGO AVENUE
 SILVER SPRING, MD 20910

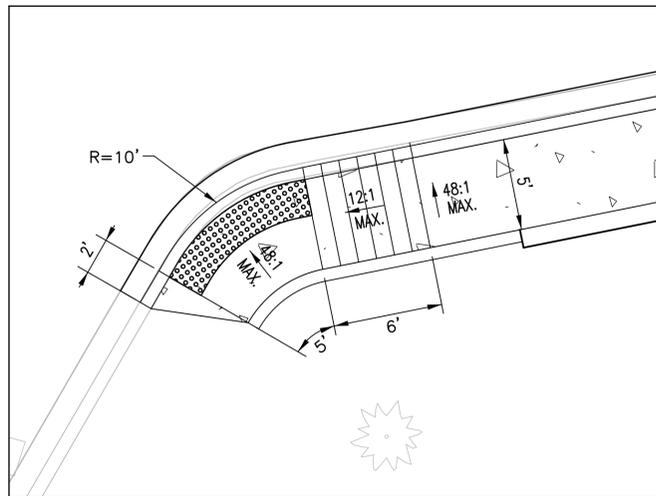
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**SIDEWALK ALONG LINCOLN AVENUE
 FROM JACKSON AVENUE TO ELM AVENUE**

ADA DETAILS

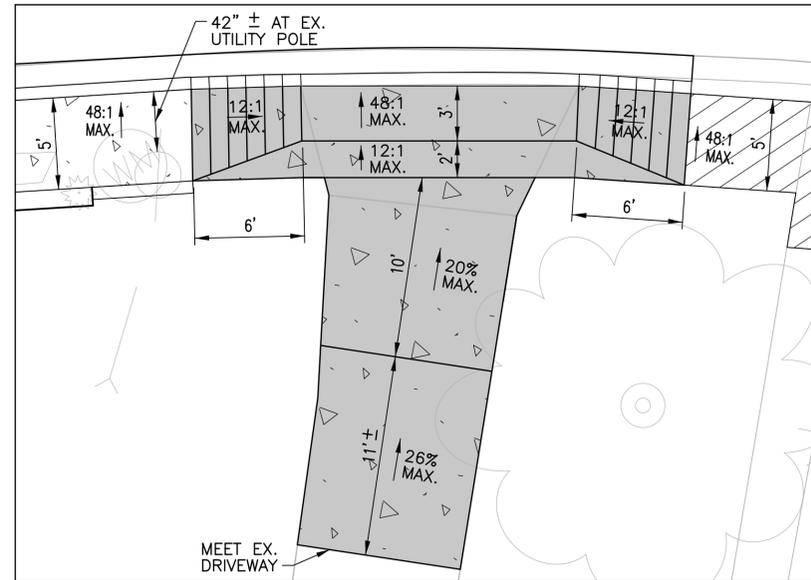
AUGUST 2017

SCALE : 1" = 5' SHEET 07 OF 30



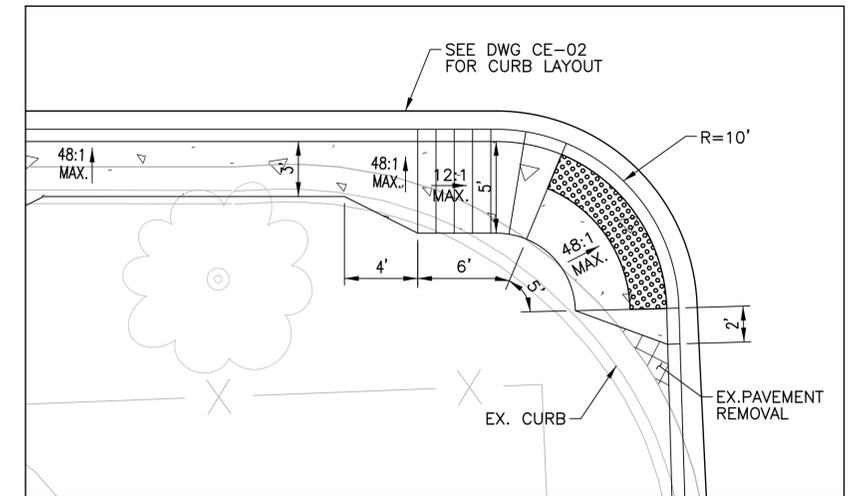
MOD. PARALLEL RAMP

STA. 11+71, RT.
(SEE MD 655.12)



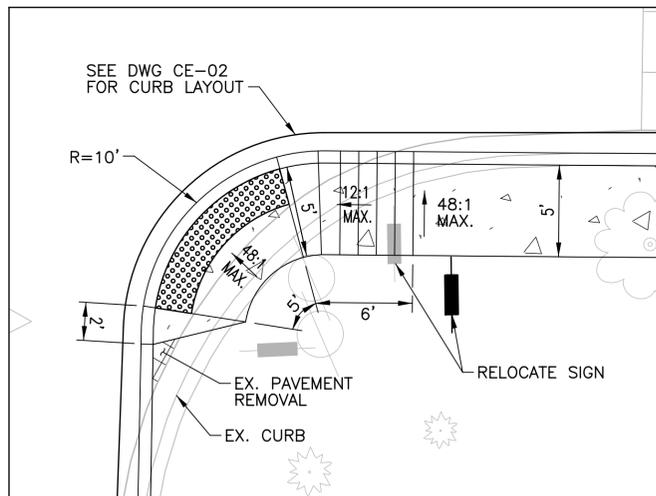
MOD. STD. ENTRANCE NO. 1

STA. 12+87, RT.
(SEE MD 630.01)



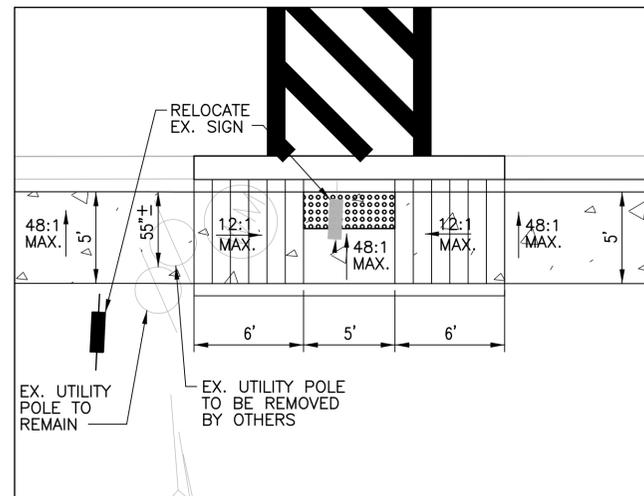
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STA. 14+88, RT.
(SEE MD 655.12)



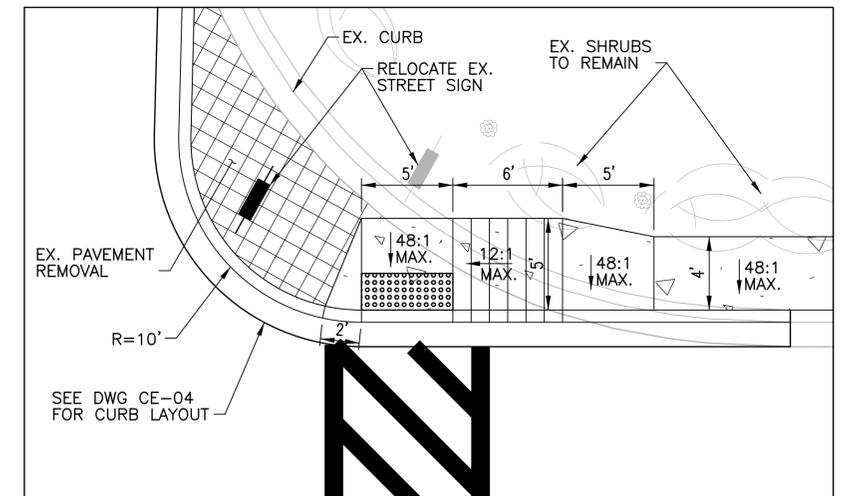
MOD. PARALLEL RAMP

STA. 15+20, RT.
(SEE MD 655.12)



MOD. PARALLEL RAMP

STA. 16+42, RT.
(SEE MD 655.12)



MOD. PARALLEL RAMP

STA. 16+42, LT.
(SEE MD 655.12)

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ADA-02

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK
31 OSWEGO AVENUE
SILVER SPRING, MD 20910

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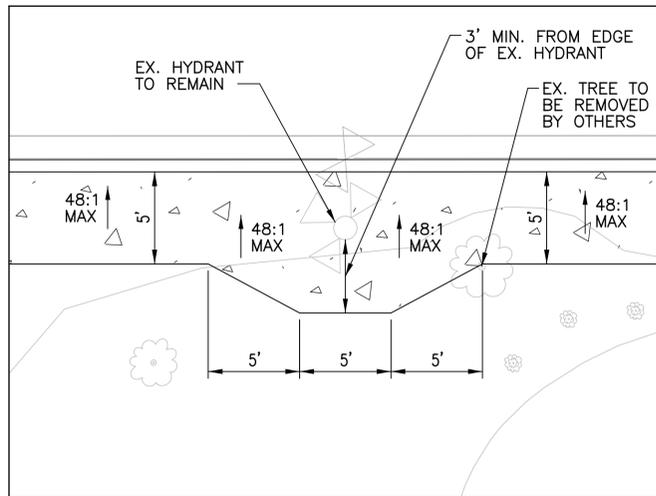
**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

ADA DETAILS

AUGUST 2017

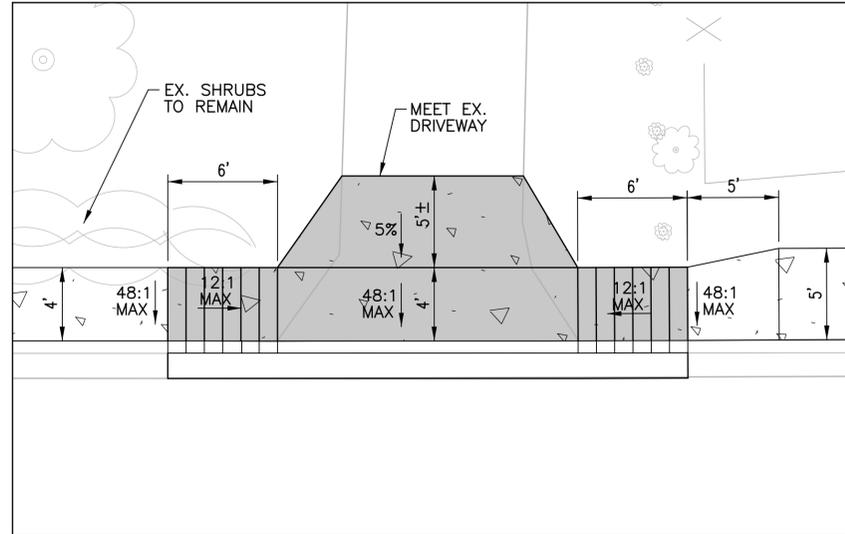
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SHEET 08 OF 30



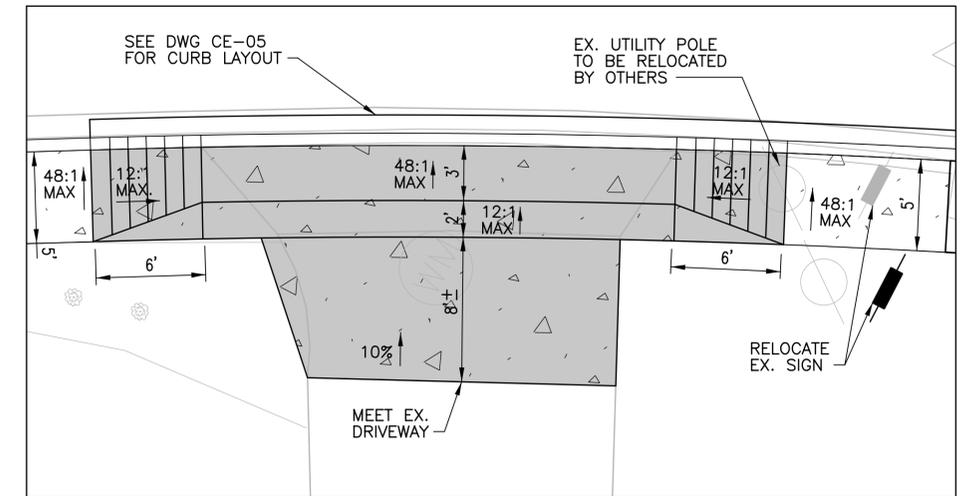
BUMPOUT AROUND HYDRANT

STA. 16+84, RT.



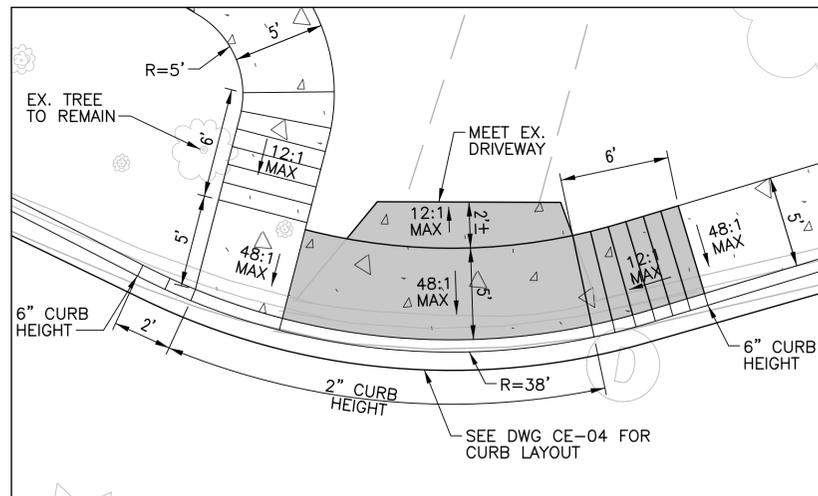
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STA. 17+14, LT.
(SEE MD 630.01)



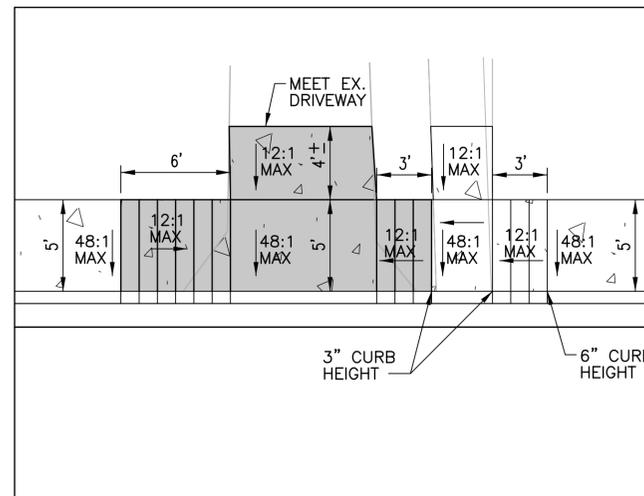
MOD. STD. ENTRANCE NO. 1

STA. 17+34, RT.
(SEE MD 630.01)



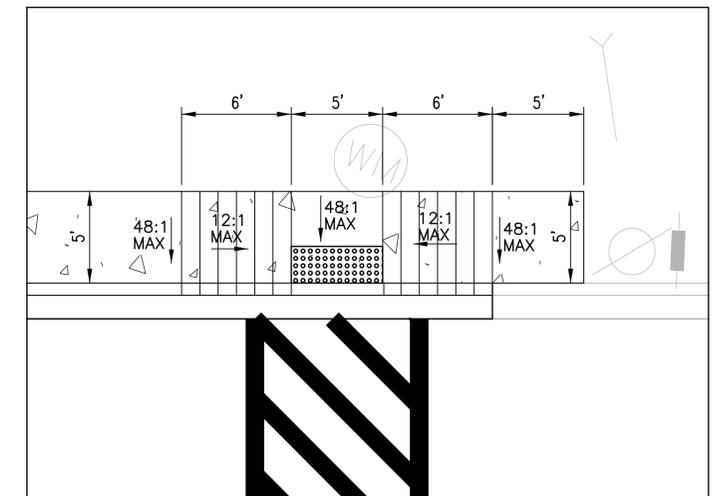
MOD. STD. ENTRANCE NO. 1

STA. 18+33, LT.
(SEE MD 630.01)



MOD. STD. ENTRANCE NO. 1

STA. 18+36, LT.
(SEE MD 630.01)



PARALLEL RAMP

STA. 18+38, LT.
(SEE MD 655.12)

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ADA-03

Whitman, Reardon & Associates, LLP
801 South Caroline Street, Baltimore, Maryland 21231

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SILVER SPRING, MD 20910

Designed by: MCK Drawn by: ALS Checked by: MCK

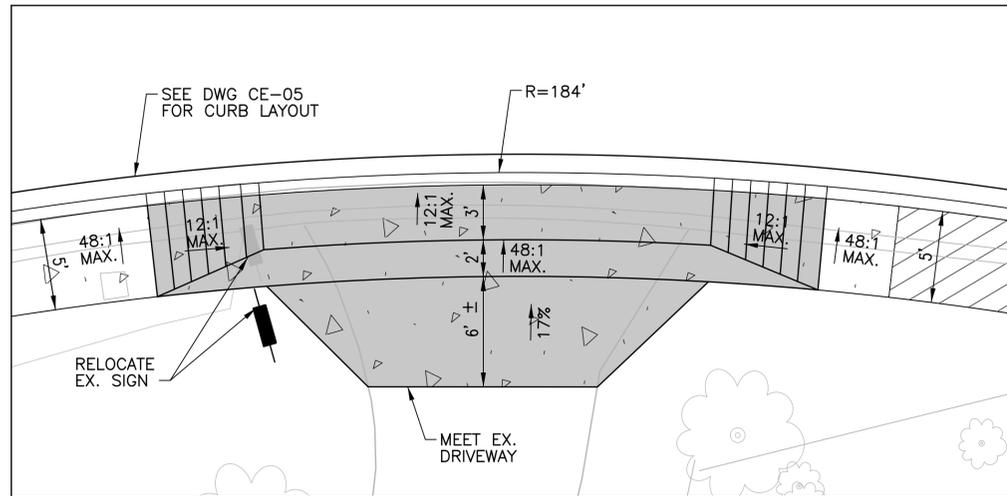
**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

ADA DETAILS

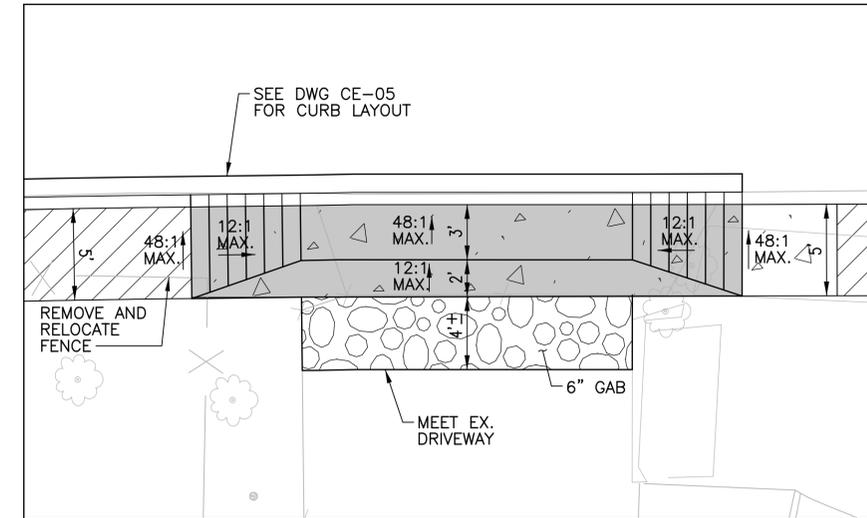
AUGUST 2017

SCALE : 1" = 5'

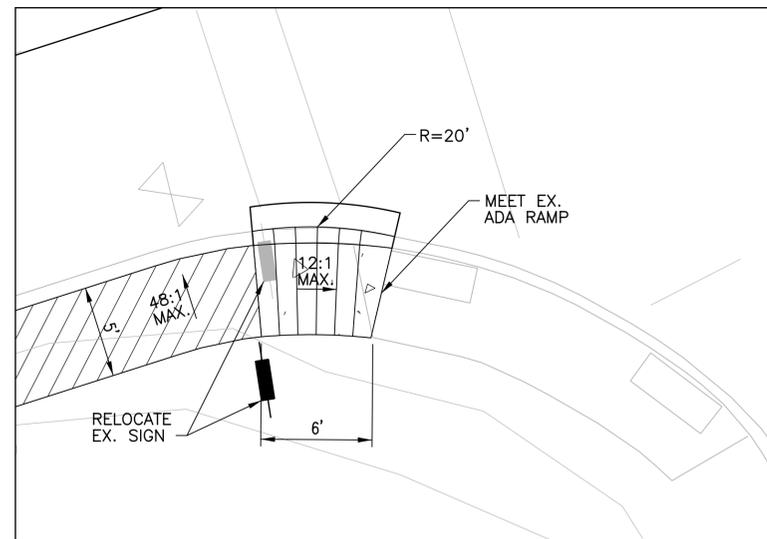
SHEET 09 OF 30



MOD. STD. ENTRANCE NO. 1
 STA. 18+88, RT.
 (SEE MD 630.01)



MOD. STD. ENTRANCE NO. 1
 STA. 19+86, RT.
 (SEE MD 630.01)



MOD. PARALLEL RAMP
 STA. 20+40, RT.
 (SEE MD 655.12)

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 11/2/2017

ADA-04

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CITY OF TAKOMA PARK
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 SILVER SPRING, MD 20910

Designed by: MCK Drawn by: ALS Checked by: MCK

**SIDEWALK ALONG LINCOLN AVENUE
 FROM JACKSON AVENUE TO ELM AVENUE**

ADA DETAILS

AUGUST 2017

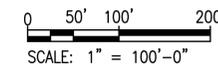
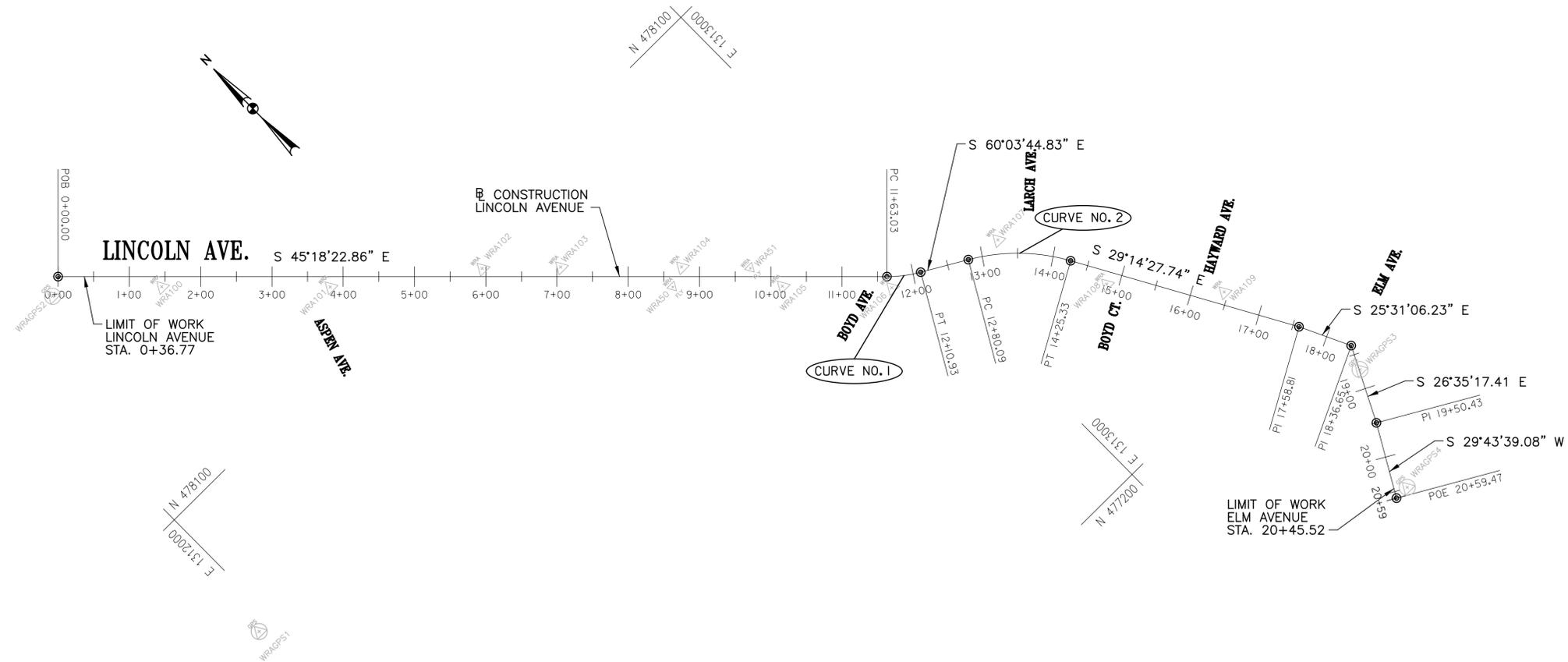
SCALE : 1" = 5'

SHEET 10 OF 30

CONSTRUCTION CONTROL COORDINATES					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
	P0B	00+00.00	478,456.6461	1,312,123.5974	S 45°18'22.86" E
CURVE NO. 1	PC	11+63.03	477,638.6688	1,312,950.3690	-
	PI	11+07.11	477,621.7296	1,312,967.4903	-
	PT	12+10.93	477,609.7100	1,312,988.3614	S 60°03'44.83" E
CURVE NO. 2	PC	12+80.09	477,575.1985	1,313,048.2878	-
	PI	13+54.51	477,538.0557	1,313,112.7832	-
	PT	14+25.33	477,473.1132	1,313,149.1386	S 29°14'27.74" E
	PI	17+58.81	477,182.1298	1,313,312.0336	S 25°31'06.23" E
	PI	18+36.65	477,111.8833	1,313,345.5672	S 26°35'17.41" W
	PI	19+50.43	477,010.1326	1,313,294.6405	S 29°43'39.08" W
	P0E	20+59.47	476,915.4455	1,313,240.5717	-

CURVE DATA						
CURVE	DELTA	Dc	R	L	T	E
CURVE-1	14°45'22" LT	30°48'15"	186.00'	47.90'	24.08'	1.55'
CURVE-2	30°49'19" RT	21°13'14"	270.00'	145.25'	74.43'	10.07'

TRAVERSE POINTS			
POINT NO.	NORTH	EAST	ELEVATION
WRAGPS1	447,905.0576	1,311,974.7957	234.37
WRAGPS2	478,442.4011	1,312,098.7334	183.80
WRAI00	478,344.2768	1,312,217.0457	196.82
WRAI01	478,177.8268	1,312,384.8345	210.34
WRAI02	478,046.3065	1,312,554.7033	222.63
WRAI03	477,970.1764	1,312,634.2603	223.91
WRA50	477,850.9640	1,312,754.9234	210.14
WRAI04	477,839.6393	1,312,726.4612	211.46
WRA51	477,781.7029	1,312,822.3970	204.66
WRAI05	477,732.3746	1,312,836.6387	204.24
WRAI06	477,622.8633	1,312,944.1557	201.18
WRAI07	477,565.6938	1,313,097.2537	196.49
WRAI08	477,414.3819	1,313,162.0201	203.10
WRAI09	477,290.5148	1,313,271.5804	201.69
WRAGPS3	477,079.3929	1,313,330.7826	205.74
WRAGPS4	476,915.5107	1,313,261.8932	226.20



GS-01

WRA
Whitman, Reardon & Associates, LLP
 801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK
 31 OSWEGO AVENUE
 SILVER SPRING, MD 20910

Designed by: MCK Drawn by: ALS Checked by: MCK

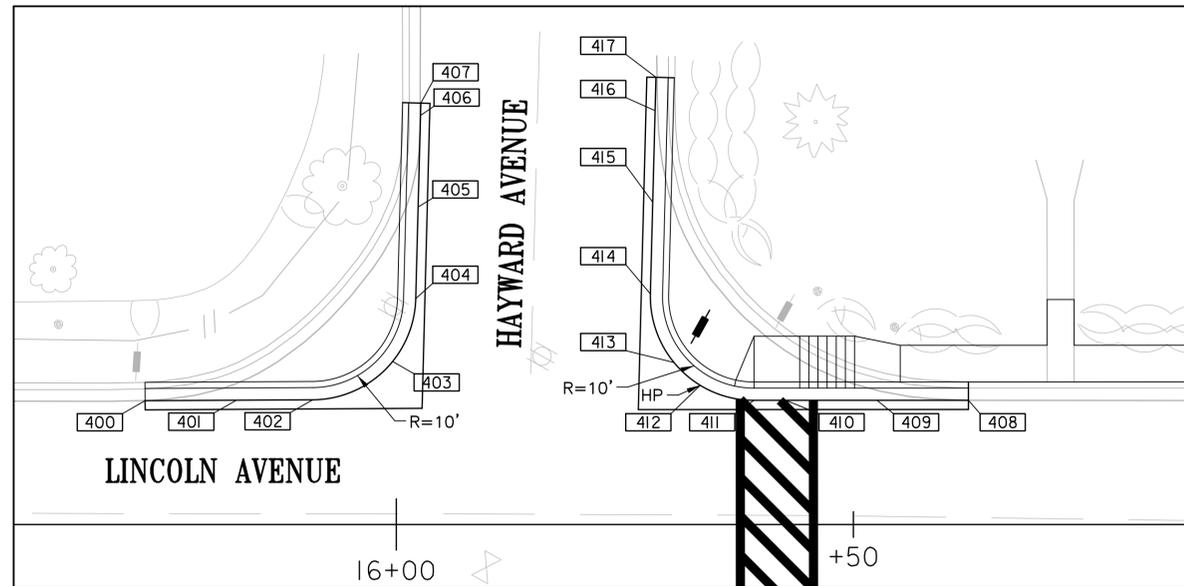
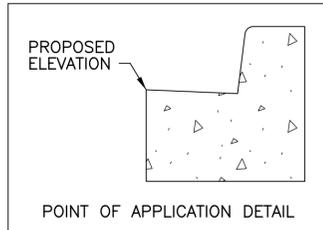
**SIDEWALK ALONG LINCOLN AVENUE
 FROM JACKSON AVENUE TO ELM AVENUE**

GEOMETRY PLAN AND SURVEY CONTROL

AUGUST 2017

SCALE : 1" = 100' SHEET 11 OF 30

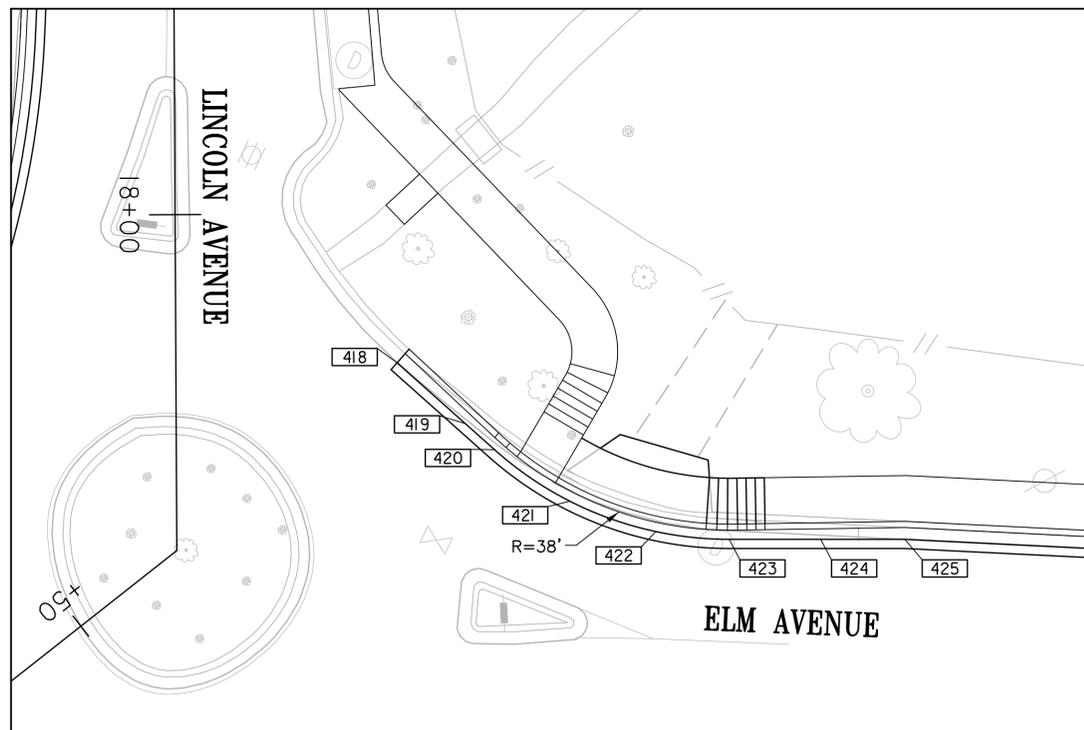
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HAYWARD AVENUE

HAYWARD AVENUE						
POINT NUMBER	BASELINE STATION	OFFSET	NORTH	EAST	ELEV.*	REMARKS
400	15+72.52	-13.51'	477351.2819	1313232.8212	203.10	MATCH EX.
401	15+82.52	-13.56'	477342.5837	1313237.7548	202.85	POT
402	15+90.87	-13.61'	477335.3192	1313241.8751	202.68	PC
403	15+99.60	-17.79'	477329.7455	1313249.7879	202.39	POC
404	16+02.13	-24.65'	477330.8820	1313257.0123	202.10	PT
405	16+02.39	-34.65'	477335.5401	1313265.8612	201.59	POT
406	16+02.65	-44.64'	477340.1982	1313274.7100	200.87	POT
407	16+02.68	-45.99'	477340.8243	1313275.8993	200.76	MATCH EX.
408	16+62.59	-13.56'	477272.7095	1313276.8625	201.17	MATCH EX.
409	16+52.59	-13.55'	477281.4336	1313271.9748	201.43	POT
410	16+42.59	-13.55'	477290.1578	1313267.0872	201.75	POT
411	16+39.13	-13.55'	477293.1738	1313265.3974	201.83	PC
412	16+33.25	-15.19'	477299.1083	1313263.9583	201.89	HIGH POINT
413	16+30.38	-17.68'	477302.8292	1313264.7253	201.87	POC
414	16+27.80	-25.17'	477308.7419	1313270.0055	201.68	PT
415	16+28.06	-35.17'	477313.4000	1313278.8544	201.26	POT
416	16+28.31	-45.17'	477318.0581	1313287.7032	200.68	POT
417	16+28.41	-48.80'	477319.7520	1313290.9209	200.42	MATCH EX.

* SEE POINT OF APPLICATION DETAIL (THIS SHEET)



ELM AVENUE

800 ELM AVENUE DRIVEWAY CURB ELEVATIONS						
POINT NUMBER	BASELINE STATION	OFFSET	NORTH	EAST	ELEV.*	REMARKS
418	18+16.29	-24.21'	477140.6879	1313358.6417	198.50	MATCH EX.
419	18+22.97	-31.64'	477137.8567	1313368.2325	197.53	POT
420	18+25.83	-34.82'	477136.6460	1313372.3340	197.15	PC
421	18+31.49	-43.04'	477135.0810	1313382.1825	196.17	POC
422	18+34.85	-52.42'	477136.0896	1313392.1035	195.03	POC
423	18+35.74	-60.45'	477138.7496	1313399.7313	194.12	PT
424	18+35.79	-70.45'	477143.0118	1313408.7775	192.82	POT
425	18+35.83	-79.66'	477146.9360	1313417.1065	191.62	MATCH EX.

* SEE POINT OF APPLICATION DETAIL (THIS SHEET)

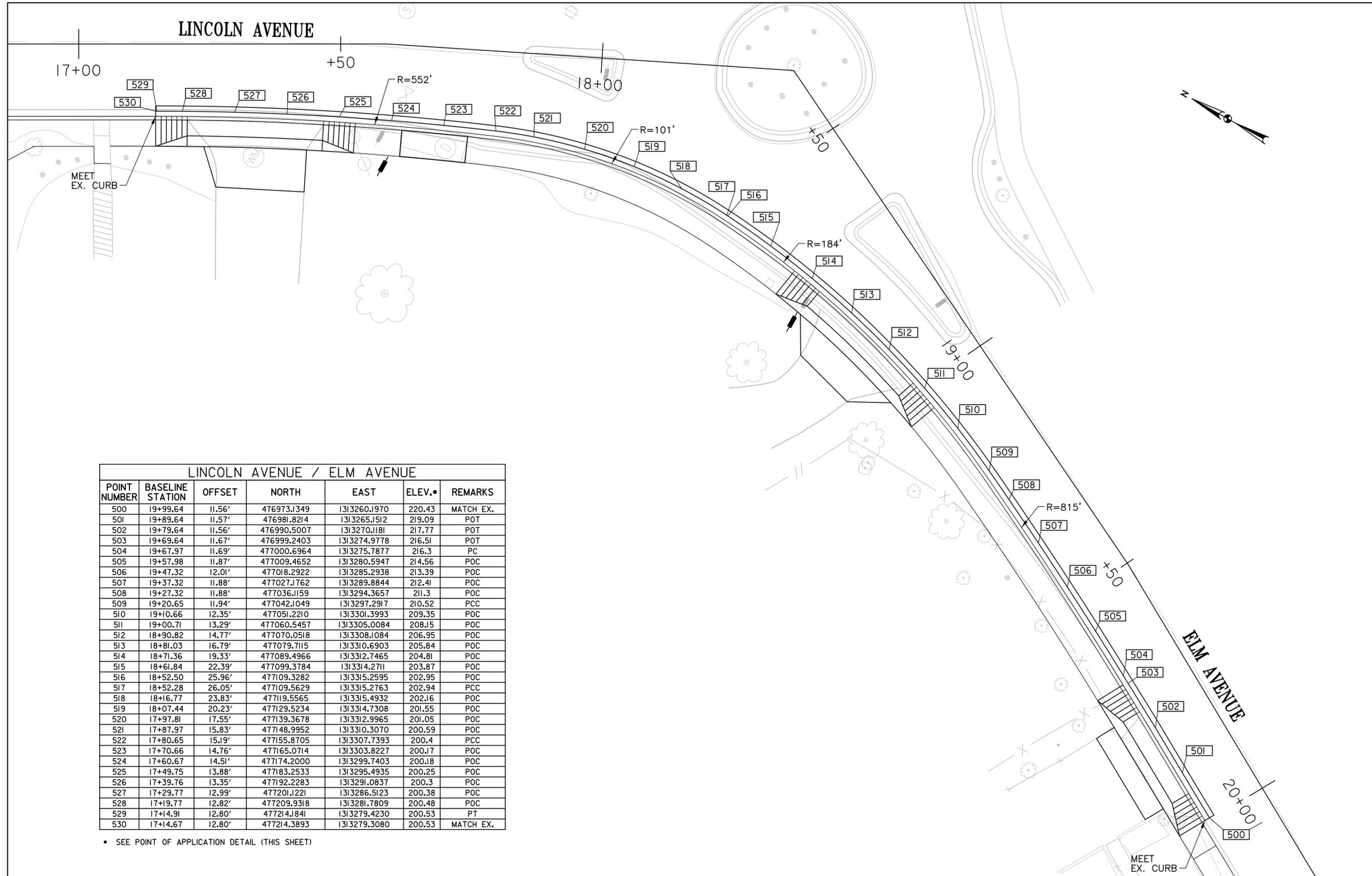
CE-04

SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE

CURB ELEVATIONS AND LAYOUT

AUGUST 2017

<p>Whitman, Reardon & Associates, LLP 801 South Caroline Street, Baltimore, Maryland 21231</p>	NO.	REVISION	DATE	BY	DESIGNED BY: MCK	DRAWN BY: ALS	CHECKED BY: MCK
	<p>CITY OF TAKOMA PARK</p> <p>31 OSWEGO AVENUE SILVER SPRING, MD 20910</p>						

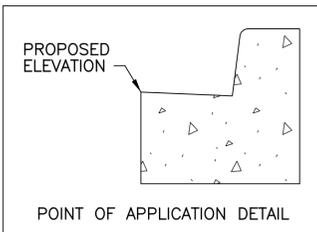


LINCOLN AVENUE / ELM AVENUE

POINT NUMBER	BASELINE STATION	OFFSET	NORTH	EAST	ELEV.▪	REMARKS
500	19+99.64	11.56'	476973.1349	1313260.1970	220.43	MATCH EX.
501	19+89.64	11.57'	476981.8214	1313265.1512	219.09	POT
502	19+79.64	11.56'	476990.5007	1313270.1181	217.77	POT
503	19+69.64	11.67'	476999.2403	1313274.9778	216.51	POT
504	19+67.97	11.69'	477000.6964	1313275.7877	216.3	PC
505	19+57.98	11.87'	477009.4652	1313280.5947	214.56	POC
506	19+47.32	12.01'	477018.2922	1313285.2938	213.39	POC
507	19+37.32	11.88'	477027.1762	1313289.8844	212.41	POC
508	19+27.32	11.88'	477036.1159	1313294.3657	211.3	POC
509	19+20.65	11.94'	477042.1049	1313297.2917	210.52	PCC
510	19+10.66	12.35'	477051.2210	1313301.3993	209.35	POC
511	19+00.71	13.29'	477060.5457	1313305.0084	208.15	POC
512	18+90.82	14.77'	477070.0518	1313308.1084	206.95	POC
513	18+81.03	16.79'	477079.7115	1313310.6903	205.84	POC
514	18+71.36	19.33'	477089.4966	1313312.7465	204.81	POC
515	18+61.84	22.39'	477099.3784	1313314.2711	203.87	POC
516	18+52.50	25.96'	477109.3282	1313315.2595	202.95	POC
517	18+52.28	26.05'	477109.5629	1313315.2763	202.94	PCC
518	18+16.77	23.83'	477119.5565	1313315.4932	202.16	POC
519	18+07.44	20.23'	477129.5234	1313314.7308	201.55	POC
520	17+97.81	17.55'	477139.3678	1313312.9965	201.05	POC
521	17+87.97	15.83'	477148.9952	1313310.3070	200.59	POC
522	17+80.65	15.19'	477155.8705	1313307.7393	200.4	PCC
523	17+70.66	14.76'	477165.0714	1313303.8227	200.17	POC
524	17+60.67	14.51'	477174.2000	1313299.7403	200.18	POC
525	17+49.75	13.88'	477183.2533	1313295.4935	200.25	POC
526	17+39.76	13.35'	477192.2283	1313291.0837	200.3	POC
527	17+29.77	12.99'	477201.1221	1313286.5123	200.38	POC
528	17+19.77	12.82'	477209.9318	1313281.7809	200.48	POC
529	17+14.91	12.80'	477214.1841	1313279.4230	200.53	PT
530	17+14.67	12.80'	477214.3893	1313279.3080	200.53	MATCH EX.

▪ SEE POINT OF APPLICATION DETAIL (THIS SHEET)

LINCOLN AVENUE / ELM AVENUE



WRA
Whitman, Reardon & Associates, LLP
801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK
31 OSWEGO AVENUE
SILVER SPRING, MD 20910

Designed by: MCK Drawn by: ALS Checked by: MCK

**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

CURB ELEVATIONS AND LAYOUT

AUGUST 2017

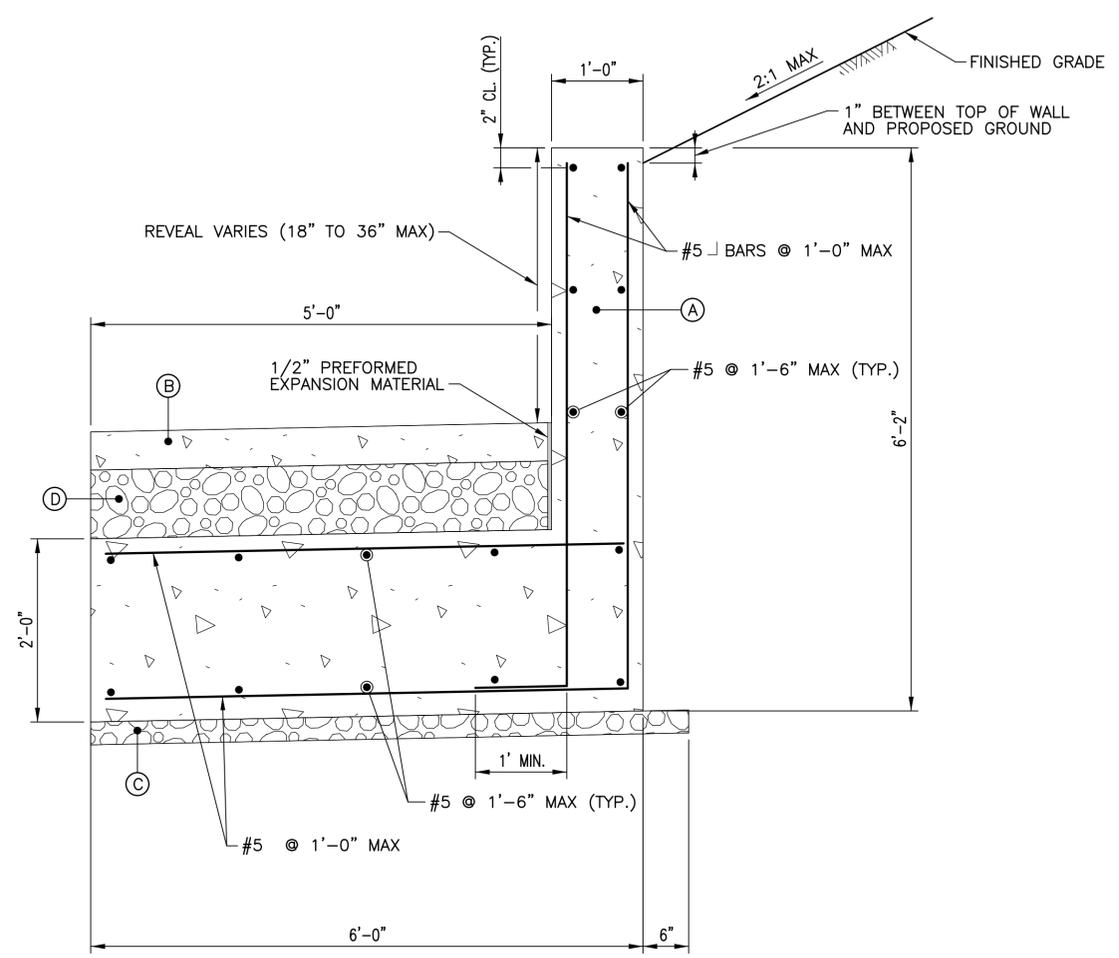
SCALE : 1" = 10'

SHEET 16 OF 30

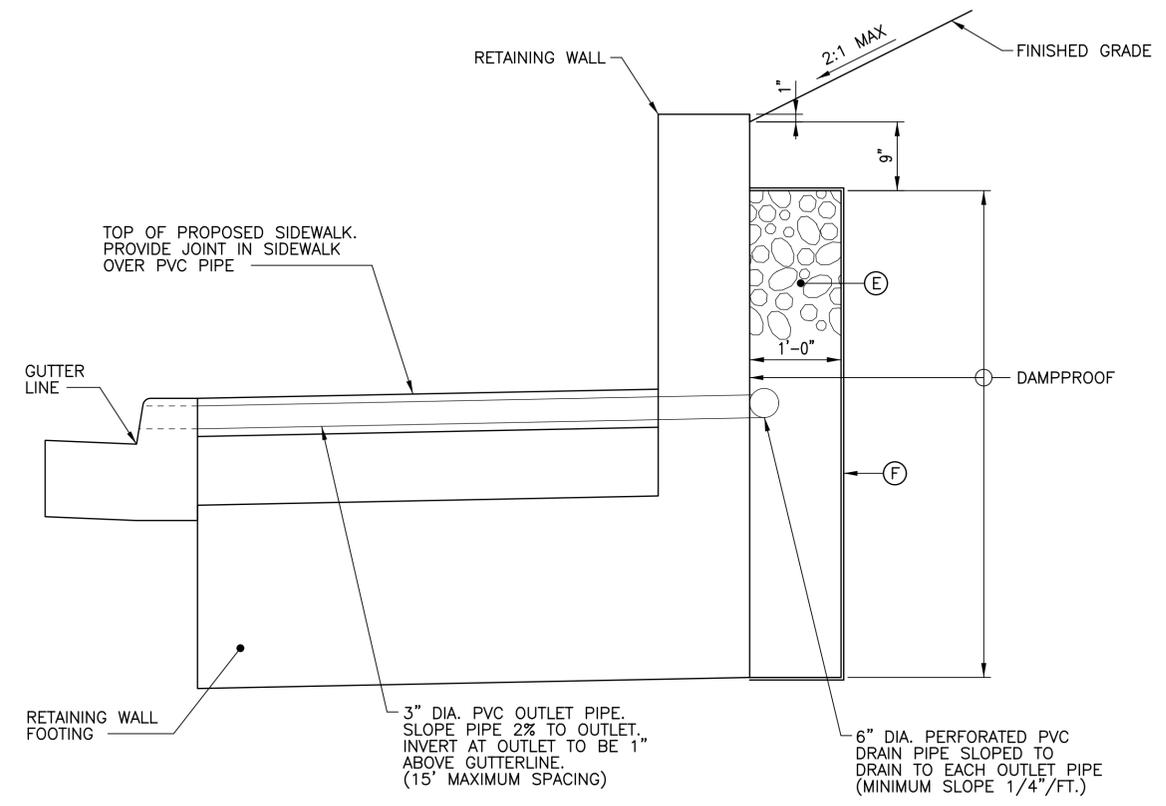
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CE-05

- LEGEND**
- (A) CONCRETE MIX NO. 3
 - (B) 5" CONCRETE SIDEWALK
 - (C) 3" CRUSHER RUN (CR-6)
 - (D) 9" CRUSHER RUN (CR-6)
 - (E) NO. 57 STONE & BACKFILL
 - (F) SD TYPE II GEOTEXTILE



RETAINING WALL DETAIL
(18" TO 36" REVEAL)
 NOT TO SCALE



RETAINING WALL UNDERDRAIN DETAIL
 NOT TO SCALE

- NOTES:**
- RETAINING WALL JOINT LOCATIONS SHALL BE INSTALLED IN ACCORDANCE WITH MD SHA STD. NO. RW-401, OR AS DIRECTED BY THE ENGINEER.
 - ALL RETAINING WALL CONCRETE SHALL BE MIX NO. 3 (3,500 PSI).
 - RETAINING WALL REINFORCING STEEL SHALL CONFORM TO A 615 GRADE 60. ALL SPLICES, NOT SHOWN, SHALL BE LAPPED AS PER BAR LAP CHARTS. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM OF FOOTINGS WHICH SHALL HAVE 3" MINIMUM COVER. FOR TIES AND STIRRUPS: STANDARD ACI BENDING TOLERANCES ARE MODIFIED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL ACI BENDING TOLERANCES.
 - ALL EXPOSED CORNERS OF CONCRETE RETAINING WALLS SHALL BE CHAMFERED WITH 3/4"x 3/4" MILLED CHAMFER STRIPS UNLESS NOTED OTHERWISE.

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 11/2/2017

DE-01

WRA
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 801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK
 31 OSWEGO AVENUE
 SILVER SPRING, MD 20910

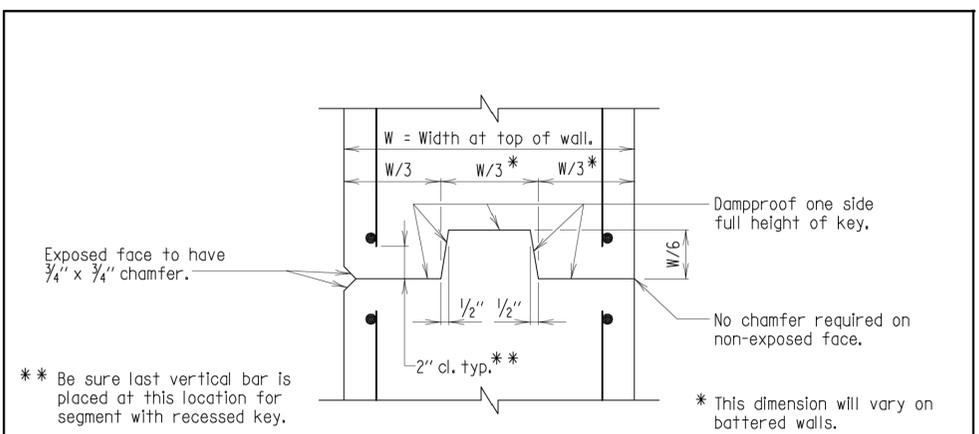
Designed by: MCK Drawn by: ALS Checked by: MCK

**SIDEWALK ALONG LINCOLN AVENUE
 FROM JACKSON AVENUE TO ELM AVENUE**

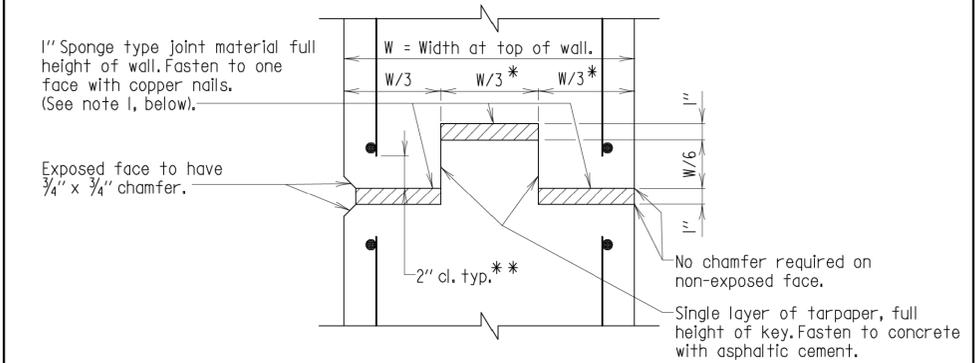
STRUCTURAL DETAILS

AUGUST 2017

SCALE : NO SCALE SHEET 17 OF 30



SECTION
STEM CONTRACTION JOINT
Scale: 1/2" = 1'-0"



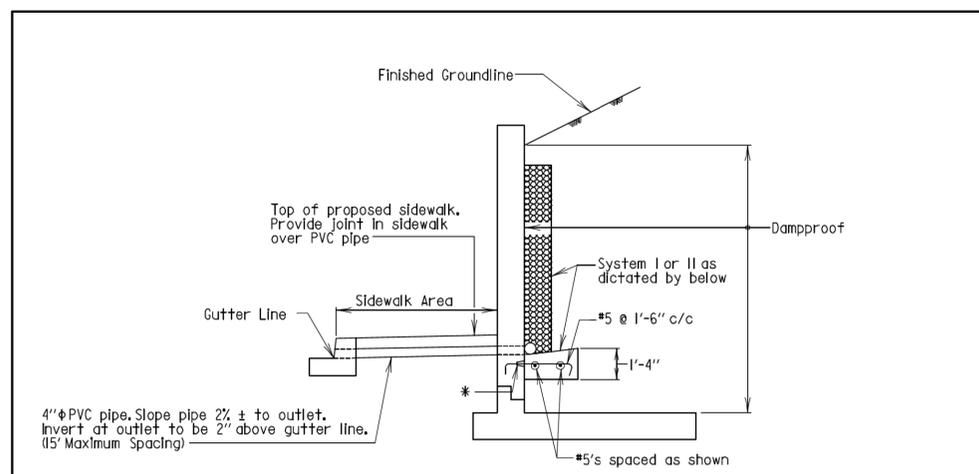
SECTION
STEM EXPANSION JOINT
Scale: 1/2" = 1'-0"

- Notes:
1. Joint locations shall be as shown on contract drawing. If no locations are given concrete retaining walls shall have contraction joints a maximum of every 30'-0"; and expansion joints, with 1" sponge type material (see 911.02), a maximum of every 90'-0"
 2. Stop key 9" below top of wall.
 3. Reinforcing steel shall not pass through contraction or expansion joint.
 4. For battered walls, with stems greater than 12 feet height, key dimensions noted thus *, shall be based on wall thickness at mid height.
 5. All keys are nominal size.
 6. Only place contraction and expansion joints in stems (no joint in footer).

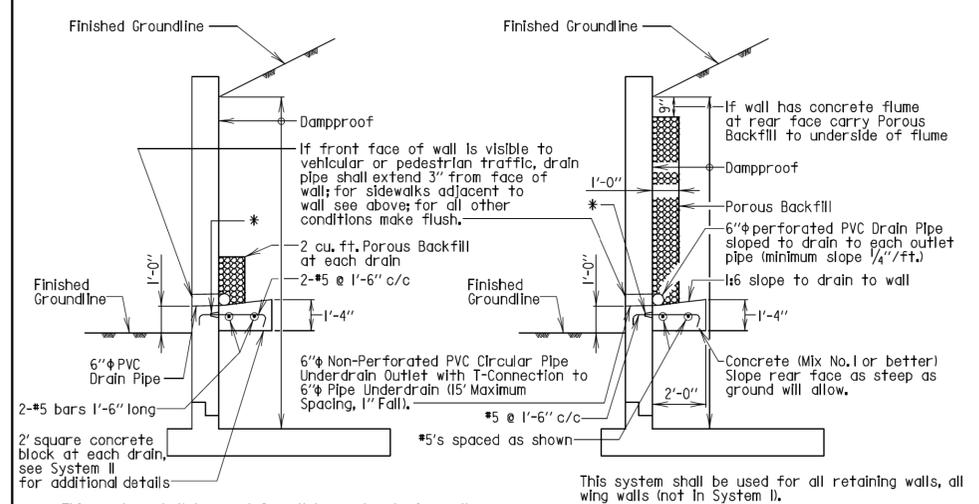
APPROVAL		STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
DATE: 4/19/84		CONCRETE RETAINING WALL CONTRACTION AND EXPANSION JOINTS	
REVISIONS		STANDARD NO. RW-401	
SHA	FWA	SHEET 1 OF 1	
1-4-94			
7-16-02			
FWA APPROVAL	3-22-06		
DATE: 5-3-84	5-4-06		

OLD NO. RW(6.13)-83-157

RETAINING WALLS



DRAIN AT SIDEWALK
Scale: None



SYSTEM I
Scale: None

SYSTEM II
Scale: None

- Note:
1. Exact elevation of drain to be determined by Engineer in field.
 2. Porous backfill (refer to Section 469).
 3. Use this standard for bridges with wing walls that are not parallel to the highway. For bridges with wing walls parallel to the highway see Std. No. SUB-DR-203 sheet 5 of 5 for details.

APPROVAL		STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
DATE: 2/25/80		RETAINING WALL AND WING WALL DRAINAGE SYSTEMS	
REVISIONS		STANDARD NO. RW-301	
SHA	FWA	SHEET 1 OF 1	
11-17-97			
4-22-98			
FWA APPROVAL	12-14-98		
DATE: 6-20-80	1-22-01		

OLD NO. RW(6.01)-80-100

RETAINING WALLS

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DE-02

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK
31 OSWEGO AVENUE
SILVER SPRING, MD 20910

Designed by: MCK Drawn by: ALS Checked by: MCK

SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE

STRUCTURAL

AUGUST 2017

SCALE: NO SCALE SHEET 18 OF 30

BUMPOUTS		
STATION	STA. & OFFSET	REMARKS
LINCOLN	16+84, RT.	SEE DWG ADA-03

5" CONCRETE SIDEWALK			
STATION	STA. TO STA.	SF	REMARKS
LINCOLN	11+66 TO 12+73, RT.	553	
LINCOLN	13+17 TO 14+90, RT.	818	
LINCOLN	15+17 TO 17+00, RT.	981	
LINCOLN	11+78 TO 11+82, LT.	15	
LINCOLN	13+09 TO 13+12, LT.	17	
LINCOLN	13+93 TO 13+96, LT.	23	
LINCOLN	16+37 TO 17+00, LT.	276	

MODIFIED TYPE A CURB, ANY HEIGHT OR DEPTH			
STATION	STA. TO STA.	LF	REMARKS
LINCOLN	11+71 TO 11+84, RT.	17	SEE DWG PD-01
LINCOLN	12+68 TO 12+73, RT.	6	SEE DWG PD-01
LINCOLN	16+33 TO 16+50, RT.	17	SEE DWG PD-01

DRIVEWAY ENTRANCES		
STATION	STA. & OFFSET	REMARKS
LINCOLN	12+87, RT.	SEE DWG ADA-02
LINCOLN	11+98, LT.	SEE DWG CE-03
LINCOLN	12+11, LT.	SEE DWG CE-03
LINCOLN	14+15, LT.	SEE DWG CE-03

6 INCH PORTLAND CEMENT CONCRETE PAVEMENT FOR DRIVEWAY MIX 6			
STATION	STA. TO STA.	SY	REMARKS
LINCOLN	12+73 TO 13+02, RT.	38	
LINCOLN	11+92 TO 12+06, LT.	10	
LINCOLN	12+08 TO 12+21, LT.	10	
LINCOLN	14+07 TO 4+23, LT.	12	
LINCOLN	16+99 TO 17+00, LT.	1	

SIDEWALK RAMPS		
STATION	STA. & OFFSET	REMARKS
LINCOLN	11+71, RT.	SEE DWG ADA-02
LINCOLN	14+88, RT.	SEE DWG ADA-02
LINCOLN	15+20, RT.	SEE DWG ADA-02
LINCOLN	16+42, RT.	SEE DWG ADA-02
LINCOLN	16+42, LT.	SEE DWG ADA-02

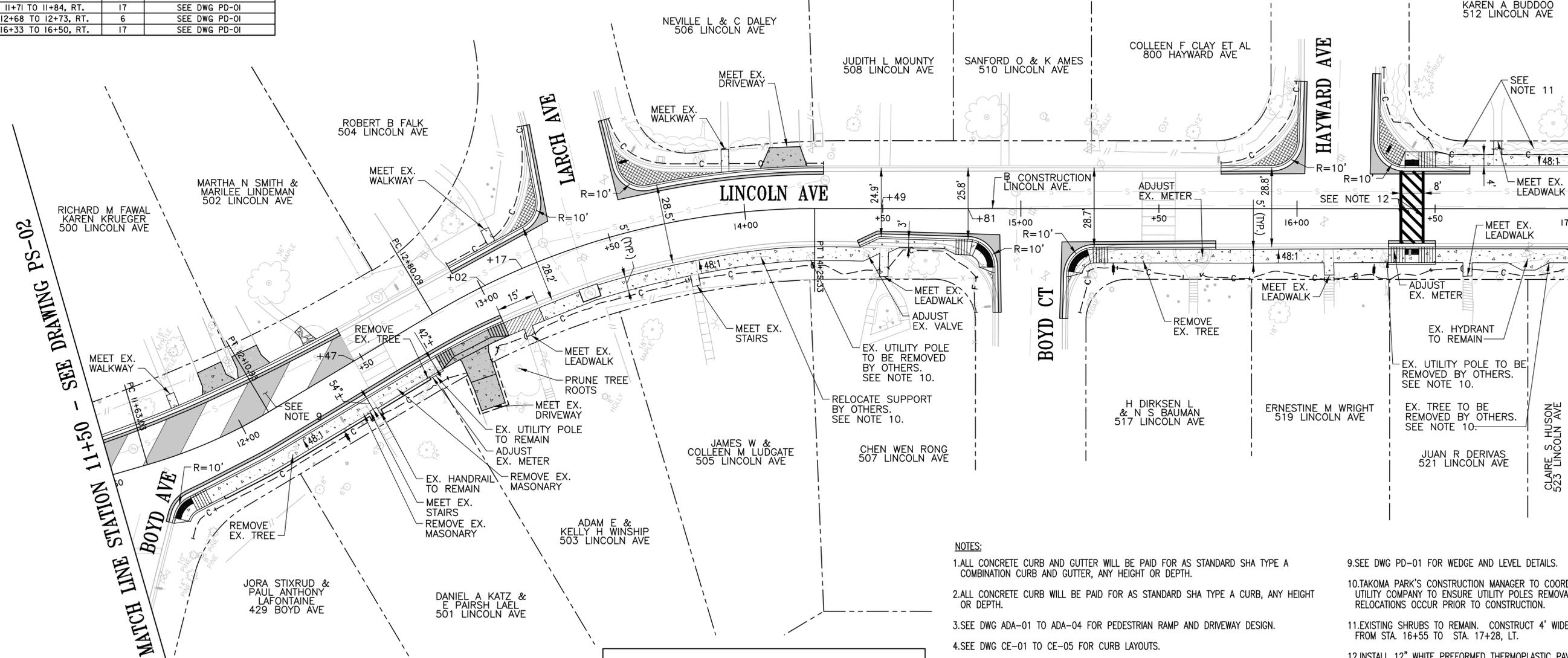
GRINDING ASPHALT PAVEMENT 0 TO 2 INCH			
STATION	STA. TO STA.	SY	REMARKS
LINCOLN	11+50 TO 12+47, LT.	133	SEE DWG PD-01

RETAINING WALL			
STATION	STA. TO STA.	LF	REMARKS
LINCOLN	11+84 TO 12+43, RT.	64	SEE DWG DE-01 AND DE-02
LINCOLN	12+45 TO 12+67, RT.	25	SEE DWG DE-01 AND DE-02

FLEXIBLE SIDEWALK			
STATION	STA. TO STA.	SF	REMARKS
LINCOLN	13+02 TO 13+17, RT.	80	SEE SP 600-FLEXIBLE SIDEWALK

RESET FLAGSTONE SIDEWALK			
STATION	STA. TO STA.	SF	REMARKS
LINCOLN	12+34 TO 12+39, LT.	25	

STANDARD SHA TYPE A COMBINATION CURB AND GUTTER, ANY HEIGHT OR DEPTH STD. MD 620.02			
STATION	STA. TO STA.	LF	REMARKS
LINCOLN	11+66 TO 13+02, RT.	142	
LINCOLN	14+42 TO 14+91, RT.	72	SEE DWG CE-02
LINCOLN	15+16 TO 15+71, RT.	76	SEE DWG CE-02
LINCOLN	16+33 TO 16+50, RT.	17	
LINCOLN	11+50 TO 12+47, LT.	94	SEE DWG CE-03
LINCOLN	12+92 TO 13+34, LT.	70	SEE DWG CE-02
LINCOLN	13+58 TO 14+29, LT.	97	SEE DWG CE-02
LINCOLN	15+73 TO 16+01, LT.	56	SEE DWG CE-04
LINCOLN	16+29 TO 16+63, LT.	64	SEE DWG CE-04
LINCOLN	16+99 TO 17+00, LT.	1	



LEGEND	
[Symbol]	CONCRETE SIDEWALK
[Symbol]	FLEXIBLE SIDEWALK
[Symbol]	CONCRETE DRIVEWAY
[Symbol]	DETECTABLE WARNING SURFACE
[Symbol]	FLAGSTONE SIDEWALK
[Symbol]	FULL DEPTH PAVEMENT
[Symbol]	6" GABC
[Symbol]	MILL AND OVERLAY/ WEDGE AND LEVEL
[Symbol]	PAVEMENT REMOVAL

DETECTABLE WARNING SURFACE			
STATION	STA. & OFFSET	SF	REMARKS
LINCOLN	11+71, RT.	18	SEE STD. MD 655.40
LINCOLN	14+88, RT.	20	SEE STD. MD 655.40
LINCOLN	15+20, RT.	20	SEE STD. MD 655.40
LINCOLN	16+42, RT.	10	SEE STD. MD 655.40
LINCOLN	16+42, LT.	10	SEE STD. MD 655.40

RELOCATE EXISTING GROUND MOUNTED SIGNS			
STATION	STA. & OFFSET	SF	REMARKS
LINCOLN	12+32, 16.0' RT.	5	RELOCATE TO STA. 12+31, 22.4' RT.
LINCOLN	15+30, 24.8' RT.	5	RELOCATE TO STA. 15+33, 21.9' RT.
LINCOLN	16+41, 16.1' RT.	4	RELOCATE TO STA. 16+28, 22.2' RT.
LINCOLN	16+43, 23.3' LT.	2.5	RELOCATE TO STA. 16+33, 21.6' LT.

REMOVAL OF EXISTING PAVEMENT			
STATION	STA. & OFFSET	CY	REMARKS
LINCOLN	14+37 TO 14+40, RT.	1	
LINCOLN	15+17 TO 15+18, RT.	1	
LINCOLN	13+17 TO 13+30, LT.	3	
LINCOLN	13+59 TO 13+95, LT.	6	
LINCOLN	15+83 TO 16+00, LT.	4	
LINCOLN	16+30 TO 16+41, LT.	4	

- NOTES:**
- ALL CONCRETE CURB AND GUTTER WILL BE PAID FOR AS STANDARD SHA TYPE A COMBINATION CURB AND GUTTER, ANY HEIGHT OR DEPTH.
 - ALL CONCRETE CURB WILL BE PAID FOR AS STANDARD SHA TYPE A CURB, ANY HEIGHT OR DEPTH.
 - SEE DWG ADA-01 TO ADA-04 FOR PEDESTRIAN RAMP AND DRIVEWAY DESIGN.
 - SEE DWG CE-01 TO CE-05 FOR CURB LAYOUTS.
 - SEE DWG DE-01 TO DE-02 FOR RETAINING WALL DETAILS.
 - VERTICAL ADJUSTMENT OF EXISTING UTILITIES SHALL BE INCIDENTAL TO THE 5 INCH CONCRETE SIDEWALK. SEE SP 603-SIDEWALKS.
 - IN AREAS OF PAVEMENT REMOVAL, SEE DWG PD-01.
 - ALL RELOCATED SIGNS SHALL BE POSITIONED SUCH THAT THE EDGE OF THE SIGN DOES NOT OVERHANG THE PROPOSED SIDEWALK.
 - SEE DWG PD-01 FOR WEDGE AND LEVEL DETAILS.
 - TAKOMA PARK'S CONSTRUCTION MANAGER TO COORDINATE WITH THE APPROPRIATE UTILITY COMPANY TO ENSURE UTILITY POLES REMOVALS, TREE REMOVALS, AND GUY WIRE RELOCATIONS OCCUR PRIOR TO CONSTRUCTION.
 - EXISTING SHRUBS TO REMAIN. CONSTRUCT 4' WIDE SIDEWALK IN FRONT OF SHRUBS FROM STA. 16+55 TO STA. 17+28, LT.
 - INSTALL 12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES FOR CROSSWALK. SEE DWG PD-01 FOR CROSSWALK DETAIL.

WRA
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801 South Caroline Street, Baltimore, Maryland 21231

CITY OF TAKOMA PARK
31 OSWEGO AVENUE
SILVER SPRING, MD 20910

SIDEWALK ALONG LINCOLN AVENUE FROM JACKSON AVENUE TO ELM AVENUE

ROADWAY PLAN

AUGUST 2017

SCALE : 1" = 20'

SHEET 21 OF 30

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PS-03

MATCH LINE STATION 17+00 - SEE DRAWING PS-04



SIDEWALK RAMPS		
STATION	STA. & OFFSET	REMARKS
LINCOLN	18+38, LT.	SEE DWG ADA-03
LINCOLN	20+40, RT.	SEE DWG ADA-04

DRIVEWAY ENTRANCES		
STATION	STA. & OFFSET	REMARKS
LINCOLN	17+34, RT.	SEE DWG ADA-03
LINCOLN	17+14, LT.	SEE DWG ADA-03
LINCOLN	18+33, LT.	SEE DWG ADA-03
LINCOLN	18+36, LT.	SEE DWG ADA-03
LINCOLN	18+88, RT.	SEE DWG ADA-04
LINCOLN	19+86, RT.	SEE DWG ADA-04

5" CONCRETE SIDEWALK			
STATION	STA. TO STA.	SF	REMARKS
LINCOLN	17+00 TO 17+15, RT.	84	
LINCOLN	17+52 TO 18+70, RT.	443	
LINCOLN	19+04 TO 19+09, RT.	20	
LINCOLN	19+99 TO 20+05, RT.	26	
LINCOLN	20+36 TO 20+44, RT.	34	
LINCOLN	17+28 TO 18+29, LT.	508	
LINCOLN	18+29 TO 18+35, LT.	205	
LINCOLN	18+27 TO 18+38, LT.	205	

6 INCH PORTLAND CEMENT CONCRETE PAVEMENT FOR DRIVEWAY MIX 6			
STATION	STA. TO STA.	SY	REMARKS
LINCOLN	17+15 TO 17+53, RT.	37	
LINCOLN	18+78 TO 19+05, RT.	33	
LINCOLN	19+70 TO 19+99, RT.	17	
LINCOLN	17+00 TO 17+28, LT.	20	
LINCOLN	18+25 TO 18+34, LT.	16	
LINCOLN	18+26 TO 18+36, LT.	13	

FLEXIBLE SIDEWALK			
STATION	STA. TO STA.	SF	REMARKS
LINCOLN	19+09 TO 19+70, RT.	298	SEE SP 600-FLEXIBLE SIDEWALK
LINCOLN	20+05 TO 20+36, RT.	158	SEE SP 600-FLEXIBLE SIDEWALK

DETECTABLE WARNING SURFACE			
STATION	STA. & OFFSET	SF	REMARKS
LINCOLN	18+38, LT.	10	SEE STD. MD 655.40

STANDARD SHA TYPE A COMBINATION CURB AND GUTTER, ANY HEIGHT OR DEPTH STD. MD 620.02			
STATION	STA. TO STA.	LF	REMARKS
LINCOLN	17+15 TO 19+99, RT.	260	SEE DWG CE-05
LINCOLN	20+36 TO 20+44, RT.	8	
LINCOLN	17+00 TO 17+28, LT.	28	
LINCOLN	18+15 TO 18+39, LT.	137	SEE DWG CE-04

RECONSTRUCT EXISTING INLET		
STATION	STA. & OFFSET	REMARKS
LINCOLN	17+69, RT.	SEE NOTE 9

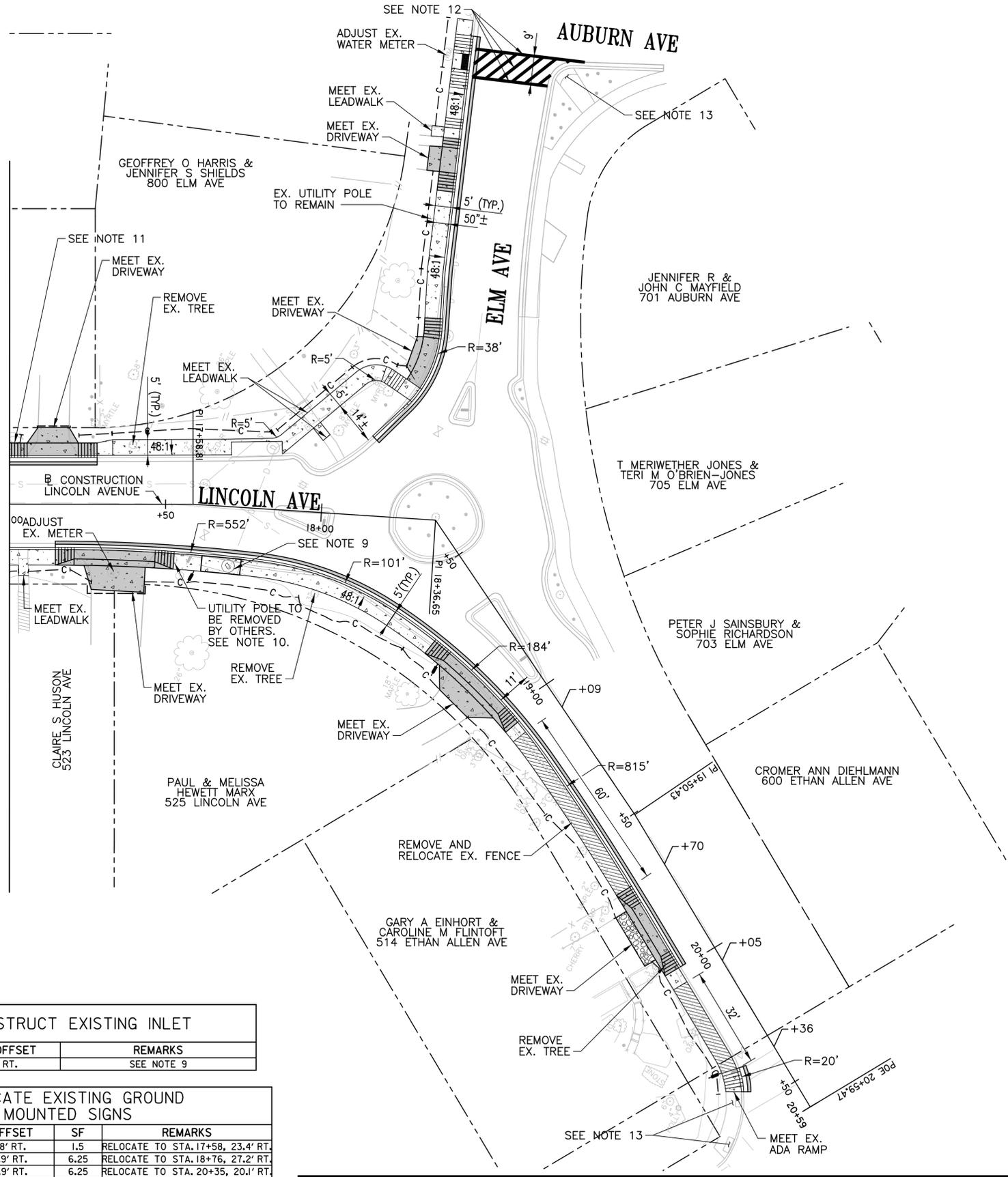
RELOCATE EXISTING GROUND MOUNTED SIGNS			
STATION	STA. & OFFSET	SF	REMARKS
LINCOLN	17+58, 17.8' RT.	1.5	RELOCATE TO STA. 17+58, 23.4' RT.
LINCOLN	18+75, 22.9' RT.	6.25	RELOCATE TO STA. 18+76, 27.2' RT.
LINCOLN	20+37, 14.9' RT.	6.25	RELOCATE TO STA. 20+35, 20.1' RT.

REMOVE AND RELOCATE EXISTING FENCE			
STATION	STA. TO STA.	LF	REMARKS
LINCOLN	19+10 TO 19+70, RT.	65	

LEGEND

	CONCRETE SIDEWALK
	FLEXIBLE SIDEWALK
	CONCRETE DRIVEWAY
	DETECTABLE WARNING SURFACE
	FLAGSTONE SIDEWALK
	FULL DEPTH PAVEMENT
	6" GABC
	MILL AND OVERLAY/ WEDGE AND LEVEL
	PAVEMENT REMOVAL

MATCH LINE STATION 17+00 - SEE DRAWING PS-03



- NOTES:**
- ALL CONCRETE CURB AND GUTTER WILL BE PAID FOR AS STANDARD SHA TYPE A COMBINATION CURB AND GUTTER, ANY HEIGHT OR DEPTH.
 - ALL CONCRETE CURB WILL BE PAID FOR AS STANDARD SHA TYPE A CURB, ANY HEIGHT OR DEPTH.
 - SEE DWG ADA-01 TO ADA-04 FOR PEDESTRIAN RAMP AND DRIVEWAY DESIGN.
 - SEE DWG CE-01 TO CE-05 FOR CURB LAYOUTS.
 - SEE DWG DE-01 TO DE-02 FOR RETAINING WALL DETAILS.
 - VERTICAL ADJUSTMENT OF EXISTING UTILITIES SHALL BE INCIDENTAL TO THE 5 INCH CONCRETE SIDEWALK. SEE SP 603-SIDEWALKS.
 - IN AREAS OF PAVEMENT REMOVAL, SEE DWG PD-01.
 - ALL RELOCATED SIGNS SHALL BE POSITIONED SUCH THAT THE EDGE OF THE SIGN DOES NOT OVERHANG THE PROPOSED SIDEWALK.
 - EXISTING INLET SHALL BE RECONSTRUCTED INLINE WITH PROPOSED CURB AND GUTTER. INLET TOP CROSS SLOPE SHALL NOT EXCEED 2.0%.
 - TAKOMA PARK'S CONSTRUCTION MANAGER TO COORDINATE WITH THE APPROPRIATE UTILITY COMPANY TO ENSURE UTILITY POLE REMOVALS, TREE REMOVALS, AND GUY WIRE RELOCATION OCCUR PRIOR TO CONSTRUCTION.
 - EXISTING SHRUBS TO REMAIN. CONSTRUCT 4' WIDE SIDEWALK INFRONT OF SHRUBS FROM STA. 16+55 TO STA. 17+28, LT.
 - INSTALL 12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES FOR CROSSWALK. SEE PD-01 FOR CROSSWALK DETAIL.
 - EXISTING RAMP WAS FOUND TO BE COMPLIANT WITH CURRENT FEDERAL ADA POLICY.

PS-04

**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

CITY OF TAKOMA PARK
31 OSWEGO AVENUE
SILVER SPRING, MD 20910

ROADWAY PLAN

Whitman, Reardon & Associates, LLP
801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

Designed by: MCK Drawn by: ALS Checked by: MCK

AUGUST 2017

SCALE : 1" = 20' SHEET 22 OF 30

M:\2017\08-08\08-08\CADD\PSD-04-LincolnAve.dwg 11/2/2017

STANDARD EROSION AND SEDIMENT CONTROL NOTES

(MAY 2013, DPS)

1. THE PERMITTEE SHALL NOTIFY THE DEPARTMENT OF PERMITTING SERVICES (DPS) FORTY-EIGHT (48) HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE DEPARTMENT, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN THEM OR THEIR REPRESENTATIVE, THEIR ENGINEER AND AN AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT.
2. THE PERMITTEE MUST OBTAIN INSPECTION AND APPROVAL BY DPS AT THE FOLLOWING POINTS:
 - A. AT THE REQUIRED PRE-CONSTRUCTION MEETING.
 - B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY.
 - C. DURING THE INSTALLATION OF A SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION IS MANDATORY.
 - D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
 - E. PRIOR TO FINAL ACCEPTANCE.
3. THE PERMITTEE SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE, SHALL HAVE THEM INSPECTED AND APPROVED BY THE DEPARTMENT PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES, 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 THE DEPARTMENT.
4. THE PERMITTEE SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARE(S). ALL MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY.
5. THE PERMITTEE SHALL INSPECT PERIODICALLY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE DEPARTMENT. THE PERMITTEE IS RESPONSIBLE FOR IMMEDIATELY REPAIRING OR REPLACING ANY SEDIMENT CONTROL MEASURES WHICH HAVE BEEN DAMAGED OR REMOVED BY THE PERMITTEE OR ANY OTHER PERSON.
6. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
 - A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3H:1V); AND
 - B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED AND STABILIZED IMMEDIATELY. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.
7. THE PERMITTEE SHALL APPLY SOD, SEE, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN SEVEN (7) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. ACTIVE CONSTRUCTION AREAS SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS, AND AREAS WITHIN FIFTY (50) FEET OF A BUILDING UNDER CONSTRUCTION MAY BE EXEMPT FROM THIS REQUIREMENT, PROVIDED THAT EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND MAINTAINED TO PROTECT THOSE AREAS.
8. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE PERMITTEE SHALL STABILIZE ALL CONTRIBUTORY DISTURBED AREAS WITH REQUIRED SOIL AMENDMENTS AND TOPSOIL USING SOD OR AN APPROVED PERMANENT SEED MIXTURE AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHEN 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 WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, AN APPROVED TEMPORARY SEED AND STRAW ANCHORED MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE COMPLETED PRIOR TO THE FOLLOWING APRIL 15.
9. THE SITE PERMIT, WORK, MATERIALS, APPROVED SC/SWM PLANS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF MONTGOMERY COUNTY.
10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL 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. MECHANICAL DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.
11. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN THREE (3) CALENDAR DAYS OF ESTABLISHMENT WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION MEASURES.
12. SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF THE DEPARTMENT, 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.
13. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS OR ON RESIDENTIAL LOTS. 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.
14. THE PERMITTEE SHALL INSTALL A SPLASHBLOCK AT THE BOTTOM OF EACH DOWNSPOUT UNLESS THE DOWNSPOUT IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET.
15. FOR FINISHED GRADING, THE PERMITTEE SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS 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.
16. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A BUILDING WHICH IS EXISTING OR UNDER CONSTRUCTION. NO BUILDING MAY BE CONSTRUCTED WITHIN 20 FEET OF A SEDIMENT TRAP OR BASIN.
17. ALL INLETS IN NON-SUMP AREAS SHALL HAVE ASPHALT BERMS INSTALLED AT THE TIME OF BASE PAVING ESTABLISHMENT.
18. THE SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES, AS DEEMED NECESSARY.
19. ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING UNDISTURBED GROUND.
20. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE DPS STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL.
21. SEDIMENT TRAP(S)/BASIN(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO THE POINT OF ONE-HALF (1/2) THE WET VOLUME OF THE TRAP/BASIN OR WHEN REQUIRED BY THE SEDIMENT CONTROL INSPECTOR.
22. SEDIMENT REMOVED FROM TRAPS/BASINS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN.

23. ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE. THE FENCE MUST BE AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN TWO INCHES IN WIDTH AND FOUR INCHES IN HEIGHT, WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
24. NO EXCAVATION IN THE AREA OF EXISTING UTILITIES IS PERMITTED UNLESS THEIR LOCATION HAS BEEN DETERMINED. CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK.
25. OFF-SITE SPOIL OR BORROW AREAS MUST HAVE PRIOR APPROVAL BY DPS.
26. SEDIMENT TRAP/BASIN DEWATERING FOR CLEANOUT OR REPAIR MAY ONLY BE DONE WITH THE DPS INSPECTOR'S PERMISSION. THE INSPECTOR MUST APPROVE THE DEWATERING METHOD FOR EACH APPLICATION. THE FOLLOWING METHODS MAY BE CONSIDERED:
 - A. PUMP DISCHARGE MAY BE DIRECTED TO ANOTHER ON-SITE SEDIMENT TRAP OR BASIN, PROVIDED IT IS OF SUFFICIENT VOLUME AND THE PUMP INTAKE IS FLOATED TO PREVENT AGITATION OR SUCTION OF A DEPOSITED SEDIMENT; OR
 - B. THE PUMP INTAKE MAY UTILIZE A REMOVABLE PUMPING STATION AND MUST DISCHARGE INTO AN UNDISTURBED AREA THROUGH A NON-EROSIVE OUTLET; OR
 - C. THE PUMP INTAKE MAY BE FLOATED AND DISCHARGE INTO A DIRT BAG (12 OZ. NON-WOVEN FABRIC), OR APPROVED EQUIVALENT, LOCATED IN AN UNDISTURBED BUFFER AREA.

REMEMBER: DEWATER OPERATIONS AND METHODS MUST HAVE PRIOR APPROVAL BY THE DPS INSPECTOR.
27. THE PERMITTEE MUST NOTIFY THE DEPARTMENT OF ALL UTILITY CONSTRUCTION ACTIVITIES WITHIN THE PERMITTED LIMITS OF DISTURBANCE PRIOR TO THE COMMENCEMENT OF THOSE ACTIVITIES.
28. TOPSOIL MUST BE APPLIED TO ALL PERVIOUS AREAS WITHIN THE LIMITS OF DISTURBANCE PRIOR TO PERMANENT STABILIZATION IN ACCORDANCE WITH MDE "STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS."

EROSION AND SEDIMENT CONTROL LEGEND

STABILIZED CONSTRUCTION ENTRANCE		TEMPORARY STONE OUTLET STRUCTURE	
WASH RACK		TEMPORARY GABION OUTLET STRUCTURE	
TEMP STABILIZATION		INLET PROTECTION: STANDARD	
PERM STABILIZATION		AT-GRADE	
SOIL STABILIZATION MATTING: TYPE (A - E)		CURB	
HEAVY USE AREA PROTECTION		MEDIAN	
STOCKPILE AREA		MEDIAN SUMP	
TEMP MULCH - STRAW - SEED		COMBINATION	
PERM SEEDING - SOD		CATCH BASIN	
EARTH DIKE		GABION	
TEMPORARY SWALE		REMOVABLE PUMPING STATION	
PERIMETER DIKE/SWALE		SUMP PIT	
TEMPORARY STORM DRAIN DIVERSION		PORTABLE SEDIMENT TANK	
TEMPORARY ASPHALT BERM		FILTER BAG	
CLEAR WATER DIVERSION PIPE		PIPE OUTLET SEDIMENT TRAP, ST-I	
TEMPORARY BARRIER DIVERSION		STONE/RIPRAP OUTLET SEDIMENT TRAP, ST-II	
MOUNTABLE BERM		RIPRAP OUTLET SEDIMENT TRAP, ST-III	
DIVERSION FENCE		SEDIMENT BASINS: MAJOR CONTOUR	
WATER DIVERSION BLOCK		MINOR CONTOUR	
PIPE SLOPE DRAIN		SUB-MINOR CONTOUR	
STONE CHECK DAM		CONTOUR LABEL	
RIPRAP/GABION INFLOW PROTECTION		SANDBAG DIVERSION	
ROCK OUTLET PROTECTION (CLASS 0-III)		SANDBAG DIKE	
PLUNGE POOL		PUMP	
SILT FENCE		HOSE	
SILT FENCE ON PAVEMENT		LOD	
SUPER SILT FENCE		ESC DRAINAGE AREA	
REINFORCED SILT FENCE		STRAW BALE DIKE	
FILTER BERM A		UNDERDRAIN: CIRCULAR	
FILTER BERM B		UNDERDRAIN: PERFORATED	
FILTER LOG (6"-24")		BAFFLE BOARDS	
		WASHOUT AREA	
		TEMPORARY ACCESS BRIDGE	
		TEMPORARY ACCESS CULVERT	
		STILLING WELL	

MISS UTILITY

CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF CHAPTER 36A OF THE MONTGOMERY COUNTY CODE.

EN01

**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

EROSION & SEDIMENT CONTROL NOTES

NOT TO SCALE

AUGUST 2017

CITY OF TAKOMA PARK

31 OSWEGO AVENUE
SILVER SPRING, MD 20910



Whitman, Reardon & Associates, LLP
801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

Designed by: KDV Drawn by: ALS Checked by: JDC

SCALE : NOT TO SCALE SHEET 23 OF 30

M:\2017-08-01-02\CAUD\WRA-EN01.dgn 11/2/2017

B.4 STANDARDS AND SPECIFICATIONS

FOR VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization, soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

- Adequate vegetative stabilization requires 95 percent groundcover.
- If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
- If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
- Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B.9

B.4.1 STANDARDS AND SPECIFICATIONS

FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

- A. Incremental Stabilization - Cut Slopes
- Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
 - Construction sequence example (Refer to Figure B.1):
 - Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
 - Perform Phase 1 excavation, prepare seedbed, and stabilize.
 - Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
 - Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: 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.

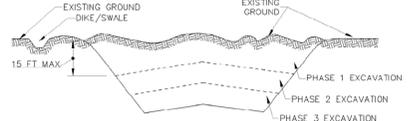


Figure B.1: Incremental Stabilization - Cut

B.10

B.4.2 STANDARDS AND SPECIFICATIONS

FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

- A. Soil Preparation
- Temporary Stabilization
 - Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches 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 must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 - Permanent Stabilization
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soluble salts less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if ryegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

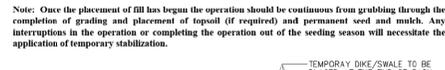
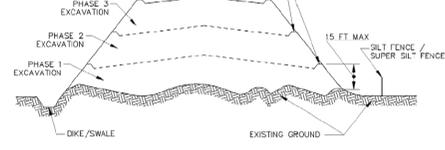


Figure B.2: Incremental Stabilization - Fill



B.11

B.4.3 STANDARDS AND SPECIFICATIONS

FOR SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

- A. Seeding
- Specifications
 - All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
 - Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the 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 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - Soil or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Application
 - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.

B.14

B.4.4 STANDARDS AND SPECIFICATIONS

FOR SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

- B. Mulching
- Mulch Materials (in order of preference)
 - Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM is to 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, must contain no germination or growth inhibiting factors.
 - WCFM materials are to 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 must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

B.15

B.4.4 STANDARDS AND SPECIFICATIONS

FOR TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
- For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3):					Fertilizer Rate (16-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	ANNUAL ryegrass	40	MAR 1/MAY 15 AUG 1/OCT 15	0.5"	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)

B.17



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801 South Caroline Street, Baltimore, Maryland 21231

NO.	REVISION	DATE	BY

CITY OF TAKOMA PARK

31 OSWEGO AVENUE
SILVER SPRING, MD 20910

Designed by: KDV Drawn by: ALS Checked by: JDC

**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

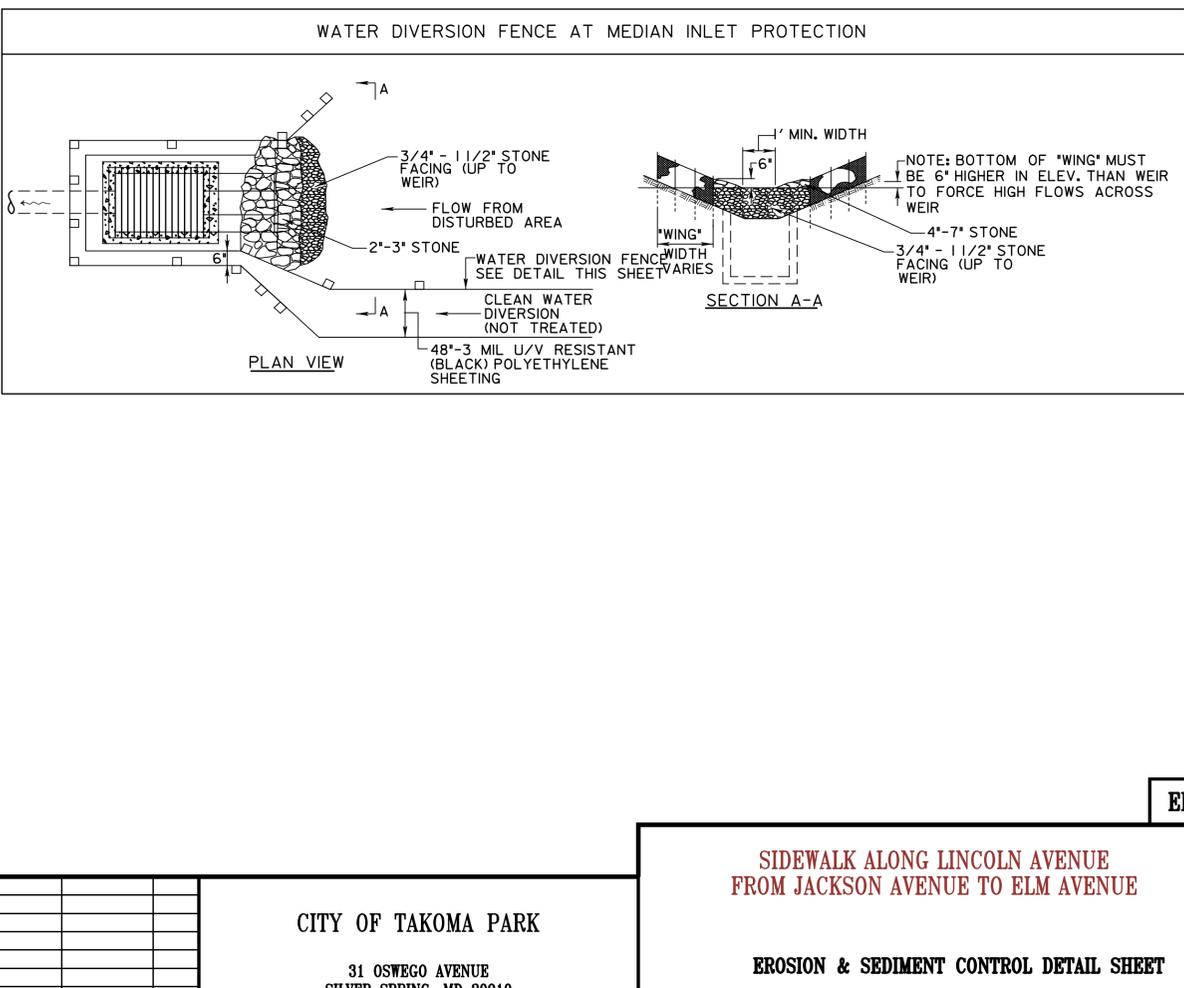
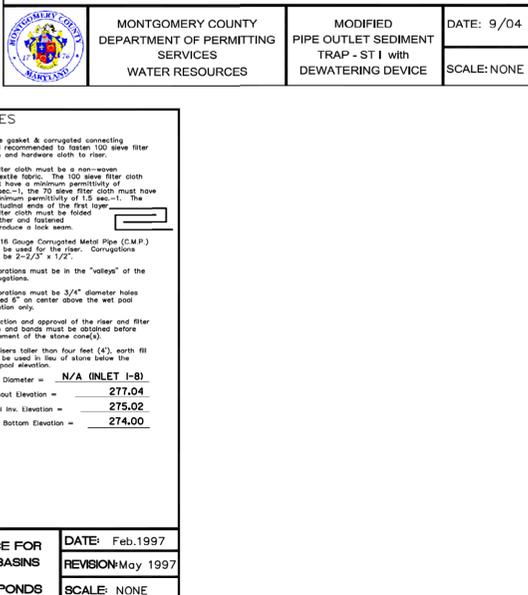
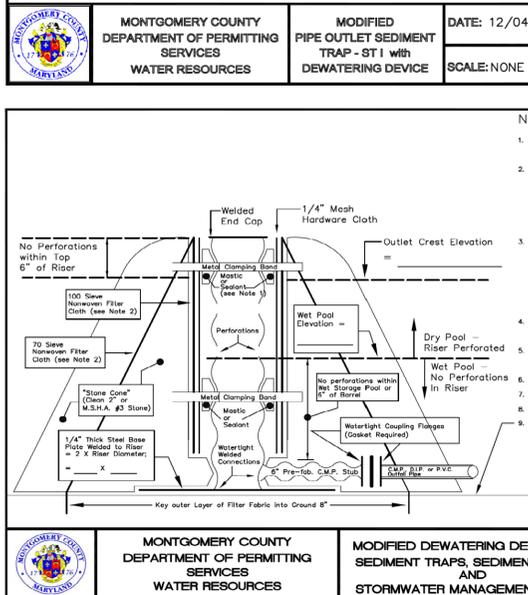
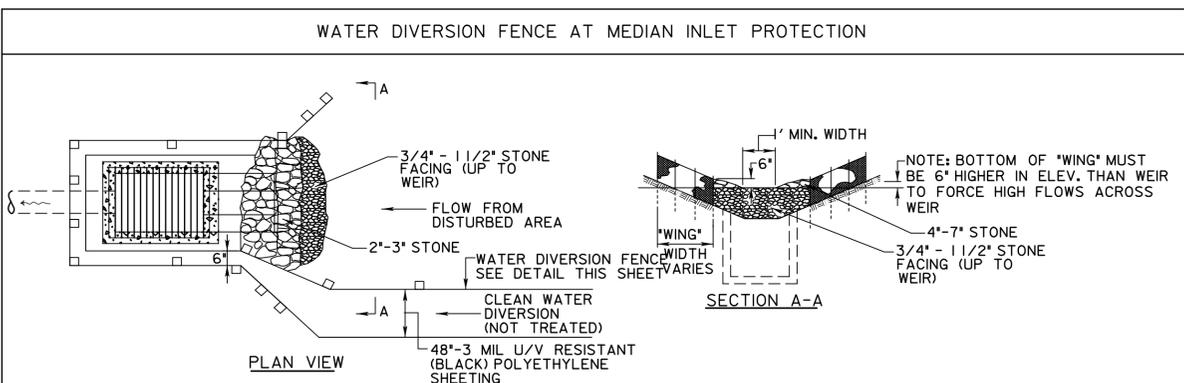
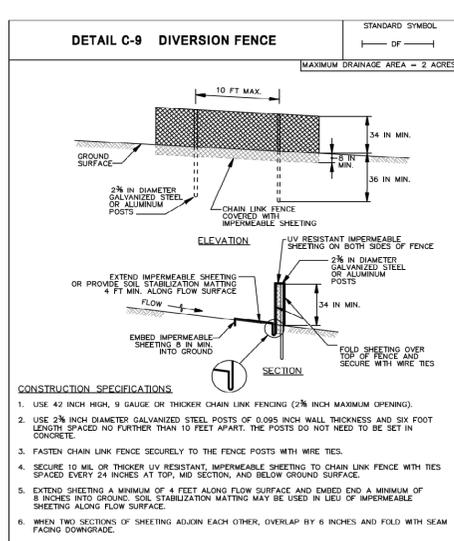
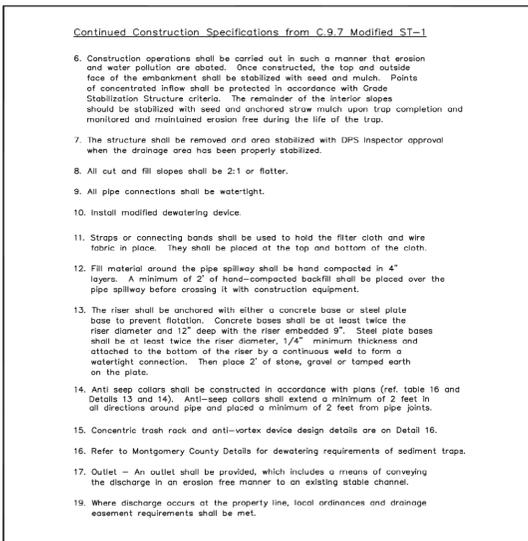
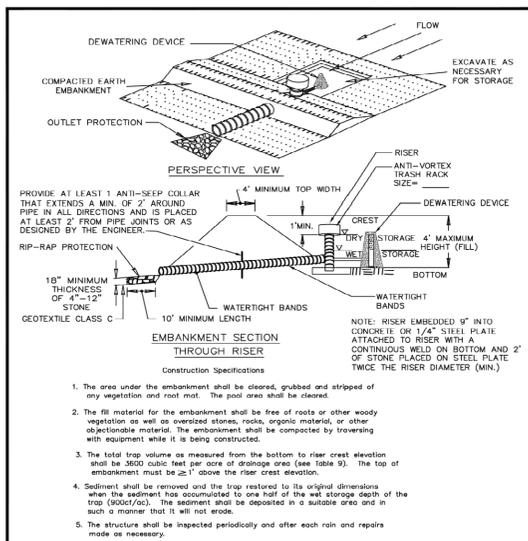
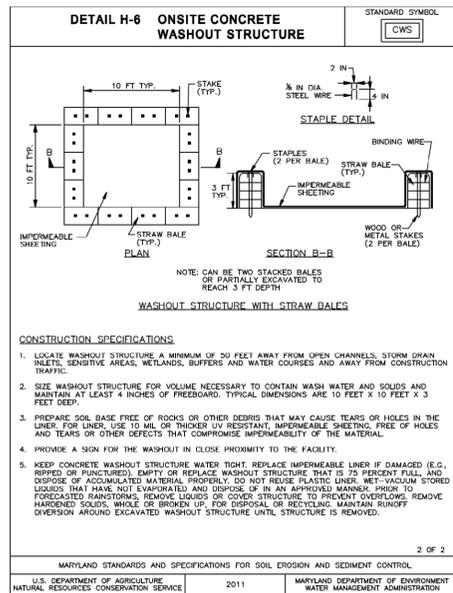
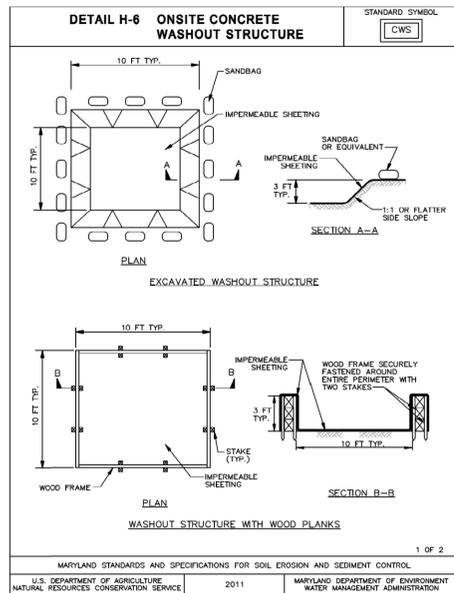
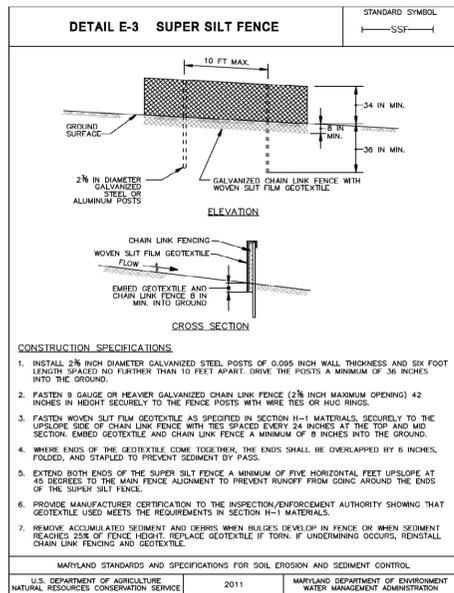
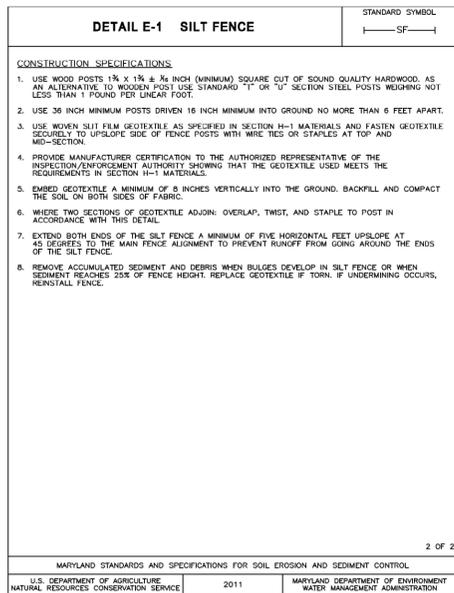
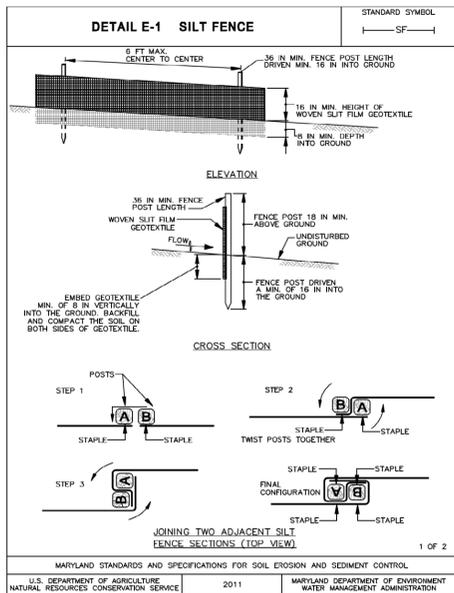
EROSION & SEDIMENT CONTROL NOTES

NOT TO SCALE

AUGUST 2017

SCALE : NOT TO SCALE SHEET 24 OF 30

EN02



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**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

EROSION & SEDIMENT CONTROL DETAIL SHEET

AUGUST 2017

SCALE: NOT TO SCALE SHEET 26 OF 30

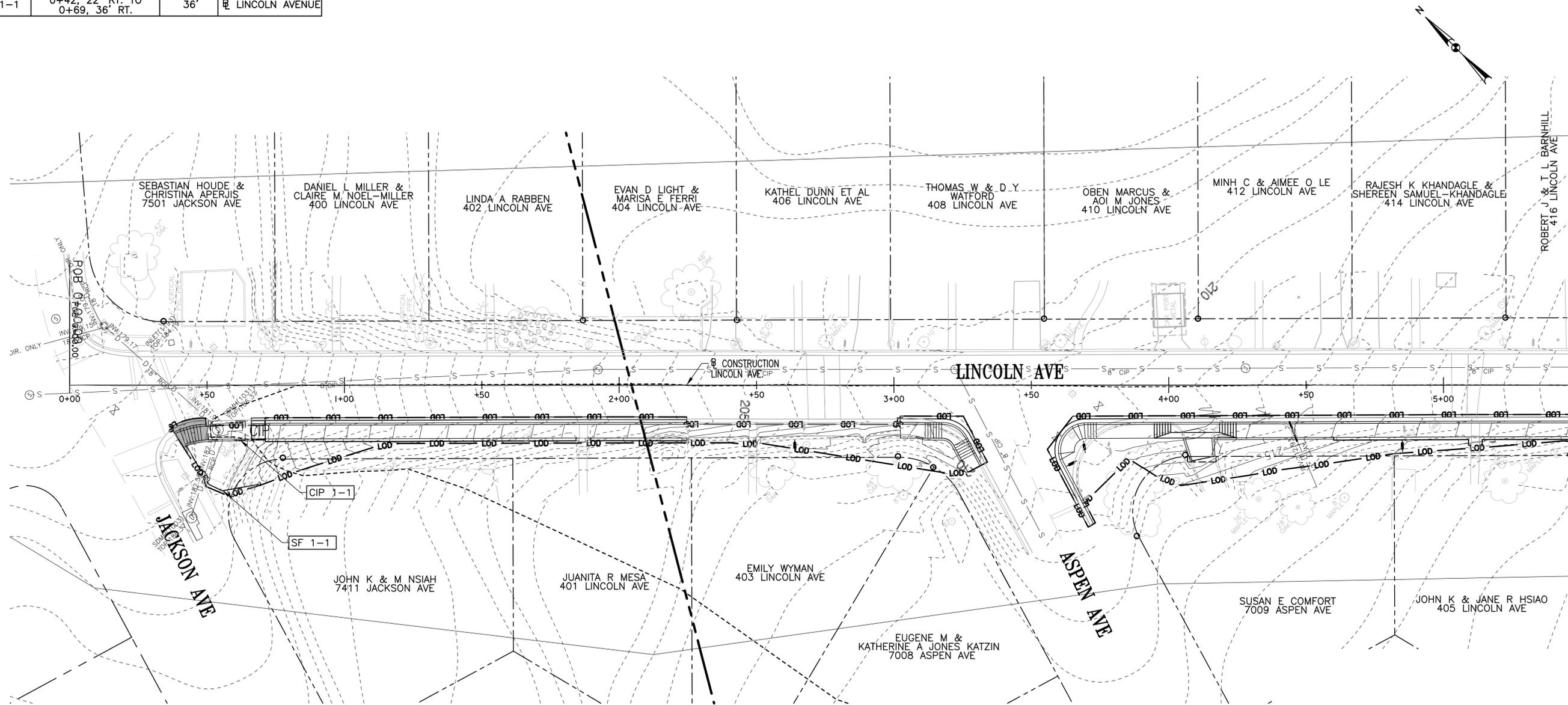
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EN04

NO.	REVISION	DATE	BY	DESIGNED BY	DRAWN BY	CHECKED BY
				KDV	ALS	JDC

CURB INLET PROTECTION (CIP)				
NO.	STATION	OFFSET	D.A. (AC.)	REMARKS
CIP 1-1	0+57	17' RT.	3.02	℄ LINCOLN AVENUE

SILT FENCE (SF)			
NO.	STATION, OFFSET	L.F.	REMARKS
SF 1-1	0+42, 22' RT. TO 0+69, 36' RT.	36'	℄ LINCOLN AVENUE



MATCH LINE STATION 5+50 - SEE DRAWING EP-02

NOTES:

- CONSTRUCTION VEHICLES WILL BE LOADED AND UNLOADED FROM THE ROADWAY ADJACENT TO THE WORK AREA AND WILL NOT TRAVEL FROM NON-PAVED DISTURBED AREAS ONTO ROADWAY SURFACES. CONTRACTOR MUST CLEAN ANY SEDIMENT FROM THE ADJACENT ROAD IMMEDIATELY. VEHICLES UTILIZED WITHIN NON-PAVED DISTURBED AREAS MAY NOT RE-ENTER PAVED SURFACES WITHOUT THE USE OF A STABILIZED CONSTRUCTION ENTRANCE (SCE). IF REQUIRED, SCE'S SHALL BE LOCATED IN THE FIELD WITH THE APPROVAL OF THE ENGINEER AND THE REGIONAL ENVIRONMENTAL COORDINATOR.
- WHERE SHADED (■), AREAS SHALL BE STABILIZED WITHIN SAME WORKING DAY.

EP01

**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

EROSION AND SEDIMENT CONTROL PLAN

AUGUST 2017

SCALE : 1" = 20'

SHEET 27 OF 30



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SILVER SPRING, MD 20910

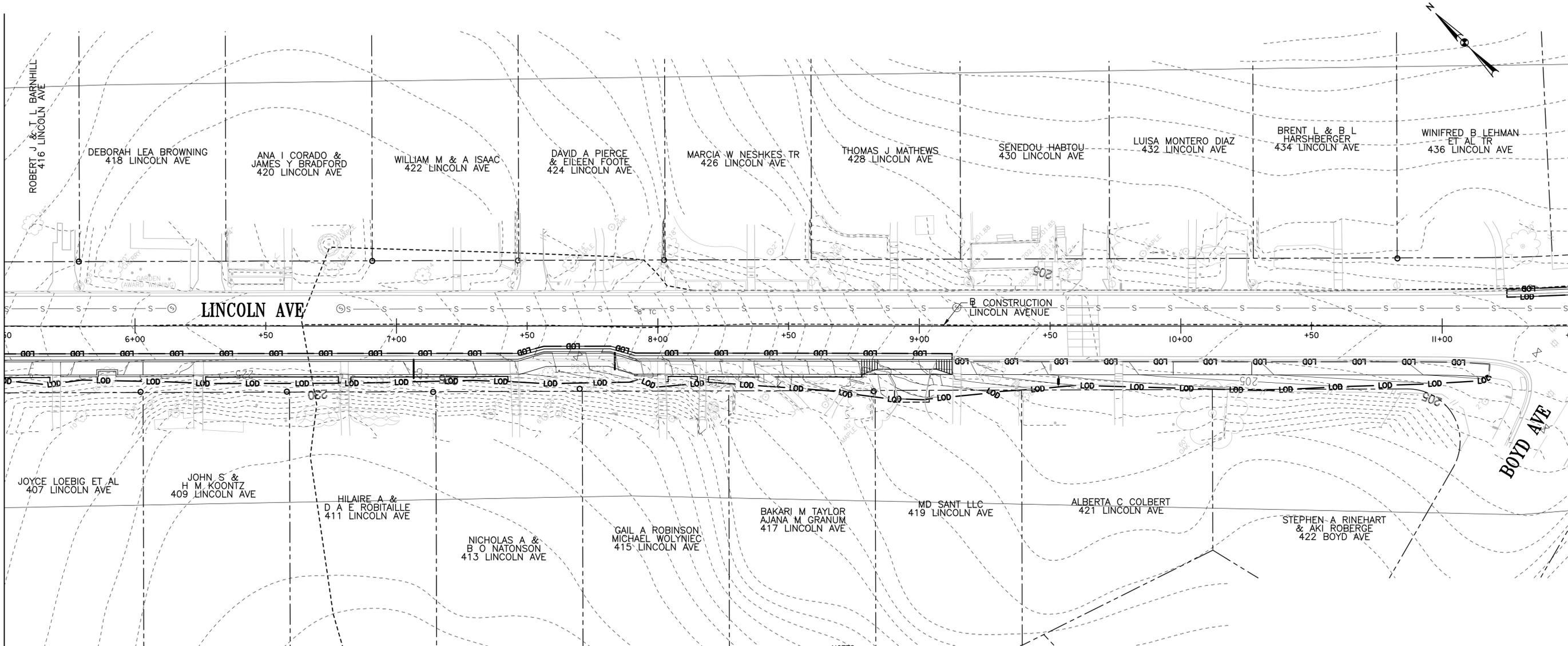
NO.	REVISION	DATE	BY

Designed by: KDV Drawn by: ALS Checked by: JDC

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 11/29/2017

MATCH LINE STATION 5+50 - SEE DRAWING EP-01

MATCH LINE STATION 11+50 - SEE DRAWING EP-03



NOTES:
 1. CONSTRUCTION VEHICLES WILL BE LOADED AND UNLOADED FROM THE ROADWAY ADJACENT TO THE WORK AREA AND WILL NOT TRAVEL FROM NON-PAVED DISTURBED AREAS ONTO ROADWAY SURFACES. CONTRACTOR MUST CLEAN ANY SEDIMENT FROM THE ADJACENT ROAD IMMEDIATELY. VEHICLES UTILIZED WITHIN NON-PAVED DISTURBED AREAS MAY NOT ENTER PAVED SURFACES WITHOUT THE USE OF A STABILIZED CONSTRUCTION ENTRANCE (SCE). IF REQUIRED, SCE'S SHALL BE LOCATED IN THE FIELD WITH THE APPROVAL OF THE ENGINEER AND THE REGIONAL ENVIRONMENTAL COORDINATOR.

EP02


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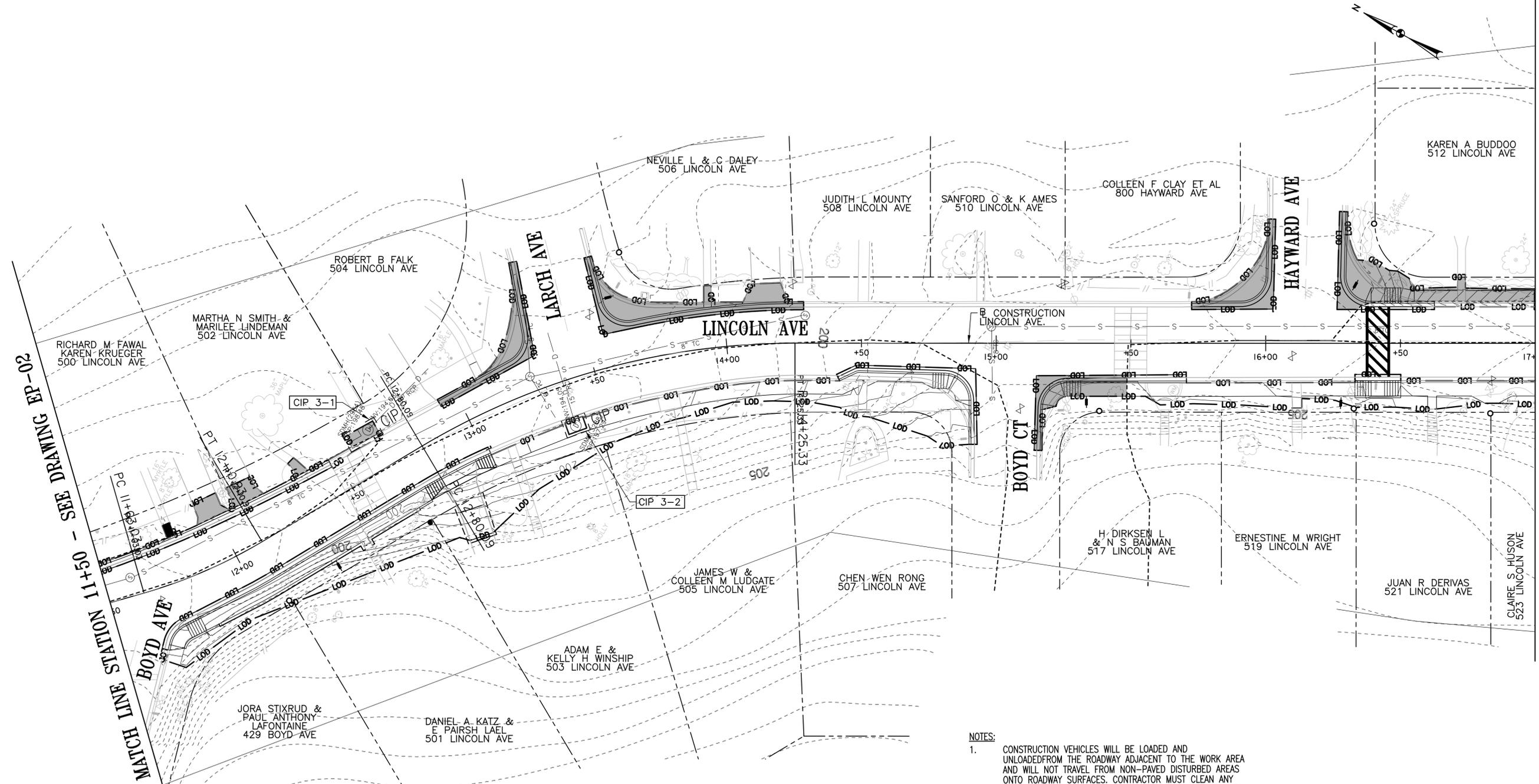
**SIDEWALK ALONG LINCOLN AVENUE
 FROM JACKSON AVENUE TO ELM AVENUE**

EROSION AND SEDIMENT CONTROL PLAN

AUGUST 2017

SCALE : 1" = 20' SHEET 28 OF 30

CURB INLET PROTECTION (CIP)				
NO.	STATION	OFFSET	D.A. (AC.)	REMARKS
CIP 3-1	12+63	15' LT.	0.23	ℳ LINCOLN AVENUE
CIP 3-2	13+36	17' RT.	8.63	ℳ LINCOLN AVENUE



- NOTES:**
- CONSTRUCTION VEHICLES WILL BE LOADED AND UNLOADED FROM THE ROADWAY ADJACENT TO THE WORK AREA AND WILL NOT TRAVEL FROM NON-PAVED DISTURBED AREAS ONTO ROADWAY SURFACES. CONTRACTOR MUST CLEAN ANY SEDIMENT FROM THE ADJACENT ROAD IMMEDIATELY. VEHICLES UTILIZED WITHIN NON-PAVED DISTURBED AREAS MAY NOT RE-ENTER PAVED SURFACES WITHOUT THE USE OF A STABILIZED CONSTRUCTION ENTRANCE (SCE). IF REQUIRED, SCE'S SHALL BE LOCATED IN THE FIELD WITH THE APPROVAL OF THE ENGINEER AND THE REGIONAL ENVIRONMENTAL COORDINATOR.
 - WHERE SHADED (■), AREAS SHALL BE STABILIZED WITHIN SAME WORKING DAY.

MATCH LINE STATION 11+50 - SEE DRAWING EP-02

MATCH LINE STATION 17+00 - SEE DRAWING EP-04

M:\2017\17-0005-001\CADD\17EP-003_LincolnAve.dgn 11/9/2017

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SILVER SPRING, MD 20910

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**SIDWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

EROSION AND SEDIMENT CONTROL PLAN

AUGUST 2017

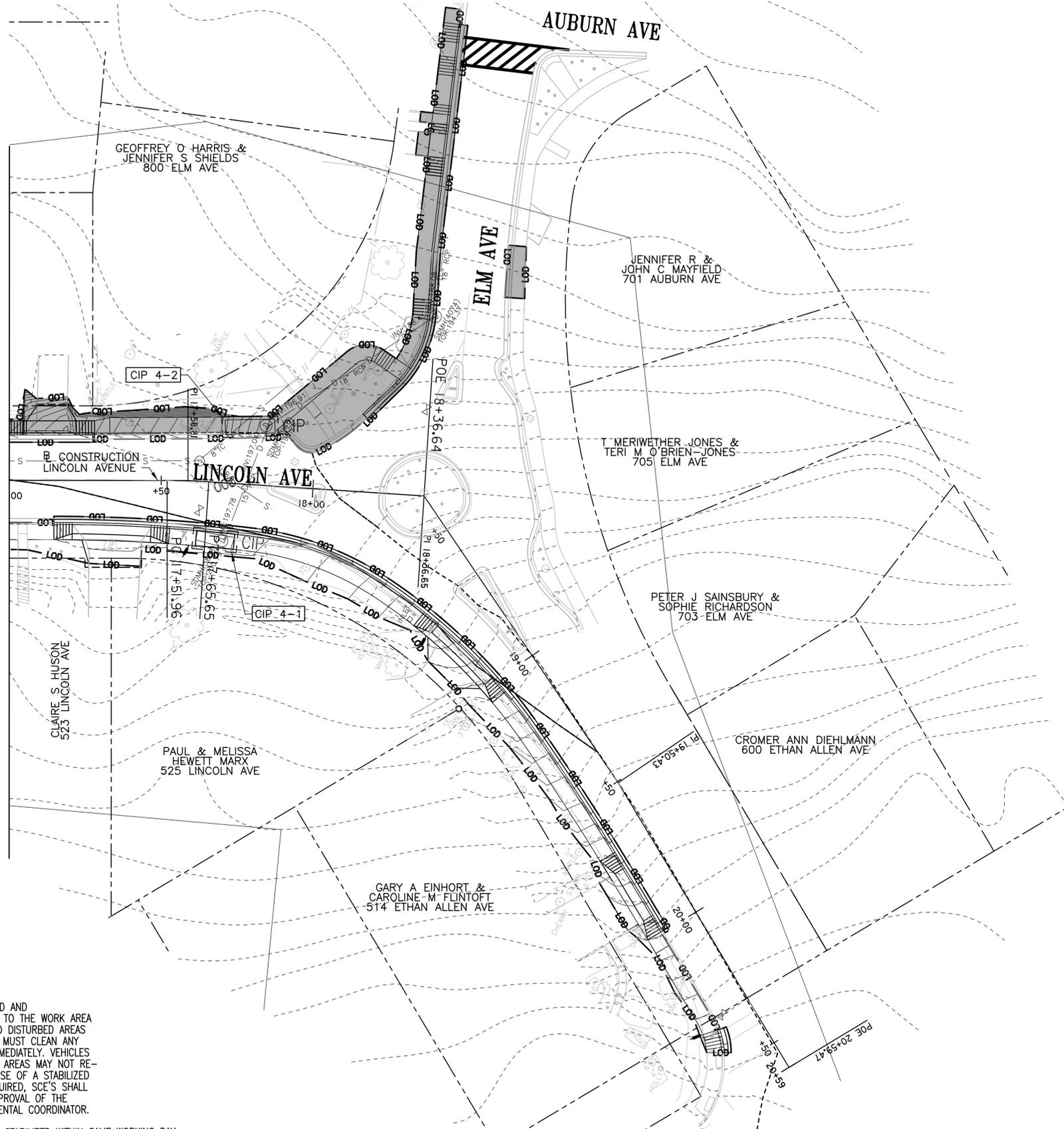
SCALE : 1" = 20'
SHEET 29 OF 30

EP03

CURB INLET PROTECTION (CIP)				
NO.	STATION	OFFSET	D.A. (AC.)	REMARKS
CIP 4-1	17+68	19' RT.	0.12	Ⓜ LINCOLN AVENUE
CIP 4-2	17+21	19' LT.	2.93	Ⓜ LINCOLN AVENUE



MATCH LINE STATION 17+00 - SEE DRAWING EP-03



NOTES:

- CONSTRUCTION VEHICLES WILL BE LOADED AND UNLOADED FROM THE ROADWAY ADJACENT TO THE WORK AREA AND WILL NOT TRAVEL FROM NON-PAVED DISTURBED AREAS ONTO ROADWAY SURFACES. CONTRACTOR MUST CLEAN ANY SEDIMENT FROM THE ADJACENT ROAD IMMEDIATELY. VEHICLES UTILIZED WITHIN NON-PAVED DISTURBED AREAS MAY NOT RE-ENTER PAVED SURFACES WITHOUT THE USE OF A STABILIZED CONSTRUCTION ENTRANCE (SCE). IF REQUIRED, SCE'S SHALL BE LOCATED IN THE FIELD WITH THE APPROVAL OF THE ENGINEER AND THE REGIONAL ENVIRONMENTAL COORDINATOR.
- WHERE SHADED (■), AREAS SHALL BE STABILIZED WITHIN SAME WORKING DAY.

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11/9/2017

EP04

**SIDEWALK ALONG LINCOLN AVENUE
FROM JACKSON AVENUE TO ELM AVENUE**

EROSION AND SEDIMENT CONTROL PLAN

AUGUST 2017

CITY OF TAKOMA PARK

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SCALE : 1" = 20'

SHEET 30 OF 30