CITY OF DUBLIN, OHIO

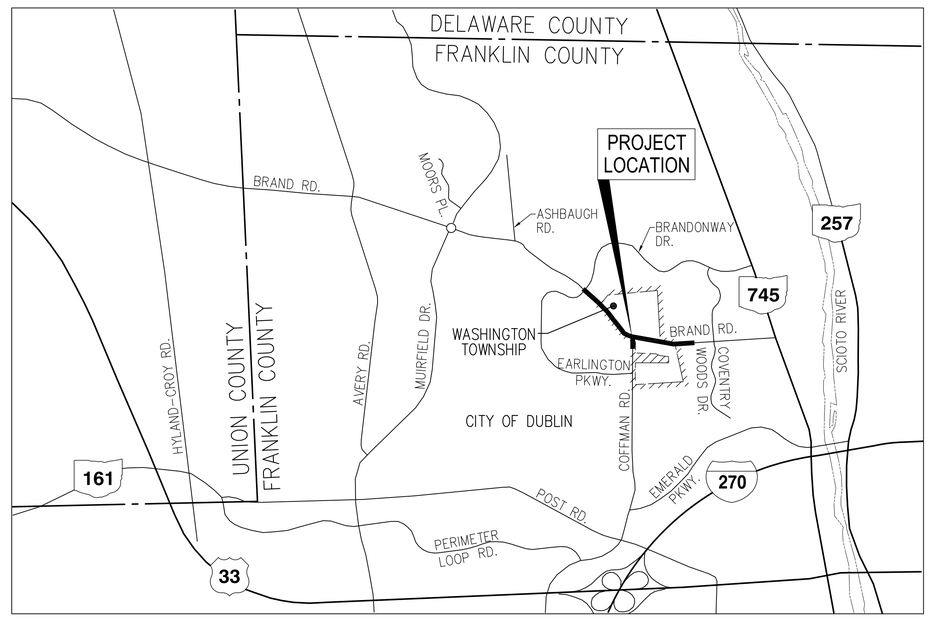
BRAND ROAD / COFFMAN ROAD ROUNDABOUT

11 - 023 - CIP

City of Dublin

INDEX

TITLE SHEET 1
SCHEMATIC PLAN 2
SURVEY CONTROL PLAN (SHARED–USE PATH) 3
GEOMETRIC LAYOUT 4–5
TYPICAL SECTIONS 6–8
GENERAL NOTES 9–12
MAINTENANCE OF TRAFFIC NOTES 13
DETOUR PLAN 14
GENERAL SUMMARY 15
EROSION CONTROL 16–19
PLAN 20–22
PROFILES 23–27
CROSS SECTIONS – BRAND ROAD 28–35
CROSS SECTIONS – COFFMAN ROAD 36–37
CROSS SECTIONS – ROUNDABOUT 38–39
PAVEMENT DETAILS 40–41
SPLITTER ISLAND DETAILS 42
DRIVEWAY DETAILS 43–44
STORM SEWER PROFILE 45
STORM SEWER TRIBUTARY AREA MAP 46
STORM SEWER COMPUTATIONS 47–48
TRAFFIC CONTROL PLANS 49–51
LIGHTING PLANS 52–56
NOT USED 57
PLAN AND PROFILE (SHARED–USE PATH) ℄ "B" 58–62
NOT USED 63
CROSS SECTIONS (SHARED–USE PATH) ℄ "B" 64–69
PEDESTRIAN BRIDGE PLANS (SHARED–USE PATH) 70–73
GRADING PLAN 74–80
HARDSCAPE PLAN 81
RIGHT–OF–WAY 82–82A



LOCATION MAP

0 1/2 1

SCALE IN MILES

N

ENGINEERS SEAL:

REGISTERED ENGINEER _____ DATE _____

SIGNATURES BELOW SIGNIFY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT ONLY AND DO NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL CIVIL ENGINEER PREPARING THE PLANS.

APPROVED:

CITY ENGINEER, CITY OF DUBLIN, OHIO _____ DATE _____

APPROVAL ON THE PART OF THE CITY OF COLUMBUS IS GIVEN PURSUANT TO THE PROVISIONS OF THE WATER SERVICE AGREEMENT BETWEEN THE CITY OF DUBLIN, OHIO AND THE CITY OF COLUMBUS, OHIO ON APRIL 13, 1993 AND ALL SUBSEQUENT AMENDMENTS THEREOF.

ADMINISTRATOR, DIVISION OF WATER
CITY OF COLUMBUS _____ DATE _____

DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES
CITY OF COLUMBUS _____ DATE _____

Ohio Utilities Protection Service
Call 811 before you dig

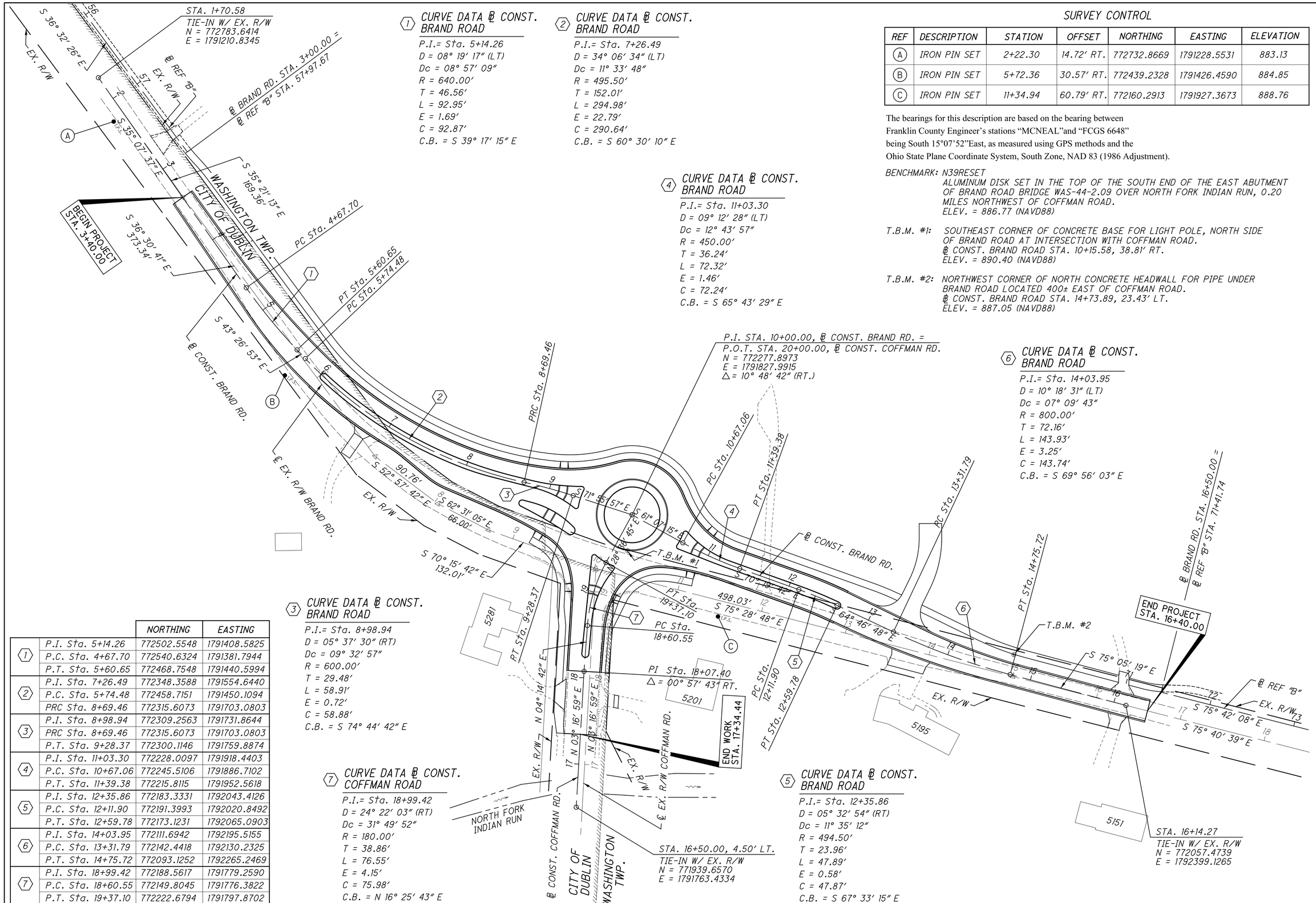
STANDARD CONSTRUCTION DRAWINGS

CITY OF DUBLIN		ODOT		CITY OF COLUMBUS	
PD–01	SL–01	BP–3.1	4–20–12	1441	AA–S102
PD–02	SL–02	DM–4.4	7–20–12	2160	AA–S106
PD–03	SL–03	MH–1.2	1–18–13		AA–S107
PD–06	SL–04	HL–20.11	1–19–07	L–1003	AA–S112
PD–11	SL–05	HL–30.11	1–18–13	L–1004	AA–S117
		MT–97.10	7–20–12	L–6306	AA–S119
RD–02	SL–13	MT–97.11	7–20–12	L–6309A	AA–S125A
RD–03	ST–03	MT–101.60	7–20–12	L–6309B	AA–S128
RD–05	ST–05	MT–105.10	7–20–12	L–6310	AA–S133A
RD–06		TC–41.20	1–19–01	L–6311	AA–S133B
RD–07		TC–41.30	1–19–07	L–6312	AA–S139
		TC–41.40	7–16–04	L–6316A	AA–S150
		TC–42.20	1–21–11	L–6409A	AA–S151
		TC–52.10	1–18–13	L–6637A	AA–S169
		TC–52.20	1–18–13	L–8502	
		TC–71.10	10–19–12		

W.E. STILSON CONSULTING GROUP
355 E. CAMPUS VIEW BOULEVARD
SUITE 250
COLUMBUS, OHIO 43235
614–847–4670 (TELEPHONE)
614–847–1648 (FAX)

ROUNDABOUT GEOMETRICS / REVIEW

MTJ ENGINEERING



① CURVE DATA ℄ CONST. BRAND ROAD

P.I.= Sta. 5+14.26
D = 08° 19' 17" (LT)
Dc = 08° 57' 09"
R = 640.00'
T = 46.56'
L = 92.95'
E = 1.69'
C = 92.87'
C.B. = S 39° 17' 15" E

② CURVE DATA ℄ CONST. BRAND ROAD

P.I.= Sta. 7+26.49
D = 34° 06' 34" (LT)
Dc = 11° 33' 48"
R = 495.50'
T = 152.01'
L = 294.98'
E = 22.79'
C = 290.64'
C.B. = S 60° 30' 10" E

③ CURVE DATA ℄ CONST. BRAND ROAD

P.I.= Sta. 8+98.94
D = 05° 37' 30" (RT)
Dc = 09° 32' 57"
R = 600.00'
T = 29.48'
L = 58.91'
E = 0.72'
C = 58.88'
C.B. = S 74° 44' 42" E

④ CURVE DATA ℄ CONST. BRAND ROAD

P.I.= Sta. 11+03.30
D = 09° 12' 28" (LT)
Dc = 12° 43' 57"
R = 450.00'
T = 36.24'
L = 72.32'
E = 1.46'
C = 72.24'
C.B. = S 65° 43' 29" E

⑤ CURVE DATA ℄ CONST. BRAND ROAD

P.I.= Sta. 12+35.86
D = 05° 32' 54" (RT)
Dc = 11° 35' 12"
R = 494.50'
T = 23.96'
L = 47.89'
E = 0.58'
C = 47.87'
C.B. = S 67° 33' 15" E

⑥ CURVE DATA ℄ CONST. BRAND ROAD

P.I.= Sta. 14+03.95
D = 10° 18' 31" (LT)
Dc = 07° 09' 43"
R = 800.00'
T = 72.16'
L = 143.93'
E = 3.25'
C = 143.74'
C.B. = S 69° 56' 03" E

⑦ CURVE DATA ℄ CONST. COFFMAN ROAD

P.I.= Sta. 18+99.42
D = 24° 22' 03" (RT)
Dc = 31° 49' 52"
R = 180.00'
T = 38.86'
L = 76.55'
E = 4.15'
C = 75.98'
C.B. = N 16° 25' 43" E

SURVEY CONTROL

REF	DESCRIPTION	STATION	OFFSET	NORTHING	EASTING	ELEVATION
A	IRON PIN SET	2+22.30	14.72' RT.	772732.8669	1791228.5531	883.13
B	IRON PIN SET	5+72.36	30.57' RT.	772439.2328	1791426.4590	884.85
C	IRON PIN SET	11+34.94	60.79' RT.	772160.2913	1791927.3673	888.76

The bearings for this description are based on the bearing between Franklin County Engineer's stations "MCNEAL"and "FCGS 6648" being South 15°07'52"East, as measured using GPS methods and the Ohio State Plane Coordinate System, South Zone, NAD 83 (1986 Adjustment).

BENCHMARK: N39RESET
ALUMINUM DISK SET IN THE TOP OF THE SOUTH END OF THE EAST ABUTMENT OF BRAND ROAD BRIDGE WAS-44-2.09 OVER NORTH FORK INDIAN RUN, 0.20 MILES NORTHWEST OF COFFMAN ROAD.
ELEV. = 886.77 (NAVD88)

T.B.M. #1: SOUTHEAST CORNER OF CONCRETE BASE FOR LIGHT POLE, NORTH SIDE OF BRAND ROAD AT INTERSECTION WITH COFFMAN ROAD.
℄ CONST. BRAND ROAD STA. 10+15.58, 38.81' RT.
ELEV. = 890.40 (NAVD88)

T.B.M. #2: NORTHWEST CORNER OF NORTH CONCRETE HEADWALL FOR PIPE UNDER BRAND ROAD LOCATED 400± EAST OF COFFMAN ROAD.
℄ CONST. BRAND ROAD STA. 14+73.89, 23.43' LT.
ELEV. = 887.05 (NAVD88)

		NORTHING	EASTING
1	P.I. Sta. 5+14.26	772502.5548	1791408.5825
	P.C. Sta. 4+67.70	772540.6324	1791381.7944
	P.T. Sta. 5+60.65	772468.7548	1791440.5994
2	P.I. Sta. 7+26.49	772348.3588	1791554.6440
	P.C. Sta. 5+74.48	772458.7151	1791450.1094
	PRC Sta. 8+69.46	772315.6073	1791703.0803
3	P.I. Sta. 8+98.94	772309.2563	1791731.8644
	PRC Sta. 8+69.46	772315.6073	1791703.0803
	P.T. Sta. 9+28.37	772300.1146	1791759.8874
4	P.I. Sta. 11+03.30	772228.0097	1791918.4403
	P.C. Sta. 10+67.06	772245.5106	1791886.7102
	P.T. Sta. 11+39.38	772215.8115	1791952.5618
5	P.I. Sta. 12+35.86	772183.3331	1792043.4126
	P.C. Sta. 12+11.90	772191.3993	1792020.8492
	P.T. Sta. 12+59.78	772173.1231	1792065.0903
6	P.I. Sta. 14+03.95	772111.6942	1792195.5155
	P.C. Sta. 13+31.79	772142.4418	1792130.2325
	P.T. Sta. 14+75.72	772093.1252	1792265.2469
7	P.I. Sta. 18+99.42	772188.5617	1791779.2590
	P.C. Sta. 18+60.55	772149.8045	1791776.3822
	P.T. Sta. 19+37.10	772222.6794	1791797.8702

N

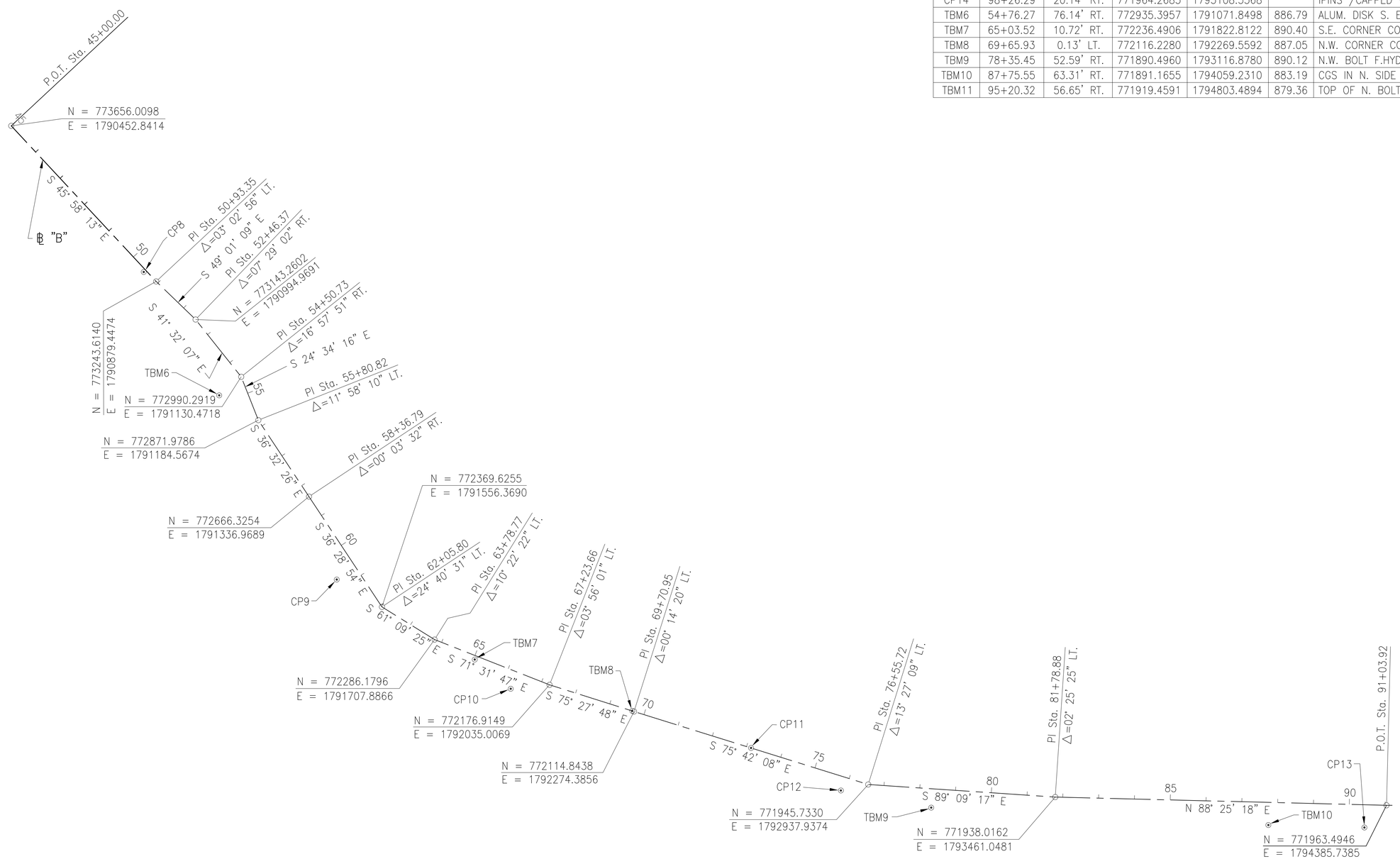
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LAM
CHECKED KJG

SCHEMATIC PLAN

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

REF #	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
CP8	50+50.38	7.31' RT.	773268.2240	1790843.4670	885.42	IPID /CAPPED STANTEC #306
CP9	60+72.59	63.07' RT.	772439.2328	1791426.4590	884.85	IPID /CAPPED STANTEC #307
CP10	66+26.83	49.87' RT.	772160.2913	1791927.3673		IPID /CAPPED STANTEC #308
CP11	73.13.10	0.15' LT.	772030.4975	1792605.9680	894.39	IPID /CAPPED STANTEC #309
CP12	75+87.86	38.64' RT.	771925.0447	1792862.6399		IPINS /CAPPED WESCG #500157
CP13	90+43.77	63.52' RT.	771898.3397	1794327.3543		IPINS /CAPPED WESCG #500158
CP14	98+26.29	20.14' RT.	771964.2683	1795108.3368		IPINS /CAPPED WESCG #500160
TBM6	54+76.27	76.14' RT.	772935.3957	1791071.8498	886.79	ALUM. DISK S. END E. ABUTMENT
TBM7	65+03.52	10.72' RT.	772236.4906	1791822.8122	890.40	S.E. CORNER CONC. BASE L/POLE
TBM8	69+65.93	0.13' LT.	772116.2280	1792269.5592	887.05	N.W. CORNER CONC. HEADWALL N.
TBM9	78+35.45	52.59' RT.	771890.4960	1793116.8780	890.12	N.W. BOLT F.HYD.
TBM10	87+75.55	63.31' RT.	771891.1655	1794059.2310	883.19	CGS IN N. SIDE P/POLE
TBM11	95+20.32	56.65' RT.	771919.4591	1794803.4894	879.36	TOP OF N. BOLT E. END GUARDRAIL



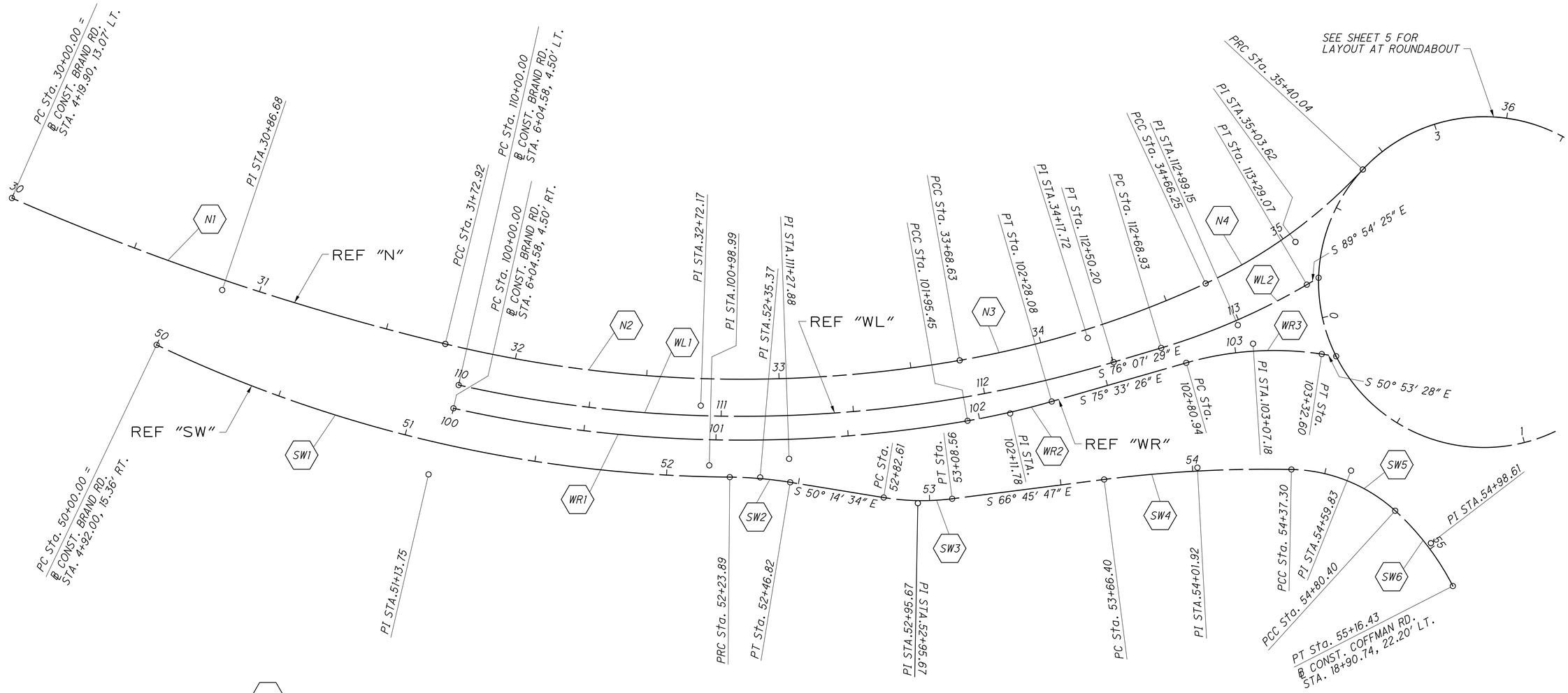
N

HORIZONTAL SCALE IN FEET
0 75 150 300

CALCULATED LAM
CHECKED KJG

SURVEY CONTROL PLAN (SHARED-USE PATH)

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



CURVE DATA LAYOUT

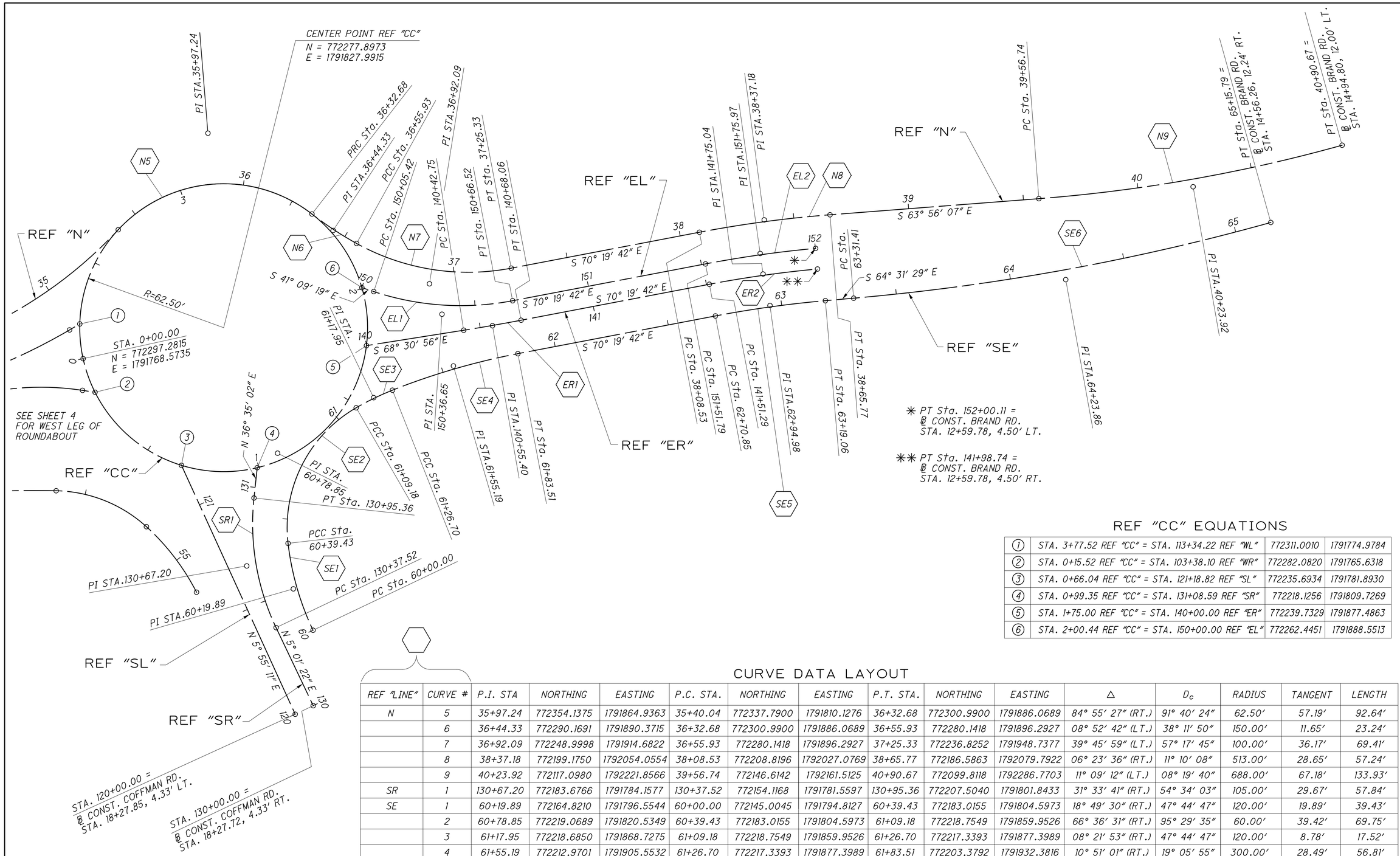
REF "LINE"	CURVE #	P.I. STATION	NORTHING	EASTING	P.C. STATION	NORTHING	EASTING	P.T. STATION	NORTHING	EASTING	Δ	D_c	RADIUS	TANGENT	LENGTH
N	1	30+86.68	772517.0280	1791415.7981	30+00.00	772587.2506	1791364.9773	31+72.92	772456.7387	1791478.0810	10° 02′ 18″ (LT.)	05° 48′ 18″	987.00′	86.68′	172.92′
	2	32+72.17	772387.7092	1791549.3932	31+72.92	772456.7387	1791478.0810	33+68.63	772352.8531	1791642.3209	23° 30′ 28″ (LT.)	12° 00′ 42″	477.00′	99.25′	195.71′
	3	34+17.72	772335.6137	1791688.2820	33+68.63	772352.8531	1791642.3209	34+66.25	772330.7851	1791737.1319	14° 54′ 55″ (LT.)	15° 16′ 44″	375.00′	49.09′	97.62′
	4	35+03.62	772327.1094	1791774.3186	34+66.25	772330.7851	1791737.1319	35+40.04	772337.7900	1791810.1276	22° 15′ 11″ (LT.)	30° 09′ 20″	190.00′	37.37′	73.79′
WL	1	111+27.88	772353.4620	1791567.9495	110+00.00	772440.7915	1791474.5334	112+50.20	772322.7961	1791692.0971	29° 11′ 47″ (LT.)	11° 40′ 09″	491.00′	127.88′	250.20′
	2	112+99.15	772311.0585	1791739.6146	112+68.93	772318.3040	1791710.2823	113+29.07	772311.0094	1791769.8284	13° 46′ 56″ (LT.)	22° 55′ 06″	250.00′	30.21′	60.14′
WR	1	100+98.99	772366.6180	1791540.6976	100+00.00	772434.2170	1791468.3872	101+95.45	772331.6694	1791633.3099	22° 23′ 48″ (LT.)	11° 27′ 33″	500.00′	98.99′	195.45′
	2	102+11.78	772325.9033	1791648.5898	101+95.45	772331.6694	1791633.3099	102+28.08	772321.8300	1791664.4053	06° 13′ 55″ (LT.)	19° 05′ 55″	300.00′	16.33′	32.63′
	3	103+07.18	772302.1016	1791741.0057	102+80.94	772308.6454	1791715.5978	103+32.60	772285.5513	1791761.3642	24° 39′ 59″ (RT.)	47° 44′ 47″	120.00′	26.24′	51.66′
SW	1	51+13.75	772417.4677	1791447.6126	50+00.00	772511.7211	1791383.9338	52+23.89	772358.8836	1791545.1144	24° 57′ 25″ (RT.)	11° 08′ 49″	514.00′	113.75′	223.89′
	2	52+35.37	772352.9679	1791554.9598	52+23.89	772358.8836	1791545.1144	52+46.82	772345.6222	1791563.7898	08° 45′ 27″ (RT.)	38° 11′ 50″	150.00′	11.49′	22.93′
	3	52+95.67	772314.3762	1791601.3495	52+82.61	772322.7321	1791591.3052	53+08.56	772309.2214	1791613.3551	16° 31′ 13″ (LT.)	63° 39′ 43″	90.00′	13.07′	25.95′
	4	54+01.92	772272.3884	1791699.1398	53+66.40	772286.3990	1791666.5090	54+37.30	772253.7834	1791729.3874	08° 21′ 30″ (RT.)	11° 47′ 21″	486.00′	35.51′	70.90′
	5	54+59.83	772241.9800	1791748.5771	54+37.30	772253.7834	1791729.3874	54+80.40	772220.4636	1791755.2556	41° 09′ 39″ (LT.)	95° 29′ 35″	60.00′	22.53′	43.10′
	6	54+98.61	772203.0744	1791760.6531	54+80.40	772220.4638	1791755.2555	55+16.43	772184.8984	1791759.5750	20° 38′ 19″ (RT.)	57° 17′ 45″	100.00′	18.21′	36.02′

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

GEOMETRIC LAYOUT - REF "LINES"

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



REF "CC" EQUATIONS

1	STA. 3+77.52 REF "CC" = STA. 113+34.22 REF "WL"	772311.0010	1791774.9784
2	STA. 0+15.52 REF "CC" = STA. 103+38.10 REF "WR"	772282.0820	1791765.6318
3	STA. 0+66.04 REF "CC" = STA. 121+18.82 REF "SL"	772235.6934	1791781.8930
4	STA. 0+99.35 REF "CC" = STA. 131+08.59 REF "SR"	772218.1256	1791809.7269
5	STA. 1+75.00 REF "CC" = STA. 140+00.00 REF "ER"	772239.7329	1791877.4863
6	STA. 2+00.44 REF "CC" = STA. 150+00.00 REF "EL"	772262.4451	1791888.5513

CURVE DATA LAYOUT

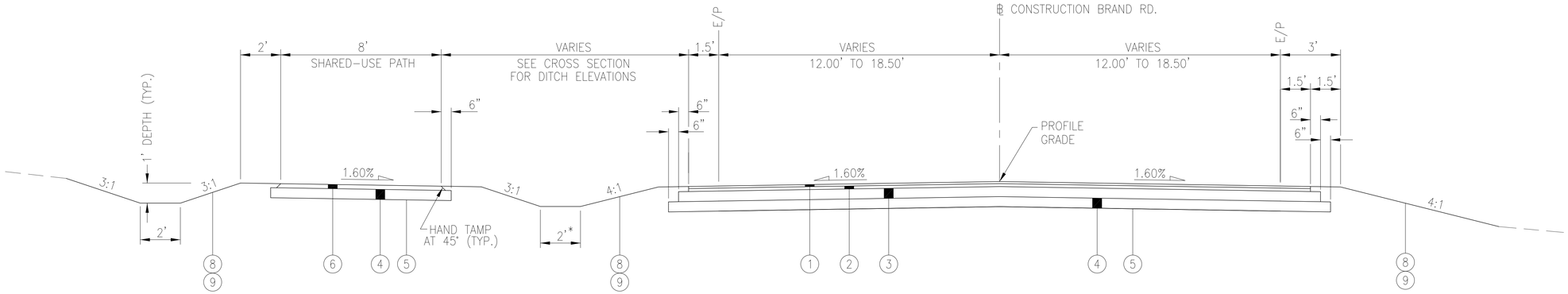
REF "LINE"	CURVE #	P.I. STA	NORTHING	EASTING	P.C. STA.	NORTHING	EASTING	P.T. STA.	NORTHING	EASTING	Δ	D_c	RADIUS	TANGENT	LENGTH
N	5	35+97.24	772354.1375	1791864.9363	35+40.04	772337.7900	1791810.1276	36+32.68	772300.9900	1791886.0689	84° 55' 27" (RT.)	91° 40' 24"	62.50'	57.19'	92.64'
	6	36+44.33	772290.1691	1791890.3715	36+32.68	772300.9900	1791886.0689	36+55.93	772280.1418	1791896.2927	08° 52' 42" (LT.)	38° 11' 50"	150.00'	11.65'	23.24'
	7	36+92.09	772248.9998	1791914.6822	36+55.93	772280.1418	1791896.2927	37+25.33	772236.8252	1791948.7377	39° 45' 59" (LT.)	57° 17' 45"	100.00'	36.17'	69.41'
	8	38+37.18	772199.1750	1792054.0554	38+08.53	772208.8196	1792027.0769	38+65.77	772186.5863	1792079.7922	06° 23' 36" (RT.)	11° 10' 08"	513.00'	28.65'	57.24'
	9	40+23.92	772117.0980	1792221.8566	39+56.74	772146.6142	1792161.5125	40+90.67	772099.8118	1792286.7703	11° 09' 12" (LT.)	08° 19' 40"	688.00'	67.18'	133.93'
SR	1	130+67.20	772183.6766	1791784.1577	130+37.52	772154.1168	1791781.5597	130+95.36	772207.5040	1791801.8433	31° 33' 41" (RT.)	54° 34' 03"	105.00'	29.67'	57.84'
SE	1	60+19.89	772164.8210	1791796.5544	60+00.00	772145.0045	1791794.8127	60+39.43	772183.0155	1791804.5973	18° 49' 30" (RT.)	47° 44' 47"	120.00'	19.89'	39.43'
	2	60+78.85	772219.0689	1791820.5349	60+39.43	772183.0155	1791804.5973	61+09.18	772218.7549	1791859.9526	66° 36' 31" (RT.)	95° 29' 35"	60.00'	39.42'	69.75'
	3	61+17.95	772218.6850	1791868.7275	61+09.18	772218.7549	1791859.9526	61+26.70	772217.3393	1791877.3989	08° 21' 53" (RT.)	47° 44' 47"	120.00'	8.78'	17.52'
	4	61+55.19	772212.9701	1791905.5532	61+26.70	772217.3393	1791877.3989	61+83.51	772203.3792	1791932.3816	10° 51' 01" (RT.)	19° 05' 55"	300.00'	28.49'	56.81'
	5	62+94.98	772165.8565	1792037.3425	62+70.85	772173.9790	1792014.6216	63+19.06	772155.4780	1792059.1255	05° 48' 14" (RT.)	12° 02' 13"	476.00'	24.13'	48.22'
	6	64+23.86	772110.4025	1792153.7327	63+31.41	772150.1673	1792070.2719	65+15.79	772086.6128	1792243.0692	10° 33' 50" (LT.)	05° 43' 46"	1000.00'	92.45'	184.38'
ER	1	140+55.40	772219.4416	1791929.0396	140+42.75	772224.0775	1791917.2614	140+68.06	772215.1807	1791940.9587	01° 48' 47" (LT.)	07° 09' 43"	800.00'	12.66'	25.31'
	2	141+75.04	772179.1691	1792041.6924	141+51.29	772187.1619	1792019.3344	141+98.74	772169.0521	1792063.1728	05° 32' 54" (RT.)	11° 41' 35"	490.00'	23.74'	47.45'
EL	1	150+36.65	772234.8516	1791912.6695	150+05.42	772258.3639	1791892.1185	150+66.52	772224.3395	1791942.0746	29° 10' 24" (LT.)	47° 44' 47"	120.00'	31.23'	61.10'
	2	151+75.97	772187.4971	1792045.1327	151+51.79	772195.6367	1792022.3641	152+00.11	772177.1942	1792067.0077	05° 32' 54" (RT.)	11° 28' 56"	499.00'	24.18'	48.32'

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

GEOMETRIC LAYOUT - REF "LINES"

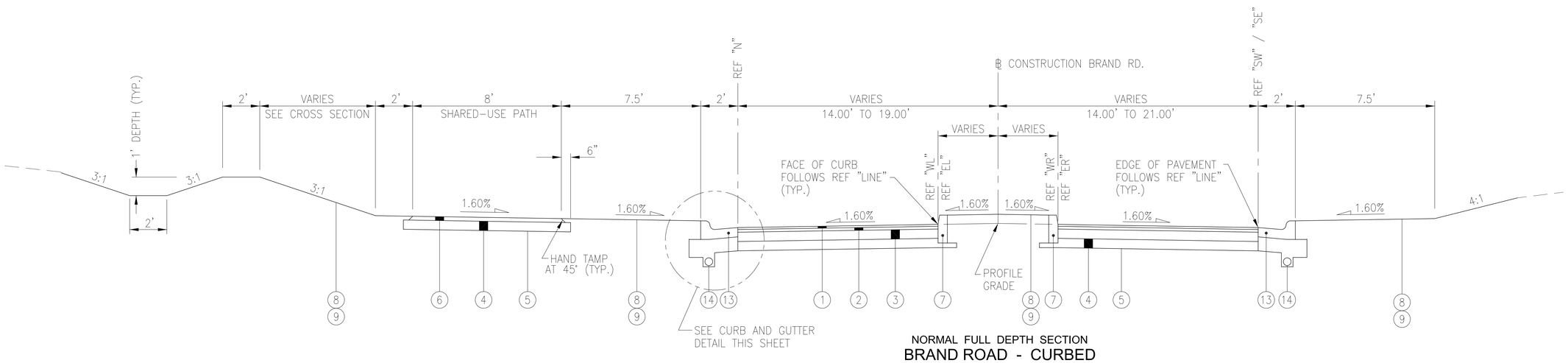
BRAND ROAD / COFFMAN ROAD ROUNDABOUT



* UNLESS OTHERWISE NOTED
ON THE CROSS SECTIONS.

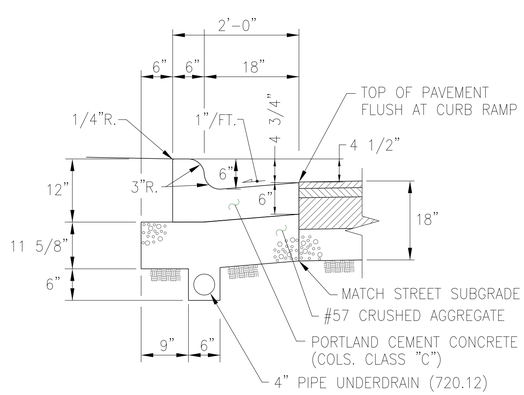
NORMAL FULL DEPTH SECTION
BRAND ROAD
LIMITING STATIONS

℄ BRAND RD. FROM STA. 3+40.00 TO STA. 6+00.00 = 260.00 FT.
℄ BRAND RD. FROM STA. 12+64.28 TO STA. 16+40.00 = 375.72 FT.



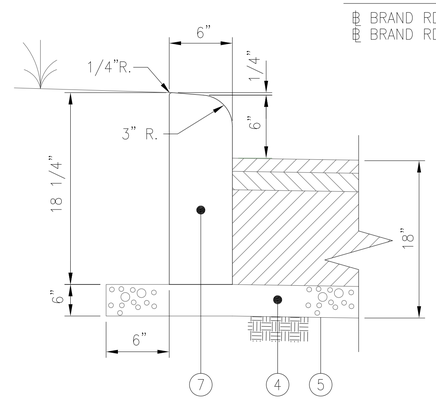
NORMAL FULL DEPTH SECTION
BRAND ROAD - CURBED
LIMITING STATIONS

℄ BRAND RD. FROM STA. 6+00.00 TO STA. 9+37.50 = 337.50 FT.
℄ BRAND RD. FROM STA. 10+62.50 TO STA. 12+64.28 = 201.78 FT.



6" CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN DETAIL

NOT TO SCALE



STRAIGHT 18" CONCRETE CURB, AS PER PLAN DETAIL

NOT TO SCALE

LEGEND

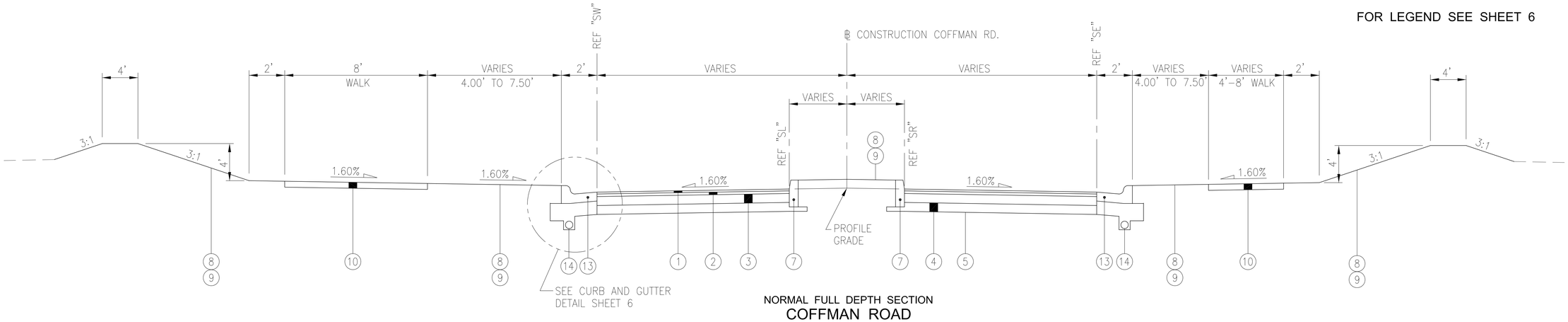
1. ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC
2. ITEM 448 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, MEDIUM TRAFFIC
3. ITEM 301 – 6" ASPHALT CONCRETE BASE, PG64-22
4. ITEM 304 – 6" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC
7. ITEM 609 – STRAIGHT 18" CONCRETE CURB, AS PER PLAN (SEE DETAIL THIS SHEET)
8. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED, AS PER PLAN
9. ITEM 659 – SEEDING AND MULCHING, AS PER PLAN
10. ITEM 608 – 4" CONCRETE WALK, AS PER PLAN
11. ITEM 254 – 1 1/4" PAVEMENT PLANING, ASPHALT CONCRETE
12. ITEM 407 – NTSS – 1HM TRACKLESS TACK COAT @ 0.10 GAL./S.Y.
13. ITEM 609 – 6" CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN (SEE DETAIL THIS SHEET)
14. ITEM 605 – 4" PIPE UNDERDRAIN (720.12)
15. ITEM 609 – CONCRETE MOUNTABLE CURB, AS PER PLAN (SEE DETAIL ON SHEET 7)
16. ITEM SPECIAL – TRUCK APRON PAVEMENT (SEE DETAIL ON SHEET 7)

CALCULATED LAM
CHECKED KJG

TYPICAL SECTIONS

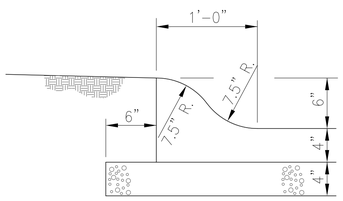
BRAND ROAD / COFFMAN ROAD ROUNDABOUT

FOR LEGEND SEE SHEET 6

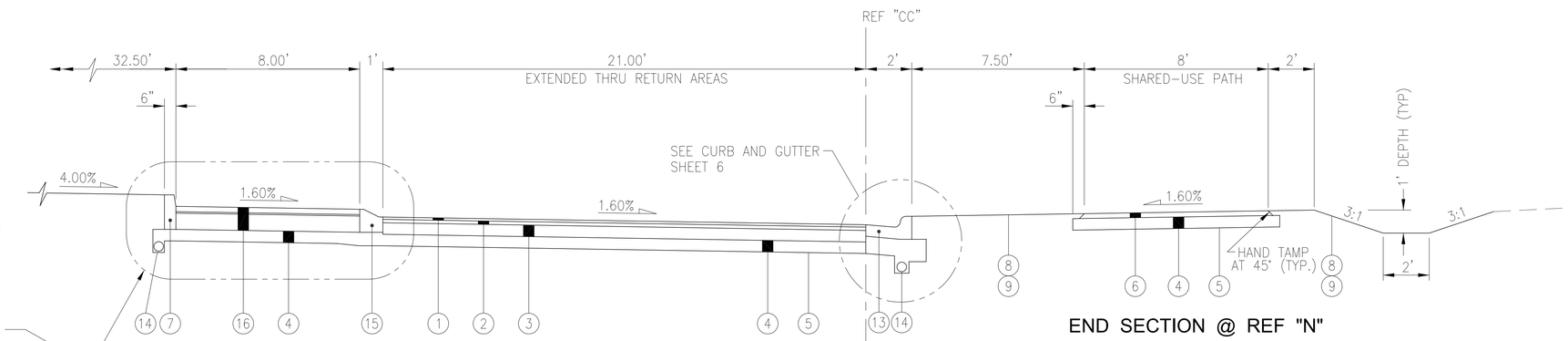


NORMAL FULL DEPTH SECTION
COFFMAN ROAD
LIMITING STATIONS

℄ COFFMAN RD. FROM STA. 18+07.40 TO STA. 19+88.56 = 181.16 FT.



INTEGRAL CURB DETAIL
NOT TO SCALE

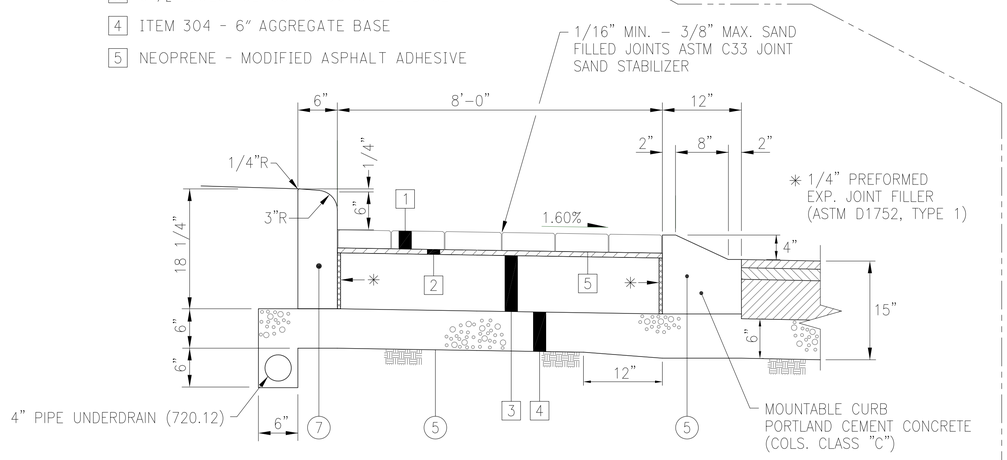


ROUNDABOUT SECTION
LIMITING STATIONS

REF "CC" FROM STA. 0+00.00 TO STA. 3+92.50 = 392.50 FT.

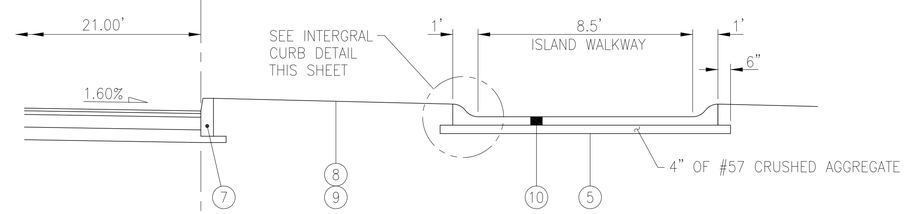
END SECTION @ REF "N"

1. 8" x 4" x 2 ¾" BRICK PAVERS (SEE GENERAL NOTES FOR DETAILS)
2. ¾" BITUMINOUS ASPHALT SETTING BED (PG64-22)
3. 8 ½" COLS. CLASS "C" CONCRETE BASE
4. ITEM 304 - 6" AGGREGATE BASE
5. NEOPRENE - MODIFIED ASPHALT ADHESIVE

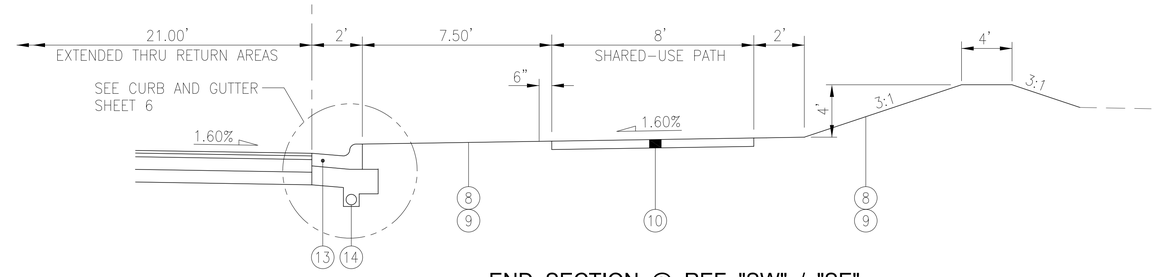


TRUCK APRON PAVEMENT
W/ BRICK PAVERS

NOT TO SCALE



END SECTION @ MEDIAN ISLAND



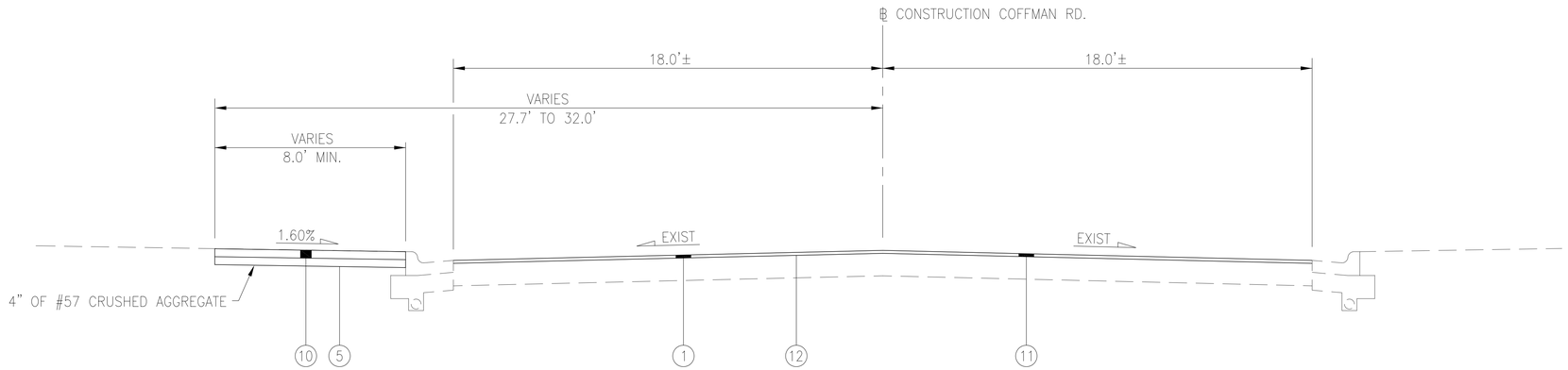
END SECTION @ REF "SW" / "SE"

CALCULATED LAM
CHECKED KJG

TYPICAL SECTIONS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

FOR LEGEND SEE SHEET 6

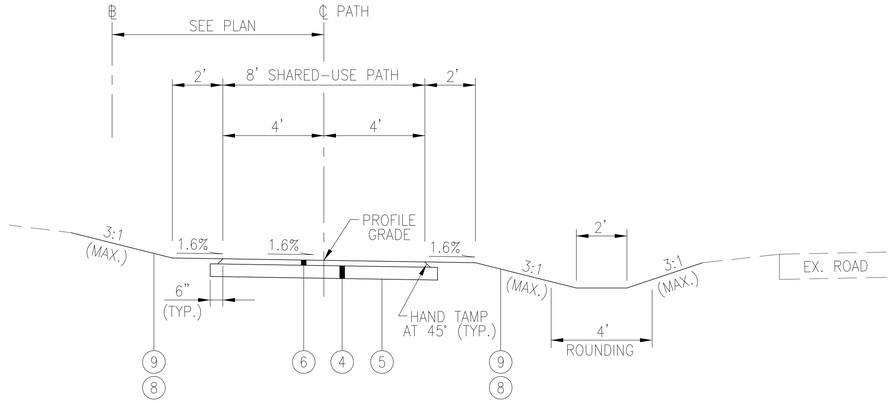


PAVEMENT PLANING AND RESURFACING

COFFMAN ROAD

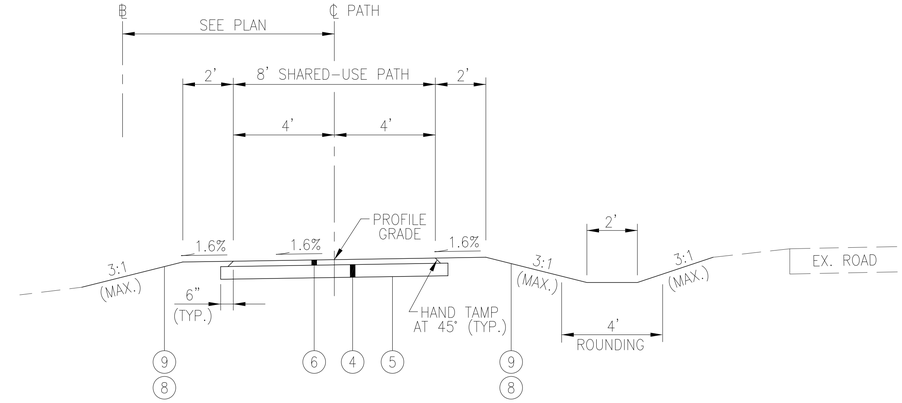
LIMITING STATIONS

℄ COFFMAN RD. FROM STA. 17+34.44 TO STA. 18+07.40 = 72.96 FT.



TYPICAL SECTION SHARED-USE PATH

℄ "B" STA. 46+23.75 TO STA. 51+85.00 = 561.25 FT.
℄ "B" STA. 56+10.00 TO STA. 57+97.67 = 187.67 FT.
℄ "B" STA. 71+41.74 TO STA. 81+78.88 = 1037.14 FT.



TYPICAL SECTION SHARED-USE PATH

℄ "B" STA. 51+85.00 TO STA. 56+10.00 = 425.00 FT.

CROSS SLOPE TRANSITIONS:
SHARED-USE PATH CROSS SLOPE TRANSITIONS SHALL BE COMPLETED OVER A 10' LENGTH, CENTERED ABOUT THE STATIONS LISTED ON THE TYPICAL SECTIONS.

CALCULATED LAM
CHECKED KJG

TYPICAL SECTIONS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

GENERAL

CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITION, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS) SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED. ITEM NUMBERS LISTED REFER TO CITY OF COLUMBUS ITEM NUMBERS UNLESS OTHERWISE NOTED.

THE CONTRACTOR INTENDING TO SUBMIT A BID FOR CITY OF DUBLIN (HEREAFTER REFERRED TO AS "CITY") CAPITAL IMPROVEMENT CONTRACTS SHALL BE PREQUALIFIED WITH THE OHIO DEPARTMENT OF TRANSPORTATION IN ACCORDANCE WITH SECTION 102 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND CHAPTER 5525 OF THE OHIO REVISED CODE CONCERNING CONSTRUCTION CONTRACTS.

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR WITH THE COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

IT IS THE INTENTION OF THE CONTRACT DOCUMENTS TO PROVIDE AND REQUIRE A COMPLETED PROJECT READY FOR OPERATION. ANY WORK ITEMS OMITTED FROM THE CONTRACT DOCUMENTS WHICH ARE CLEARLY NECESSARY FOR COMPLETION OF THE WORK AND ITS APPURTENANCES SHALL BE CONSIDERED A PART OF SUCH WORK, THOUGH NOT DIRECTLY SPECIFIED OR CALLED FOR IN THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, SUCH INCIDENTAL ITEMS AS RELOCATION OF MAIL BOXES, SAW CUTTING, AND REMOVAL AND/OR RELOCATION OF SIGNS, SPRINKLERS, OR OTHER MISCELLANEOUS ITEMS.

THE CONTRACTOR SHALL NOTIFY THE CITY OF DUBLIN, DIVISION OF ENGINEERING IN WRITING AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.

THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION THAT ARE NOT SPECIFIED HEREIN. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR SAFETY ON THE WORK SITE, OR FOR FAILURE BY THE CONTRACTOR TO PERFORM WORK ACCORDING TO THE CONTRACT DOCUMENTS.

THE CITY SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. THE CONTRACTOR SHALL EXERCISE CAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK, INCLUDING THE REQUIREMENTS FOR CONFINED SPACES PER 29 CFR 1910.146.

ANY MODIFICATION TO THE WORK AS SHOWN ON THESE APPROVED PLANS SHALL HAVE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

THE CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY AND AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, AND/OR THE LIMITS OF DISTURBANCE SHOWN.

PROPERTY BOUNDARIES, INCLUDING PROPERTY LINES AND ROAD RIGHT-OF-WAY, ARE SHOWN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT NECESSARILY COMPLETE OR CORRECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE FINISHED WORK CONFORM TO THE LINES, GRADES, ELEVATIONS, AND DIMENSIONS CALLED FOR ON THE DRAWINGS AND TYPICAL SECTIONS. PAYMENT FOR CONSTRUCTION LAYOUT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 623, CONSTRUCTION LAYOUT STAKES.

THE CONTRACTOR SHALL SUBSTANTIALLY RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION.

NON-RUBBER TIRED VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT WRITTEN PERMISSION FROM THE CITY ENGINEER.

TRACKING OR SPILLING MUD, DIRT OR DEBRIS UPON STREETS, RESIDENTIAL OR COMMERCIAL DRIVES, SIDEWALKS OR SHARED-USE PATHS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE CITY. IF THE CONTRACTOR FAILS TO REMOVE THE MUD, DIRT, DEBRIS OR SPILLAGE, THE CITY OF DUBLIN RESERVES THE RIGHT TO REMOVE THESE MATERIALS AND CLEAN AFFECTED AREAS, THE COST OF WHICH SHALL BE WITHHELD FROM MONIES THAT ARE DUE OR MAY BECOME DUE TO THE CONTRACTOR.

ALL SIGNS, LANDSCAPING, STRUCTURES, OR OTHER APPURTENANCES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE PAID FOR BY THE CONTRACTOR.

ALL PRECAST CONCRETE PRODUCTS SHALL BE INSPECTED AT THE LOCATION OF MANUFACTURE. APPROVED PRECAST CONCRETE PRODUCTS WILL BE STAMPED NOTING THAT INSPECTION HAS BEEN PERFORMED BY THE CITY OF COLUMBUS. PRECAST CONCRETE PRODUCTS WITHOUT PROOF OF INSPECTION SHALL NOT BE APPROVED FOR INSTALLATION.

EXCESS EXCAVATED MATERIAL FROM THIS PROJECT SHALL BE HAULED OFFSITE BY THE CONTRACTOR AND COMPENSATION FOR HAULING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION.

THE COST OF ALL ASPHALT PAVEMENT REMOVAL AND DISPOSAL SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR ITEM 203, EXCAVATION. THE COST OF CONCRETE PAVEMENT REMOVAL AND DISPOSAL WILL BE PAID AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 202, PAVEMENT REMOVED.

ALL NON-PAVEMENT AREAS DISTURBED WITHIN THE DESIGNATED EASEMENTS, RIGHTS-OF-WAY, AND LIMITS OF DISTURBANCE AS SHOWN, SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ITEM 659, SEEDING AND MULCHING, AS PER PLAN. ALL AREAS DISTURBED OUTSIDE THESE LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT U.S. MAIL DELIVERY WITHIN THE PROJECT LIMITS IS NOT DISRUPTED BY CONSTRUCTION OPERATIONS. THIS RESPONSIBILITY IS LIMITED TO RELOCATION OF MAILBOXES TO A TEMPORARY LOCATION THAT WILL ALLOW THE COMPLETION OF THE WORK AND SHALL ALSO INCLUDE THE RESTORATION OF MAILBOXES TO THEIR ORIGINAL LOCATION OR APPROVED NEW LOCATION. ANY RELOCATION OF MAILBOX SERVICES MUST FIRST BE COORDINATED WITH THE U.S. POSTAL SERVICE AND AFFECTED PROPERTY OWNERS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

PAVEMENT

PAVEMENTS SHALL BE CUT IN NEAT, STRAIGHT LINES THE FULL DEPTH OF THE EXISTING PAVEMENT, OR AS REQUIRED BY THE CITY ENGINEER.

BUTT JOINTS BETWEEN EXISTING AND NEW PAVEMENT SHALL BE MADE WHERE INDICATED ON THE PLANS IN ACCORDANCE WITH ODOT STD. CONSTRUCTION DWG. BP-3.1.

PAVEMENT REPLACEMENT SHALL BE CONDUCTED ACCORDING TO CITY OF COLUMBUS STANDARD DRAWING 1441 AND APPLICABLE CITY OF DUBLIN STANDARD DRAWINGS. THE REPLACEMENT OF DRIVEWAYS, HANDICAPPED RAMPS, SIDEWALKS, SHARED-USE PATHS, PARKING LOT PAVEMENT, ETC. SHALL BE PROVIDED ACCORDING TO THE APPROVED CONSTRUCTION DRAWINGS AND CITY OF DUBLIN STANDARD CONSTRUCTION DRAWINGS.

THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER AT THE PRECONSTRUCTION MEETING HIS PROPOSED DESIGN MIX FORMULA FOR ALL BITUMINOUS MIXTURES TO BE PLACED ON THE PROJECT FOR REVIEW AND APPROVAL. A DESIGN MIX FORMULA SHALL BE SUBMITTED FOR EACH MIXTURE AND EACH PRODUCER AND SHALL PROVIDE GRADATION OF ALL COMPONENT AGGREGATES, PERCENTAGE OF BLENDING OF AGGREGATES, PERCENTAGE OF BITUMEN, ANY ADDITIVES AND APPLICATION RATE, NAMES AND ADDRESSES OF AGGREGATE SUPPLIERS, MARSHALL MIX DESIGN DATA, AND THE THEORETICAL LABORATORY DENSITY.

THE CONTRACTOR IS NOT PERMITTED TO USE ANY RECLAIMED MATERIALS IN ITEM 304.

SUBGRADE

ALL SOIL SUBGRADES SHALL BE PREPARED AND COMPACTED IN ACCORDANCE WITH ITEM 204, SUBGRADE COMPACTION, TO A DEPTH OF 12-INCHES BELOW THE SUBGRADE SURFACE. SUBGRADE SHALL BE SCARIFIED AND CONTAIN SUFFICIENT MOISTURE TO MEET ITEM 204 COMPACTION REQUIREMENTS.

SUBGRADE COMPACTION SHALL ALSO BE REQUIRED UNDER THE SIDEWALKS, SHARED-USE PATHS, AND BRICK PAVER AREAS AND SHALL FOLLOW THE REQUIREMENTS FOR COMPACTION UNDER DRIVEWAYS AS DESCRIBED IN SECTION 204.03. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 204, SUBGRADE COMPACTION.

PROOF SURVEY

FOLLOWING COMPLETION OF CONSTRUCTION, A PROOF SURVEY SHALL BE PROVIDED BY THE CONTRACTOR TO THE DIVISION OF ENGINEERING THAT DOCUMENTS AS-BUILT INFORMATION OF ALL ELEMENTS OF THIS PROJECT. THE SURVEY SHALL BE PREPARED AND SIGNED BY AN OHIO PROFESSIONAL SURVEYOR. THE CONTRACTOR SHALL REVISE THE ORIGINAL MYLARS IN RED INK, TO THE SATISFACTION OF THE CITY, SHOWING ALL CHANGES IN THE WORK. THE COST OF THE PROOF SURVEY, INCLUDING MYLAR REVISIONS, WILL BE PAID AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL, PROOF SURVEY.

SURVEY MONUMENTATION

THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS. IN CASES OF WILLFUL OR CARELESS DESTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATIONS. RESETTING OF MARKERS SHALL BE PERFORMED BY AN OHIO PROFESSIONAL SURVEYOR AS APPROVED BY THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

FRANKLIN COUNTY ENGINEER'S MONUMENTATION

THE CONTRACTOR SHALL CONTACT THE FRANKLIN COUNTY ENGINEER'S OFFICE, SURVEY DEPARTMENT AT 614-462-3026 TWO WORKING DAYS BEFORE DISTURBING ANY FRANKLIN COUNTY GEODETIC MONUMENTS (VERTICAL AND/OR HORIZONTAL) FOR REFERENCE AND REPLACEMENT.

FRANKLIN COUNTY PERMIT

THE CONTRACTOR SHALL SECURE A WRITTEN PERMIT FROM THE FRANKLIN COUNTY ENGINEER'S OFFICE, 970 DUBLIN ROAD, A MINIMUM OF TWO WORKING DAYS PRIOR TO BEGINNING WORK WITHIN FRANKLIN COUNTY R/W. THE CONTRACTOR MAY BE REQUIRED TO POST A BOND WITH THE FRANKLIN COUNTY ENGINEER PRIOR TO ISSUANCE OF THE PERMIT TO INSURE PROPER RESTORATION OF THE PAVEMENT AND R/W. THE CONTRACTOR SHALL PROVIDE THE FRANKLIN COUNTY ENGINEER'S OFFICE A 24-HOUR TELEPHONE NUMBER TO BE USED IN CASE OF AN EMERGENCY.

CONSTRUCTION NOISE

ANY DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED SO AS TO ELIMINATE ALL UNNECESSARY NOISE, DUST, AND ODORS. THE USE OF OIL OR OTHER MATERIAL FOR DUST CONTROL, WHICH MAY CAUSE TRACKING, IS NOT PERMITTED.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS.

PRIVATE LANDSCAPING ITEMS

CONTRACTOR SHALL CAREFULLY REMOVE AND DELIVER TO THE HOME OWNER PRIVATE LANDSCAPING ITEMS LOCATED WITHIN THE CONSTRUCTION LIMITS. SUCH ITEMS INCLUDE BUT ARE NOT LIMITED TO, LANDSCAPE LIGHTING, ORNAMENTAL FENCES, STONE BOULDERS, ETC.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NEITHER ORDER MATERIALS NOR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE CITY ENGINEER" UNLESS AUTHORIZED BY THE CITY ENGINEER.

UTILITIES

UTILITIES KNOWN TO BE LOCATED WITHIN THE LIMITS OF THIS PROJECT ARE LISTED BELOW WITH CONTACT INFORMATION.

COLUMBIA GAS
1600 DUBLIN ROAD
COLUMBUS, OHIO 43215
TEL: 614-481-1058
CELL: 614-634-1812
CONTACT: DAVE KELLY

TIME WARNER CABLE
3760 INTERCHANGE ROAD
COLUMBUS, OHIO 43204
TEL: 614-481-5262
CELL: 614-348-2979
CONTACT: RAY MAURER

AT&T (CONDUIT)
111 N. 4TH STREET
ROOM 802
COLUMBUS, OHIO 43215
TEL: 614-223-7276
CONTACT: GARY VAN ALMSICK

AT&T LEGACY (TRANSMISSION)
HLG CONSULTING
5980-G WILCOX PL.
DUBLIN, OHIO 43016
TEL: 614-760-8320
CONTACT: ED HUGHES

CITY OF DUBLIN
DIVISION OF ENGINEERING
5800 SHIER-RINGS ROAD
DUBLIN, OHIO 43016
TEL: 614-410-4621
CONTACT: MIKE SWEDER, PE

FRANKLIN COUNTY ENGINEER
970 DUBLIN ROAD
COLUMBUS, OHIO 43215
TEL: 614-525-3030
CONTACT: DEAN RINGLE, PE, PS

FRONTIER COMMUNICATIONS
1300 COLUMBUS-SANDUSKY RD. N.
MARION, OHIO 43302
TEL: 740-369-0826
CELL: 740-815-0332
CONTACT: COURTNEY MURPHY

WIDE OPEN WEST
3675 CORPORATE DRIVE
COLUMBUS, OHIO 43231
TEL: 614-725-5003
CELL: 614-668-7632
CONTACT: JAYTEE NOVARIA

AT&T (CABLE)
111 N. 4TH STREET
ROOM 802
COLUMBUS, OHIO 43215
TEL: 614-223-6424
CELL: 614-208-9312
CONTACT: KEVIN GLASER

AMERICAN ELECTRIC POWER
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
TEL: 614-883-6831
CELL: 614-949-8883
CONTACT: PAUL PAXTON

CITY OF COLUMBUS
DIVISION OF WATER
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
TEL: 614-645-7788

THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800-362-2764) AND TO OWNERS OF UNDERGROUND UTILITIES THAT ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE. NOTICE SHALL BE GIVEN AT LEAST TWO WORKING DAYS BEFORE START OF CONSTRUCTION.

THE IDENTITY AND LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE CITY OF DUBLIN AND THE CITY ENGINEER ASSUME NO RESPONSIBILITY FOR THE ACCURACY OR DEPTHS OF UNDERGROUND FACILITIES SHOWN ON THE PLANS. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF THE SAME AND FOR ANY RESULTING CONTINGENT DAMAGE.

LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES, SHOWN OR NOT SHOWN ON THE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

WHEN UNKNOWN OR INCORRECTLY LOCATED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY ENGINEER.

TRENCH AND BACKFILL

TRENCH EXCAVATION SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF OPEN TRENCH AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.

ALL TRENCHES WITHIN PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS. TRENCHES OUTSIDE THESE AREA SHALL BE BACKFILLED OR SHALL BE PROTECTED BY APPROVED TEMPORARY FENCING OR BARRICADES DURING NON-WORKING HOURS. CLEAN UP SHALL FOLLOW CLOSELY BEHIND THE TRENCHING OPERATION.

BACKFILL WITHIN A 1:1 INFLUENCE LINE OF EXISTING STRUCTURES (HOUSES, GARAGES, ETC.) OR PUBLIC INFRASTRUCTURE (PAVEMENTS, SIDEWALKS, CURBS, ETC.) SHALL BE ITEM 912, COMPACTED GRANULAR MATERIAL.

TRENCHES WITHIN 2 FEET OF PROPOSED PAVEMENT, CURB AND GUTTER, BERM, SHOULDERS, SIDEWALK, OR BIKE PATH, OR WHERE SPECIFICALLY CALLED FOR ON THE PLANS, SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS.

GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS. ITEM 912 MATERIAL SHALL CONSIST OF NATURAL, BROKEN, OR CRUSHED ROCK. SYNTHETIC OR MANMADE MATERIALS ARE UNACCEPTABLE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF TRENCHES WITHIN THE RIGHT-OF-WAY AND PUBLIC EASEMENTS FOR A PERIOD OF ONE YEAR FROM THE FINAL ACCEPTANCE OF THE WORK, AND SHALL MAKE ANY NECESSARY REPAIRS AT NO COST TO THE CITY.

ITEM SPECIAL, TREE PROTECTION FENCE

ALL TREES WITHIN THE CONSTRUCTION AREA NOT DESIGNATED FOR REMOVAL, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE PRESERVED WITHOUT DAMAGE. TREES TO BE PRESERVED SHALL BE PROTECTED WITH HIGH VISIBILITY FENCING PLACED A MINIMUM OF 15 FEET FROM THE TREE TRUNK. TREES 6 INCHES OR GREATER AT DBH (DIAMETER BREAST HEIGHT) MUST BE PROTECTED WITH FENCING PLACED AT THE CRITICAL ROOT ZONE OR 15 FEET, WHICHEVER IS GREATER. WHERE 15 FEET CANNOT BE MAINTAINED, THE FENCING SHALL BE PLACED IN SUCH A WAY AS TO MAXIMIZE PROTECTION OF THE BRANCHES, TRUNK, AND ROOTS. A QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR SAID WORK.

TREES NOT INDICATED ON THE APPROVED CONSTRUCTION DRAWINGS FOR REMOVAL MAY NOT BE REMOVED WITHOUT PRIOR APPROVAL OF THE DIVISION OF ENGINEERING.

ITEM 201, TREES OR STUMPS REMOVED

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER ITEM 201, TREES OR STUMPS REMOVED.

THE FOLLOWING IS AN ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZE	NO. OF TREES	NO. OF STUMPS
OVER 12"-24" (18" SIZE)	21	0
OVER 24"-36" (30" SIZE)	5	1
OVER 36"-60" (48" SIZE)	1	0

THE ABOVE TREE REMOVAL QUANTITIES ARE APPROXIMATE AND THE CITY OF DUBLIN RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES AND/OR STUMPS OUTSIDE THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES.

TREE TRIMMING WITHIN THE CONSTRUCTION ZONE IS TO BE COMPLETED BY A CERTIFIED ARBORIST. AT THE COMPLETION OF THE PROJECT, THE ARBORIST IS TO RETURN AND TRIM ANY BROKEN BRANCHES AS NEEDED.

ITEM 201, CLEARING AND GRUBBING

THE CONTRACTOR SHALL REMOVE THE TREES DEEMED NECESSARY BY THE CITY OF DUBLIN TO CONSTRUCT THE PROPOSED IMPROVEMENTS WITHIN THE HEAVILY WOODED AREAS ALONG THE NORTH SIDE OF BRAND ROAD BETWEEN STA. 8+75 AND STA. 14+50. THE CITY HAS NOT MARKED INDIVIDUAL TREES AND STUMPS FOR REMOVAL WITHIN THESE HEAVILY WOODED AREAS.

REMOVE ALL TREES AND STUMPS DESCRIBED ABOVE UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 202, SANDSTONE BLOCK REMOVED, AS PER PLAN

THE CONTRACTOR SHALL REMOVE THE SANDSTONE BLOCK LOCATED AT 5151 BRAND ROAD, AT THE LOCATION SHOWN ON THE PLANS AND MOVE IT TO 5200 BRAND ROAD TO A LOCATION TO BE DETERMINED BY THE ENGINEER. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 202, SANDSTONE BLOCK REMOVED, AS PER PLAN.

ITEM SPECIAL, MAILBOX REMOVED AND RESET

THE CONTRACTOR SHALL CAREFULLY REMOVE AND REERECT MAILBOXES AND SUPPORTS AT THE LOCATIONS SHOWN ON THE PLANS, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE REERECTED SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUT, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY MAILBOX OR SUPPORT DAMAGED DURING THEIR REMOVAL OR REERECTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER EACH FOR ITEM SPECIAL, MAILBOX REMOVED AND RESET AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK NOTED ABOVE.

DRAINAGE

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES STORM SEWER, DRAIN, AND DITCH FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PUT INTO SERVICE. THE FLOW OF ALL STORM SEWER, DRAINS, AND OTHER WATERCOURSES ENCOUNTERED AND DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION SATISFACTORY TO THE CITY ENGINEER. PAYMENT FOR THIS SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

ALL FIELD TILE BROKEN OR ENCOUNTERED DURING EXCAVATION SHALL BE REPLACED OR REPAIRED IN LIKE KIND AND CONNECTED TO THE STORM SEWER SYSTEM OR OPEN CHANNEL OUTLET, RESTORING NORMAL FUNCTION TO THE TILE, AS DIRECTED BY THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

WHERE THE WORK CALLS FOR RELOCATION OF EXISTING DITCHES OR STORM SEWER, THE CONTRACTOR SHALL REESTABLISH THE OUTLETS OF ALL PRIVATE DRAINS ENCOUNTERED; SUCH AS DOWNSPOUTS, FOUNDATION DRAINS, CATCH BASINS, YARD DRAINS, ETC., INTO THE NEAREST NEW DITCH OR STORM SEWER. THE COST FOR REESTABLISHING PRIVATE DRAIN OUTLETS SHALL BE INCLUDED IN THE VARIOUS STORM SEWER ITEMS.

ITEM 601, ROCK CHANNEL PROTECTION, TYPE C WITH FILTER FABRIC SHALL BE PROVIDED AT THE OUTLET END OF ALL STORM SEWERS AT THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS. ITEM 601 MATERIALS SHALL CONSIST OF NATURAL, BROKEN, OR CRUSHED ROCK. BROKEN CONCRETE MATERIALS ARE UNACCEPTABLE. THE FILTER UNDERLYING ROCK CHANNEL PROTECTION BE FILTER FABRIC AS PER SECTION 601.09.

HDPE FLARED ENDS CALLED FOR ON THE PLANS SHALL BE ADVANCED DRAINAGE SYSTEMS (ADS) "FLARED END SECTIONS", HANSON PIPE "FLARED END SECTION FOR CONCRETE ARCH PIPE", OR APPROVED EQUAL, WITH THREADED RODS AND WING NUTS. N-12 ADAPTER FITTINGS FOR CONNECTION TO CONCRETE PIPE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE FLARED END SECTIONS.

ALL STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM DESIGNATION C76, WALL B, CLASS V FOR PIPE DIAMETERS 12 INCHES TO 15 INCHES, AND 18 INCHES AND LARGER PIPE SHALL BE CLASS III, UNLESS OTHERWISE SHOWN ON THE PLANS.

THE CONTRACTOR SHALL INCLUDE THE COST OF CONNECTION TO EXISTING STRUCTURES IN THE UNIT PRICE BID FOR THE VARIOUS 901 ITEMS. ALL MANHOLE CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE PROVISIONS OF ITEM 604.

ALL INLETS, CATCH BASINS, AND MANHOLES SHALL BE CHANNELIZED.

BICYCLE SAFE GRATES SHALL BE USED FOR ALL PROPOSED CURB AND GUTTER INLETS AND CATCH BASINS. ALL CATCH BASINS ARE TO BE EQUIPPED WITH EAST JORDAN #5110, TYPE M3 GRATES.

ALL EXISTING AND PROPOSED CASTINGS SHALL BE ADJUSTED TO MATCH THE SURROUNDING FINISH GRADE BY THE CONTRACTOR. TOP OF CASTING ELEVATIONS (TC) PROVIDED ON THE PLANS ARE APPROXIMATE. TOP OF GRATE (TG) ELEVATIONS FOR CURB AND GUTTER INLETS ARE THE CENTER OF GRATE ELEVATION AT THE FACE OF CURB. PAYMENT UNDER ITEM 604, MANHOLES ADJUSTED TO GRADE, SHALL ONLY BE FOR CASTING ADJUSTMENTS ON EXISTING MANHOLES THAT REQUIRE NO OTHER WORK. THE COST OF ALL CASTING ADJUSTMENTS SHALL BE INCLUDED IN THE VARIOUS SEWER ITEMS.

WHERE BACKFILLING WITH CONCRETE AROUND A STORM SEWER PIPE IS DETERMINED TO BE NECESSARY, BY EITHER CALL OUT ON THE PLANS, OR AS DIRECTED BY THE ENGINEER, THE WORK SHALL BE IN ACCORDANCE WITH THE CITY OF COLUMBUS STANDARD DRAWING AA-S151, TYPE 1 BEDDING FOR RIGID SEWER PIPE USING CLASS "A" CONCRETE. THE TOTAL LENGTH OF BACKFILL SHALL BE FOR ALL EXPOSED PORTIONS OF PIPE, OR AS DIRECTED BY THE ENGINEER.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER.

PAYMENT FOR ALL INSPECTIONS, CLEANING, AND MAINTENANCE OF EXISTING AND NEW STORM SEWER DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS CALL FOR CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES FOR BOTH LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR EXISTING APPURTENANCE TO BE CONNECTED DIFFERS FROM THE PLAN ELEVATION, THE CITY ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT A PROPOSED CONDUIT WILL CONFLICT WITH AN EXISTING SEWER OR UNDERGROUND UTILITY WHEN CONSTRUCTED AS SHOWN ON THE PLAN, THE CITY ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION ON ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE CONFLICT.

PAYMENT FOR DETERMINATION OF LINE AND GRADE OF EXISTING UTILITIES AS REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

UNDERDRAIN OUTLETS

UNDERDRAIN PIPE OUTLETS SHALL BE ITEM 603, 4" CONDUIT, TYPE F. AN UNDERDRAIN PIPE OUTLET SHALL BE PROVIDED AT EACH PROPOSED CURB AND GUTTER INLET AND SHALL BE A MINIMUM OF 10 FEET IN LENGTH. A QUANTITY OF ITEM 603, 4" CONDUIT, TYPE F HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 452, 8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 452, THE CONTRACTOR SHALL USE CONCRETE THAT CLOSELY MATCHES THE BEIGE COLOR OF THE EXISTING DRIVEWAY ON COFFMAN ROAD AT STA. 17+67.7 LT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 452, 8" NON-REINFORCED PAVEMENT, AS PER PLAN.

AMERICANS WITH DISABILITIES ACT (ADA)
ITEM 608, CURB RAMP, AS PER PLAN
ITEM 608, DETECTABLE WARNING, AS PER PLAN

ALL SIDEWALKS, PEDESTRIAN PATHS, CURB RAMPS, AND DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAGG).

THE ELEVATIONS AND SLOPES PROVIDED ON THE DRAWINGS ARE INTENDED TO CONVEY A DESIGN THAT IS COMPATIBLE WITH ADA GUIDELINES. THE CONTRACTOR SHALL DETERMINE THE EXISTING ELEVATIONS OF ADJACENT NEW OR EXISTING CONCRETE CURB AND ADJACENT NEW OR EXISTING WALK PRIOR TO THE START OF RAMP CONSTRUCTION. ADJUSTMENTS IN GRADE SHALL BE MADE BY THE CONTRACTOR BASED ON THE ELEVATION INFORMATION TO INSURE THAT THE FINISHED WORK IS IN ACCORDANCE WITH ADA GUIDELINES.

DETECTABLE WARNINGS SHALL BE PROVIDED WHEREVER A CURB RAMP CROSSES A VEHICULAR WAY, EXCLUDING DRIVEWAYS, IN ACCORDANCE WITH DUBLIN STANDARD DRAWING PD-03. ALL DETECTABLE WARNINGS SHALL BE ADA SOLUTIONS TACTILE WARNING SURFACE MATS - REPLACEABLE WET-SET COMPOSITE TACTILE WITH A DOME SPACING OF 2.35 INCHES, MANUFACTURER PART NUMBER 2448REP. BRICK RED COLOR SHALL BE USED IN MOST LOCATIONS UNLESS OTHERWISE NOTED. THE COST OF THIS WORK WILL BE PAID AT THE UNIT PRICE BID PER EACH, AND SHALL BE IN ADDITION TO ANY OVERLAPPING PAYMENTS PER SQUARE FOOT FOR SIDEWALK OR SHARED-USE PATH.

ITEM 608, 4" CONCRETE WALK, AS PER PLAN

IN ADDITION TO THE CONCRETE WALK, THE CONTRACTOR SHALL SHAPE AND UNIFORMLY COMPACT THE SUBGRADE TO A SURFACE CONFORMING TO THE PLANS AND THE REQUIREMENTS OF ITEM 204 AND PLACE A 4" BASE OF #57 CRUSHED AGGREGATE THE FULL WIDTH OF THE WALK. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 608, 4" CONCRETE WALK, AS PER PLAN.

ITEM 609, 6" CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN

THE 6" CONCRETE COMBINATION CURB AND GUTTER SHALL BE IN ACCORDANCE WITH CITY OF DUBLIN STANDARD DRAWING RD-02.

WHERE THESE ITEMS ARE TO BE PLACED WITHIN OR ADJACENT TO EXISTING PAVEMENT, THE PAVEMENT SHALL BE SAWCUT, REMOVED AND REPLACED IN ACCORDANCE WITH THE PLAN LOCATIONS AND DETAILS. THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO SAWCUT, REMOVE AND REPLACE THE AFFECTED EXISTING PAVEMENT AREA SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE PERTINENT 609 ITEM.

ITEM SPECIAL, TRUCK APRON PAVEMENT

PAVERS - THE PAVERS SHALL BE REGIMENTAL FULL RANGE WITH A CHAMFERED EDGE AND SPACER LUGS, 8" x 4" x 2-3/4", MADE BY BELDON BRICK COMPANY, CANTON, OHIO, LAID IN A RUNNING BOND PATTERN.

ALTERNATE PAVERS - IF BELDEN BRICK PAVERS ARE UNAVAILABLE, THEN THE PAVERS SHALL BE ENGLISH EDGE FULL RANGE WITH BEVELS AND SPACER NIBS, 8" x 4" x 2-3/4", MADE BY PINE HALL BRICK, WINSTON-SALEM, NORTH CAROLINA, LAID IN A RUNNING BOND PATTERN.

NEOPRENE-MODIFIED ASPHALT ADHESIVE - FURNISH NEOPRENE MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2% GRADE WM1 NEOPRENE, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10% LONG-FIBERED INERT MATERIAL, AS SUPPLIED BY SEIDEL COMPANY, INC., NEWBURYPORT, MA, (617) 649-6740; HASTINGS PAVEMENT COMPANY, INC., LAKE SUCCESS, NY, (516) 379-3500; OR APPROVED EQUAL.

BITUMINOUS SETTING BED, 3/4 INCH - FURNISH ASPHALT CEMENT CONFORMING TO ASTM D 3381, PG64-22. FINE AGGREGATE SHALL BE NATURAL SAND AND/OR STONE SAND COMPOSED OF HARD, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL, OR OTHER DELETERIOUS SUBSTANCES. ALL SAND SHALL BE UNIFORMLY GRADED AND PASS A NO. 4 SIEVE, MEETING THE REQUIREMENTS OF ASTM C 136. THE DRIED FINE AGGREGATE SHALL BE MIXED WITH HOT ASPHALT CEMENT AT THE PLANT AND HEATED TO APPROXIMATELY 300 DEGREES (F). APPROXIMATE MATERIAL PROPORTIONS SHALL BE 7% ASPHALT CEMENT AND 93% FINE AGGREGATE; OR 140 LBS ASPHALT TO 1,860 LBS FINE AGGREGATE PER TON.

SAND - ALL JOINTS SHALL BE FILLED WITH A POLYMERIC SAND. SAND SHALL BE ALLIANCE XXX GATOR SAND AND SLATE GREY IN COLOR OR AN APPROVED EQUAL.

EDGING - A BRICK/PAVER EDGING SHALL BE PROVIDED ALONG ANY PAVER EDGE NOT RESTRAINED BY CURB, CURB-AND-GUTTER, SIDEWALK, SHARED-USE PATH, ETC. EDGING TO BE PERMALOC ASPHALT EDGE, BLACK, 3" x 3" OR APPROVED EQUAL.

PAYMENT - PAYMENT FOR THE TRUCK APRON PAVEMENT WILL BE MADE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL, TRUCK APRON PAVEMENT AND SHALL INCLUDE THE CONCRETE BASE SLAB, BITUMINOUS SETTING BED, ASPHALT ADHESIVE, BRICK PAVERS, AND SAND FILL. THE COST OF ALL CONCRETE CURBING WILL BE PAID UNDER THE APPROPRIATE 609 CURB ITEM. AGGREGATE BASE WILL BE PAID UNDER ITEM 304 AGGREGATE BASE.

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN

A MINIMUM 3 INCHES OF TOPSOIL SHALL BE PLACED IN ALL AREAS TO BE SEEDED. PRIOR TO PLACING TOPSOIL IN CUT AREAS, THE EARTH SHALL BE EXCAVATED TO A DEPTH SUFFICIENT TO PLACE 3 INCHES OF TOPSOIL. THE COST OF EXCAVATION AND DISPOSAL OF SURPLUS MATERIALS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONTRACT ITEMS.

TOPSOIL SHALL BE REMOVED AND WASTED OR UTILIZED IN NON-LOAD BEARING FILLS IN ACCORDANCE WITH THE SPECIFICATIONS. NO EXTRA COMPENSATION SHALL BE PAID FOR THE REMOVAL OF EXCESS TOPSOIL AS REQUIRED TO OBTAIN A SUITABLE SUBGRADE. PAYMENT FOR TOPSOIL REMOVAL IS INCLUDED IN ITEM 203, EXCAVATION.

ALL TOPSOIL MATERIALS AND FINAL AREA OF SUBGRADE PREPARATION SHALL BE FREE FROM ROCK AND OTHER FOREIGN MATERIAL OF 1/2" OR GREATER IN ANY DIMENSION.

ITEM 659, SEEDING AND MULCHING, AS PER PLAN

SEED: CERTIFICATION OF GRASS SEED SHALL BE PROVIDED BY SEED VENDOR FOR EACH GRASS-SEED MIXTURE STATING THE BOTANICAL AND COMMON NAME, PERCENTAGE BY WEIGHT OF EACH SPECIES AND VARIETY; AND PERCENTAGE OF PURITY, GERMINATION, AND WEED SEED. INCLUDE THE YEAR OF PRODUCTION AND DATE OF PACKAGING. FURNISH NATIONAL TURFGRASS EVALUATION PROGRAM (NTEP) DATA FOR EACH SPECIES TO BE USED.

GRASS SEED MUST BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH THE A.O.S.A. "JOURNAL OF SEED TECHNOLOGY" RULES FOR TESTING SEEDS FOR PURITY AND GERMINATION TOLERANCES.

SEED SPECIES SHALL BE AS FOLLOWS, WITH NOT LESS THAN 90 PERCENT GERMINATION, NOT LESS THAN 98 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED.

TURFGRASS SEED MIX PROPORTIONED BY WEIGHT:

A. 80 PERCENT TALL FESCUE (FESTUCA ARUNDINACEA), WITH A MINIMUM OF 3 IMPROVED TURF-TYPE VARIETIES. KENTUCKY-31 AND ALTA VARIETIES ARE NOT APPROVED.
B. 20 PERCENT PERENNIAL RYEGRASS (LOLIUM PERENNE).

SEEDING: SOW SEED AT A TOTAL RATE OF 7-9 LB. / 1,000 S.F. WITH A SPREADER OR SEEDING MACHINE. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY. THOROUGHLY COVER WITH STRAW AND NETTING. NETTING SHALL BE ADEQUATELY PINNED TO PREVENT THE STRAW FROM BEING BLOWN OR WASHED AWAY.

PROTECT SEEDED AREAS WITH SLOPES EXCEEDING 3:1 WITH EROSION CONTROL BLANKETS AS DIRECTED BY THE ENGINEER. COST OF EROSION CONTROL BLANKETS, MATERIAL, AND LABOR SHALL BE PAID FOR BY THE CITY.

HYDRO-SEEDING: NOT PERMITTED.

HYDRO-MULCHING: NOT PERMITTED.

TURF MAINTENANCE: MAINTAIN AND ESTABLISH TURF BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, AND REPLANTING TO ESTABLISH HEALTHY, VIABLE TURF. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH TURF. PROVIDE THE SAME MATERIALS AND INSTALLATION AS THOSE USED IN THE ORIGINAL INSTALLATION. WATER TURF WITH FINE SPRAY AT A MINIMUM RATE OF 1 INCH PER WEEK UNLESS RAINFALL PRECIPITATION IS ADEQUATE.

MOW TURFGRASS SEED MIX AREAS AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 1/3 OF GRASS HEIGHT. MOW AREAS TO A HEIGHT OF 2 TO 3 INCHES.

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659, SEEDING AND MULCHING, AS PER PLAN	16,000 SY
ITEM 659, COMMERCIAL FERTILIZER	2.16 TON
ITEM 659, WATER	87 M GAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL WITHIN THE CONSTRUCTION LIMITS. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS AND WERE DERIVED FROM CADD AREAS.

WATER LINES

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2012 EDITION, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED.

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER.

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER LINE SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, ALSO ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED, IN ACCORDANCE WITH SECTION 801.13 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.14 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 801.15 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO APPLICABLE SECTIONS OF A.W.W.A. C-651. WHEN THE WATER MAINS ARE READY FOR DISINFECTION, THE CITY OF DUBLIN SHALL SUBMIT THREE (3) SETS OF "AS-BUILT" PLANS (FULL SIZE SHEETS ONLY), THE AS-BUILT SURVEY COORDINATES, AND A LETTER STATING THAT THE WATER MAINS HAVE BEEN PRESSURE TESTED AND NEED TO BE DISINFECTED, TO THE CITY OF COLUMBUS, DIVISION OF WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE DISINFECTION OF ALL WATER MAINS CONSTRUCTED UNDER THIS PLAN.

ALL WATER METERS ASSOCIATED WITH THIS PROJECT SHALL BE INSTALLED INSIDE THE PROPOSED STRUCTURE UNLESS A METER PIT IS APPROVED BY THE ADMINISTRATOR OF THE DIVISION OF WATER. ALL METER PITS MUST CONFORM TO STANDARD DRAWING L-7103 FOR 5/8" THROUGH 1" METERS OR L-6317 A, B, C, D, & E FOR 1-1/2" OR LARGER METERS.

NO SERVICE CONNECTION PERMITS SHALL BE ISSUED OR CONNECTIONS MADE TO ANY SERVICE TAPS UNTIL WATER MAINS HAVE BEEN DISINFECTED BY THE CITY OF COLUMBUS, DIVISION OF WATER.

WATER SERVICE BOXES SHALL BE PLACED 1' FROM THE EDGE OF THE PROPOSED OR EXISTING SIDEWALK BETWEEN THE SIDEWALK AND THE CURB, OR 2 FEET INSIDE THE RIGHT-OF-WAY OR EASEMENT LINE WHEN NO SIDEWALK IS PRESENT OR PROPOSED. REFER TO STANDARD DRAWING L-9901 FOR ADDITIONAL INFORMATION.

THE CONTRACTOR SHALL ADJUST ALL EXISTING VALVE BOXES TO FINAL GRADE IN BOTH PAVEMENT AND NON-PAVEMENT AREAS IN ACCORDANCE WITH ITEM 807.

"SURVEY COORDINATES" SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, BLOW OFFS, CHLORINATION TAPS, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, CASING PIPE TERMINI, AND OTHER FITTINGS. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 500 FEET WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (NSRS2007) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH (N XXXXXX.XX, E XXXXXX.XX, ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE MUNICIPALITY ENGINEER OR DESIGNATED REPRESENTATIVE IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE MUNICIPALITY ENGINEER OR DESIGNATED REPRESENTATIVE ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

					AS-BUILT		
WATER ITEM	STA.	OFFSET	NORTHING	EASTING	NORTHING	EASTING	C/L ELEV.
BRAND ROAD							
FH RELOCATED	4+10.5	21.3' RT.	772575.10	1791331.46			
VALVE ATG	4+11.0	25.3' RT.	772572.47	1791328.47			
FH RELOCATED	7+56.5	31.0' RT.	772324.30	1791583.17			
6" VALVE	7+56.2	33.0' RT.	772322.64	1791582.04			
FH RELOCATED	12+58.0	22.5' RT.	772153.49	179053.96			
6" VALVE	12+58.0	24.5' RT.	772151.68	1792053.12			
FH RELOCATED	16+31.4	20.0' RT.	772033.85	1792410.79			
VALVE ATG	16+33.2	16.4' RT.	772036.85	1792413.44			
COFFMAN ROAD							
VALVE ATG	18+53.6	14.0' LT.	772143.93	1791761.88			
VALVE ATG	18+68.4	11.1' LT.	772158.89	1791766.12			
VALVE ATG	19+06.1	25.0' RT.	772186.28	1791809.11			

ITEM 809, FIRE HYDRANT, RELOCATED, AS PER PLAN

THIS ITEM SHALL MEET ALL OF THE REQUIREMENTS OF ITEM 809, FIRE HYDRANT, RELOCATED EXCEPT THAT THE CONTRACTOR IS TO PROVIDE A NEW FIRE HYDRANT. THE EXISTING HYDRANT SHALL BE CAREFULLY REMOVED AND CAREFULLY DELIVERED AND UNLOADED AT 6371 SHIER-RINGS ROAD, DUBLIN, OHIO. ANY ITEMS SPECIFICALLY DESIGNATED AS "UNUSABLE" BY THE CITY SHALL BE DISPOSED OF BY THE CONTRACTOR.

FIRE HYDRANT RELOCATIONS SHALL CONFORM TO APPLICABLE SECTIONS OF ITEM 809 OF THE COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. WORK SHALL CONSIST OF REMOVING THE EXISTING HYDRANT, INSTALLING NEW 6" PIPE AND FITTING AS REQUIRED TO LOCATE THE FIRE HYDRANT 2 FEET FROM BACK OF PROPOSED CURB OR 8 FEET OFF EDGE OF PAVEMENT, RESETTING HYDRANT AND BLOCKING AS REQUIRED. ALL 6" PIPE SHALL BE INSTALLED AT 4-FOOT MINIMUM COVER. HYDRANT EXTENSIONS SHALL BE PROVIDED PER ITEM 810, AS REQUIRED. RELOCATED FIRE HYDRANTS SHALL BE ADJUSTED TO PROPER GRADE AND FACED IN THE PROPER DIRECTION. WHEN A HYDRANT IS RELOCATED FIFTEEN (15) FEET OR MORE FROM THE "TYPICAL HYDRANT SETTING" VALVE LOCATION (SEE L-6637A), AN ADDITIONAL VALVE SHALL BE INSTALLED, AND RESTRAINED, WITHIN TWO (2) FEET OF THE RELOCATED HYDRANT. PAYMENT IS TO BE INCLUDED UNDER ITEM 809, FIRE HYDRANT RELOCATED.

NO TWO (2) ADJACENT FIRE HYDRANTS SHALL BE TAKEN OUT OF SERVICE CONCURRENTLY.

RELOCATED FIRE HYDRANTS SHALL BE PUT BACK IN SERVICE AS SOON AS POSSIBLE.

TRAFFIC CONTROL

ITEM 630, GROUND MOUNTED SUPPORT, NO. 3 & 4 POST, TYPE S, AS PER PLAN

ALL SIGN SUPPORTS SHALL BE 2 INCH SQUARE GALVANIZED POSTS WITH DIE CUT KNOCK OUTS (ALLIED QUICK-PUNCH SUPPORTS OR APPROVED EQUAL). A SINGLE BREAKAWAY ANCHOR SHALL BE USED. ALL SIGNS SHALL BE ERECTED WITH A 7-FOOT VERTICAL CLEARANCE BETWEEN THE TOP OF CURB AND THE BOTTOM OF EACH SIGN, UNLESS OTHERWISE DESIGNATED BY THE CITY ENGINEER. HORIZONTAL CLEARANCE FOR BOTH CURB AND DITCH SECTIONS SHALL BE AS PER ODOT STANDARDS. THE ANCHOR POST SHALL BE PAID SEPARATELY. PAYMENT FOR THIS ITEM SHALL BE FOR THE LENGTH ONLY, INCLUDING THE 8" OVERLAP IN THE ANCHOR POST, AND ALL MISCELLANEOUS ATTACHMENT HARDWARE.

ITEM 630, GROUND MOUNTED SUPPORT, ANCHOR POST, 2 1/4" SQUARE, AS PER PLAN

IN ADDITION TO ITEMS 630 AND 730, THE ANCHOR POST PROVIDED AND INSTALLED WITH THE GROUND MOUNTED SIGN SUPPORT SHALL BE AS PER ODOT STD. DWG. TC-41.20, AND SHALL BE 48" IN LENGTH. THE ANCHOR SHALL BE 2 1/4 INCHES SQUARE, 12 GA., WITH A 2 1/2 INCH OVERSLEEVE 18 INCHES LONG OVER TOP OF THE ANCHOR. THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH.

ITEM 630, REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, AS PER PLAN

ALL EXISTING GROUND MOUNTED SIGNS WITHIN THE PROJECT AREA SHALL BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE CITY AT A LOCATION TO BE DETERMINED WITHIN THE DUBLIN CITY LIMITS. THE CONTRACTOR SHALL COMPENSATE THE CITY IN AN AMOUNT EQUAL TO THE REPLACEMENT COST OF ANY SIGNS DAMAGED AS A RESULT OF THE CONSTRUCTION OPERATIONS. PAYMENT FOR THIS ITEM SHALL BE MADE AT THE UNIT PRICE BID PER EACH SIGN REMOVED AND DELIVERED.

ITEM 630, SIGN, FLAT SHEET

CUSTOM TRAFFIC CONTROL SIGNS, AS SHOWN ON THE DRAWINGS, SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE PROVISIONS OF ODOT ITEM 630 UNLESS OTHERWISE NOTED.

BRAND ROAD AND COFFMAN ROAD DETOURS

A DETOUR SHALL BE PROVIDED ALONG THE ROUTES SHOWN ON THE DETOUR PLAN WITH SIGNING AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE CITY OF DUBLIN 14 DAYS ADVANCED NOTICE OF ANY PLANNED CLOSURES. PAYMENT FOR ALL LABOR AND MATERIALS ASSOCIATED WITH DETOUR SIGNING SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THESE PLANS.

PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE DETOUR PLAN TO GIVE ADVANCE NOTICE OF CLOSURES TO MOTORISTS. THE CONTRACTOR SHALL CONTACT THE CITY OF DUBLIN AT LEAST 14 DAYS IN ADVANCE OF ANY CLOSURE TO OBTAIN DIRECTION FOR THE PLACEMENT AND PCMS MESSAGES.

ITEM 614, MAINTAINING TRAFFIC

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE CONTRACTOR SHALL MAINTAIN ACCESS FROM PUBLIC ROADWAYS TO ALL ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION OF THIS PROJECT, AS WELL AS ACCESS FOR MAIL, WATER, SANITARY SERVICE AND EMERGENCY VEHICLES.

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH THE CONTRACT.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

IN THE EVENT THAT IT BECOMES NECESSARY FOR THE CITY TO PERFORM WORK OF AN IMMEDIATE NATURE (SUCH AS THE PLACEMENT OF BARRICADES OR REPLACEMENT OF SIGNS AND OTHER WARNING OR PROTECTIVE DEVICES) BECAUSE OF FAILURE OR REFUSAL OF THE CONTRACTOR TO PERFORM SUCH WORK AS REQUIRED BY THE CONTRACT, THE CONTRACTOR SHALL REIMBURSE THE CITY AT THE RATE OF 2.5 TIMES THE ACTUAL COST OF LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM SUCH WORK. THE CITY SHALL BE REQUIRED TO NOTIFY OR ATTEMPT TO NOTIFY THE DESIGNATED REPRESENTATIVE OF THE CONTRACTOR OF THE NECESSITY TO PERFORM SUCH WORK. IF THE CONTRACTOR REFUSES OR FAILS WITHIN A REASONABLE TIME TO PERFORM OR CAUSE THE PERFORMANCE OF SUCH WORK, THE CITY SHALL BE REIMBURSED BY THE CONTRACTOR IN THE AMOUNT PROVIDED HEREIN BY WAY OF A DEDUCTION FROM THE CONTRACTOR'S NEXT PAYMENT UNDER THE CONTRACT. REASONABLE TIME FOR ALL STREETS INVOLVED ON THIS CONTRACT IS 1 HOUR FROM THE TIME OF NOTIFICATION BY THE CITY.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

COVERING OF SIGNS

THE CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH MAINTENANCE OF TRAFFIC SIGNS. COVERING OF SIGNS SHALL BE IN ACCORDANCE WITH 614.03. COSTS FOR COVERING SIGNS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

SEQUENCE OF CONSTRUCTION

BRAND ROAD / COFFMAN ROAD ROUNDABOUT:

1. PLACE ALL NEEDED DETOUR SIGNS AND TYPE III BARRICADES AS NOTED ON THE DETOUR PLAN.
2. CLOSE BRAND ROAD AND COFFMAN ROAD INTERSECTION FOR THE DURATION OF CONSTRUCTION, WHILE PROVIDING ACCESS TO ABUTTING PROPERTIES WITHIN THE PROJECT LIMITS AT ALL TIMES. ACCESS TO ABUTTING PROPERTIES SHALL BE PROVIDED VIA ONE APPROACH TO EACH RESPECTIVE PROPERTY AS NOTED BELOW:

ADDRESS:	MEANS OF INGRESS/EGRESS:
5300 BRAND ROAD	BRAND ROAD, FROM/TO THE WEST
5281 BRAND ROAD	COFFMAN ROAD, FROM/TO THE SOUTH
5201 BRAND ROAD	COFFMAN ROAD, FROM/TO THE SOUTH
5200 BRAND ROAD	BRAND ROAD FROM/TO THE EAST
5195 BRAND ROAD	BRAND ROAD FROM/TO THE EAST
5151 BRAND ROAD	BRAND ROAD FROM/TO THE EAST
5150 BRAND ROAD	BRAND ROAD FROM/TO THE EAST

3. CONSTRUCT STORM SEWER, ROUNDABOUT, APPROACHES, STREET LIGHTING, DRIVEWAY APPROACHES, SIDEWALK, AND SHARED-USE PATH ACCORDING TO PLAN.
4. COMPLETE FINAL GRADING AND SEEDING OPERATIONS.
5. PLACE PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS.
6. OPEN INTERSECTION TO VEHICLES AND PEDESTRIANS ON BRAND ROAD AND COFFMAN ROAD.
7. REMOVE ALL DETOUR SIGNS AND TYPE III BARRICADES.

SHARED-USE PATH WEST OF ROUNDABOUT IMPROVEMENT:

1. CONSTRUCTION OF SHARED-USE PATH AND THE PEDESTRIAN BRIDGE ALONG BRAND ROAD BETWEEN BRANDONWAY DRIVE AND THE COFFMAN ROAD ROUNDABOUT SHALL BE COMPLETED WHILE THIS SECTION OF ROADWAY IS CLOSED FOR THE ROUNDABOUT CONSTRUCTION (SEE DETOUR PLAN). AS NOTED ABOVE, ACCESS TO 5300 BRAND ROAD SHALL BE MAINTAINED VIA THIS SECTION OF CLOSED ROADWAY.

SHARED-USE PATH EAST OF ROUNDABOUT IMPROVEMENT:

1. THROUGHOUT CONSTRUCTION OF SHARED-USE PATH ALONG BRAND ROAD BETWEEN THE EAST TERMINUS OF THE ROUNDABOUT AND COVENTRY WOODS SUBDIVISION, THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC ON BRAND ROAD. WHEN DEEMED NECESSARY FOR DELIVERY OF MATERIALS, MOVEMENT OF EQUIPMENT, PAVING OPERATIONS, ETC., THE CONTRACTOR MAY UTILIZE FLAGGERS TO MAINTAIN TWO-WAY, ONE-LANE TRAFFIC OPERATION IN ACCORDANCE WITH ODOT STANDARD CONSTRUCTION DRAWINGS MT-97.10 AND MT-97.11 WITHIN THE IMMEDIATE AREA OF WORK ACTIVITIES.
2. WHERE DRIVEWAY CONSTRUCTION ACTIVITIES ARE ANTICIPATED TO REQUIRE TEMPORARY CLOSURE OF A DRIVEWAY, RESULTING IN SHORT-TERM BLOCKAGE OF ACCESS TO THE PROPERTY, THE CONTRACTOR SHALL PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT (48) HOURS TO THE PROPERTY OWNER. THE DRIVEWAY SHALL BE REOPENED FOR OWNER ACCESS PRIOR TO THE CONCLUSION OF THE WORK DAY.

ALTERNATIVE METHODS

THE CONTRACTOR MAY SUBMIT ALTERNATIVE METHODS FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS FROM THE CHANGE. NO ALTERNATIVE PLAN SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN RECEIVED FROM THE CITY OF DUBLIN IN WRITING.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN (PCMS), AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE, WHEN NO LONGER NEEDED, PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AS REQUIRED. ONLY CLASS II SIGNS WILL BE APPROVED FOR USE ON THIS PROJECT.

THE SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. THE SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

WHEN NOT BEING USED FOR CLOSURES, THE SIGN SHALL BE REMOVED FROM THE PROJECT AND STORED.

PLACEMENT, OPERATION, MAINTENANCE, AND ALL ACTIVATION OF THE SIGN BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION, YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS.

THE ENGINEER SHALL BE PROVIDED ACCESS TO THE SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATING INSTRUCTIONS ENABLING CITY OF DUBLIN PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ONBOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION WITH UP TO SIX (6) MESSAGE PHASES SHALL BE SUPPORTED, BUT NORMALLY, NOT MORE THAN THREE (3) MESSAGE PHASES SHOULD BE EMPLOYED. A BLANK PHASE SHALL BE INSERTED AT THE END OF EACH MESSAGE. THE SPEED OF EACH PHASE SHALL BE ADJUSTED TO THE SPEED WHICH WILL PERMIT THE COMPLETE MESSAGE TO BE READ AT LEAST TWICE BY A MOTORIST TRAVELING THE SPEED LIMIT.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED, OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY PER DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03 (C). THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 2 HOURS INCLUDING WEEKENDS.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04. AN ESTIMATED QUANTITY OF 9 SIGN-MONTHS HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS ITEM. PAYMENT FOR THE ABOVE DISCUSSED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER SIGN-MONTH FOR EACH ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN

USE OF LAW ENFORCEMENT OFFICES (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS FOR FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

A. FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED. IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

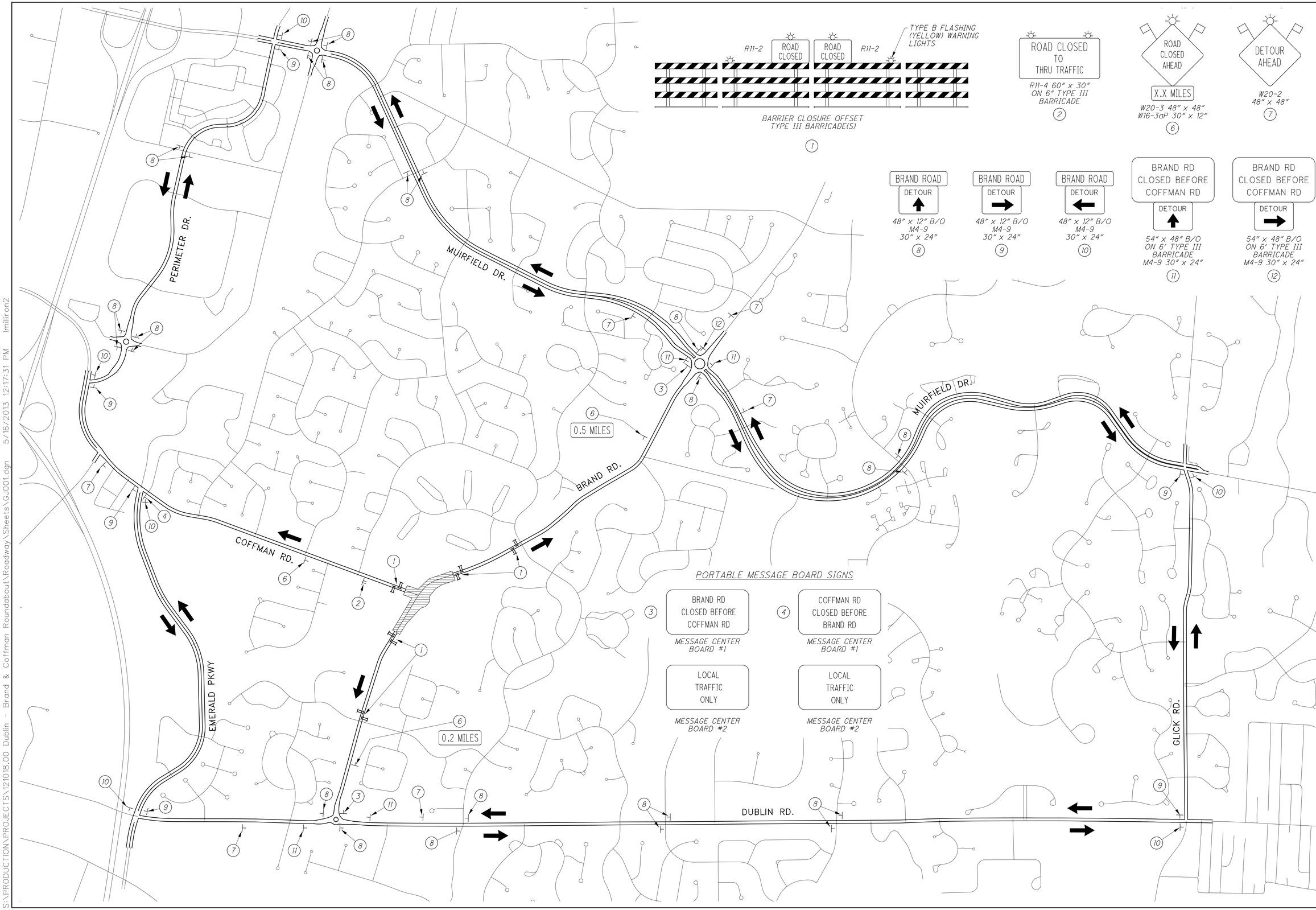
B. DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE BLOCKAGE OF TRAFFIC IS REQUIRED.

LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES. THE CONTRACTOR SHALL UTILIZE ANY OF THE FOLLOWING LAW ENFORCEMENT AGENCY(S): CITY OF DUBLIN, FRANKLIN COUNTY SHERIFF'S OFFICE, OR OHIO STATE HIGHWAY PATROL.

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN	40 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN.



CALCULATED LAM
CHECKED KJG

MAINTENANCE OF TRAFFIC DETOUR MAP

BRAND ROAD / COFFAMN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\GJ001.dgn 5/16/2013 12:17:31 PM lmilliron2

ITEM	DESCRIPTION	TOTAL	UNIT
	GENERAL		
614	MAINTAINING TRAFFIC	1	LUMP
623	CONSTRUCTION LAYOUT STAKES	1	LUMP
624	MOBILIZATION	1	LUMP
	ROADWAY		
201	CLEARING AND GRUBBING	1	LUMP
201	TREE REMOVED, 18" SIZE	21	EACH
201	TREE REMOVED, 30" SIZE	5	EACH
201	TREE REMOVED, 48" SIZE	1	EACH
201	STUMP REMOVED, 18" SIZE	1	EACH
201	STUMP REMOVED, 30" SIZE	1	EACH
202	HEADWALL REMOVED AND DISPOSED OF	6	EACH
202	PAVEMENT REMOVED AND DISPOSED OF	37	SY
202	WALK REMOVED AND DISPOSED OF	531	SF
202	CURB AND GUTTER REMOVED AND DISPOSED OF	292	FT
202	PIPE REMOVED AND DISPOSED OF	811	FT
202	GUARDRAIL REMOVED AND DISPOSED OF	274	FT
202	CATCH BASIN REMOVED AND DISPOSED OF	2	EACH
202	SANDSTONE BLOCK REMOVED, AS PER PLAN	1	EACH
203	EXCAVATION	7653	CY
203	EMBANKMENT	2545	CY
204	SUBGRADE COMPACTION (ROADWAY)	6664	SY
204	SUBGRADE COMPACTION (SUP)	4124	SY
204	SUBGRADE COMPACTION (DRIVEWAYS)	824	SY
608	4" CONCRETE WALK, AS PER PLAN	4253	SF
608	CURB RAMP, AS PER PLAN	16	EACH
608	DETECTABLE WARNING, 2' x 8', AS PER PLAN	16	EACH
653	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	1350	CY
SPECIAL	MAILBOX REMOVED AND RESET	4	EACH
SPECIAL	PROOF SURVEY	1	LUMP
	EROSION CONTROL		
207	PERIMETER FILTER FABRIC FENCE	2000	FT
207	INLET PROTECTION	13	EACH
659	SEEDING AND MULCHING, AS PER PLAN	16,000	SY
659	COMMERCIAL FERTILIZER	2.16	TON
659	WATER	87	M GAL
SPECIAL	NO. 2 STONE CHECK DAM	3	EACH
SPECIAL	TREE PROTECTION FENCE	500	FT
	DRAINAGE		
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER FABRIC	11	CY
603	4" CONDUIT, TYPE F (FOR UNDERDRAIN OUTLETS)	80	FT
604	STANDARD CURB AND GUTTER INLET (AA-S125A) WITH BIKE SAFE GRATE	6	EACH
604	CATCH BASIN (AA-S133A) WITH BIKE SAFE GRATE	3	EACH
604	CATCH BASIN (AA-S133B) WITH BIKE SAFE GRATE	2	EACH
604	MANHOLE, TYPE C (AA-S102)	4	EACH
605	4" PIPE UNDERDRAIN (720.12)	1643	FT
605	4" PIPE UNDERDRAIN, SCH. 80	35	FT
611*	MANHOLE, NO. 3 WITH 84" BASE I.D. AND 6" DIVERSION WEIR	1	EACH
611*	MANHOLE, NO. 3 WITH 90" BASE I.D. AND 8" DIVERSION WEIR	1	EACH
895*	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1	1	EACH
895*	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2	1	EACH
901	12" PIPE, WITH TYPE 1 BEDDING, 706.02	579	LF
901	12" PIPE, WITH TYPE 1 BEDDING WITH ITEM 912 COMPACTED GRANULAR	464	LF
	MATERIAL, 706.02		
901	15" PIPE, WITH TYPE 1 BEDDING, 706.02	176	LF
901	15" PIPE, WITH TYPE 1 BEDDING WITH ITEM 912 COMPACTED GRANULAR	309	LF
	MATERIAL, 706.02		
901	18" PIPE, WITH TYPE 1 BEDDING, 706.02	49	LF
901	24" PIPE, WITH TYPE 1 BEDDING, 706.02	5	LF

ITEM	DESCRIPTION	TOTAL	UNIT
	DRAINAGE CONT.		
901	30"x19" PIPE, WITH TYPE 1 BEDDING, 706.02	144	LF
901	30"x19" PIPE, WITH TYPE 1 BEDDING WITH ITEM 912 COMPACTED GRANULAR	50	LF
	MATERIAL, 706.02		
SPECIAL	12" ADS FLARED END SECTION WITH DISSIMILAR COUPLER	13	EACH
SPECIAL	18" ADS FLARED END SECTION WITH DISSIMILAR COUPLER	1	EACH
SPECIAL	24" ADS FLARED END SECTION WITH DISSIMILAR COUPLER	1	EACH
SPECIAL	FLARED END SECTION FOR CONCRETE ARCH PIPE, 29"x18"	1	EACH
	PAVEMENT		
254	PAVEMENT PLANING, ASPHALT CONCRETE	293	SY
259	DRIVEWAY PAVEMENT REPLACEMENT, TYPE IIIA	2	CY
301	ASPHALT CONCRETE BASE, PG64-22 (ROADWAY)	1950	TON
301	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	125	TON
304	AGGREGATE BASE (ROADWAY)	1058	CY
304	AGGREGATE BASE (SUP)	563	CY
304	AGGREGATE BASE (DRIVEWAYS)	137	CY
407	NTSS – 1HM TRACKLESS TACK COAT	29	GAL
448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22,	422	TON
	MEDIUM TRAFFIC (ROADWAY)		
448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC (SUP)	428	TON
448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22,	63	TON
	MEDIUM TRAFFIC (DRIVEWAYS)		
448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22,	562	TON
	MEDIUM TRAFFIC (ROADWAY)		
452	8" NON-REINFORCED CONCRETE PAVEMENT	38	SY
452	8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	36	SY
609	6" CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN	1567	FT
609	STRAIGHT 18" CONCRETE CURB, AS PER PLAN	1770	FT
609	CONCRETE MOUNTABLE CURB, AS PER PLAN	261	FT
SPECIAL	TRUCK APRON PAVEMENT	204	SY
	WATER		
801	6 INCH WATER PIPE AND FITTINGS	72	LF
802	6 INCH VALVE AND APPURTENANCES	2	EACH
807	VALVE BOXES ADJUSTED TO GRADE	5	EACH
809	FIRE HYDRANT, RELOCATED, AS PER PLAN	4	EACH
SPECIAL	SURVEY COORDINATES	1	LUMP
	LIGHTING *		
625	CONNECTOR KIT, TYPE II	11	EACH
625	CONNECTOR KIT, TYPE III	22	EACH
625	LIGHT POLE, 35'	10	EACH
625	LIGHT POLE FOUNDATION (24" x 7' DEEP), AS PER PLAN	10	EACH
625	TRANSFORMER BASE	10	EACH
625	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	4635	FT
625	NO. 10 AWG POLE AND BRACKET CABLE	1350	FT
625	CONDUIT 2", 725.051	1401	FT
625	CONDUIT 3", 725.051, SCHEDULE 80	142	FT
625	LUMINAIRE, AS PER PLAN	10	EACH
625	TRENCH	1375	FT
625	PULL BOX, 725.06, 18"x11"x18"	5	EACH
625	PULL BOX REMOVED AND DISPOSED OF	2	EACH
625	GROUND ROD	12	EACH
625	PORTION OF LUMINAIRE SUPPORT FOUNDATION REMOVED, AS PER PLAN	3	EACH
625	LUMINAIRE SUPPORT REMOVED FOR STORAGE, AS PER PLAN	3	EACH
625	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	3	EACH
625	DISTRIBUTION CABLE REMOVED AND DISPOSED OF	1395	FT
625	POWER SERVICE, AS PER PLAN	1	EACH
625	PLASTIC CAUTION TAPE	1233	FT
625	CADWELD CONNECTION	12	EACH
SPECIAL	ELECTRICAL LIGHTING TEST, AS PER PLAN	1	LUMP

ITEM	DESCRIPTION	TOTAL	UNIT
	TRAFFIC CONTROL *		
630+	GROUND MOUNTED SUPPORT, NO. 3 POST, TYPE S, AS PER PLAN	372.3	FT
630+	GROUND MOUNTED SUPPORT, NO. 4 POST, TYPE S, AS PER PLAN	41.1	FT
630+	GROUND MOUNTED SUPPORT, ANCHOR POST, 2 1/4" SQUARE, AS PER PLAN	38	EACH
630+	SIGN POST REFLECTOR	14	EACH
630+	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	1	EACH
630+	SIGN, FLAT SHEET	224.7	SF
630	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, AS PER PLAN	12	EACH
630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	11	EACH
644	EDGE LINE, 4"	0.51	MILE
644	CENTER LINE, 4"	0.24	MILE
644	DASHED LINE, 8"	73	FT
644	DASHED LINE, 12"	141	FT
644	CHANNELIZING LINE, 12"	294	FT
644	CROSSWALK LINE, 12"	304	FT
644	TRANSVERSE/DIAGONAL LINE, 24"	140	FT
644	LANE ARROW, 72"	2	EACH
644	YIELD LINE, AS PER PLAN, SHARK TOOTH, 2' x 3'	20	EACH
	HARDSCAPE		
SPECIAL	DRY-LAID STONE RETAINING WALL, 22"-24"	78	FT
SPECIAL	DRY-LAID STONE RETAINING WALL, 14"-16" TO 22"-24"	16	FT
	STRUCTURES		
503	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	1	LUMP
503	UNCLASSIFIED EXCAVATION	1	LUMP
511	CLASS C CONCRETE, FOOTING, AS PER PLAN	66	CY
511	CLASS C CONCRETE, WINGWALL ABOVE FOOTING, AS PER PLAN	37	CY
511	CLASS C CONCRETE, ABUTMENT ABOVE FOOTING, AS PER PLAN	20	CY
518	POROUS BACKFILL WITH FILTER FABRIC	36	CY
518	6" PERFORATED CORRUGATED PIPE, INCLUDING SPECIALS, 720.12	61	FT
518	6" NON-PERFORATED CORRUGATED PIPE, INCLUDING SPECIALS,	56	FT
	720.08, AS PER PLAN		
SPECIAL	PREFABRICATED STEEL TRUSS BRIDGE SUPERSTRUCTURE	1	LUMP
SPECIAL	STONE VENEER	960	SF
SPECIAL	POLYSULFIDE CAULKING FOR STONE VENEER	2880	FT
	MAINTENANCE OF TRAFFIC		
614	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	9	SIGN MNTH
614	LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN	40	HOUR

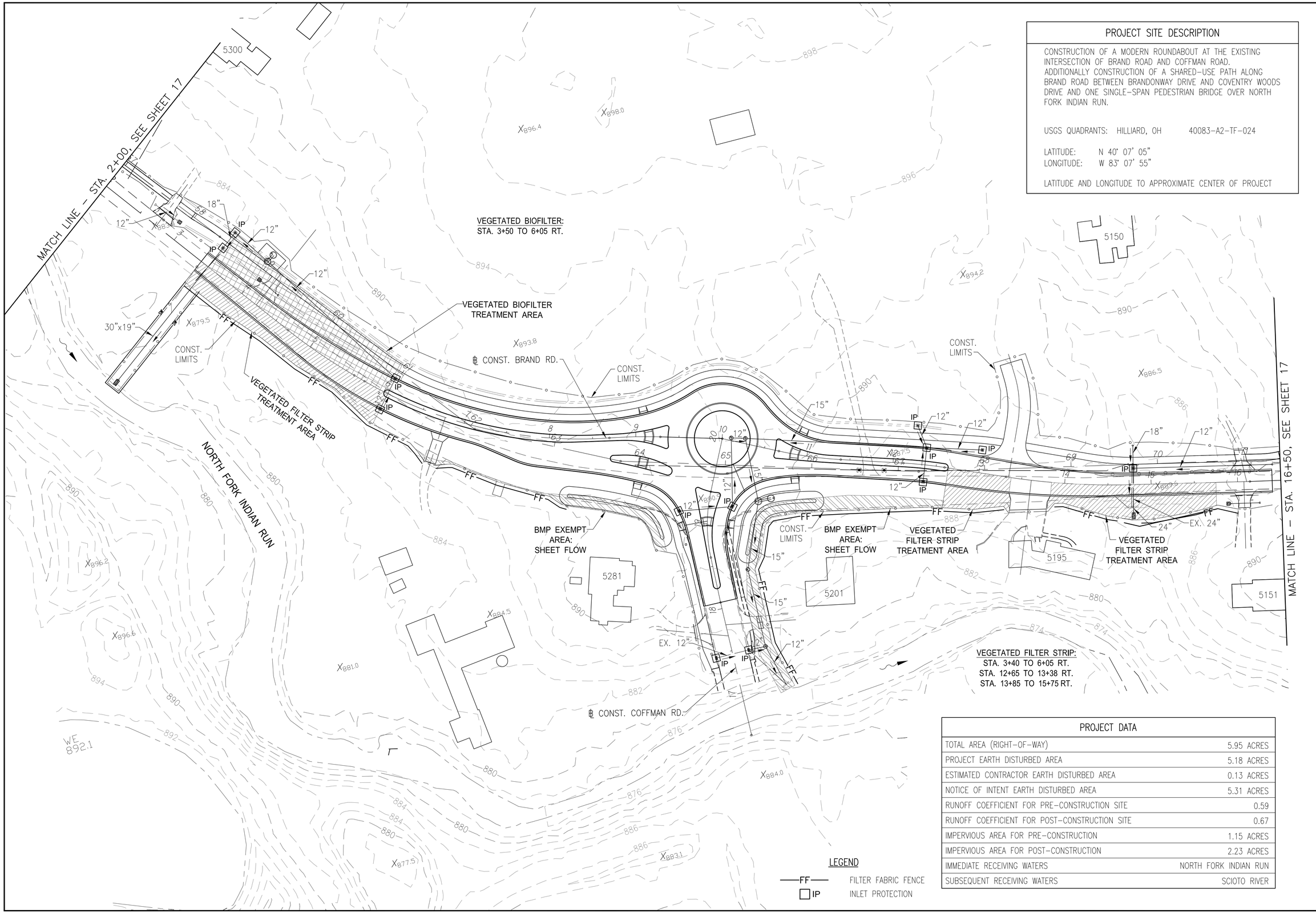
* DENOTES OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (2013 EDITION). ALL OTHER ITEMS REFERENCE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

+ ITEM TO BE FURNISHED AND INSTALLED BY THE CITY OF DUBLIN.

CALCULATED LMO
CHECKED KJG

GENERAL SUMMARY

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



PROJECT SITE DESCRIPTION

CONSTRUCTION OF A MODERN ROUNDABOUT AT THE EXISTING INTERSECTION OF BRAND ROAD AND COFFMAN ROAD. ADDITIONALLY CONSTRUCTION OF A SHARED–USE PATH ALONG BRAND ROAD BETWEEN BRANDONWAY DRIVE AND COVENTRY WOODS DRIVE AND ONE SINGLE–SPAN PEDESTRIAN BRIDGE OVER NORTH FORK INDIAN RUN.

USGS QUADRANTS: HILLIARD, OH 40083–A2–TF–024

LATITUDE: N 40° 07' 05"
LONGITUDE: W 83° 07' 55"

LATITUDE AND LONGITUDE TO APPROXIMATE CENTER OF PROJECT

PROJECT DATA

TOTAL AREA (RIGHT–OF–WAY)	5.95 ACRES
PROJECT EARTH DISTURBED AREA	5.18 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	5.31 ACRES
RUNOFF COEFFICIENT FOR PRE–CONSTRUCTION SITE	0.59
RUNOFF COEFFICIENT FOR POST–CONSTRUCTION SITE	0.67
IMPERVIOUS AREA FOR PRE–CONSTRUCTION	1.15 ACRES
IMPERVIOUS AREA FOR POST–CONSTRUCTION	2.23 ACRES
IMMEDIATE RECEIVING WATERS	NORTH FORK INDIAN RUN
SUBSEQUENT RECEIVING WATERS	SCIOTO RIVER

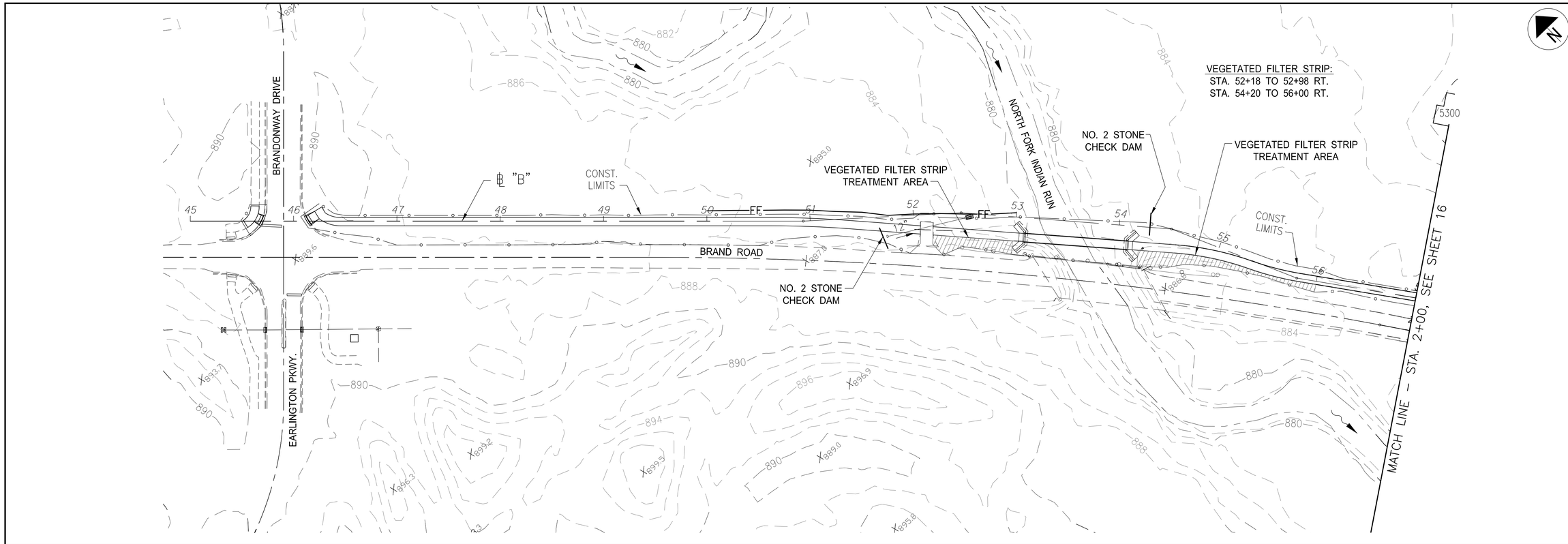
N

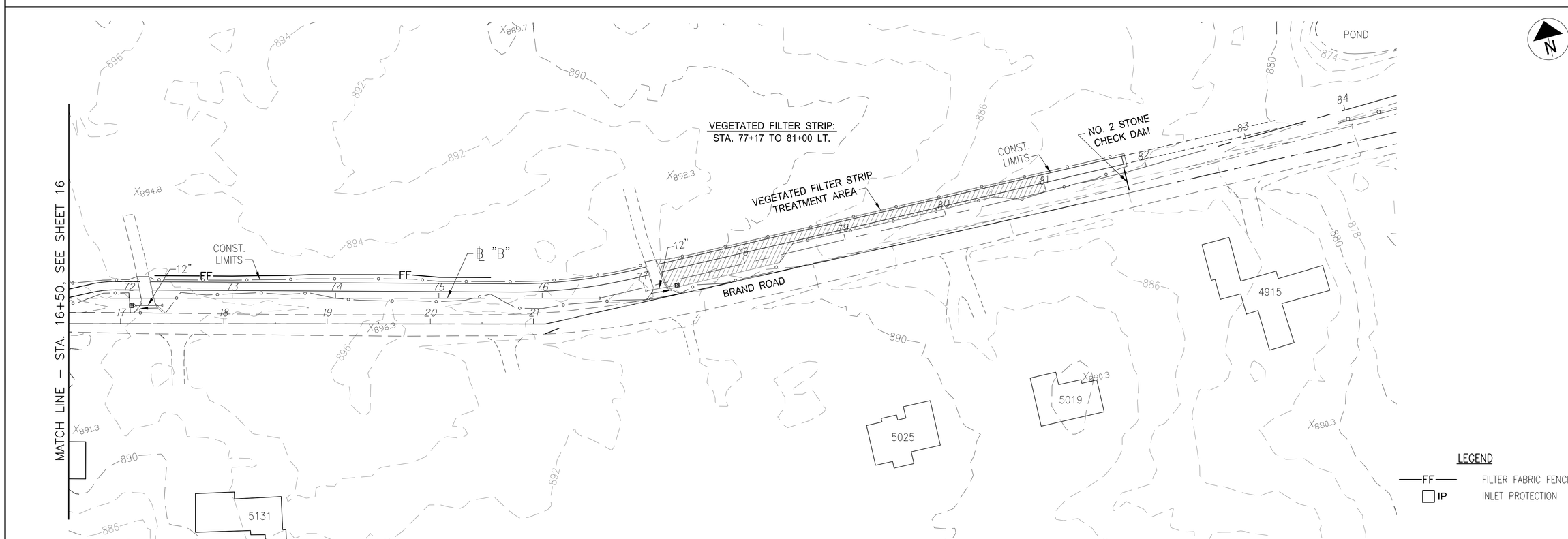
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED LMO
CHECKED KJG

EROSION CONTROL PLAN

BRAND ROAD / COFFMAN ROAD ROUNDABOUT





HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LMO
CHECKED KJG

EROSION CONTROL PLAN

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

GENERAL NOTES

1. A DETAILED TEMPORARY AND PERMANENT EROSION CONTROL PLAN MUST BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL BEFORE CONSTRUCTION IF ONE IS NOT INCLUDED IN THE PLANS. THE DESIGN OF EROSION CONTROL SYSTEMS SHALL FOLLOW THE REQUIREMENTS OF OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD SPECIFICATIONS, AND THE CITY ENGINEER. THE CONTRACTOR SHALL BE CONSIDERED THE DEVELOPER OF THE STORMWATER DISCHARGE.

2. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE WATER LEAVES THE PROJECT, INCLUDING WATERWAYS, OVERLAND SHEET FLOW, AND STORM SEWERS, WHETHER SPECIFICALLY SHOWN ON THE PLANS OR NOT.

3. ACCEPTED METHODS OF PROVIDING EROSION/SEDIMENT CONTROL INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT FILTERS, SILT FILTER FENCE, ROCK CHECK DAMS, AND TEMPORARY GROUND COVER.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.

5. DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR 45 DAYS OR MORE SHALL BE SEEDED WITHIN 7 CALENDAR DAYS OF THE DISTURBANCE. OTHER SEDIMENT CONTROLS THAT ARE INSTALLED SHALL BE MAINTAINED UNTIL VEGETATIVE GROWTH HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY SEDIMENT DEVICES AT THE CONCLUSION OF CONSTRUCTION BUT NOT BEFORE GROWTH OF PERMANENT GROUND COVER.

6. ALL DENUDED AREAS, INCLUDING STOCKPILED TOPSOIL AND EXCAVATED MATERIAL, ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING, OR COVERED WITH ANCHORED STRAW MULCH.

7. FINAL GRADING WILL BE CONSISTENT WITH PRECONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.

8. REMOVE ONLY THE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED TO PERMIT ACTUAL CONSTRUCTION. PROTECT THE REMAINING TO PRESERVE THEIR AESTHETIC AND EROSION CONTROL VALUE.

9. BACKFILL TRENCHES IMMEDIATELY AFTER USE. SEED AND MULCH TRENCH AREA WITHIN 2 WEEKS AFTER AREA OR SECTION HAS BEEN OPENED.

10. SETTLING FACILITIES, SEDIMENT FILTERS, PERIMETER CONTROLS, AND OTHER PRACTICES INTENDED TO TRAP SEDIMENT SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING OR CONSTRUCTION AND WITHIN 7 DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RESTABILIZED.

11. STORM SEWER INLET PROTECTION – ALL STORM SEWER INLETS WHICH ACCEPT WATER RUNOFF FROM THE PROJECT AREA SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL NOT ENTER THE STORM SEWER SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT, UNLESS THE STORM SEWER SYSTEM DRAINS TO A SETTLING FACILITY. THESE CONTROLS SHALL BE SELECTED AND LOCATED AS INDICATED IN THE PLANS AND AS DIRECTED BY THE CITY ENGINEER.

12. WORKING IN OR CROSSING STREAMS – STREAMS INCLUDING BED AND BANKS SHALL BE RESTABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED, INTERRUPTED, OR STOPPED. TO THE EXTENT PRACTICABLE, CONSTRUCTION VEHICLES SHALL BE KEPT OUT OF STREAMS. WHERE IN-CHANNEL WORK IS NECESSARY, PRECAUTIONS SHALL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION. WHERE A STREAM MUST BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY CULVERT SHALL BE PROVIDED.

13. CONSTRUCTION ACCESS ROUTES – MEASURES SHALL BE TAKEN TO PREVENT SOIL TRANSPORT ONTO SURFACES WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, OR ONTO PUBLIC ROADS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT OFF-SITE TRACKING OF SEDIMENTS BY VEHICLES AND EQUIPMENT IS ELIMINATED.

14. SLOUGHING AND DUMPING – NO SOIL, ROCK, DEBRIS, OR ANY OTHER MATERIAL SHALL BE DUMPED OR PLACED INTO A WATER RESOURCE OR INTO SUCH PROXIMITY THAT IT MAY READILY SLOUGH, SLIP, OR ERODE INTO A WATER RESOURCE UNLESS SUCH DUMPING OR PLACING IS AUTHORIZED BY THE CITY ENGINEER. UNSTABLE SOILS PRONE TO SLIPPING OR LANDSLIDING SHALL NOT BE GRADED, EXCAVATED, FILLED, OR HAVE LOADS IMPOSED UPON THEM UNLESS THE WORK IS DONE IN ACCORDANCE WITH A QUALIFIED PROFESSIONAL ENGINEER'S RECOMMENDATIONS TO CORRECT, ELIMINATE, OR ADEQUATELY ADDRESS THE PROBLEMS.

15. MAINTENANCE AND INSPECTION – ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED AND CONSTRUCTED TO MINIMIZE MAINTENANCE REQUIREMENTS. THEY SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND INSPECTION OF ALL EROSION/SEDIMENT CONTROL DEVICES REQUIRED BY THE CITY ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY ENGINEER, ONCE EVERY 7 CALENDAR DAYS AND/OR WITHIN 24 HOURS AFTER A RAIN EVENT OF GREATER THAN 0.5 INCHES IN A 24-HOUR PERIOD. THESE INSPECTIONS SHALL IDENTIFY AREAS CONTRIBUTING TO STORMWATER DISCHARGES ASSOCIATED WITH THE PROJECT; EVALUATE THE ADEQUACY, IMPLEMENTATION, AND MAINTENANCE OF EXISTING AND PROPOSED EROSION/SEDIMENTATION MEASURES; AND DETERMINE WHETHER ADDITIONAL MEASURES ARE REQUIRED. ACCEPTABLE INSPECTION REPORTS SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ENGINEER WITHIN 48 HOURS OF INSPECTION COMPLETION. THE REPORT SHALL CONTAIN THE RESULTS OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN, A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE PLAN, AND IDENTIFYING ANY INCIDENTS OF NONCOMPLIANCE.

16. OUTFLOWS FROM DEWATERING OPERATIONS – ALL WATER PRODUCED FROM CLEANING AND DEWATERING OPERATIONS, WHETHER SPECIFICALLY FROM TRENCH DEWATERING OPERATIONS OR FROM MORE EXTENSIVE DEWATERING OPERATIONS, SHALL BE DISCHARGED IN SUCH A MANNER AS TO ELIMINATE EROSION FROM SUCH DISCHARGE.

17. ADDITIONAL CONTROLS – THE CONTRACTOR SHALL ENSURE THAT NO SEDIMENTS ARE TRACKED OFF-SITE BY CONSTRUCTION EQUIPMENT, VEHICLES, AND WORKERS. THE CONTRACTOR SHALL ALSO ENSURE THAT NO SOLID OR LIQUID WASTE IS DISCHARGED INTO ANY STORMWATER FLOW.

18. TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AVAILABILITY AND UPDATES – THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM ALL UPDATES AND ADJUSTMENTS TO THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN.

PROHIBITED CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL NOT USE CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS THAT MAY UNNECESSARILY IMPACT THE NATURAL ENVIRONMENTAL OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOOD PLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.

2. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.

3. PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM DRAINS.

4. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, AND/OR ANY OTHER HARMFUL WASTE, INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.

5. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOWLINE OF A STREAM.

6. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.

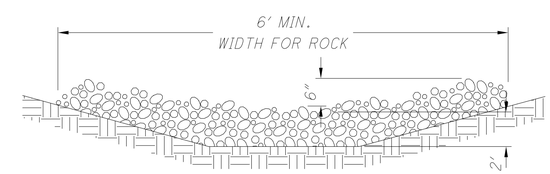
7. DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, WETLANDS, OR SURFACE WATERS.

8. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.

9. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY (PUBLIC OR PRIVATE) NOT PREVIOUSLY SPECIFIED BY THE CITY ENGINEER FOR SAID PURPOSES.

NO. 2 STONE CHECK DAM

FURNISH MATERIAL CONFORMING TO ITEM 601 – ROCK CHANNEL PROTECTION, NO. 2 STONE, WITHOUT FILTER. PLACE THE ROCK OUTSIDE THE TRAFFIC CLEAR ZONE IN THE DITCH. THIS WORK SHALL BE PAID AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM SPECIAL, NO. 2 STONE CHECK DAM.



MINIMUM DIMENSIONS: 2' HIGH x 6' WIDTH x 3' LONG

ELEVATION VIEW

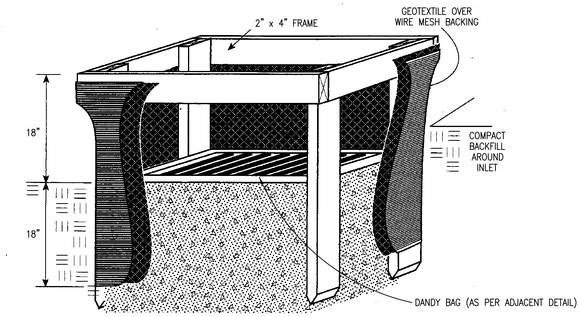
NO. 2 STONE CHECK DAM DETAIL

CALCULATED LMO
CHECKED KJG

EROSION CONTROL NOTES AND DETAILS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

EROSION AND SEDIMENT CONTROL DETAILS



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.

2. The earth around the inlet shall be excavated completely to a depth at least 18 in.

3. The wooden frame shall be constructed of 2-by-4-in. construction-grade lumber. The 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.

4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.

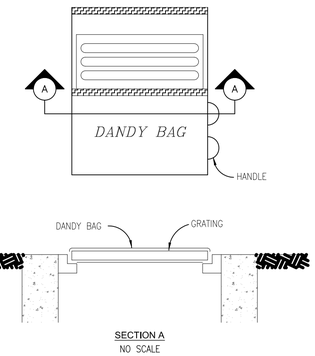
5. Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.

6. Backfill shall be placed around the inlet in compacted 6-in. layers until the earth is even with notch elevation on ends and top elevation on sides.

7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

INLET PROTECTION DETAIL

FOR CATCH BASINS

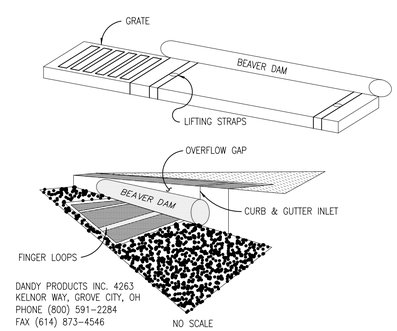


INSTALLATION: STAND GRATE ON END. PLACE DANDY BAG OVER GRATE. FLIP GRATE OVER SO THAT OPEN END IS UP. PULL UP SLACK. TUCK FLAP IN. BE SURE END OF GRATE IS COMPLETELY COVERED BY FLAP OR DANDY BAG WILL NOT FIT PROPERLY. HOLDING HANDLES, CAREFULLY PLACE DANDY BAG WITH GRATE INSERTED INTO CATCH BASIN FRAME SO THAT RED DOT ON THE TOP OF THE DANDY BAG IS VISIBLE.

MAINTENANCE: AFTER SILT HAS DRIED, REMOVE IT FROM THE SURFACE OF DANDY BAG WITH BROOM.

DANDY BAG DETAIL

FOR CATCH BASINS



INSTALLATION: STAND GRATE ON END. SLIDE THE BEAVER DAM BAG ON WITH DAM ON TOP OF GRATE. PULL ALL EXCESS DOWN. LAY UNIT ON ITS SIDE. CAREFULLY TUCK FLAP IN. PRESS VELCRO STRIPS TOGETHER. INSTALL THE UNIT MAKING SURE FRONT EDGE OF GRATE IS INSERTED IN FRAME FIRST THEN LOWER BACK INTO PLACE. PRESS VELCRO DOTS TOGETHER WHICH ARE LOCATED UNDER LIFTING STRAPS. THIS INSURES STRAPS REMAIN FLUSH WITH GUTTER.

MAINTENANCE: WITH A STIFF BRISTLE BROOM SWEEP SILT & OTHER DEBRIS OFF SURFACE AFTER EACH EVENT.

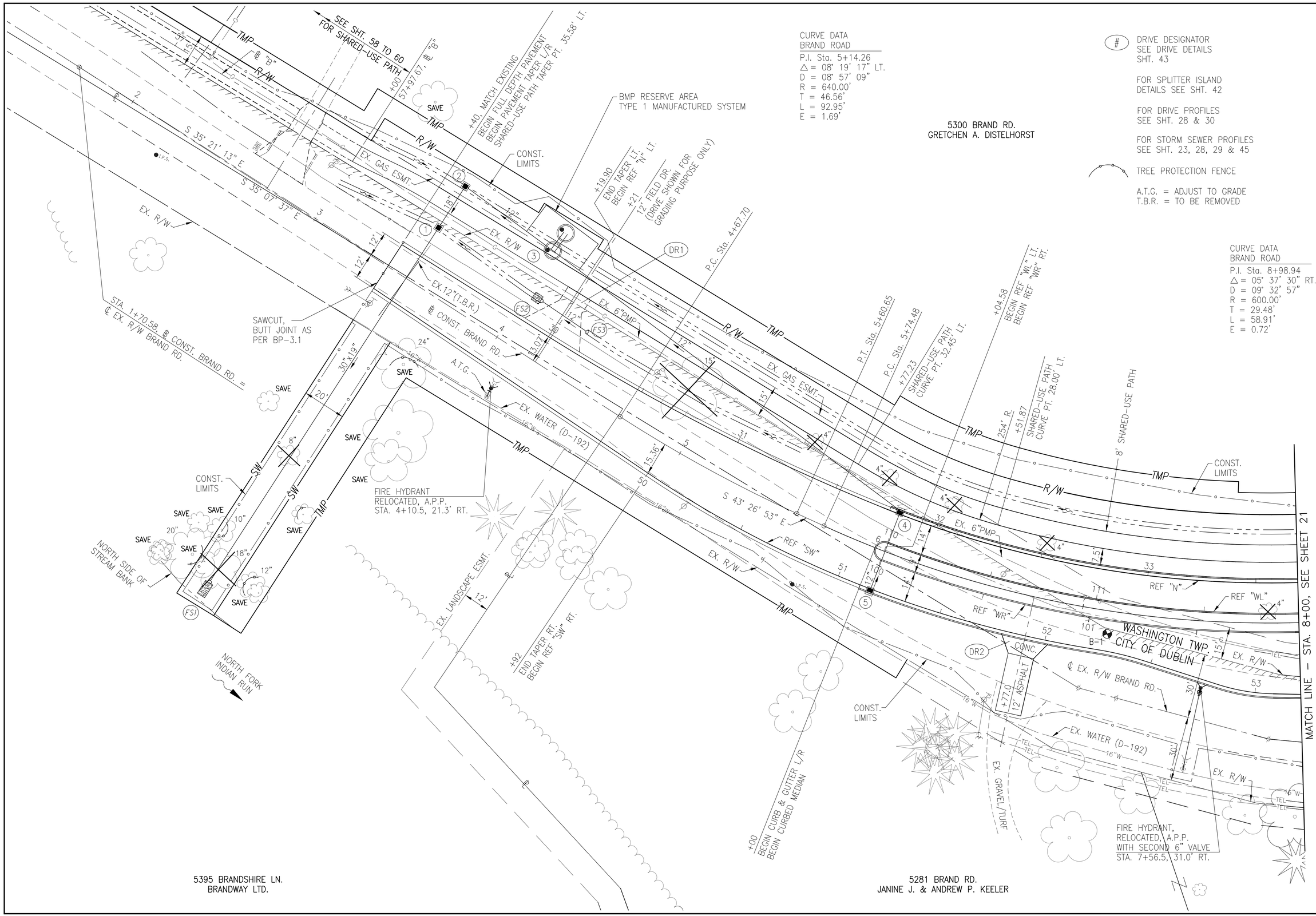
BEAVER DAM DETAIL

FOR CURB & GUTTER INLETS

CALCULATED LMO
CHECKED KJG

EROSION CONTROL NOTES AND DETAILS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



CURVE DATA
BRAND ROAD

P.I. Sta. 5+14.26
△ = 08° 19' 17" LT.
D = 08° 57' 09"
R = 640.00'
T = 46.56'
L = 92.95'
E = 1.69'

5300 BRAND RD.
GRETCHEN A. DISTELHORST

DRIVE DESIGNATOR SEE DRIVE DETAILS SHT. 43

FOR SPLITTER ISLAND DETAILS SEE SHT. 42

FOR DRIVE PROFILES SEE SHT. 28 & 30

FOR STORM SEWER PROFILES SEE SHT. 23, 28, 29 & 45

TREE PROTECTION FENCE

A.T.G. = ADJUST TO GRADE
T.B.R. = TO BE REMOVED

CURVE DATA
BRAND ROAD

P.I. Sta. 8+98.94
△ = 05° 37' 30" RT.
D = 09° 32' 57"
R = 600.00'
T = 29.48'
L = 58.91'
E = 0.72'

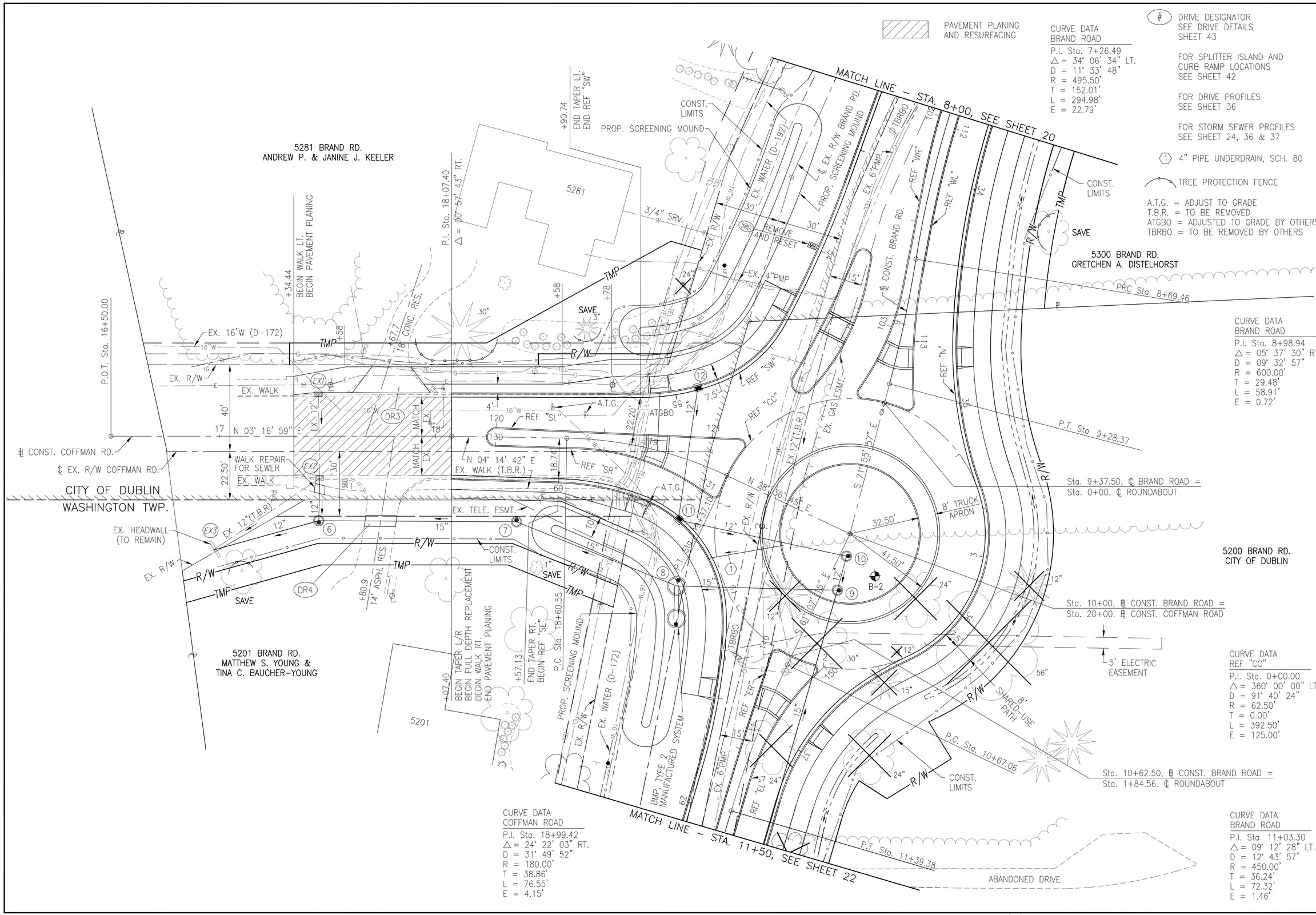
N

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED LAM
CHECKED KJG

PLAN - BRAND ROAD STA. 2+00 TO STA. 8+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



PLAN - BRAND RD. / COFFMAN ROAD
STA. 16+50 TO 20+00 / STA. 8+00 TO 11+50

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT

CURVE DATA
BRAND ROAD
P.I. Sta. 12+35.86
△ = 05° 32' 54" RT.
D = 11° 35' 12"
R = 494.50'
T = 23.96'
L = 47.89'
E = 0.58'

5200 BRAND RD.
CITY OF DUBLIN

CURVE DATA
BRAND ROAD
P.I. Sta. 14+03.95
△ = 10° 18' 31" LT.
D = 07° 09' 43"
R = 800.00'
T = 72.16'
L = 143.93'
E = 3.25'

5150 BRAND RD.
JERRY G. III & MARSHA M. SPEARS

5144 BRAND RD.
DAVIDSON PHILLIPS INC.

STA. 16+14.27, ℄ CONST. BRAND RD. =
℄ EX. R/W BRAND RD.

SEE SHT. 60 TO 62
FOR SHARED-USE PATH

DR5
SEE SHEET 44 FOR
COMMERCIAL DRIVE DETAIL

MATCH LINE – STA. 11+50, SEE SHEET 21

8' SHARED-USE PATH
P.C. Sta. 12+11.90
+11.90 BEGIN SHARED-USE PATH TAPER PT. 28.00' LT.
P.T. Sta. 12+59.78
+88.89 SHARED-USE PATH TAPER PT. 33.29' LT.
P.C. Sta. 13+31.79
+26.40 SHARED-USE PATH CURVE PT. 27.76' LT.
P.T. Sta. 14+75.72
+87.07 SHARED-USE PATH CURVE PT. 23.48' LT.
+94.80 END TAPER LT. END REF "N"
+40, MEET EXISTING END FULL DEPTH PAVEMENT
+50 71+41.74, ℄ "B"
+105 12' ASPH. RES.
+07.4 13.5' GRAVEL RES.
+61.2 43' ASPH. RES.
+56.26 END REF "SE"
+75.72, DR6 END TAPER RT.
+64.28 END CURB & GUTTER L/R END CURBED MEDIAN

CONST. LIMITS
R/W
EX. R/W
EX. GAS ESMT.
EX. 6"PMP
EX. HEADWALL (T.B.R.)
EX. 12" (T.B.R.)
REF "EL"
REF "ER"
REF "SE"
REF "N"
TBRBO
B-3
℄ CONST. BRAND RD.
S 75° 05' 19" E
S 75° 40' 39" E
15 EX. GUARDRAIL (T.B.R.)
3.5' SHOULDER
REMOVE AND RESET
A.T.G.
EX. WATER (D-172)
FIRE HYDRANT, RELOCATED, A.P.P. WITH SECOND 6" VALVE STA. 12+58, 22.5' RT.
PERM. ESMT.
TMP
SAVE
DR6
DR7
DR8
FS4
FS5
FS6
FS7
FS8
SAWCUT, BUTT JOINT AS PER BP-3.1
FIRE HYDRANT, RELOCATED, A.P.P. STA. 16+31.4, 20' RT.
SEE CROSS SECTION SHT. 34 FOR STM. SEWER AND RCP DETAIL.
EX. SANDSTONE BLOCK THE CONTRACTOR SHALL MOVE TO 5200 BRAND RD. AT LOCATION DIRECTED BY THE ENGINEER

5195

5151

5195 BRAND RD.
DENNIS W. RICHARDSON

5151 BRAND RD.
JON L. & COLLEEN M. REYNOLDS

5201 BRAND RD.
MATTHEW S. YOUNG &
TINA C. BAUCHER-YOUNG

A.T.G. = ADJUST TO GRADE
T.B.R. = TO BE REMOVED
TBRBO = TO BE REMOVED BY OTHERS

(#) DRIVE DESIGNATOR SEE DRIVE DETAILS SHT. 43

FOR DRIVE PROFILES SEE SHT. 33, 35 & 44

FOR SPLITTER ISLAND DETAILS SEE SHT. 42

FOR STORM SEWER PROFILES SEE SHT. 23, 24, 32 & 34

TREE PROTECTION FENCE

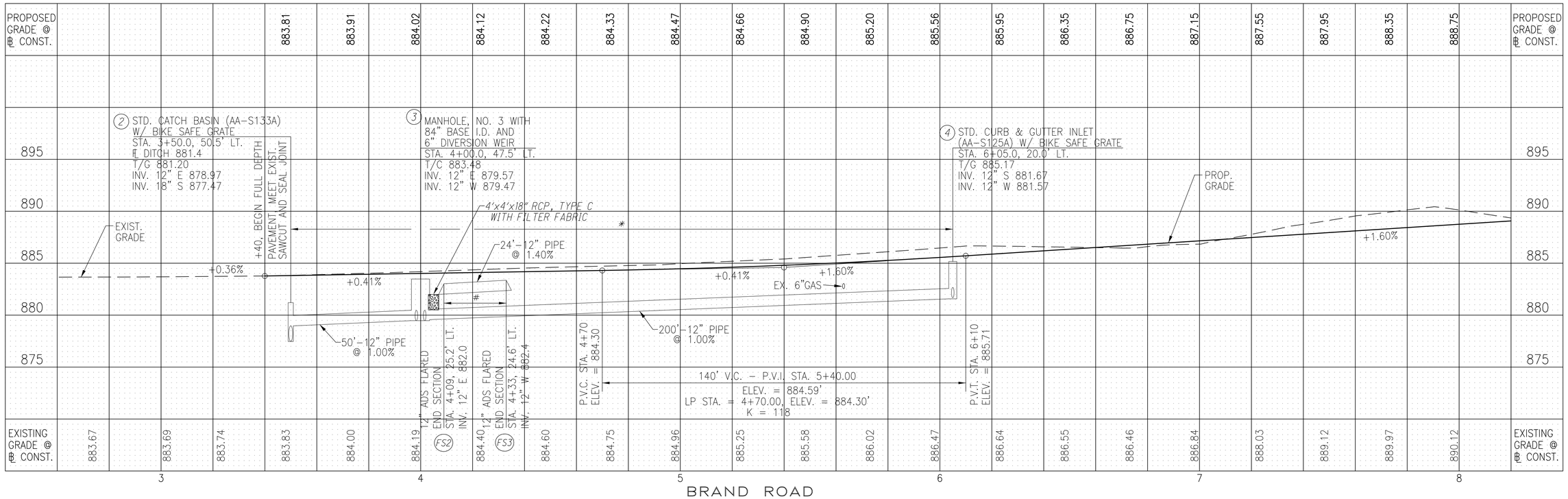
N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

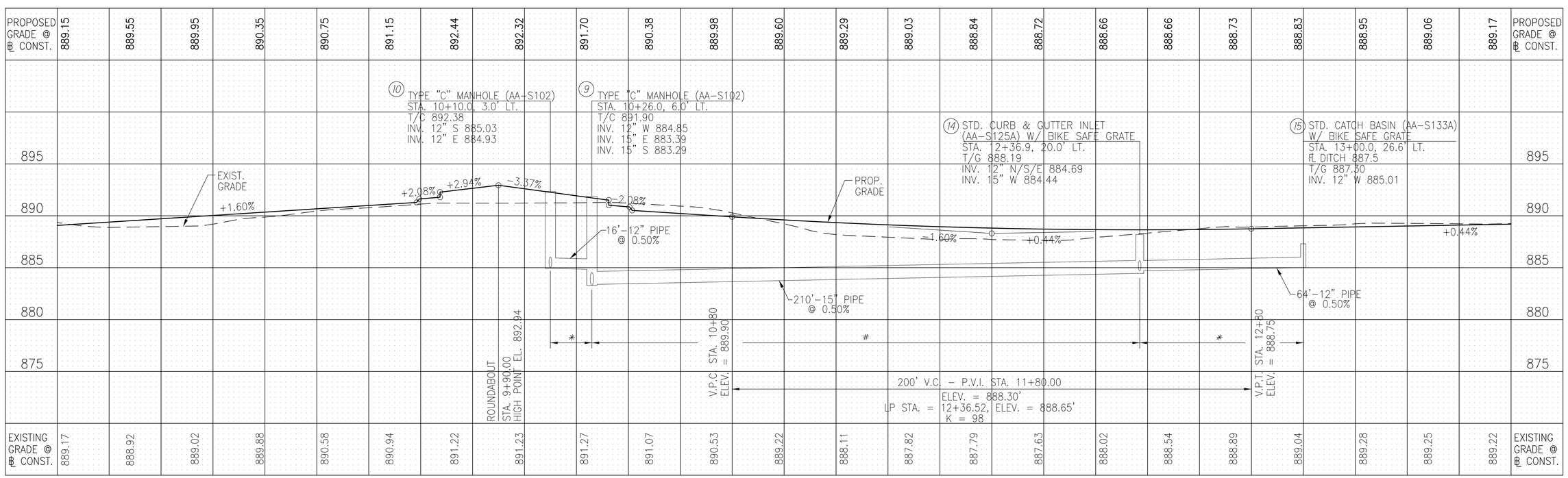
PLAN - BRAND ROAD STA. 11+50 TO STA. 17+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



FOR ADDITIONAL STORM SEWER PROFILES SEE SHEETS 28, 29, 32 AND 45

EXISTING UNDERGROUND UTILITY LOCATIONS ARE ESTIMATED

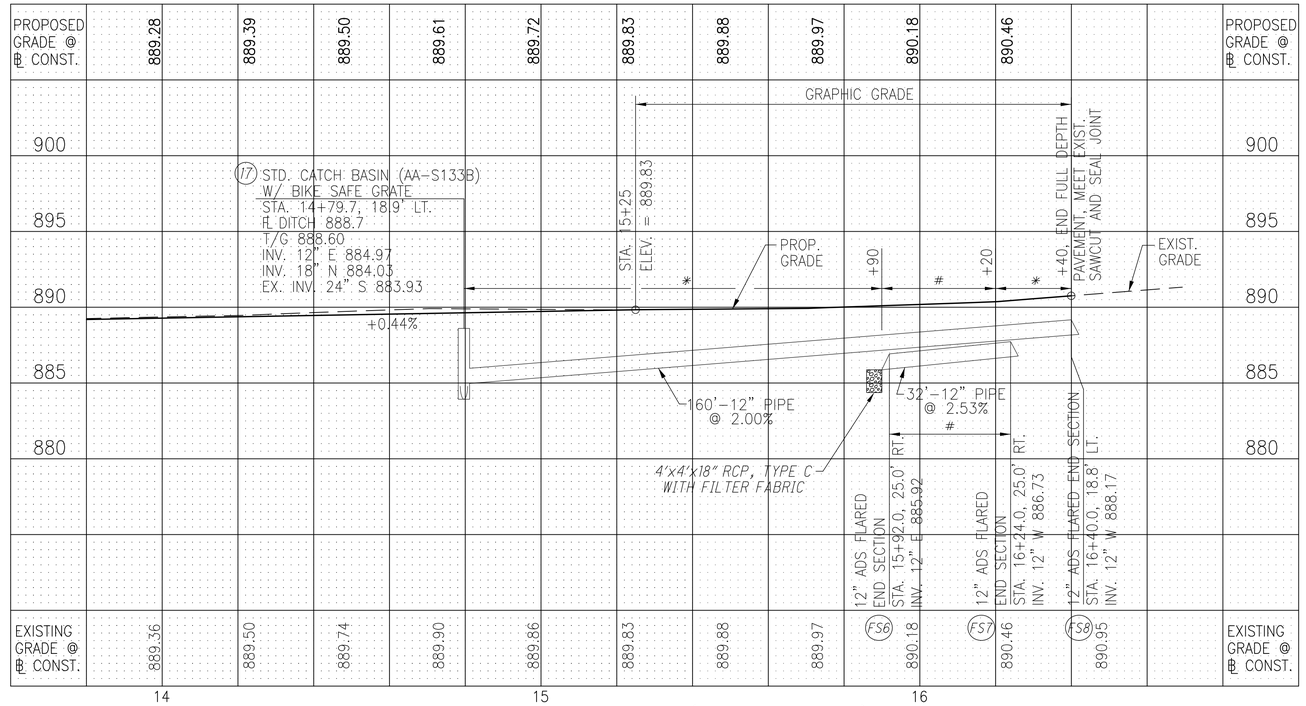


* ITEM 911 - COMPACTED BACKFILL
\# ITEM 912 - COMPACTED GRANULAR MATERIAL

CALCULATED LAM
CHECKED KJG

PROFILE
BRAND ROAD

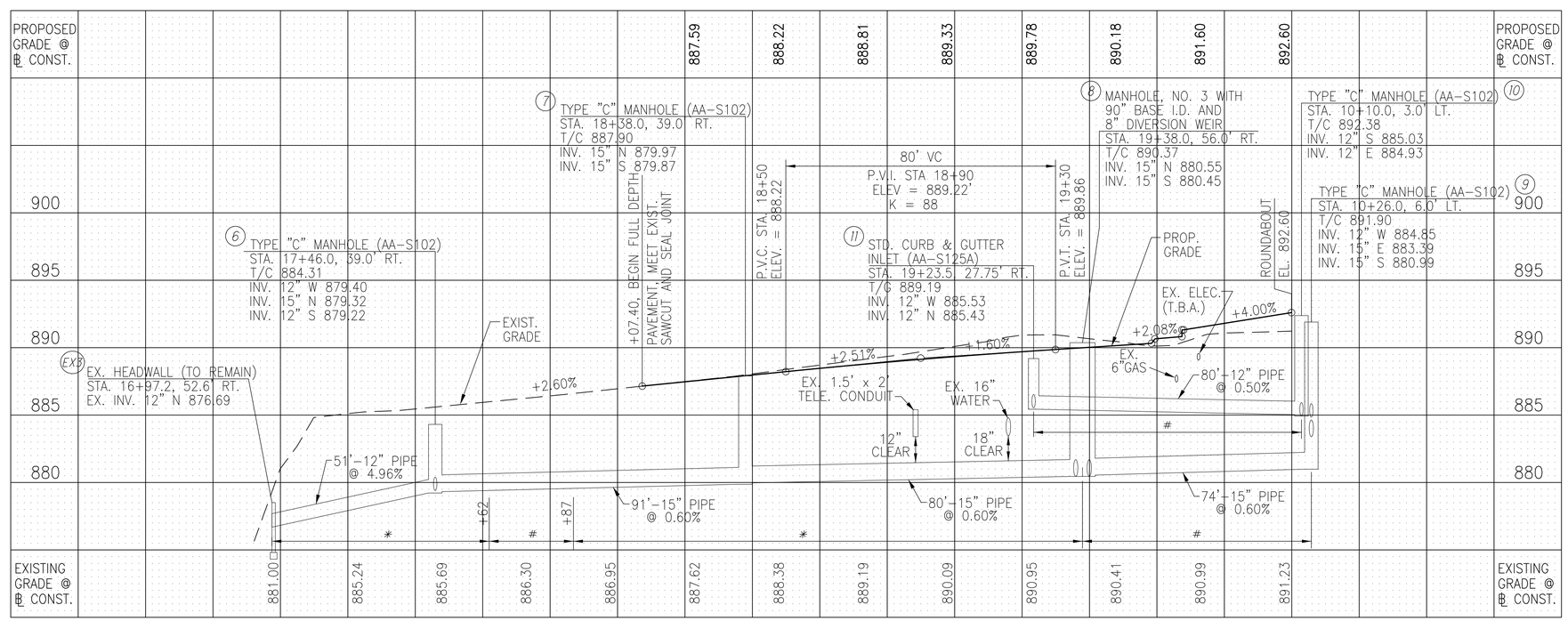
BRAND ROAD / COFFMAN ROAD ROUNDABOUT



BRAND ROAD – (CONTINUED)

FOR ADDITIONAL STORM SEWER PROFILES SEE SHEETS 34, 36, AND 37

EXISTING UNDERGROUND UTILITY LOCATIONS ARE ESTIMATED



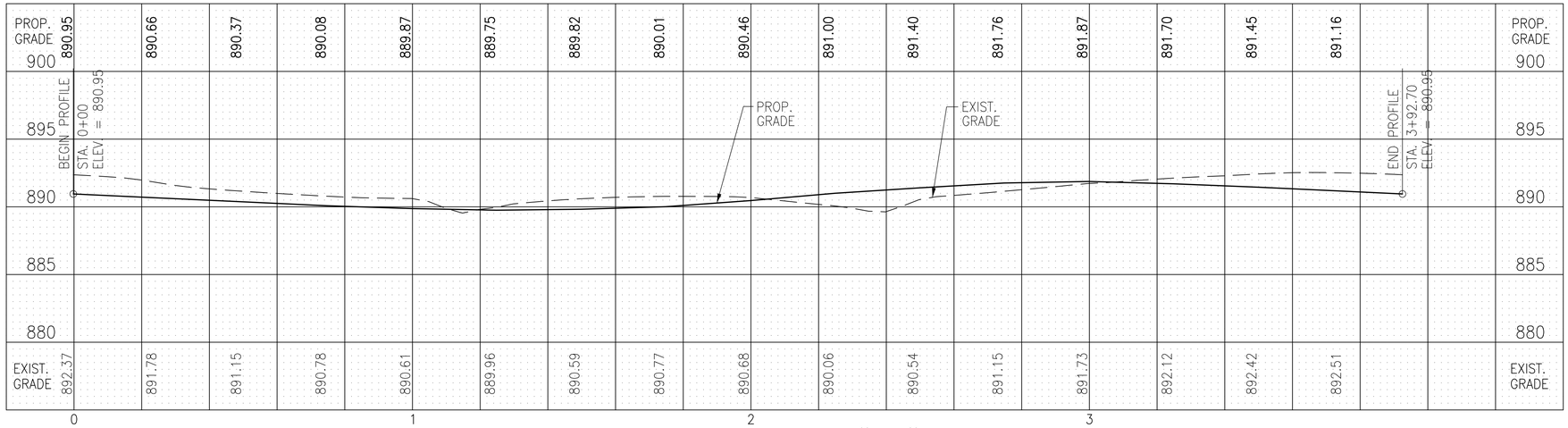
COFFMAN ROAD

* ITEM 911 - COMPACTED BACKFILL
\# ITEM 912 - COMPACTED GRANULAR MATERIAL

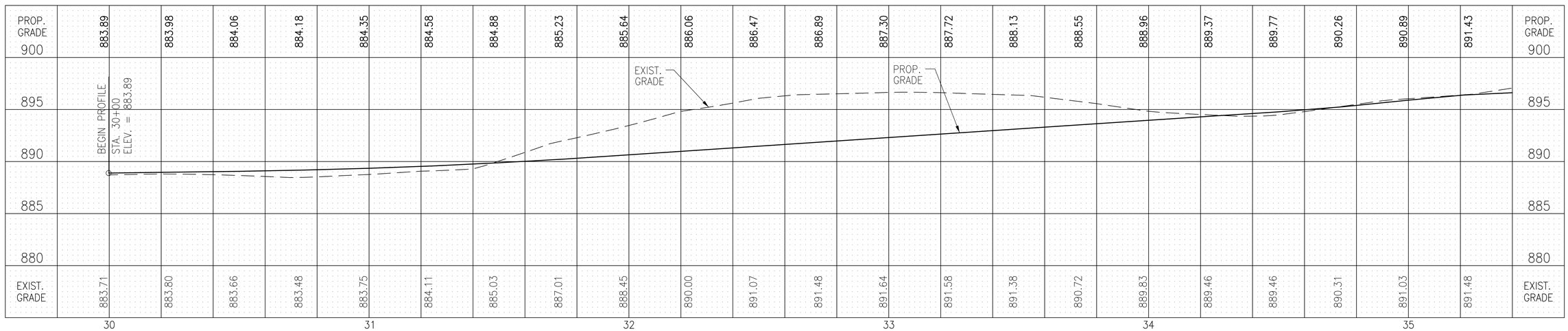
CALCULATED LAM
CHECKED KJG

PROFILES
BRAND ROAD / COFFMAN ROAD

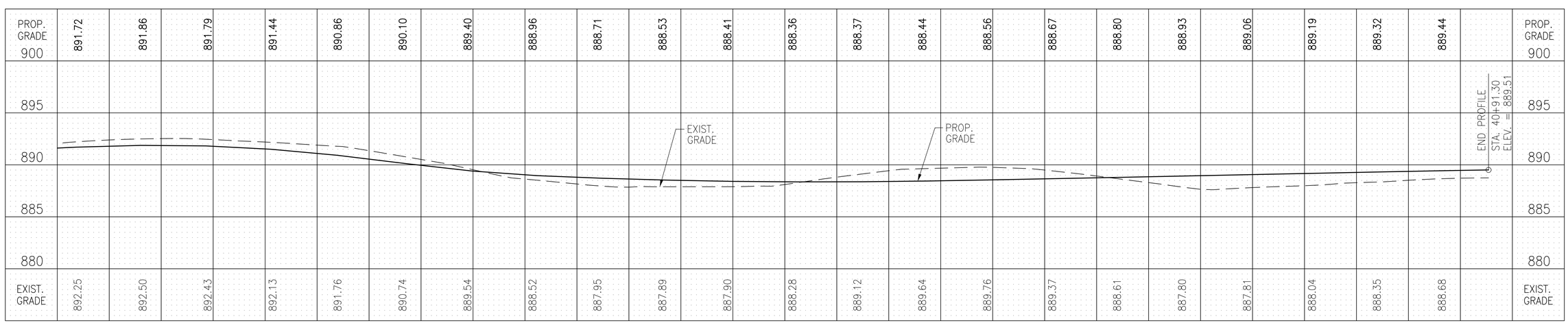
BRAND ROAD / COFFMAN ROAD ROUNDABOUT



ROUNDABOUT REF "CC"



REF "N"

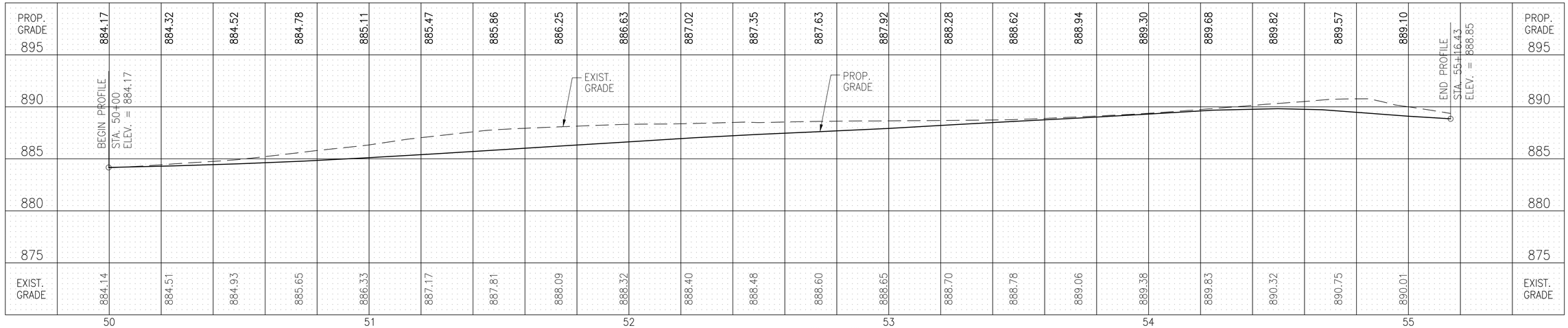


REF "N" (CONTINUED)

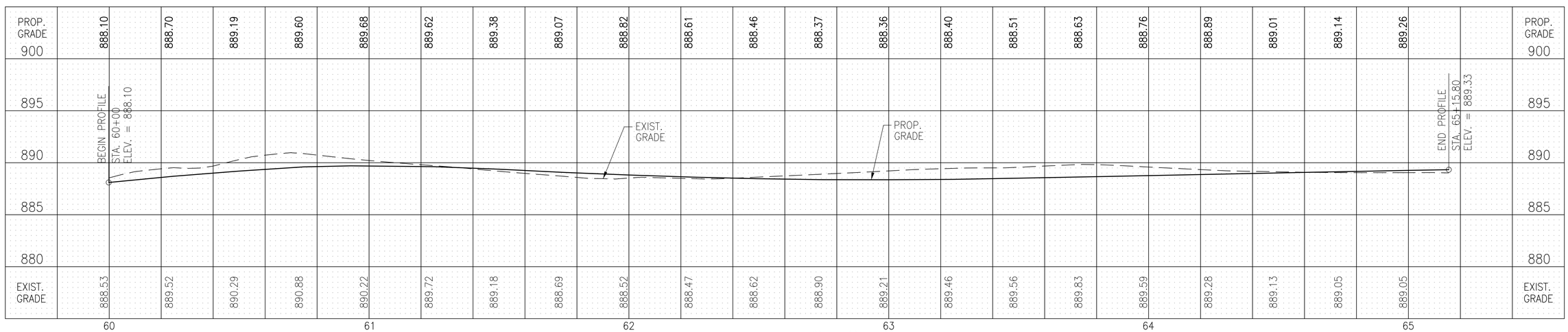
CALCULATED LAM
CHECKED KJG

PROFILES
ROUNDABOUT / REF "N" / REF "N"

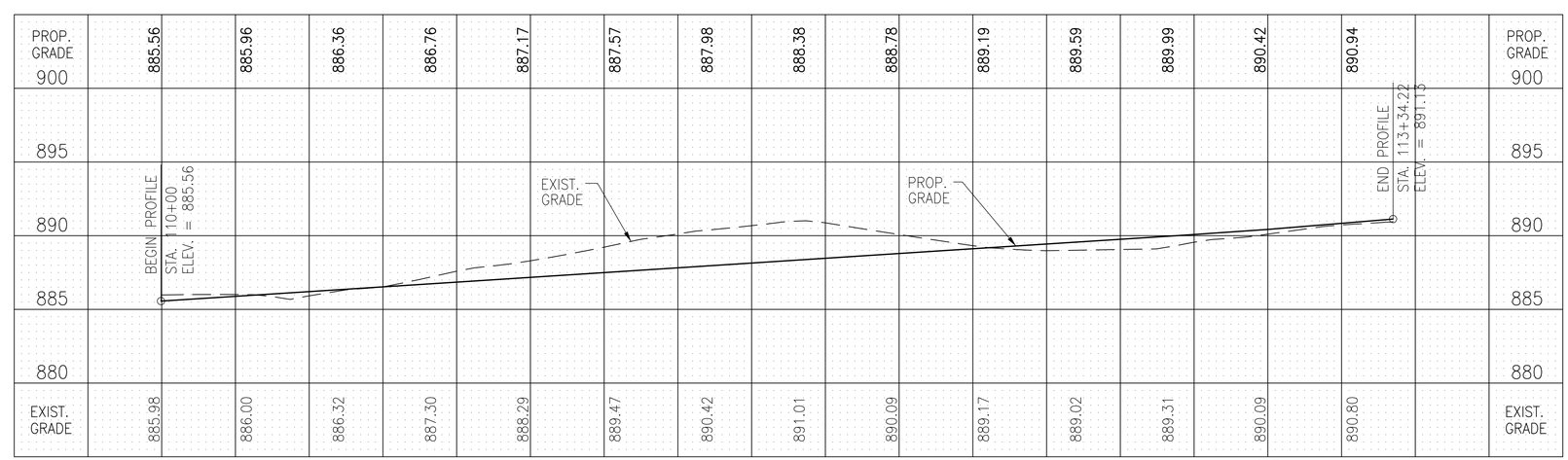
BRAND ROAD / COFFMAN ROAD
ROUNDABOUT



REF "SW"



REF "SE"

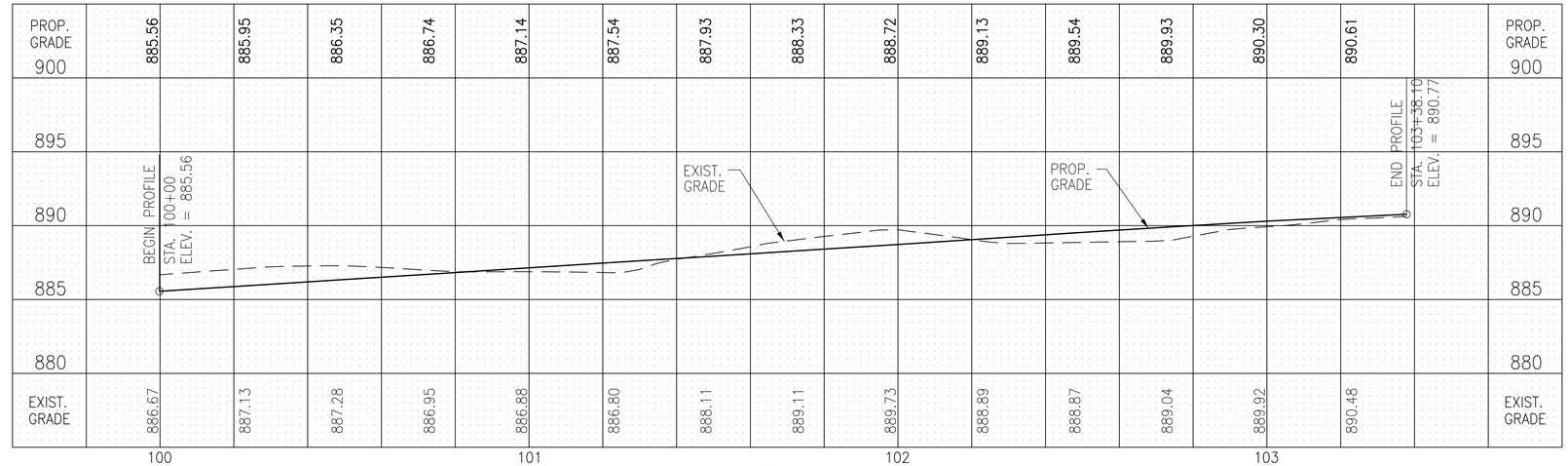


REF "WL"

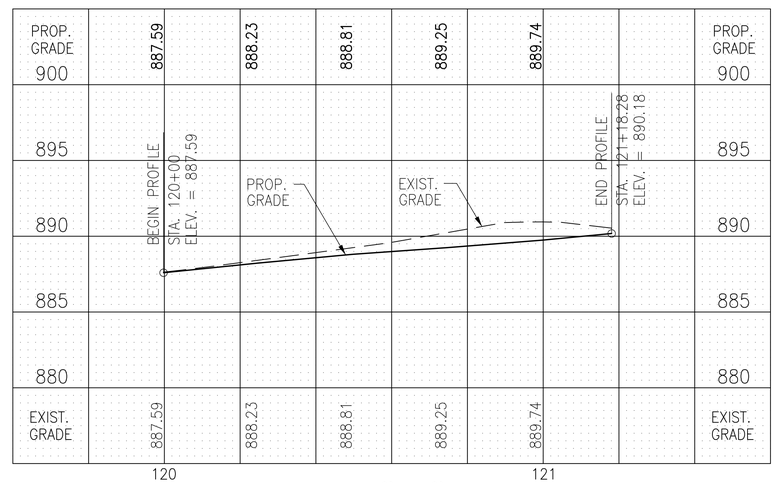
CALCULATED LAM
CHECKED KJG

PROFILES
REF "SW" / REF "SE" / REF "WL"

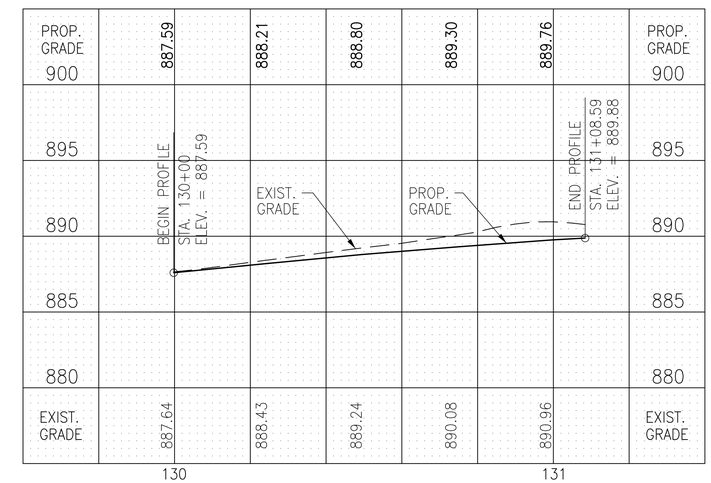
BRAND ROAD / COFFMAN ROAD
ROUNDABOUT



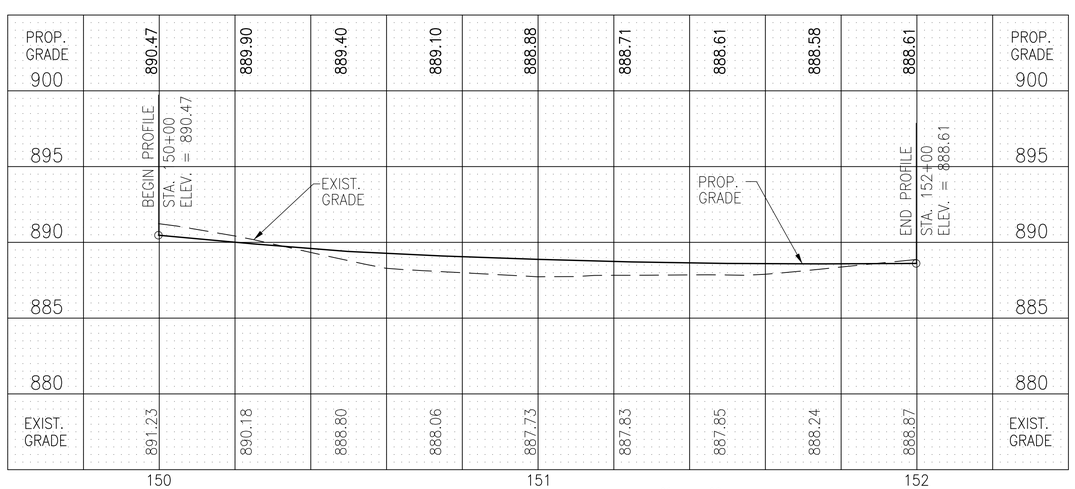
REF "WR"



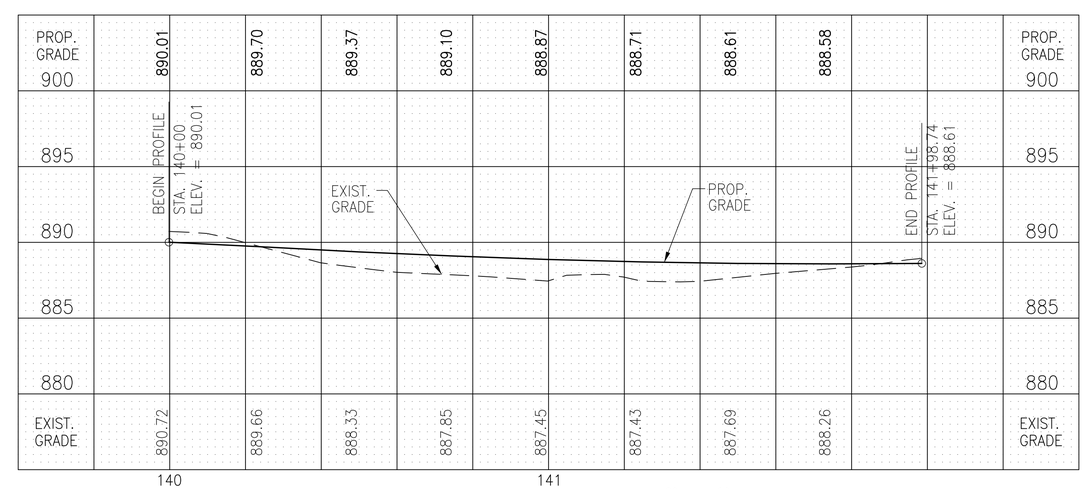
REF "SL"



REF "SR"



REF "EL"



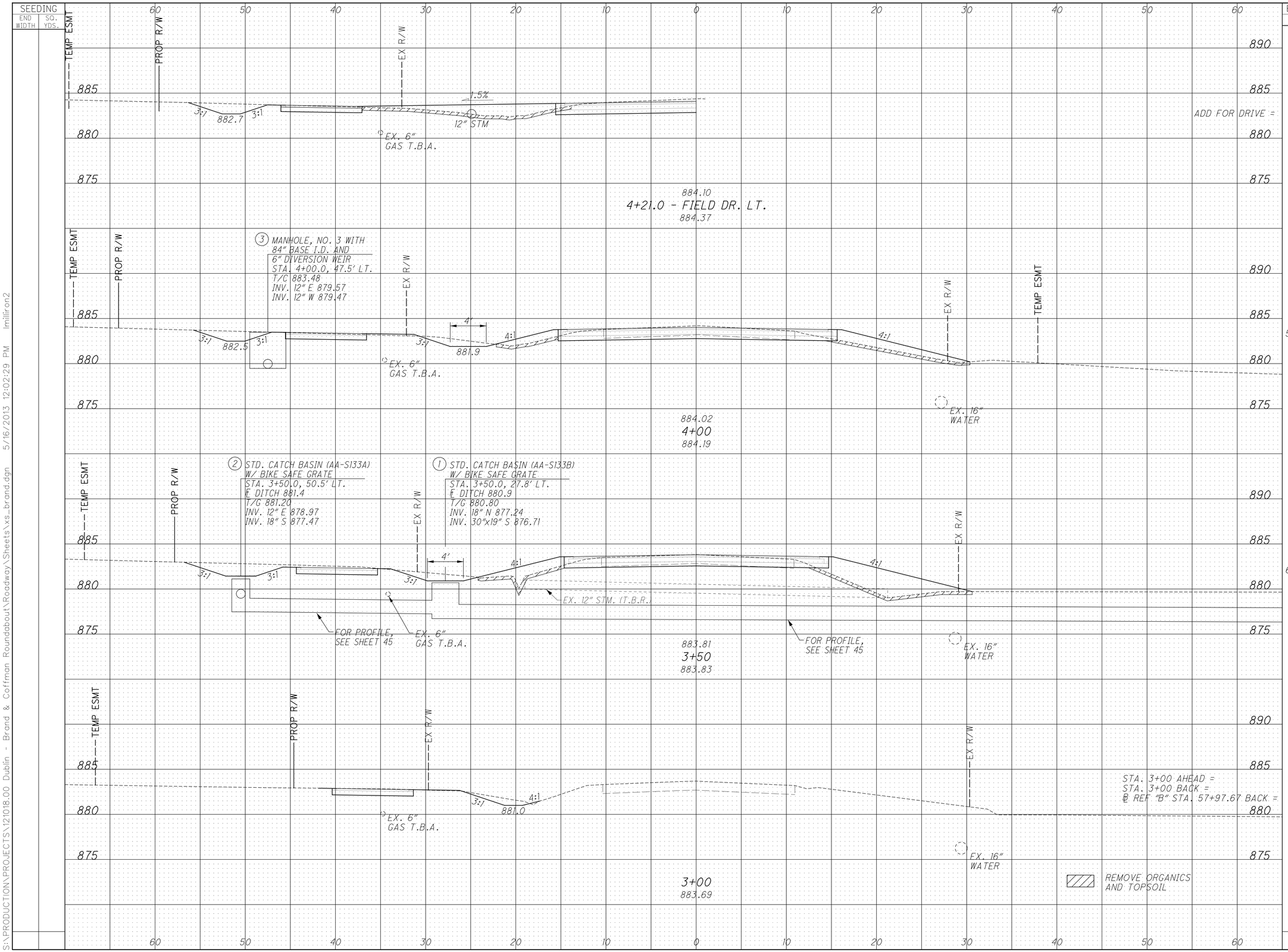
REF "ER"

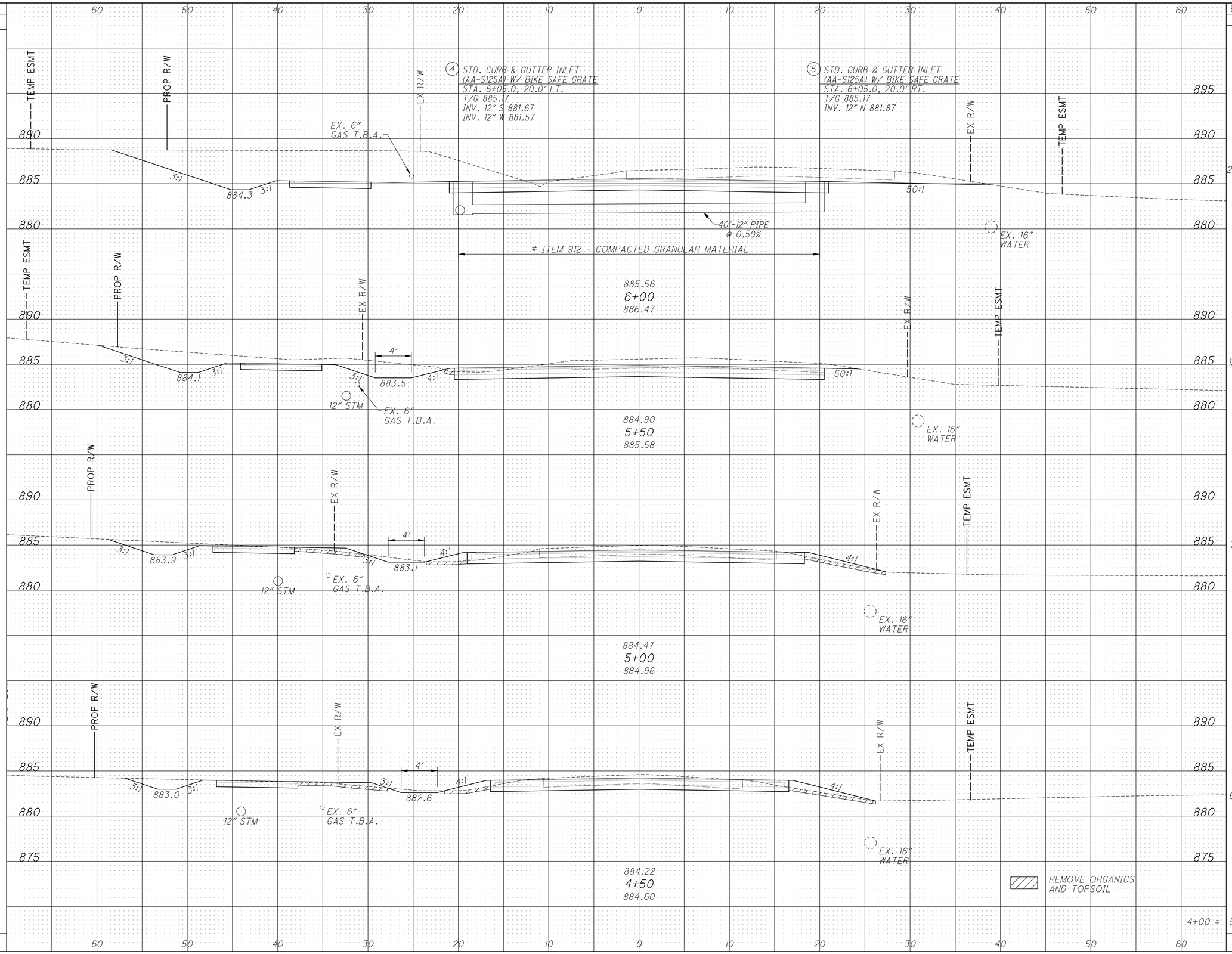
CALCULATED LAM
CHECKED KJG

PROFILES

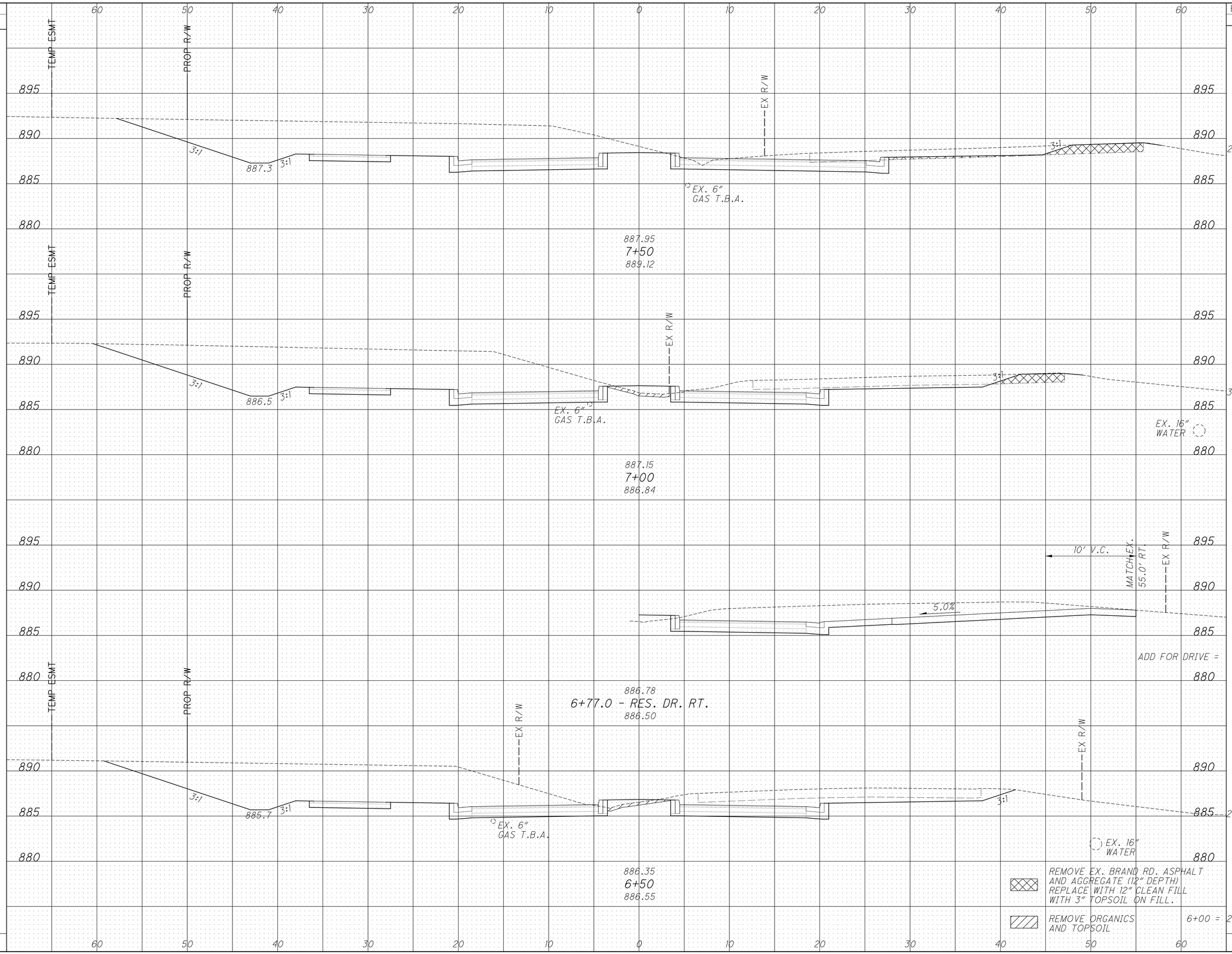
REF "WR" / REF "SL" / REF "SR" / REF "EL" / REF "ER"

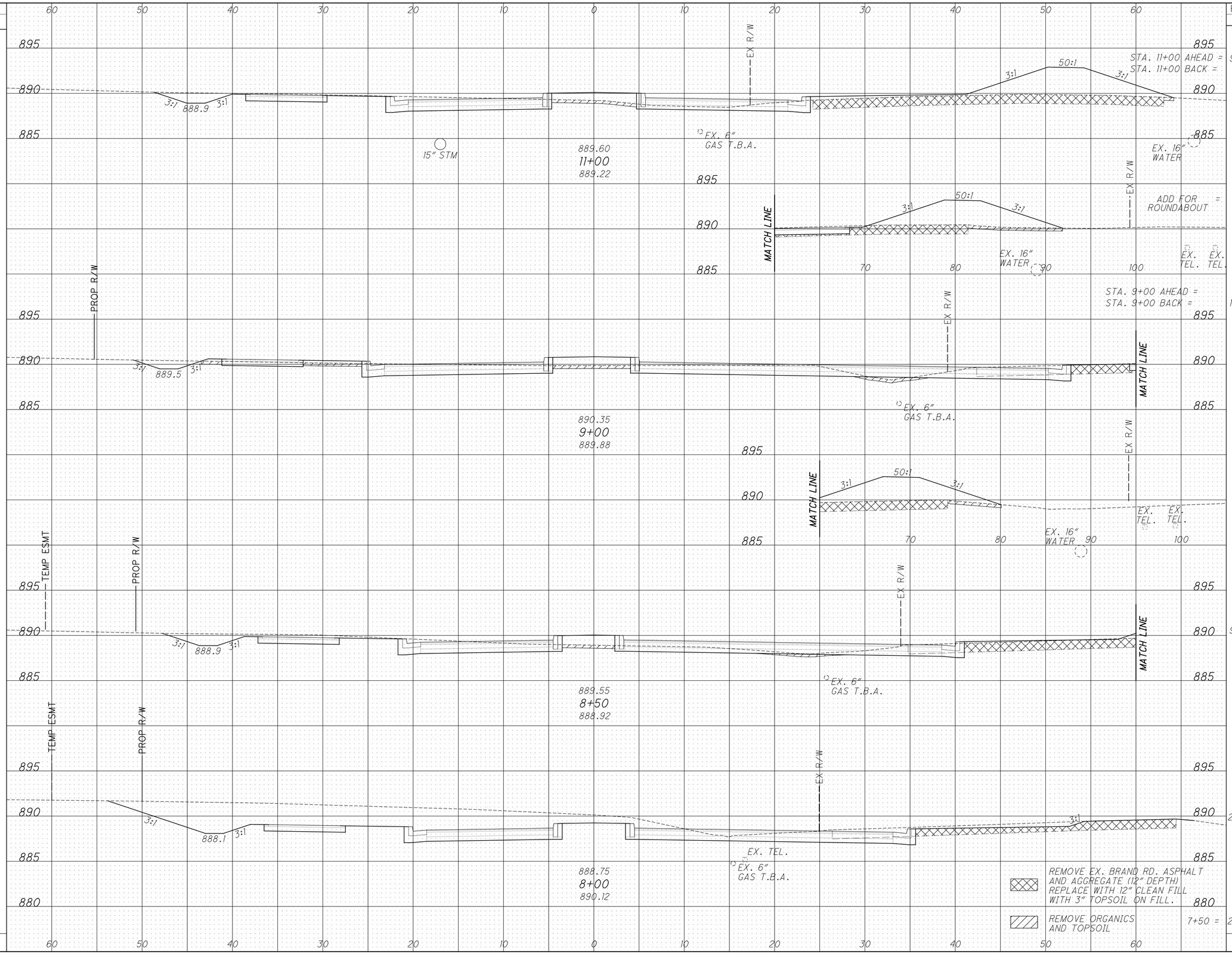
BRAND ROAD / COFFMAN ROAD
ROUNDABOUT


SEEDING
END WIDTH
SQ. YDS.
TEMP ESMT
PROP R/W
EX R/W
1.5%
3:1
882.7
12" STM
EX. 6" GAS T.B.A.
884.10
4+21.0 - FIELD DR. LT.
884.37
ADD FOR DRIVE =
0
10
3 MANHOLE, NO. 3 WITH 84" BASE I.D. AND 6" DIVERSION WEIR
STA. 4+00.0, 47.5' LT.
T/C 883.48
INV. 12" E 879.57
INV. 12" W 879.47
4'
4:1
882.5
881.9
57.4
24.8
EX. 16" WATER
884.02
4+00
884.19
111
68
2 STD. CATCH BASIN (AA-S133A) W/ BIKE SAFE GRATE
STA. 3+50.0, 50.5' LT.
℄ DITCH 881.4
T/G 881.20
INV. 12" E 878.97
INV. 18" S 877.47
1 STD. CATCH BASIN (AA-S133B) W/ BIKE SAFE GRATE
STA. 3+50.0, 27.8' LT.
℄ DITCH 880.9
T/G 880.80
INV. 18" N 877.24
INV. 30"x19" S 876.71
EX. 12" STM. (T.B.R.)
FOR PROFILE, SEE SHEET 45
883.81
3+50
883.83
62.5
48.5
67
45
881.0
STA. 3+00 AHEAD =
STA. 3+00 BACK =
℄ REF "B" STA. 57+97.67 BACK =
9.8
0
0.3
0
3+00
883.69
REMOVE ORGANICS AND TOPSOIL
178
123
890
885
880
875
END AREA
CUT
FILL
VOLUME
CUT
FILL
CALCULATED LAM
CHECKED KJG
CROSS SECTIONS - BRAND ROAD
STA. 3+00 TO STA. 4+21.0
BRAND ROAD / COFFMAN ROAD ROUNDABOUT
28
82
S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:02:29 PM lmilliron2



S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:04:40 PM lmilliron2


SEEDING
END WIDTH
SQ. YDS.
TEMP ESMT
PROP R/W
EX R/W
3:1
887.3
886.5
885.7
EX. 6" GAS T.B.A.
887.95
7+50
889.12
887.15
7+00
886.84
10' V.C.
MATCH EX. 55.0' RT.
5.0%
ADD FOR DRIVE =
886.78
6+77.0 - RES. DR. RT.
886.50
886.35
6+50
886.55
EX. 16" WATER
REMOVE EX. BRAND RD. ASPHALT AND AGGREGATE (12" DEPTH) REPLACE WITH 12" CLEAN FILL WITH 3" TOPSOIL ON FILL.
REMOVE ORGANICS AND TOPSOIL
6+00 =
END AREA
CUT
FILL
VOLUME
CUT
FILL
282.1 12.3
542 23
303.1 12.6
539 16
4 0
279.3 4.5
474 4
232.2 0
1559 43
CALCULATED LAM
CHECKED KJG
CROSS SECTIONS - BRAND ROAD
STA. 6+50 TO STA. 7+50
BRAND ROAD / COFFMAN ROAD ROUNDABOUT
30
82
S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:04:49 PM lmilliron2



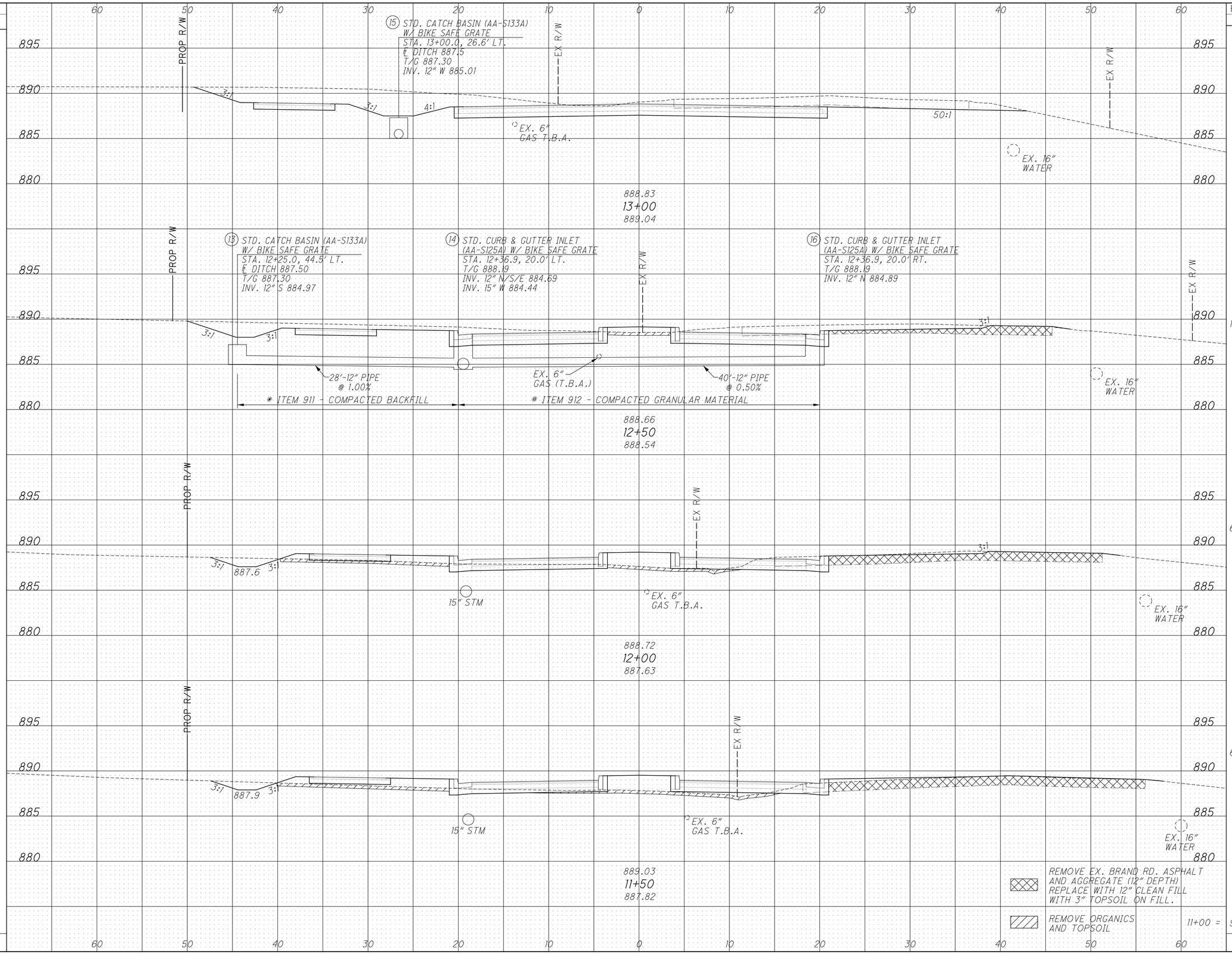
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - BRAND ROAD
STA. 8+00 TO STA. 11+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:05:00 PM lmilliron2



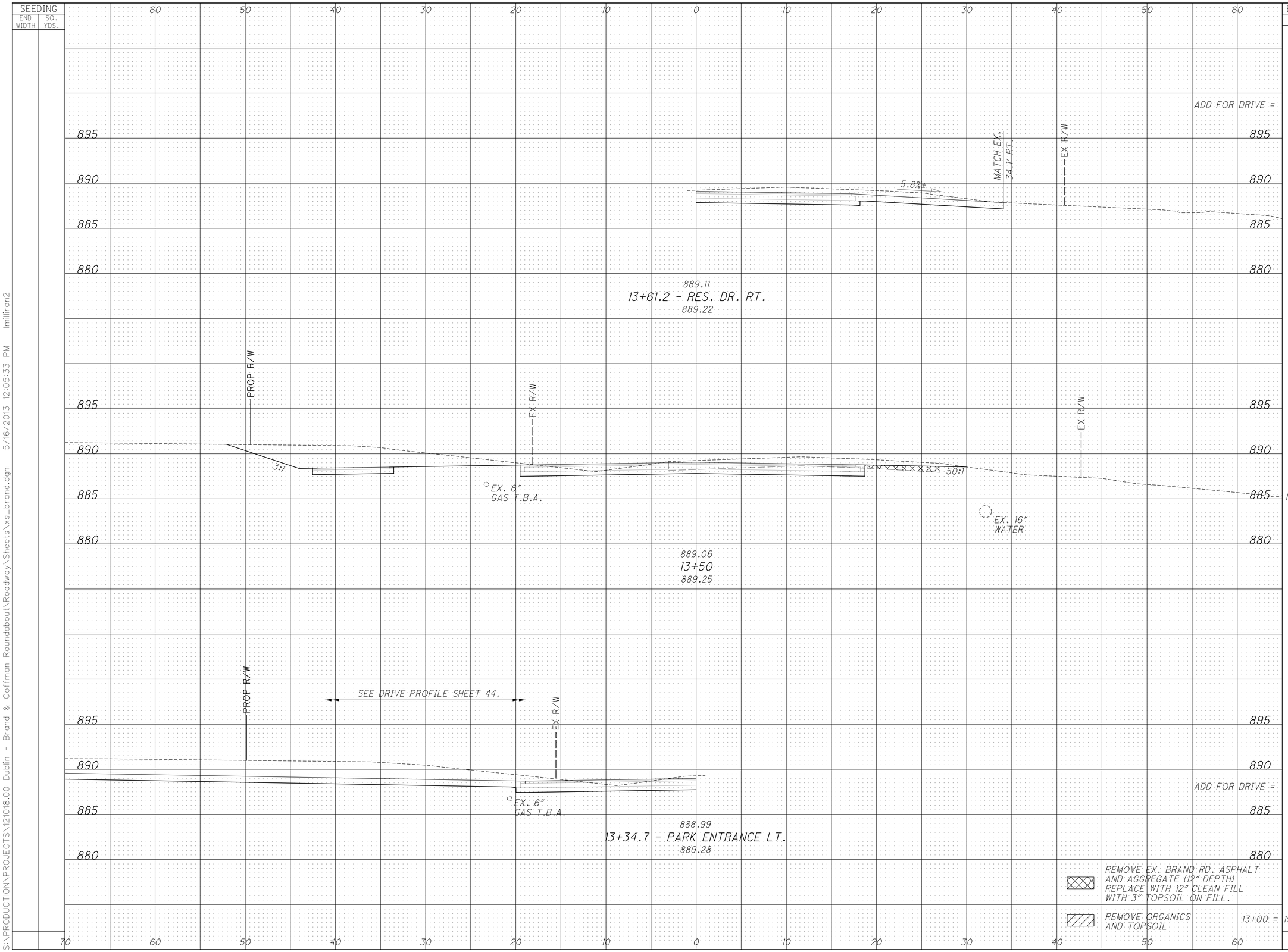
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
153	0		
		248	20
115.2	21.8		
		171	71
69.8	55.3		
		124	121
64.2	75.6		
		146	159
93.2	95.6		
		689	371

CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - BRAND ROAD
STA. 11+50 TO STA. 13+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:05:21 PM lmilliron2



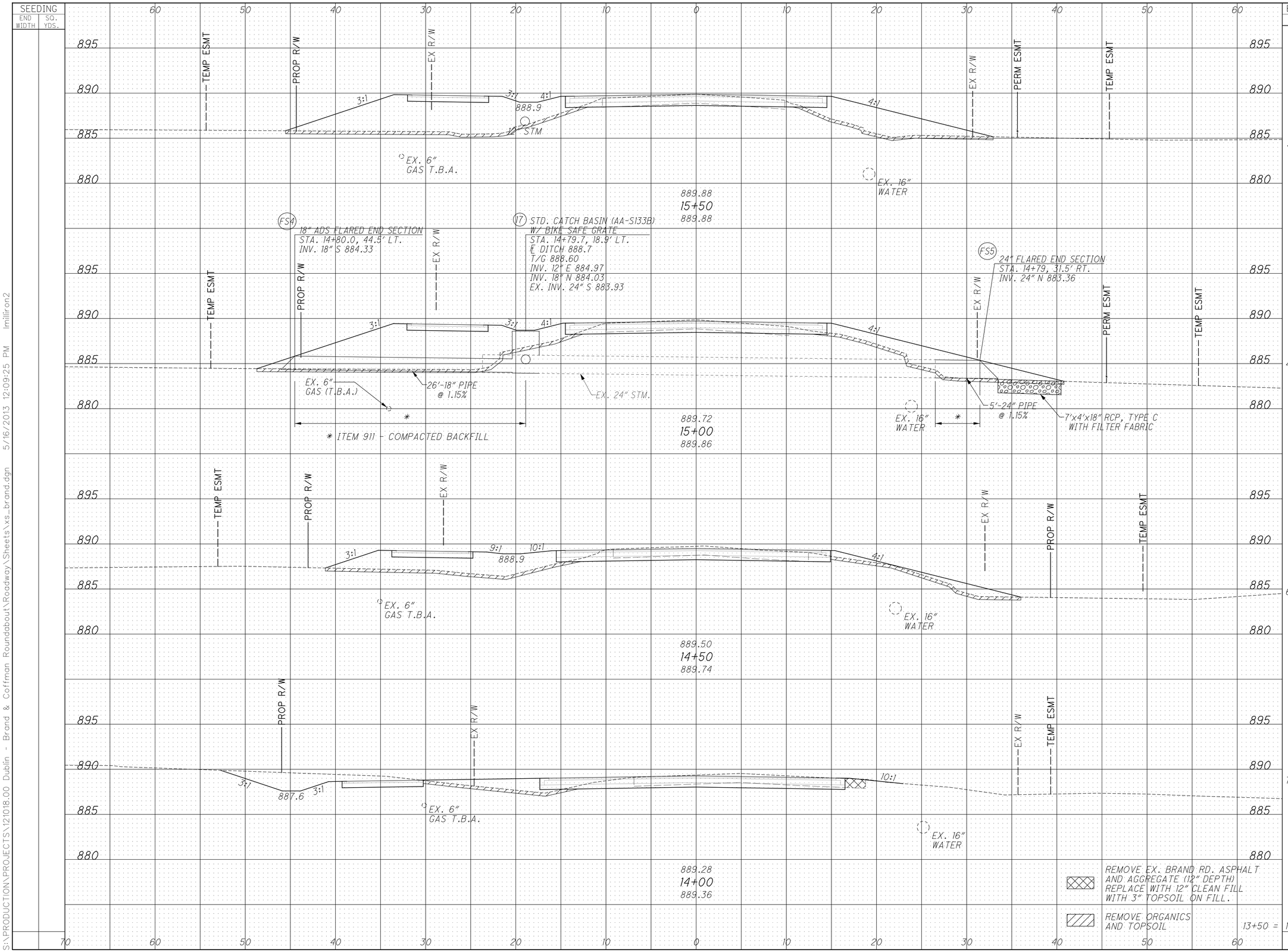
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
ADD FOR DRIVE =			0	4
13+00 =	115.6	4.7		
	153.0	0		
			249	4
ADD FOR DRIVE =			116	0
			365	8

CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - BRAND ROAD
STA. 13+34.7 STA. 13+61.2

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:05:33 PM lmilliron2



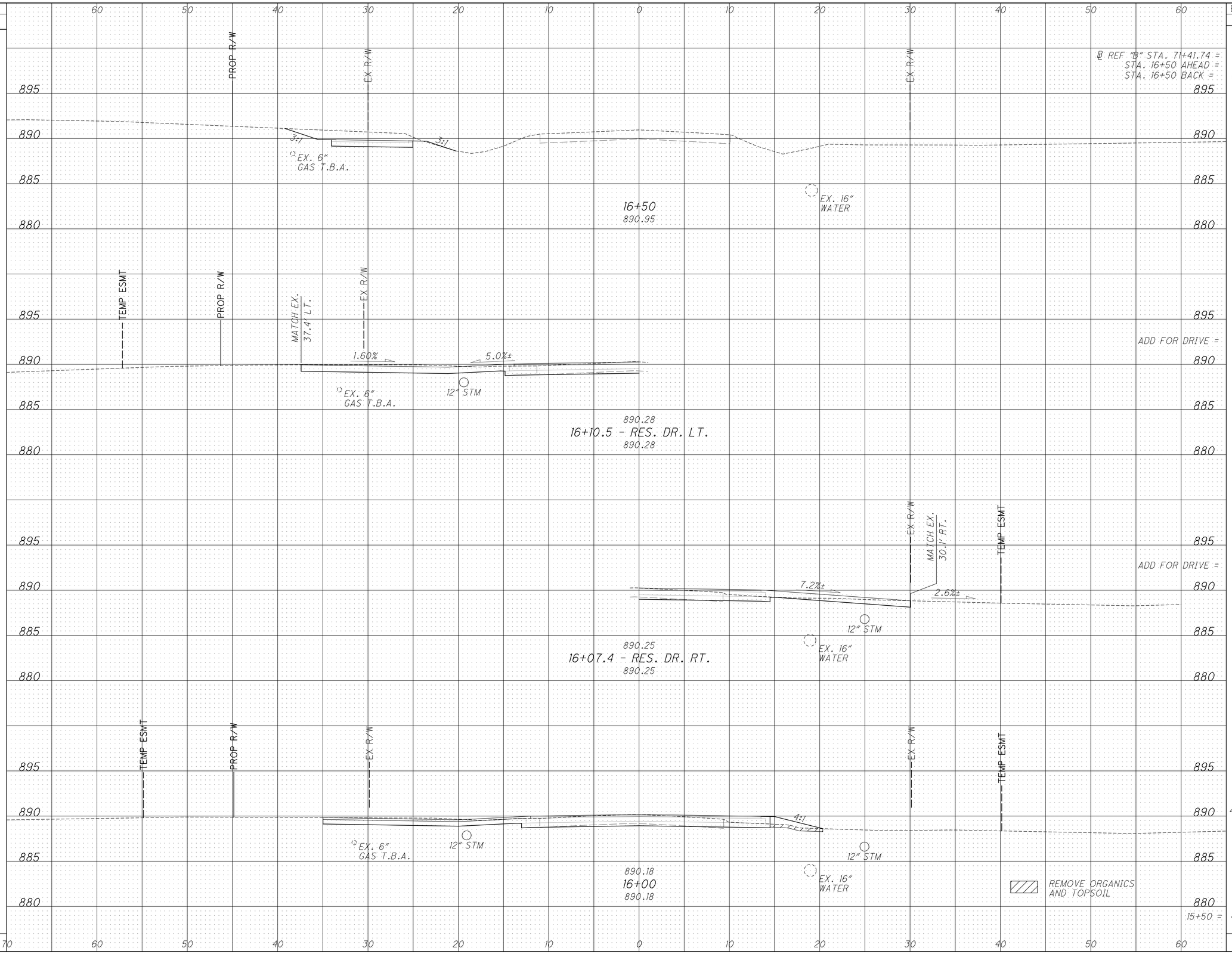
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	41.9	143.3		
			85	287
	49.8	166.6		
			108	235
	67.2	87.7		
			129	101
	72.0	21.0		
			174	24
13+50 =	115.6	4.7		
			496	647

CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - BRAND ROAD
STA. 14+00 TO STA. 15+50

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:09:25 PM lmilliron2



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
@ REF "B" STA. 71+41.74 =				
STA. 16+50 AHEAD =	0	0		
STA. 16+50 BACK =	18.1	0.2		
ADD FOR DRIVE =			3	0
			58	5
ADD FOR DRIVE =			8	0
	45.0	4.9		
			80	137
15+50 =	41.9	143.3		
			149	142

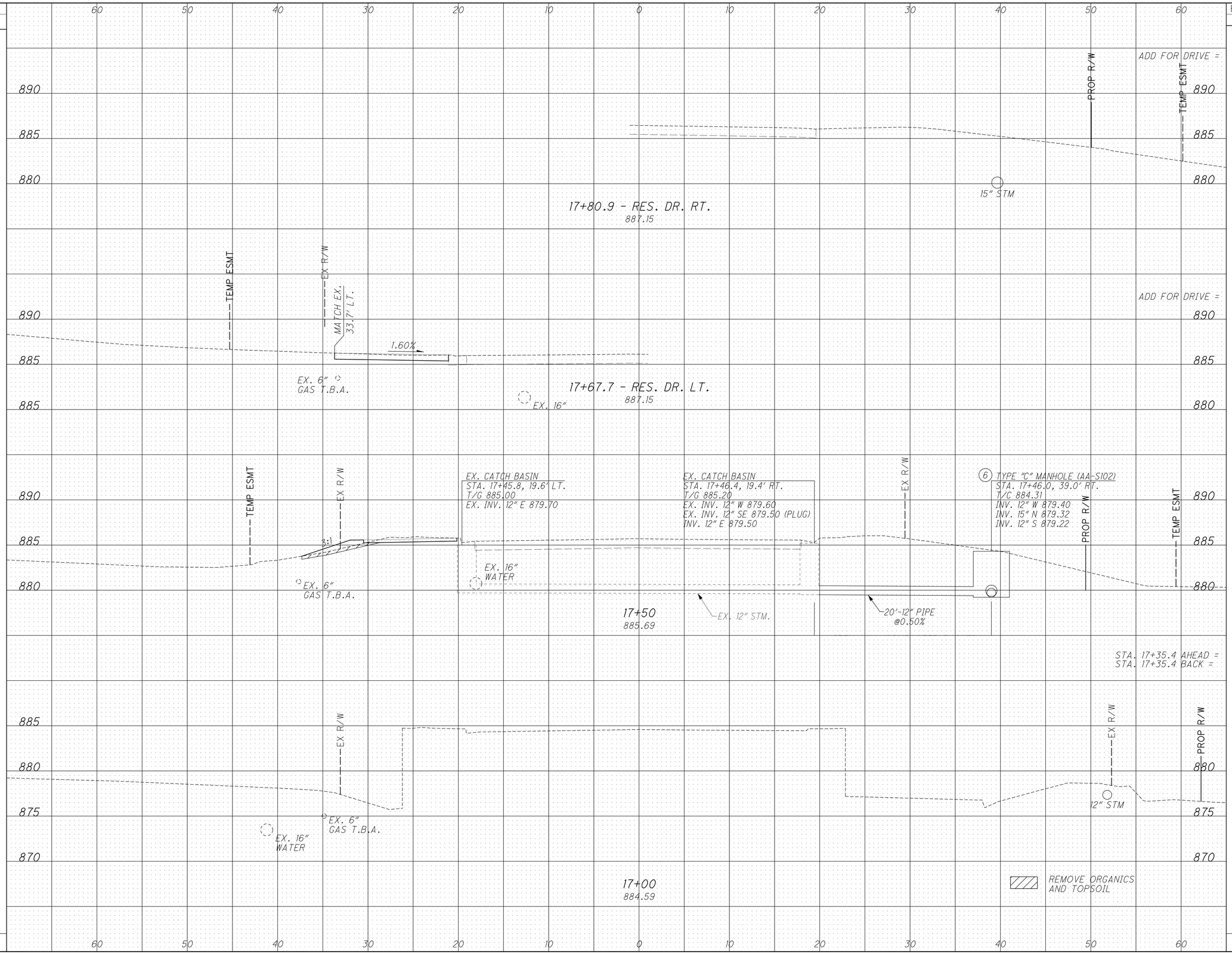
CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - BRAND ROAD
STA. 15+50 TO STA. 16+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_brand.dgn 5/16/2013 12:05:51 PM lmilliron2

SEEDING	
END WIDTH	SQ. YDS.



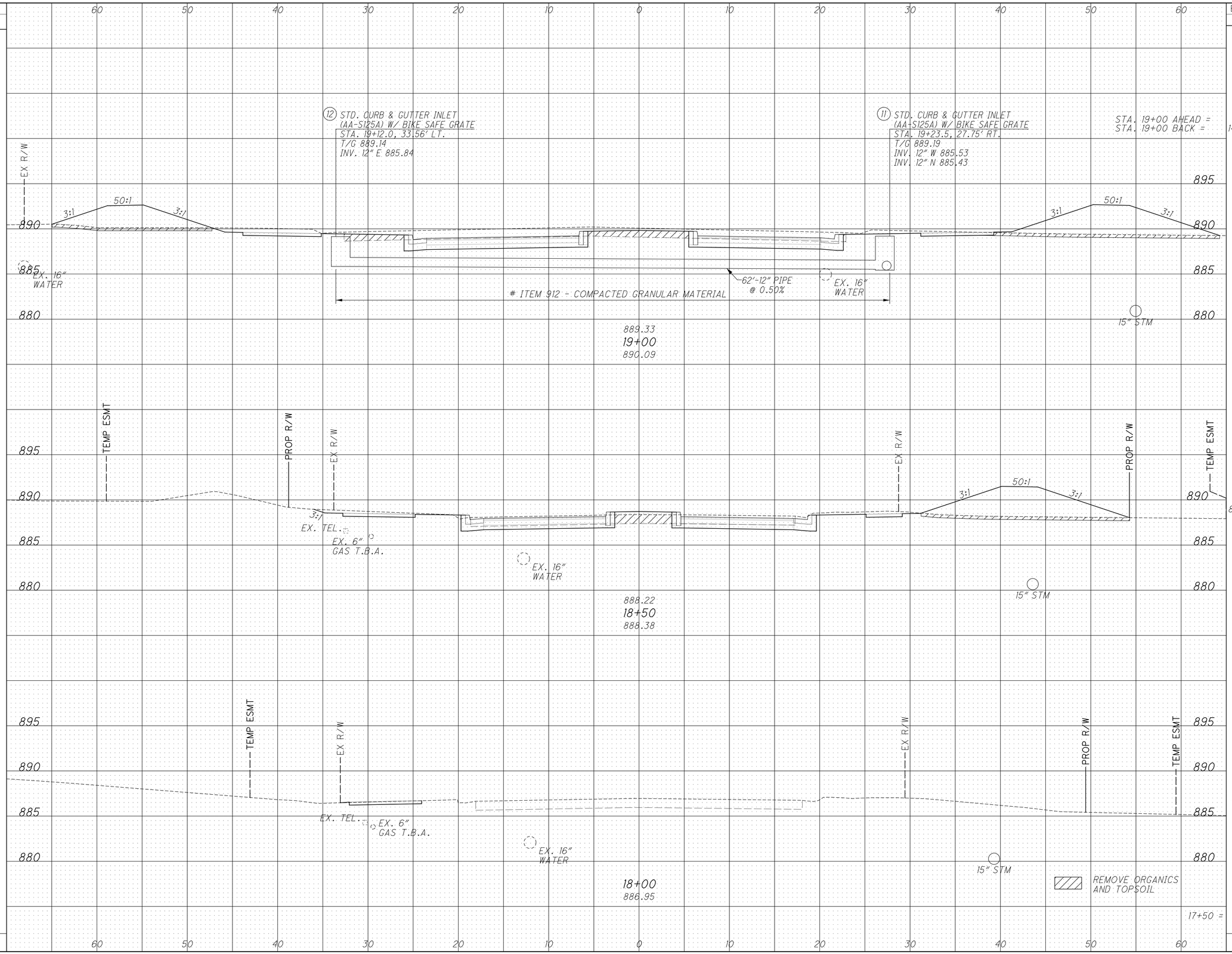
END AREA		VOLUME	
CUT	FILL	CUT	FILL
		0	0
		0	0
7.0	5.6	4	3
7.0	5.6		
0	0		
		4	3

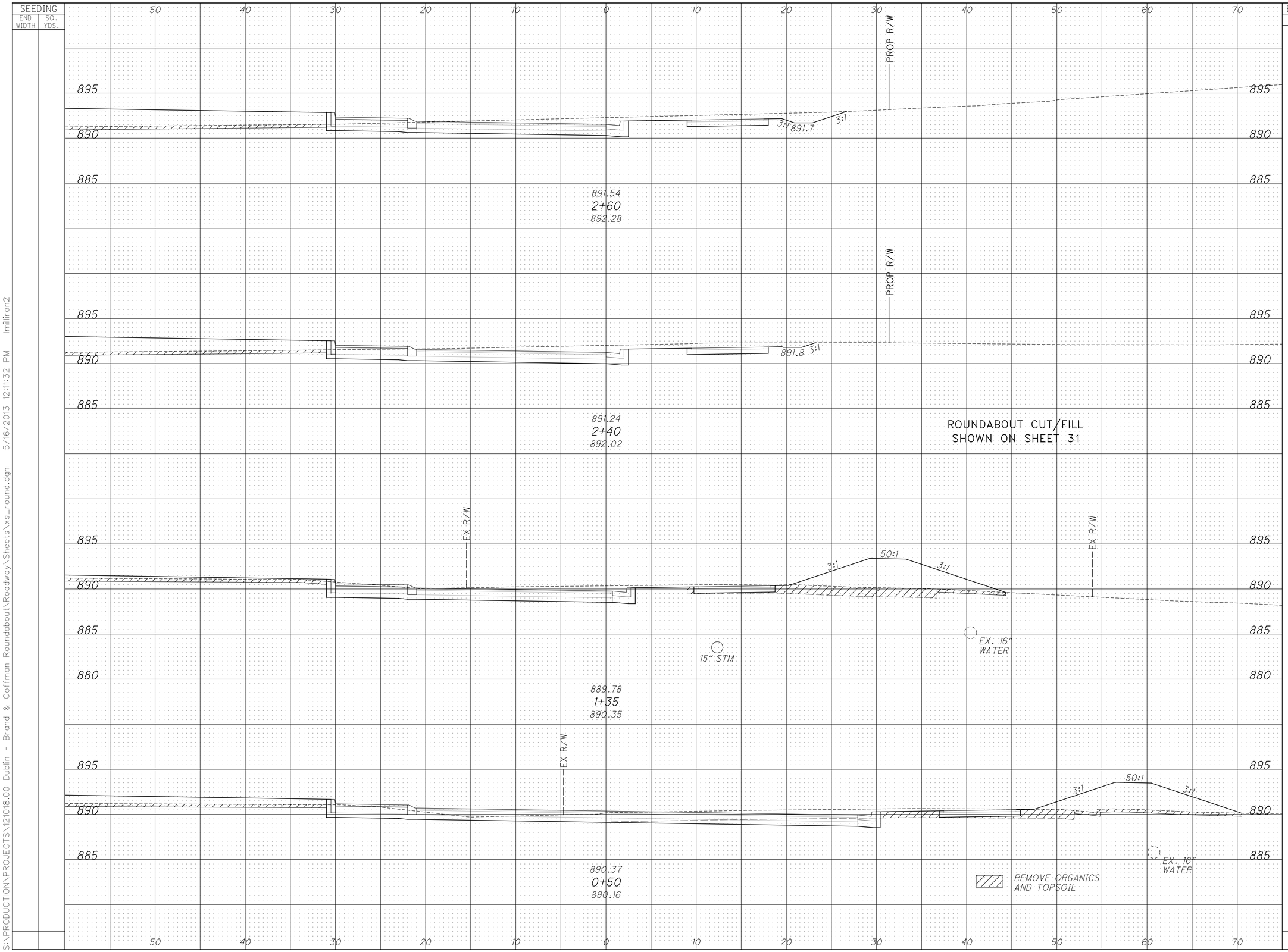
CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - COFFMAN ROAD
STA. 17+00 TO STA. 17+80.9

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_coffman.dgn 5/16/2013 12:10:17 PM lmillron2


SEEDING
END WIDTH
SQ. YDS.
60 50 40 30 20 10 0 10 20 30 40 50 60
(12) STD. CURB & GUTTER INLET
(AA-S125A) W/ BIKE SAFE GRATE
STA. 19+12.0, 33.56' LT.
T/G 889.14
INV. 12" E 885.84
(11) STD. CURB & GUTTER INLET
(AA-S125A) W/ BIKE SAFE GRATE
STA. 19+23.5, 27.75' RT.
T/G 889.19
INV. 12" W 885.53
INV. 12" N 885.43
EX R/W
3:1
50:1
3:1
895
890
885
880
EX. 16" WATER
62'-12" PIPE @ 0.50%
EX. 16" WATER
ITEM 912 - COMPACTED GRANULAR MATERIAL
889.33
19+00
890.09
15" STM
TEMP ESMT
PROP R/W
EX R/W
EX. TEL.
EX. 6" GAS T.B.A.
EX. 16" WATER
888.22
18+50
888.38
15" STM
EX. TEL.
EX. 6" GAS T.B.A.
EX. 16" WATER
18+00
886.95
15" STM
REMOVE ORGANICS AND TOPSOIL
STA. 19+00 AHEAD =
STA. 19+00 BACK =
17+50 =
END AREA
CUT FILL
VOLUME
CUT FILL
0 0
143.4 98.3
208 146
80.7 59.5
77 55
2.5 0
9 5
7.0 5.6
294 206
CALCULATED LAM
CHECKED KJG
CROSS SECTIONS - COFFMAN ROAD
STA. 18+00 TO STA. 19+00
BRAND ROAD / COFFMAN ROAD ROUNDABOUT
37
82
S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_coffman.dgn 5/16/2013 12:10:28 PM lmilliron2



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - ROUNDABOUT
STA. 0+00 TO STA. 2+60

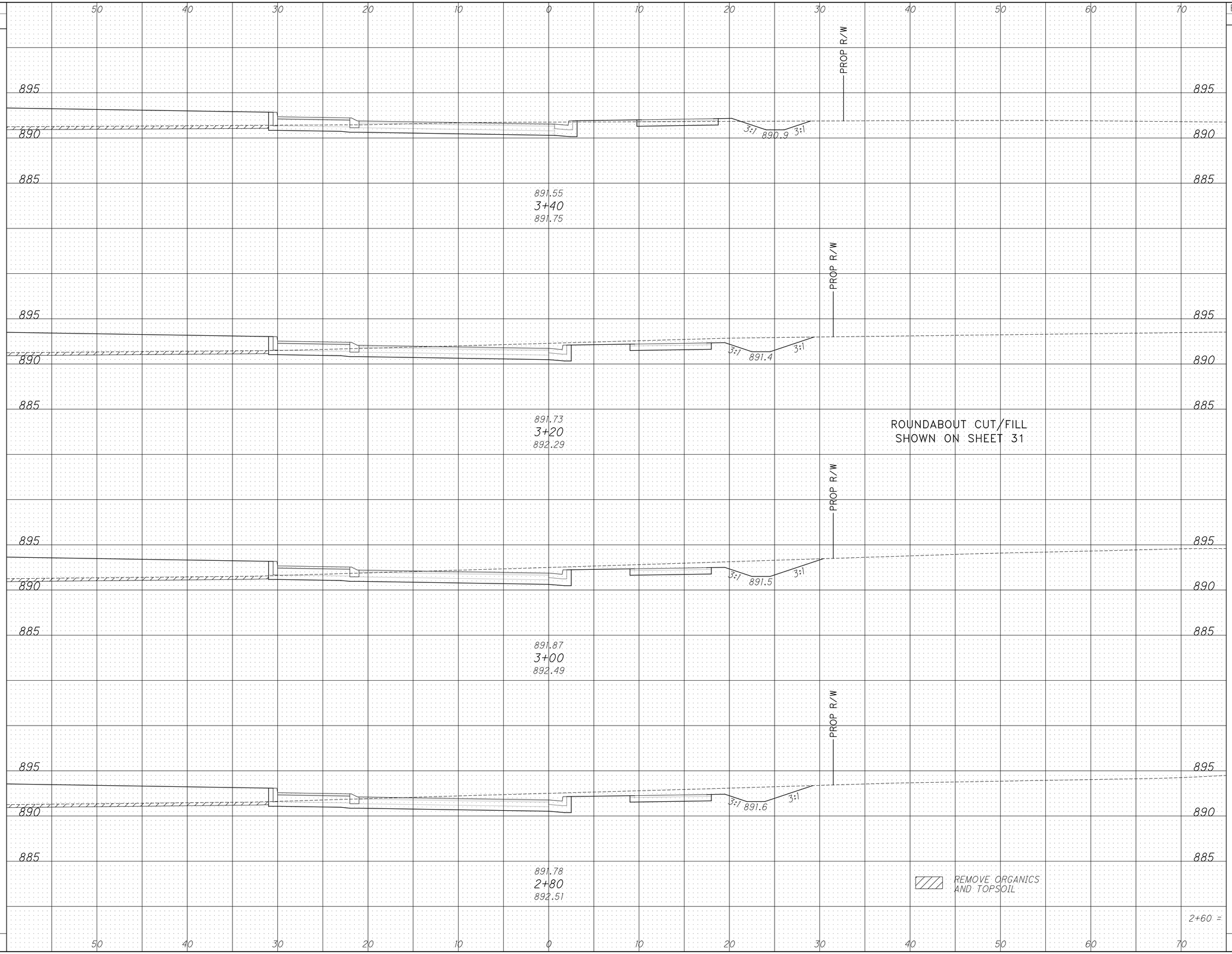
BRAND ROAD / COFFMAN ROAD
ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_round.dgn 5/16/2013 12:11:32 PM lmilliron2

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

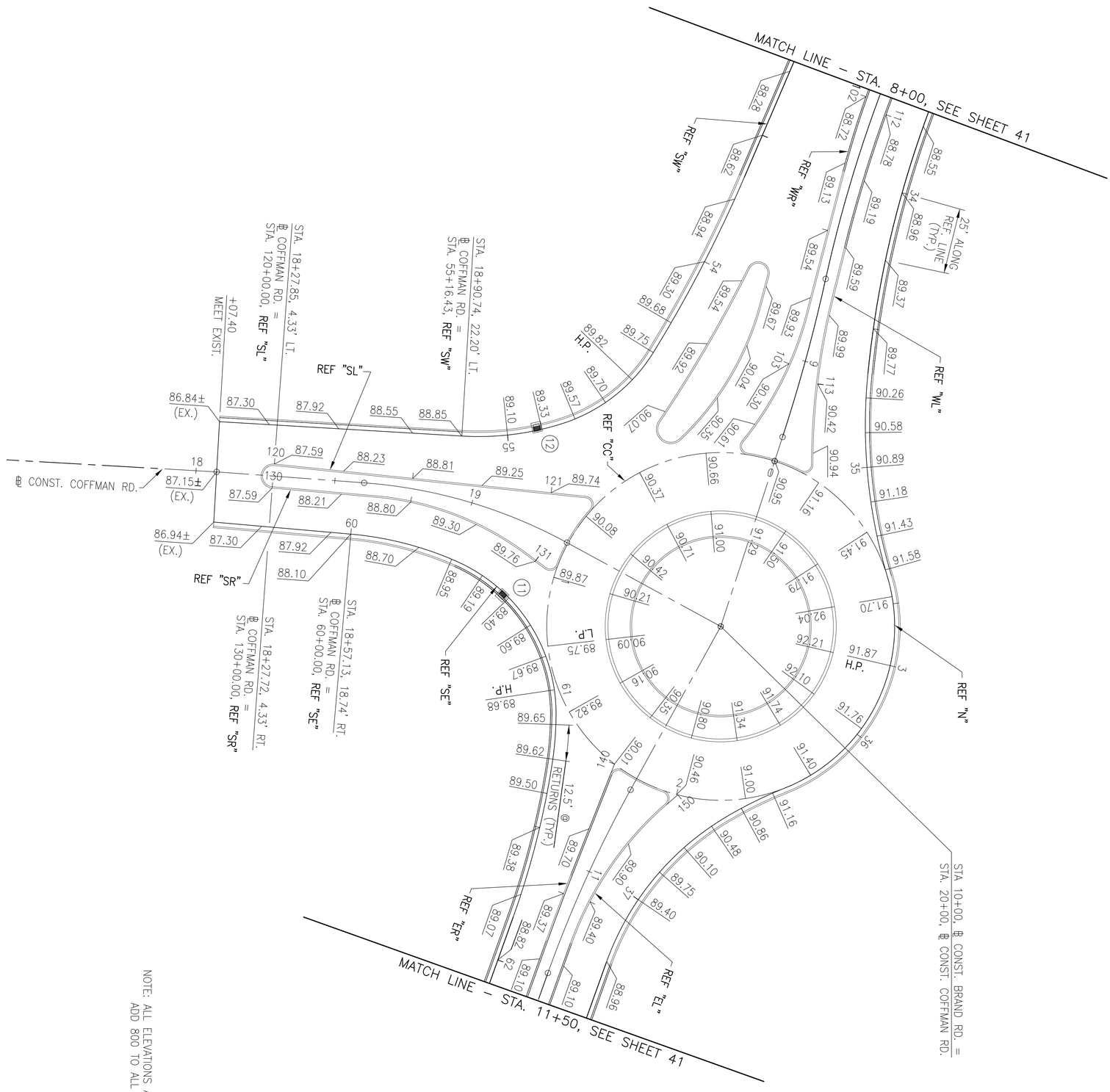
CALCULATED LAM
CHECKED KJG



CROSS SECTIONS - ROUNDABOUT
STA. 2+80 TO STA. 3+40

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\xs_round.dgn 5/16/2013 12:11:43 PM lmilliron2



NOTE: ALL ELEVATIONS ARE TOP OF PAVEMENT
ADD 800 TO ALL ELEVATIONS

40 / 82	BRAND ROAD / COFFMAN ROAD ROUNDABOUT	PAVEMENT DETAIL - BRAND RD. / COFFMAN RD. STA. 8+00 TO 11+50 / STA. 18+07.40 TO 20+00	CALCULATED LAM CHECKED KJG	0 10 20 40 HORIZONTAL SCALE IN FEET

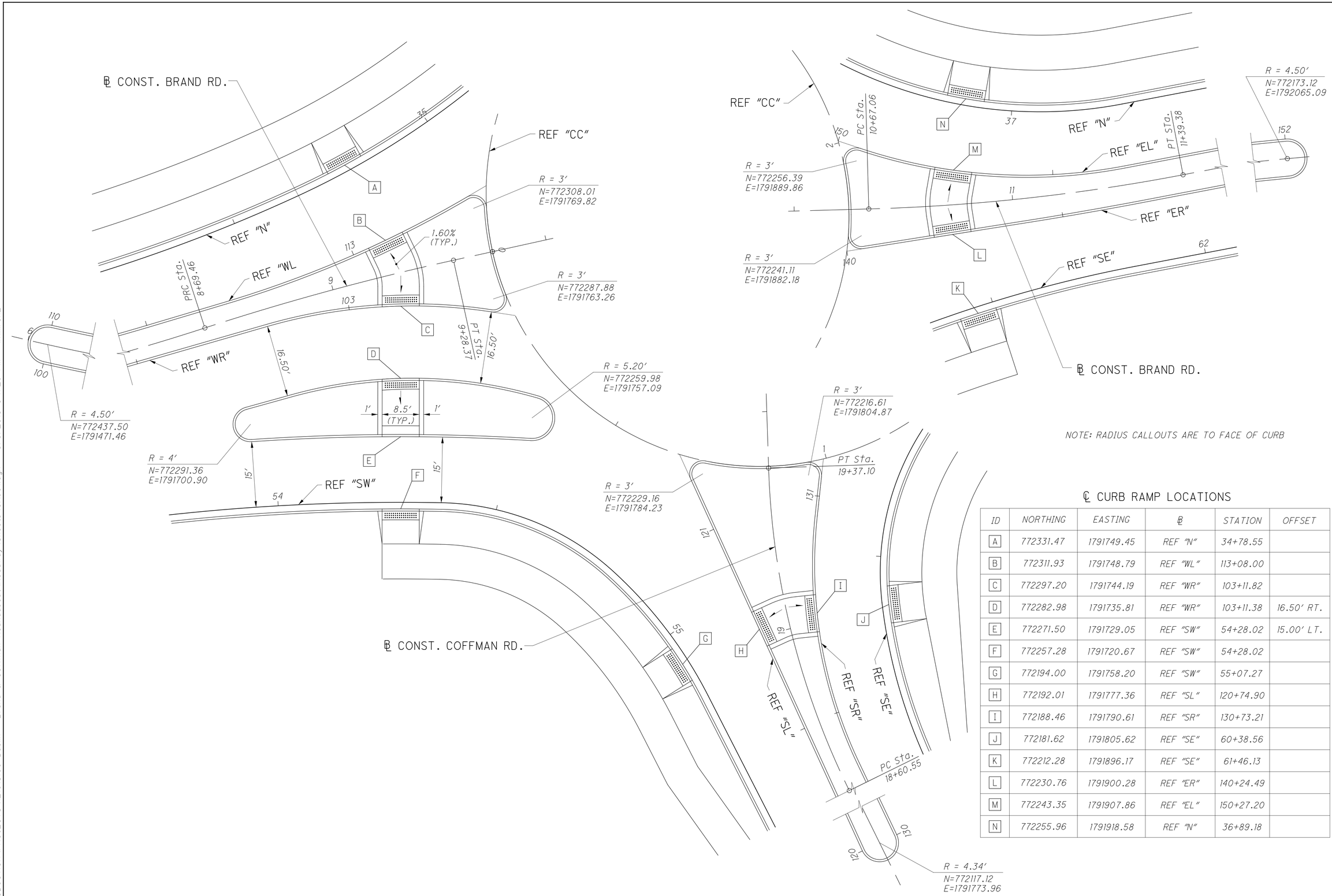
NOTE: ALL ELEVATIONS ARE TOP OF PAVEMENT
ADD 800 TO ALL ELEVATIONS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

PAVEMENT DETAIL - BRAND RD.
STA. 3+40 TO 8+00 / STA. 11+50 TO 15+25

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



℄ CURB RAMP LOCATIONS

ID	NORTHING	EASTING	℄	STATION	OFFSET
A	772331.47	1791749.45	REF "N"	34+78.55	
B	772311.93	1791748.79	REF "WL"	113+08.00	
C	772297.20	1791744.19	REF "WR"	103+11.82	
D	772282.98	1791735.81	REF "WR"	103+11.38	16.50′ RT.
E	772271.50	1791729.05	REF "SW"	54+28.02	15.00′ LT.
F	772257.28	1791720.67	REF "SW"	54+28.02	
G	772194.00	1791758.20	REF "SW"	55+07.27	
H	772192.01	1791777.36	REF "SL"	120+74.90	
I	772188.46	1791790.61	REF "SR"	130+73.21	
J	772181.62	1791805.62	REF "SE"	60+38.56	
K	772212.28	1791896.17	REF "SE"	61+46.13	
L	772230.76	1791900.28	REF "ER"	140+24.49	
M	772243.35	1791907.86	REF "EL"	150+27.20	
N	772255.96	1791918.58	REF "N"	36+89.18	

HORIZONTAL SCALE IN FEET 0 5 10 20

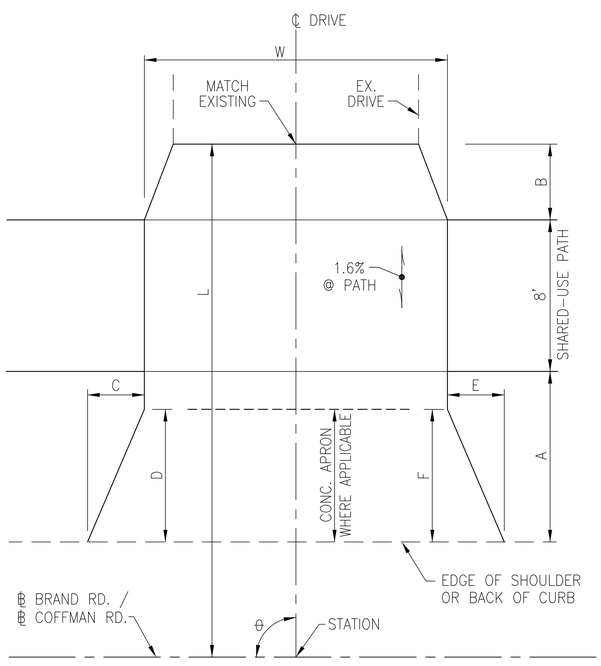
CALCULATED LAM
CHECKED KJG

SPLITTER ISLAND DETAILS

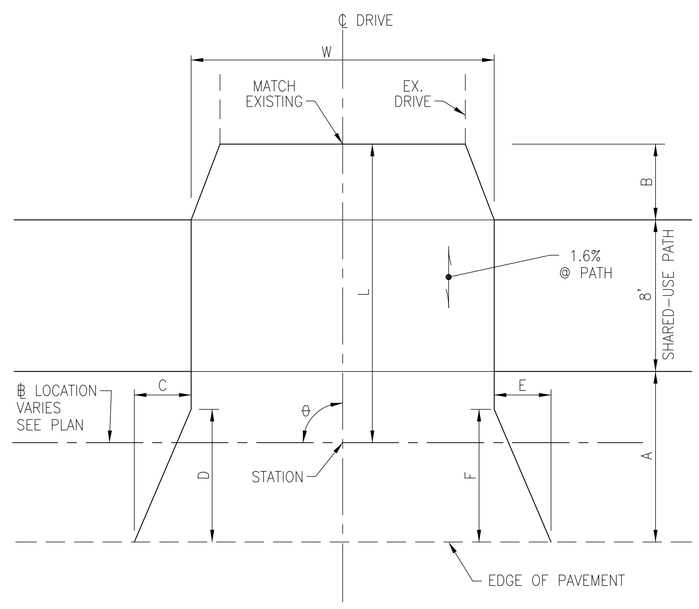
BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\GA001.dgn 5/3/2013 3:11:26 PM lmilliron2

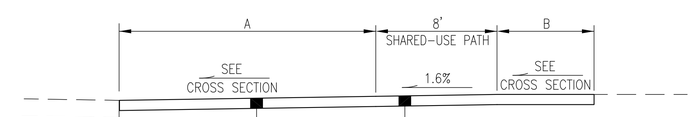
REF. NO.	SHT. NO.	℄	STATION	SIDE	SERVICE TYPE	DRIVE COMPOSITION	θ	W	L	A	B	C	D	E	F	APRON AREA	DRIVE AREA	204 SUBGRADE COMPACTION (DRIVEWAYS)	259 DRIVEWAY PAVEMENT REPLACEMENT, TYPE IIIA	301 3" ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	304 6" AGGREGATE BASE (DRIVEWAYS)	448 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC (DRIVEWAYS)	452 8" NON-REINFORCED CONCRETE PAVEMENT	452 8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN
																SQ FT	SQ FT	SQ YD	CU YD	TON	CU YD	TON	SQ YD	SQ YD
DR1	20	BRAND	4+21.0	LT.	RES.	FIELD	90°	12'	SHOWN FOR GRADING PURPOSE ONLY															
DR2	20	BRAND	6+77.0	RT.	RES.	ASPHALT	90°	12'	55.0'	N/A	N/A	5'	7.5'	5'	7.5'	125	324	49.9		6.0	8.3	3.0	13.9	
DR3	21	COFFMAN	17+67.7	LT.	RES.	CONCRETE	72°	18'	33.7'	N/A	N/A	9'	12'	9'	12'	325		36.1			6.0			36.1
DR4	21	COFFMAN	17+80.9	RT.	RES.	ASPHALT	81°	14'	FOR STORM SEWER TRENCH								72		2.0					
DR5	22	BRAND	13+34.7	LT.	PARK ENT.	ASPHALT	90°	26'	SEE DETAIL SHEET 44								3288	365.3		60.9	60.9	30.4		
DR6	22	BRAND	13+61.2	RT.	RES.	ASPHALT	90°	43'	34.1'	N/A	N/A	3'	7.5'	3'	7.5'		735	81.7		13.6	13.6	6.8		
DR7	22	BRAND	16+07.4	RT.	RES.	CONCRETE	90°	13.5'	30.1'	N/A	N/A	3'	6'	3'	6'		215	23.9			4.0		23.9	
DR8	22	BRAND	16+10.5	LT.	RES.	ASPHALT	79°	12'	37.4'	10'	5.0'	9'	10'	7'	10'		358	39.8		6.6	6.6	3.3		
DR9	59	"B"	52+13.2	LT.	RES.	GRAVEL	86°	12'	7.3'	19.0'	4.0'	10'	10'	10'	10'		472	52.4		8.8	8.7	4.4		
DR10	60	"B"	57+70.5	LT.	RES.	ASPHALT	90°	12'	9.9'	20.4'	5.0'	7'	18'	7'	18'		520	57.8		9.6	9.6	4.8		
DR11	62	"B"	72+18.1	LT.	RES.	GRAVEL	78°	12'	21.4'	22.2'	5.0'	10'	10'	8'	10'		521	57.9		9.6	9.6	4.8		
DR12	62	"B"	77+14.4	LT.	RES.	GRAVEL	84°	12'	24.0'	23.7'	5.0'	10'	9'	10'	9'		530	58.9		9.8	9.8	4.9		
TOTALS CARRIED TO GENERAL SUMMARY																		824	2	125	137	63	38	36



DRIVE DETAIL - BRAND RD. / COFFMAN RD.



DRIVE DETAIL - BASELINE "B"



DRIVEWAYS W/ CONC. APRONS
ITEM 452 – 8" NON-REINFORCED CONCRETE PAVEMENT
ITEM 304 – 6" AGGREGATE BASE
ITEM 204 – SUBGRADE COMPACTION

EX. ASPHALT / GRAVEL DRIVEWAYS
ITEM 448 – 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC (DRIVEWAYS)
ITEM 301 – 3" ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)
ITEM 304 – 6" AGGREGATE BASE
ITEM 204 – SUBGRADE COMPACTION

DRIVE PROFILE

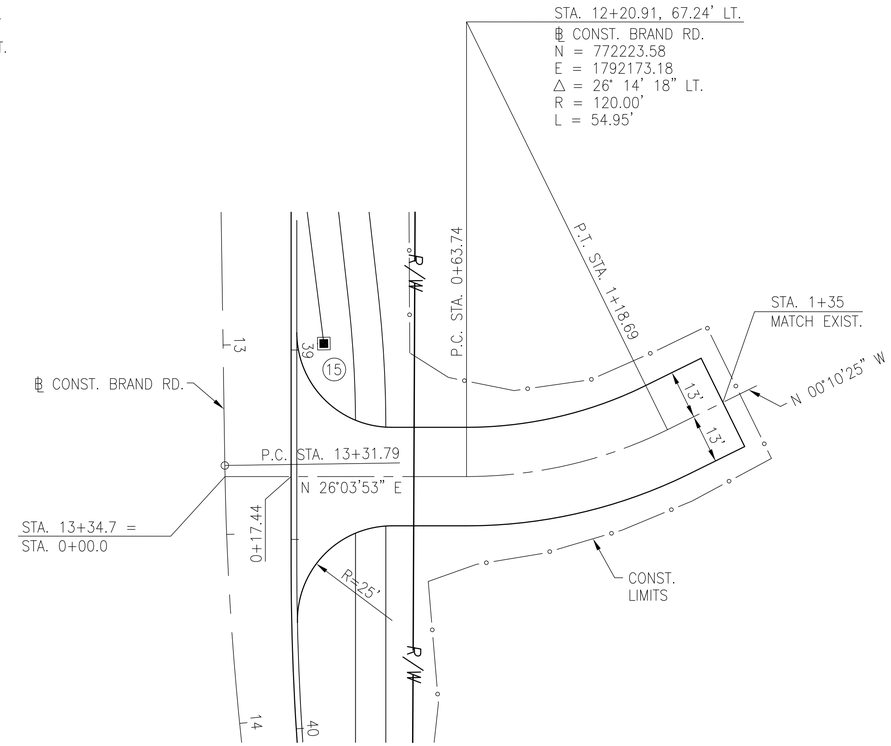
CALCULATED LAM
CHECKED KJG

DRIVE DETAILS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

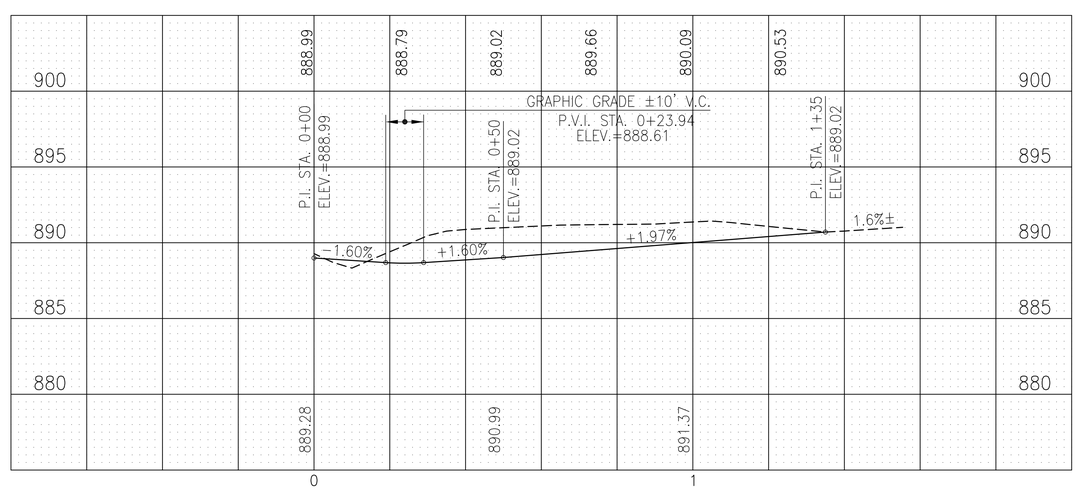
CURVE DATA
BRAND ROAD

P.I. Sta. 14+03.95
△ = 10° 18' 31" LT.
D = 07° 09' 43"
R = 800.00'
T = 72.16'
L = 143.93'
E = 3.25'



NOTE:
DRIVE PAVEMENT QUANTITIES ARE SHOWN ON SHEET 43
EARTHWORK QUANTITIES ARE INCLUDED IN CROSS SECTIONS

PLAN



PROFILE

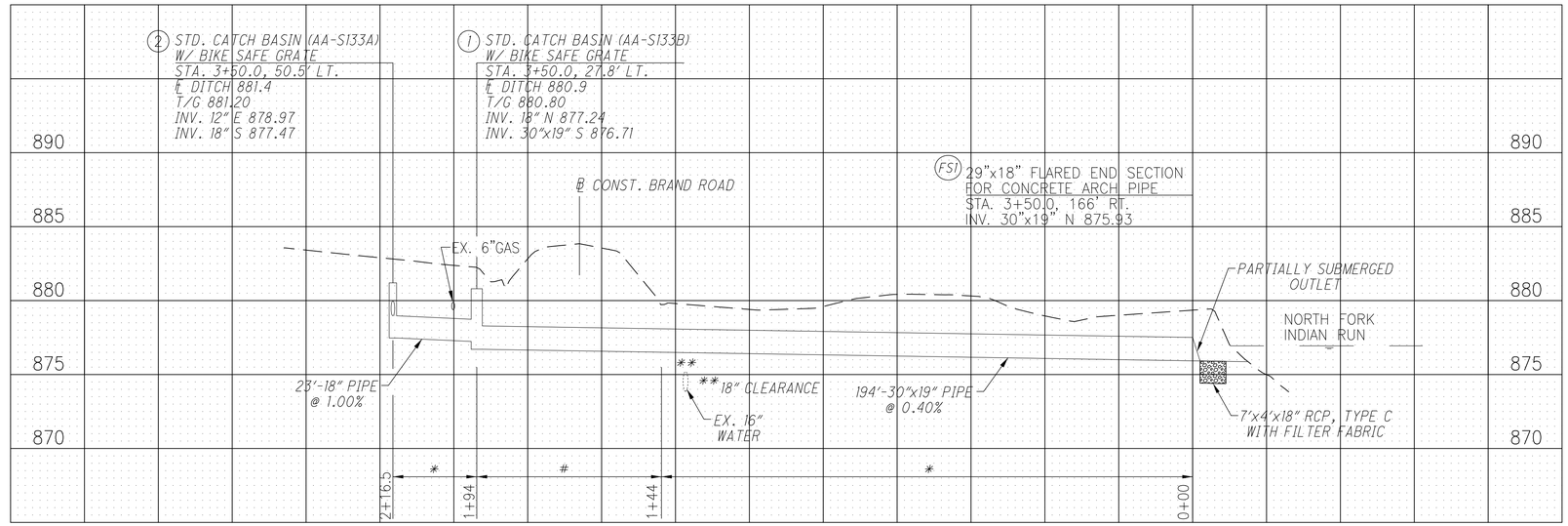
N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

DRIVE DETAILS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



* ITEM 911 - COMPACTED BACKFILL
\# ITEM 912 - COMPACTED GRANULAR MATERIAL

STORM SEWER @ STA. 3+50 – ℄ BRAND RD.

CALCULATED LMO
CHECKED KJG

STORM SEWER PROFILE

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

STORM SEWER TRIBUTARY AREA MAP

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

BMP NARRATIVE

POST-CONSTRUCTION BMP CALCULATIONS INCLUDE THE EARTH DISTURBED AREA FROM THIS PROJECT AND THE BRAND ROAD SHARED-USE PATH PROJECT (11-022-CIP). BMP TREATMENT AREA PROVIDED WITH THIS PROJECT MEETS THE REQUIREMENTS OF BOTH PROJECTS COMBINED.

POST-CONSTRUCTION BMP TREATMENT IS PROVIDED BY A COMBINATION OF MANUFACTURED SYSTEMS, VEGETATED FILTER STRIPS, AND VEGETATED BIOFILTERS ADJACENT TO THE PROJECT.

POST-CONSTRUCTION BMP REQUIREMENTS ARE MET BASED ON ODOT LOCATION AND DESIGN MANUAL VOLUME 2, 2013.

BMP CALCULATIONS

REQUIRED TREATMENT:

NEW IMPERVIOUS AREA IN NEW RIGHT-OF-WAY = 0.83 AC.
=> TREAT WATER QUALITY ONLY

NEW IMPERVIOUS AREA (Ain) = 1.22 AC.
EXISTING IMPERVIOUS AREA (Aix) = 3.91 AC.
=> TREATMENT PERCENT (T%) = 39%

EARTH DISTURBED AREA (EDA) = 6.97 AC.

EXEMPT OUTFALLS:
COFFMAN ROAD INTERSECTION = 0.23 AC.
SHEET FLOW BEHIND MOUNDING = 0.23 AC.

REQUIRED TREATMENT:
6.97-0.23-0.23 = 6.51 x 0.39 = 2.54 AC.

PROVIDED TREATMENT:

MANUFACTURED SYSTEM = 1.78 AC.
VEGETATED FILTER STRIP = 0.67 AC.
VEGETATED BIOFILTER = 0.27 AC.

TOTAL TREATED EDA = 2.72 AC.

TREATED EARTH DISTURBED AREA > REQUIRED TREATED AREA

MANUFACTURED SYSTEMS

(3) CA = 0.64, i = 0.65
=> WQf = 0.42 CFS

MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1

(8) CA = 1.49, i = 0.65
=> WQf = 0.97 CFS

MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2

STORM WATER INLET COMPUTATIONS – 5 YEAR (n=0.015)

INLET NUMBER	INLET TYPE	INLET STATION	DRAINAGE AREA (ACRES)	C	TIME (MIN.)	I-5 (IN./HR.)	Q-5 (C.F.S.)	Q (CARRYOVER) (C.F.S.)	Q TOTAL (GUTTER FLOW)	SL (LONGITUDINAL SLOPE) (FT./FT.)	SX (CROSS SLOPE) (FT./FT.)	S (GUTTER SLOPE) (FT./FT.)	GUTTER WIDTH (FT.)	SPREAD (FT.)	TOTAL FLOW INTERCEPTED	CARRY OVER FLOW	% PICK UP	REMARKS
4	AA-S125A	6+05	0.40	0.77	10	4.18	1.29	0.00	1.29	0.0160	0.0160	0.0833	1.5	7.03	0.93	0.36	72%	
5	AA-S125A	6+05	0.47	0.70	10	4.18	1.38	0.00	1.38	0.0160	0.0160	0.0833	1.5	7.27	0.97	0.41	70%	
11	AA-S125A	19+23.5	0.08	0.75	10	4.18	0.25	0.00	0.25	0.0164	0.0160	0.0833	1.5	1.83	0.25	0.00	100%	
EX2	CB	17+46.4	0.15	0.76	10	4.18	0.48	0.00	0.48	0.0260	0.0160	0.0833	1.5	3.10	0.47	0.01	98%	
12	AA-S125A	19+12	0.08	0.80	10	4.18	0.27	0.00	0.27	0.0188	0.0160	0.0833	1.5	1.85	0.27	0.00	100%	
EX1	CB	17+45.8	0.21	0.75	10	4.18	0.66	0.00	0.66	0.0260	0.0160	0.0833	1.5	4.06	0.62	0.04	94%	
14	AA-S125A	12+36.9	0.31	0.76	10	4.18	0.99	0.00	0.99	0	0.0160	0.0833	1.5	7.76	0.99	0.00	100%	SAG
16	AA-S125A	12+36.9	0.28	0.70	10	4.18	0.82	0.00	0.82	0	0.0160	0.0833	1.5	6.56	0.82	0.00	100%	SAG

STORM SEWER DESIGN COMPUTATIONS – 5 YEAR (n=0.013)

FROM POINT	TO POINT	DRAINAGE AREA (ACRES)	C	CA INCREMENTAL	CA CUMMULATIVE	TIME (MIN.)	I-5 INTENSITY (IN./HR.)	Q-5 RUNOFF (C.F.S.)	INVERT ELEV. UPPER (FT.)	INVERT ELEV. LOWER (FT.)	RIM ELEV. (FT.)	LENGTH (FT.)	SLOPE (FT./FT.)	DIAMETER (IN.)	CAPACITY (C.F.S.)	VELOCITY (FT./S)	FLOW TIME (MIN.)	REMARKS
13	14	2.06	0.40	0.82	0.82	17.30	3.37	2.8	884.97	884.69	887.30	28	0.0100	12	3.83	5.02	0.09	
15	14	0.16	0.67	0.11	0.11	15	3.58	0.4	885.01	884.69	887.30	64	0.0050	12	2.71	2.31	0.46	
12	11	0.08	0.80	0.06	0.06	10	4.18	0.3	885.84	885.53	889.14	62	0.0050	12	2.71	2.09	0.49	
11	10	0.08	0.75	0.06	0.12	10.49	4.11	0.5	885.43	885.03	889.19	80	0.0050	12	2.71	2.51	0.53	
10	9	0.00	0.00	0.00	0.12	11.02	4.04	0.5	884.93	884.85	892.38	16	0.0050	12	2.71	2.51	0.11	
EX1	EX2	0.21	0.75	0.16	0.16	10	4.18	0.7	879.70	879.60	885.00	39	0.0026	12	1.94	2.12	0.31	
EX2	6	0.15	0.76	0.11	0.27	10.31	4.14	1.1	879.50	879.40	885.20	20	0.0050	12	2.71	3.11	0.11	
16	14	0.28	0.70	0.20	0.20	10	4.18	0.8	884.89	884.69	888.19	40	0.0050	12	2.71	2.86	0.23	
14	9	0.31	0.76	0.24	1.37	17.39	3.36	4.6	884.44	883.39	888.19	210	0.0050	15	4.91	4.24	0.83	
9	8	0.00	0.00	0.00	1.49	18.22	3.29	4.9	880.99	880.55	891.90	74	0.0060	15	5.38	4.65	0.27	
8	7	0.00	0.00	0.00	1.49	18.49	3.27	4.9	880.45	879.97	890.37	80	0.0060	15	5.38	4.65	0.29	
7	6	0.00	0.00	0.00	1.49	18.78	3.25	4.8	879.87	879.32	887.90	91	0.0060	15	5.38	4.65	0.33	
6	EX3	0.00	0.00	0.00	1.76	19.11	3.22	5.7	879.22	876.69	884.31	51	0.0496	12	8.54	10.98	0.08	
5	4	0.47	0.70	0.33	0.33	10	4.18	1.4	881.87	881.67	885.17	40	0.0050	12	2.71	3.28	0.20	
4	3	0.40	0.77	0.31	0.64	10.20	4.15	2.6	881.57	879.57	885.17	200	0.0100	12	3.83	4.96	0.67	
3	2	0.00	0.00	0.00	0.64	10.87	4.06	2.6	879.47	878.97	883.48	50	0.0100	12	3.83	4.95	0.17	
2	1	5.35	0.40	2.14	2.78	20.98	3.08	8.6	877.47	877.24	881.20	23	0.0100	18	11.30	6.63	0.06	
1	FS1	0.96	0.56	0.54	3.32	21.04	3.08	10.2	876.71	875.93	880.80	194	0.0040	30x19	15.43	4.95	0.65	

CALCULATED LMO
CHECKED KJG

STORM SEWER COMPUTATIONS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

HYDRAULIC GRADE LINE COMPUTATIONS – 10 YEAR (n=0.013)

FROM POINT	TO POINT	OUTLET INVERT ELEV.	OUTLET WATER SURFACE ELEV.	PIPE DIAMETER	FLOW RATE	PIPE LENGTH	FRICTION SLOPE	FRICTION LOSS, Hf	JUNCTION LOSS: VELOCITY OUTLET PIPE, Vo	CONTROL LOSS, Ho	DISCHARGE INFLOW PIPE, Qi	VELOCITY INFLOW PIPE, Vi	MAX INFLOW PRODUCT, Qi * Vi	INFLOW VELOCITY HEAD, (Vi^2)/(2g)	MAX EXPAN. LOSS, Hi	MAX ANGLE, Ai	LOSS COEFF., K	MAX BEND LOSS, Hb	TOTAL JUNCTION LOSS, Ht	INLET CORRECT. FACTOR, X=1.3 Ht	SHAPE CORRECT. FACTOR, SCF=0.5 X	FINAL HEAD LOSS, H	INLET WATER SURFACE ELEV.	RIM ELEV.	REMARKS
		FT.	FT.	IN.	C.F.S.	FT.	%	FT.	FT./S	FT.	C.F.S.	FT./S	FT.^4/S^2	FT.	FT.	DEG.		FT.	FT.	FT.	FT.	FT.	FT.	FT.	
EX3	6	876.69	877.69	12	6.5	51	3.35%	1.709	11.30	0.496	5.5	4.54	24.97	0.320	0.112	70	0.61	0.195	0.803	1.044	0.522	2.231	879.92	884.31	
6	7	879.32	880.57	15	5.5	91	0.73%	0.664	4.54	0.080	5.5	4.58	25.19	0.326	0.114	20	0.16	0.052	0.246	0.320	0.160	0.824	881.39	887.90	
7	8	879.97	881.39	15	5.5	80	0.73%	0.584	4.58	0.081	5.5	4.61	25.36	0.330	0.116	20	0.16	0.053	0.250	0.325	0.163	0.747	882.14	890.37	
8	9	880.55	882.14	15	5.5	74	0.73%	0.540	4.61	0.083	5.2	4.32	22.46	0.290	0.102	100	0.70	0.203	0.388	0.504	0.252	0.792	882.93	891.90	
9	14	883.39	884.64	15	5.2	210	0.64%	1.344	4.32	0.072	0.7	2.98	2.09	0.138	0.048	110	0.70	0.097	0.217	0.282	0.141	1.485	886.13	888.19	
14	16	884.69	886.13	12	0.7	40	0.04%	0.016	2.98	0.034	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.034	0.044	0.022	0.038	886.17	888.19	
6	EX2	879.40	880.40	12	1.3	20	0.13%	0.026	3.24	0.041	0.8	2.20	1.76	0.075	0.026	0	0.00	0.000	0.067	0.087	0.044	0.070	880.47	885.20	
EX2	EX1	879.60	880.60	12	0.8	39	0.04%	0.016	2.20	0.019	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.019	0.025	0.012	0.028	880.63	885.00	
9	10	884.85	885.85	12	0.6	16	0.03%	0.005	2.60	0.026	0.6	2.62	1.57	0.107	0.037	90	0.70	0.075	0.138	0.179	0.090	0.095	885.95	892.38	
10	11	885.03	886.03	12	0.6	80	0.03%	0.024	2.62	0.027	0.3	2.17	0.65	0.073	0.026	90	0.70	0.051	0.104	0.135	0.068	0.092	886.12	889.19	
11	12	885.53	886.53	12	0.3	62	0.01%	0.006	2.17	0.018	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.018	0.023	0.012	0.018	886.55	889.14	
14	15	884.69	886.13	12	0.4	64	0.01%	0.006	2.42	0.023	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.023	0.030	0.015	0.021	886.15	887.30	
14	13	884.69	886.13	12	3.1	28	0.78%	0.218	5.14	0.103	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.103	0.134	0.067	0.285	886.42	887.30	
FS1	1	875.93	887.51	30x19	11.6	194	0.26%	0.504	5.10	0.101	9.9	6.76	66.92	0.710	0.249	0	0.00	0.000	0.350	0.455	0.228	0.732	878.24	880.80	
1	2	877.24	878.74	18	9.9	23	0.88%	0.202	6.76	0.177	3.0	5.08	15.24	0.401	0.140	90	0.70	0.281	0.598	0.777	0.389	0.591	879.33	881.20	
2	3	878.97	879.97	12	3.0	50	0.70%	0.350	5.08	0.100	3.0	5.11	15.33	0.405	0.142	0	0.00	0.000	0.242	0.315	0.157	0.507	880.48	883.48	
3	4	879.57	880.57	12	3.0	200	0.71%	1.400	5.11	0.101	1.6	3.39	5.42	0.178	0.062	70	0.61	0.109	0.272	0.354	0.177	1.597	882.17	885.17	
4	5	881.67	882.67	12	1.6	40	0.20%	0.080	3.39	0.045	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.045	0.059	0.029	0.109	882.78	885.17	

$$Ho = 0.25\frac{Vo^2}{2g}$$

$$Hi = 0.35\frac{Vi^2}{2g}$$

$$Hb = K\frac{Vi^2}{2g}$$

Ht = Ho+Hi+Hb

FINAL H = Hf + SCF

90°	K=0.70
80°	K=0.66
70°	K=0.61
60°	K=0.55
50°	K=0.47
40°	K=0.38
30°	K=0.28
25°	K=0.22
20°	K=0.16
15°	K=0.10

CALCULATED LMO
CHECKED KJG

STORM SEWER COMPUTATIONS

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

NOTES:

ALL STATIONS AND OFFSETS BASED ON ℄ CONST. UNLESS OTHERWISE NOTED.

EDGE LINES ALONG SPLITTER ISLANDS TO BE LOCATED 1'± FROM FACE OF CURB.

LEGEND

- (CL) CENTER LINE, DOUBLE SOLID YELLOW, 4"
- (CH) CHANNELIZING LINE, WHITE, 12"
- (WE) EDGE LINE, WHITE, 4"
- (YE) EDGE LINE, YELLOW, 4"
- (YT) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"
- (LA) LANE ARROW, 72"
- (D) DASHED LINE, WHITE, 8" (2' LONG, 4' GAP)

PROPOSED SIGN

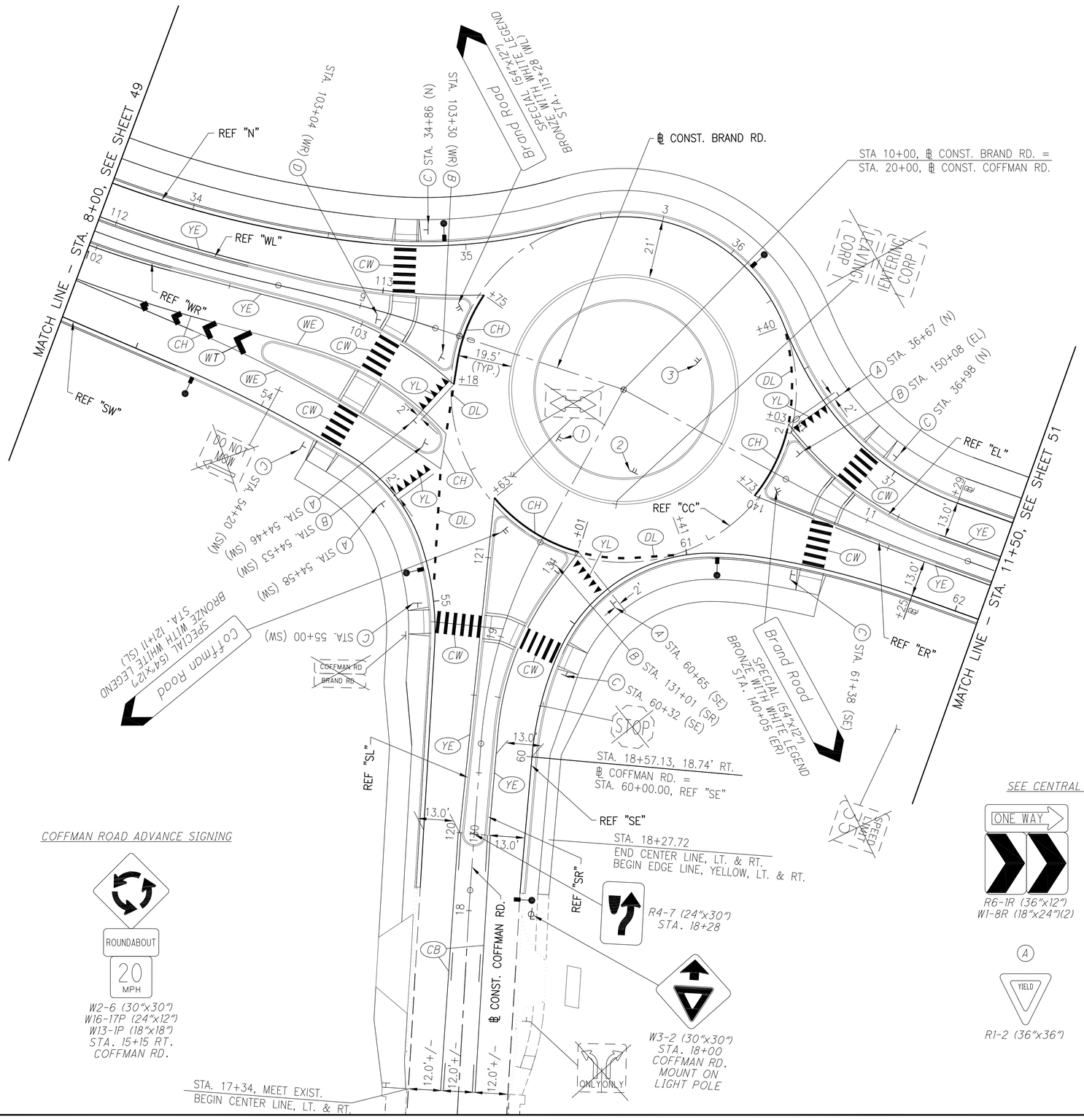
EX SIGN TO BE REMOVED AND DISPOSED OF

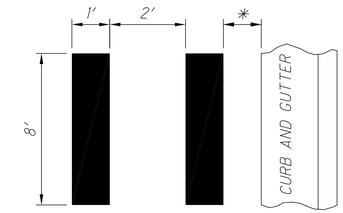
HORIZONTAL SCALE IN FEET

CALCULATED KJG
CHECKED LMO

TRAFFIC CONTROL PLAN - BRAND RD.
STA. 3+40 TO 8+00

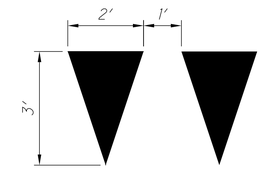
BRAND ROAD / COFFMAN ROAD ROUNDABOUT





* BALANCE SPACE BETWEEN CURBS

CROSSWALK DETAIL
NOT TO SCALE



SHARK TOOTH DETAIL
NOT TO SCALE

NOTE:

ALL STATIONS AND OFFSETS BASED ON REF. LINE "CC", EXCEPT AS NOTED.

EDGE LINES ALONG SPLITTER ISLANDS TO BE LOCATED 1' FROM FACE OF CURB.

LEGEND

- (CL) CENTER LINE, DOUBLE SOLID YELLOW, 4"
- (CB) CENTER LINE, SOLID AND BROKEN YELLOW, 4"
- (CH) CHANNELIZING LINE, WHITE, 12"
- (WE) EDGE LINE, WHITE, 4"
- (YE) EDGE LINE, YELLOW, 4"
- (YT) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"
- (WT) TRANSVERSE/DIAGONAL LINE, WHITE, 24"
- (LA) LANE ARROW, 72"
- (CW) CROSSWALK LINE, WHITE, 12"
- (DL) DASHED LINE, WHITE, 12" (3' LONG, 3' GAP)
- (YL) YIELD LINE (SEE SHARK TOOTH DETAIL ABOVE)

COFFMAN ROAD ADVANCE SIGNING

W2-6 (30"x30")
W16-17P (24"x12")
W13-1P (18"x18")
STA. 15+15 RT.
COFFMAN RD.

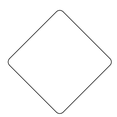
W3-2 (30"x30")
STA. 18+00
COFFMAN RD.
MOUNT ON
LIGHT POLE

R4-7 (24"x30")
STA. 18+28

SEE CENTRAL ISLAND

R6-1R (36"x12")
W1-8R (18"x24")(2)

1. STA. 0+59, 34' LT.
2. STA. 1+25, 34' LT.
3. STA. 2+38, 34' LT.



PROPOSED SIGN

EX SIGN TO BE REMOVED AND DISPOSED OF

(A)

R1-2 (36"x36")

(B)

R1-2 (36"x36")
R6-1R (36"x12")

(C)

W11-2 (30"x30")
W16-7PL (24"x12")

(D)

W11-2 (30"x30")
W16-7PR (24"x12")

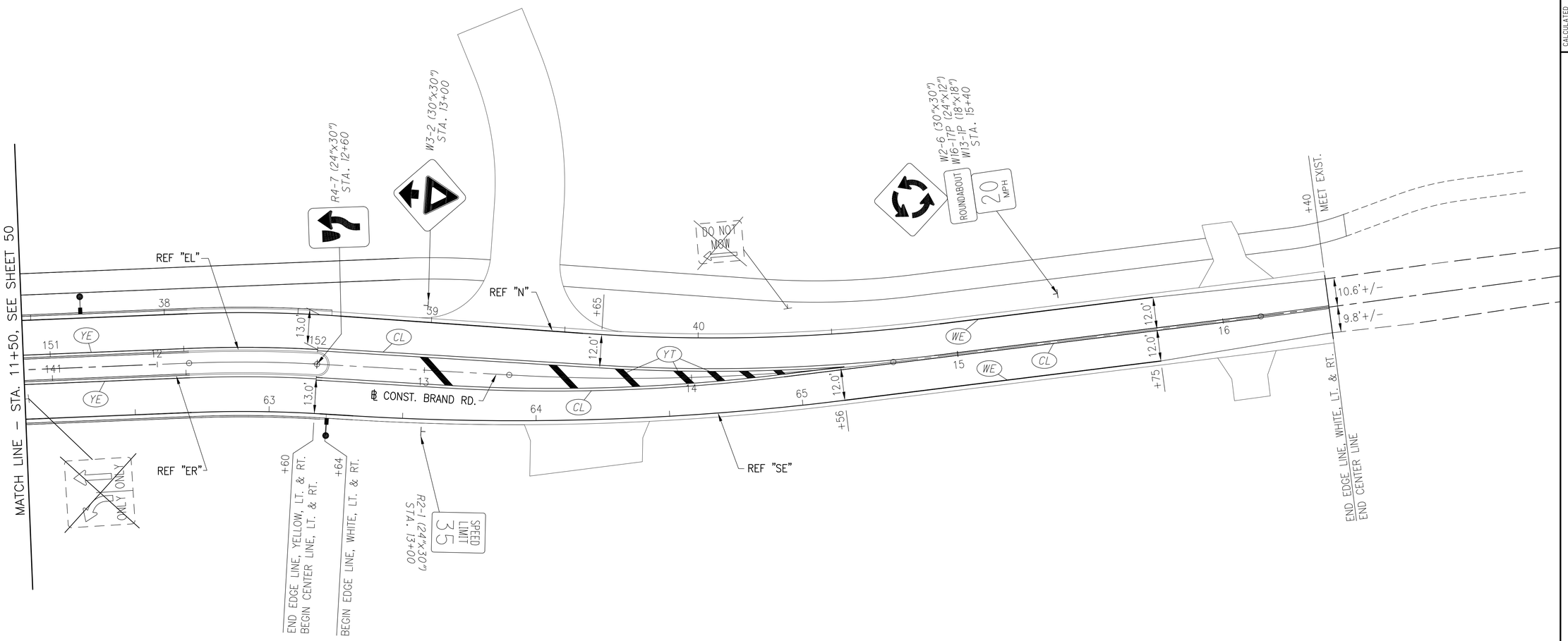
N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED K.JG
CHECKED LMO

TRAFFIC CONTROL PLAN - BRAND RD. / COFFMAN RD.
STA. 8+00 TO 11+50 / STA. 17+30 TO 20+00

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT



PROPOSED SIGN

EX SIGN TO BE REMOVED AND DISPOSED OF

NOTES:

ALL STATIONS AND OFFSETS BASED ON ℄ CONST. UNLESS OTHERWISE NOTED.

EDGE LINES ALONG SPLITTER ISLANDS TO BE LOCATED 1'± FROM FACE OF CURB.

LEGEND

- (CL) CENTER LINE, DOUBLE SOLID YELLOW, 4"
- (WE) EDGE LINE, WHITE, 4"
- (YE) EDGE LINE, YELLOW, 4"
- (YT) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED K.JG
CHECKED LMO

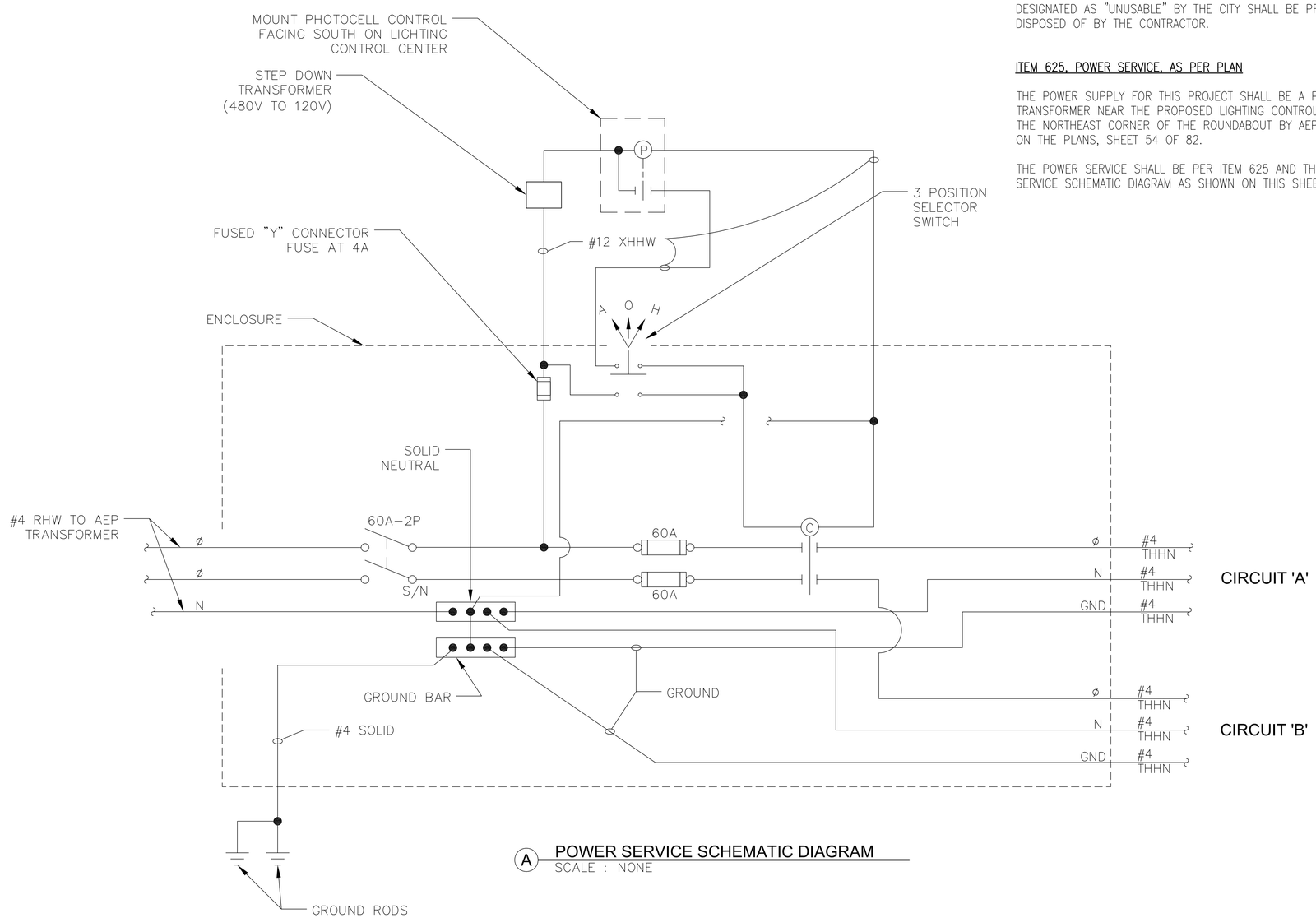
TRAFFIC CONTROL PLAN - BRAND RD.
STA. 11+50 TO 17+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

ITEM SPECIAL, ELECTRICAL LIGHTING TEST, AS PER PLAN

THE CONTRACTOR SHALL PERFORM A SERIES OF ELECTRICAL TESTING FOR THE STREET LIGHTING INSTALLATIONS, AS OUTLINED IN ODOT ITEM 625.19. THE CONTRACTOR SHALL NOT PERFORM TESTING FOR THE LOWERING DEVICE OPERATION NOTED IN ITEM 625.19, SUBPARAGRAPH E, AS IT IS NOT APPLICABLE TO THIS PROJECT. THE INTENT OF THIS TESTING ITEM IS TO PERFORM A COMPREHENSIVE TESTING OF THE LIGHTING INSTALLATIONS THAT IS APPROPRIATE FOR THE LIGHTING SYSTEM WITH A #4 AWG 600 VOLT DISTRIBUTION CABLE LIGHTING CIRCUIT. A HIGH VOLTAGE TEST IS NOT APPLICABLE TO THIS PROJECT.

PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL, ELECTRICAL LIGHTING TEST, AS PER PLAN, COMPLETE AND IN PLACE, ALL CONNECTIONS AND SYSTEMS TESTED AND ACCEPTED.



A POWER SERVICE SCHEMATIC DIAGRAM
SCALE : NONE

ITEM 625, PORTION OF LUMINAIRE SUPPORT FOUNDATION REMOVED, AS PER PLAN

IN ADDITION TO ODOT ITEM 625, IT IS THE INTENT OF THIS ITEM THAT A SUFFICIENT DEPTH OF FOUNDATION (MIN 2 FOOT) BE REMOVED SO THAT THE REMAINING FOUNDATION IS BELOW THE PROPOSED ROADWAY SUBGRADE OR FINAL GRADE. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR THIS ITEM.

ITEM 625, LUMINAIRE SUPPORT REMOVED FOR STORAGE, AS PER PLAN
ITEM 625, LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN

IN ADDITION TO ODOT ITEM 625, THE LIGHT POLES, LUMINAIRES AND ALL OTHER LIGHTING COMPONENTS NOT USED IN THE COMPLETED INSTALLATION SHALL BECOME THE PROPERTY OF THE CITY OF DUBLIN. THE CONTRACTOR SHALL CAREFULLY REMOVE THESE ITEMS, CAREFULLY TRANSPORT THEM TO A LOCATION WITHIN THE CITY (5800 SHIER-RINGS ROAD, DUBLIN, OHIO 43016), AND SHALL CAREFULLY UNLOAD AND STORE THEM AS DIRECTED. ANY ITEMS DESIGNATED AS "UNUSABLE" BY THE CITY SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

ITEM 625, POWER SERVICE, AS PER PLAN

THE POWER SUPPLY FOR THIS PROJECT SHALL BE A PROPOSED TRANSFORMER NEAR THE PROPOSED LIGHTING CONTROL CENTER ON THE NORTHEAST CORNER OF THE ROUNDABOUT BY AEP, AS SHOWN ON THE PLANS, SHEET 54 OF 82.

THE POWER SERVICE SHALL BE PER ITEM 625 AND THE POWER SERVICE SCHEMATIC DIAGRAM AS SHOWN ON THIS SHEET.

UNDERGROUND UTILITY NOTIFICATION

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY EXTENSIVE FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT. EXTREME CAUTION SHALL BE EXERCISED IN AREAS WITH UNDERGROUND ELECTRICAL CONDUIT OR CABLE, SEWERS, WATERLINES, OR ANY OTHER UNDERGROUND UTILITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MARKING ALL UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ELECTRICAL CONDUIT, DUCT AND/OR CABLE, SEWERS, AND DRAINS TO PREVENT DAMAGE DURING CONSTRUCTION.

THE CONTRACTOR SHALL NOTIFY THE UTILITIES, BY O.U.P.S. OR DIRECTLY BY TELEPHONE, FORTY EIGHT (48) HOURS IN ADVANCE OF WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE CAUSED TO ANY AND ALL UNDERGROUND UTILITY BY THE EXCAVATION ETC., AND WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE TO REPAIR THE DAMAGE TO AN "AS WAS" CONDITION.

OHIO UTILITIES PROTECTION SERVICE (OUPS): 1-800-362-2764 OR 811

ODOT SPECIFICATION AND DRAWING STANDARDS FOR USE IN THE CITY OF DUBLIN

THE FOLLOWING ITEMS SHALL CONFORM TO THE CORRESPONDING OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION ITEM NUMBER AND CITY OF DUBLIN STANDARD DRAWING NUMBER:

	STANDARD DRAWING	PERFORMANCE	MATERIAL
LUMINAIRE	SL-01	625.08	725.11
TRANSFORMER BASE	SL-02	------	------
LIGHT POLE	SL-03	625.09	725.21
POLE FOUNDATIONS	SL-04	625.10	------
TRENCHES	SL-05	625.13	------
LIGHTING CONTROLLER	SL-13	------	------
CABLE CONNECTIONS AND SPLICES	----	625.17	725.15
CONDUIT	----	625.12	725.05
DUCT CABLE	----	------	725.03
GROUND ROD	----	625.16	725.16
PULL BOXES	----	625.11	725.06
TESTING	----	625.19	------

ITEM 625, LUMINAIRE, AS PER PLAN

THIS ITEM SHALL CONSIST OF AN CREE EDGE AREA LIGHT, LED LUMINAIRE WITH TYPE II DISTRIBUTION (AS SPECIFIED ON THE LIGHTING PLAN DETAIL SHEETS), DIRECT MOUNTING, 480 VOLT SINGLE PHASE, 100 LED, 525 mA DRIVE CURRENT, COLOR TO BE BRONZE.

APPROVED MANUFACTURERS:
TYPE II: CREE LED - ARE-EDG-2M-DA-10-D-UH-BZ-525-40K

ITEM 625, LIGHT POLE FOUNDATION (24" X 7' DEEP), AS PER PLAN

THE TOP OF THE FOUNDATIONS SHALL BE ONE INCH ABOVE GROUND LEVEL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOUNDATION ELEVATIONS PRIOR TO INSTALLATION OF THE FOUNDATIONS. THE FOUNDATION DEPTH IN NO CASE SHALL BE LESS THAN THE SPECIFIED FOUNDATION DEPTH PER PAY ITEM, BUT SHALL OTHERWISE BE IN CONFORMANCE TO ODOT SPECIFICATIONS REGARDING FOUNDATIONS IN BEDROCK. THE FOUNDATION SHALL FOLLOW CITY STANDARD SL-04.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID, COMPLETE AND IN PLACE, AND ACCEPTED.

CONDUIT AND CONDUIT SLEEVES INSTALLATION UNDER PAVEMENTS

ALL CONDUITS AND SLEEVES PLACED UNDER SIDEWALK, BIKEPATH, DRIVEWAY, AND STREET PAVEMENT SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF ANY SUBBASE OR NEW PAVEMENT. PAYMENT FOR TRENCH SHALL BE MADE PER ITEM 625, "TRENCH, 24" DEEP". CONDUIT SLEEVES SHALL EXTEND 3' BEYOND THE BACK OF CURB LINE OR EDGE OF PAVEMENT.

CALCULATED NLC
CHECKED SDS

LIGHTING NOTES

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

CONTROL SITE SCHEDULE

CONTROL SITE	CIRCUIT	TOTAL LUMINAIRES	TOTAL WATTS	AMPS	KVA	CIRCUIT FUSE SIZE	VOLTAGE DROP	COMMENT
PROPOSED 480 VOLT CONTROL SITE 'A'	A	6	1094	2.28	1.09	30.00	V_D (ACCUMULATIVE) = 0.110% @ A5	V(LINE) = 480V, I(LINE) = 0.38A
	B	4	730	1.52	0.73	30.00	V_D (ACCUMULATIVE) = 0.042% @ B3	V(LINE) = 480V, I(LINE) = 0.38A
TOTAL		10	1824	3.80	1.82			

STREET LIGHTING PHOTOMETRIC RESULTS*

DESCRIPTION	AVE	MAX	MIN	MAX/MIN	AVE/MIN
CIRCULATORY ROADWAY	1.1fc	1.5fc	0.6fc	2.5:1	1.8:1
ENTIRE PROJECT	1.1fc	1.6fc	0.5fc	3.2:1	2.2:1

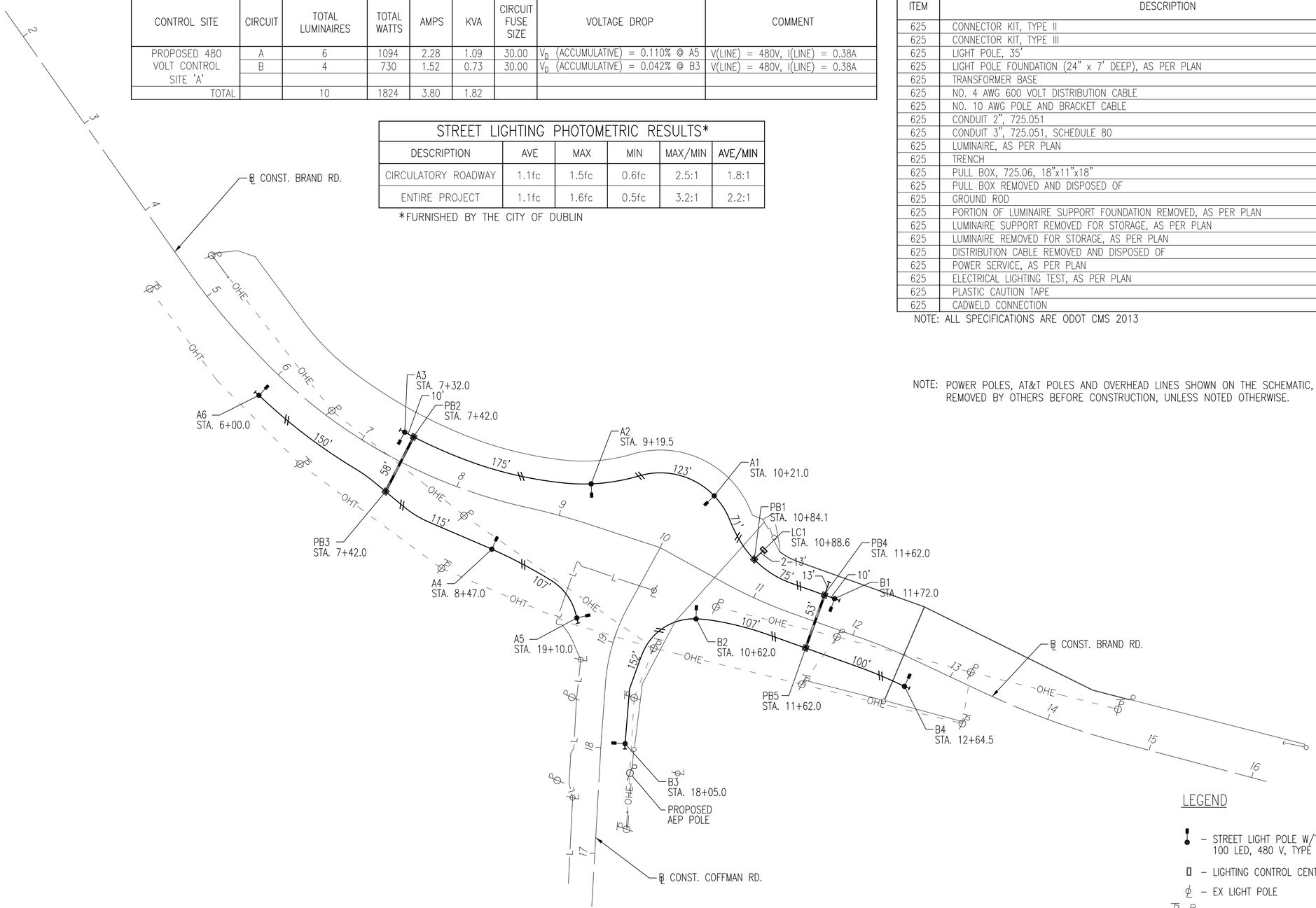
*FURNISHED BY THE CITY OF DUBLIN

LIGHTING ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	TOTAL	UNIT
625	CONNECTOR KIT, TYPE II	11	EACH
625	CONNECTOR KIT, TYPE III	22	EACH
625	LIGHT POLE, 35'	10	EACH
625	LIGHT POLE FOUNDATION (24" x 7' DEEP), AS PER PLAN	10	EACH
625	TRANSFORMER BASE	10	EACH
625	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	4635	FT
625	NO. 10 AWG POLE AND BRACKET CABLE	1350	FT
625	CONDUIT 2", 725.051	1401	FT
625	CONDUIT 3", 725.051, SCHEDULE 80	142	FT
625	LUMINAIRE, AS PER PLAN	10	EACH
625	TRENCH	1375	FT
625	PULL BOX, 725.06, 18"x11"x18"	5	EACH
625	PULL BOX REMOVED AND DISPOSED OF	2	EACH
625	GROUND ROD	12	EACH
625	PORTION OF LUMINAIRE SUPPORT FOUNDATION REMOVED, AS PER PLAN	3	EACH
625	LUMINAIRE SUPPORT REMOVED FOR STORAGE, AS PER PLAN	3	EACH
625	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	3	EACH
625	DISTRIBUTION CABLE REMOVED AND DISPOSED OF	1395	FT
625	POWER SERVICE, AS PER PLAN	1	EACH
625	ELECTRICAL LIGHTING TEST, AS PER PLAN	1	LUMP
625	PLASTIC CAUTION TAPE	1233	FT
625	CADWELD CONNECTION	12	EACH

NOTE: ALL SPECIFICATIONS ARE ODOT CMS 2013

NOTE: POWER POLES, AT&T POLES AND OVERHEAD LINES SHOWN ON THE SCHEMATIC, ARE TO BE REMOVED BY OTHERS BEFORE CONSTRUCTION, UNLESS NOTED OTHERWISE.



LEGEND

- STREET LIGHT POLE W/TRANSFORMER BASE, FOUNDATION & 100 LED, 480 V, TYPE II LUMINAIRE
- LIGHTING CONTROL CENTER, PAD MOUNTED
- EX LIGHT POLE
- EX UTILITY POLE
- PULL BOX, 725.06, 18"x11"x18"
- 3 – NO. 4 AWG DISTRIBUTION CABLE, IN 2" CONDUIT INSIDE 3" CONDUIT SLEEVE, SCH. 80
- 3 – NO. 4 AWG DISTRIBUTION CABLE, IN 2" CONDUIT
- CONDUIT, 3" PVC SLEEVE, 725.05, SCH. 80. INSTALL PULL WIRE AND CAP 3' BEHIND CURB AND CONCRETE SIDEWALK AS SHOWN.
- OHE – EX OVERHEAD ELECTRIC LINE
- L – EX UNDERGROUND LIGHTING LINE, TO BE REMOVED

N

HORIZONTAL SCALE IN FEET 0 25 50 100

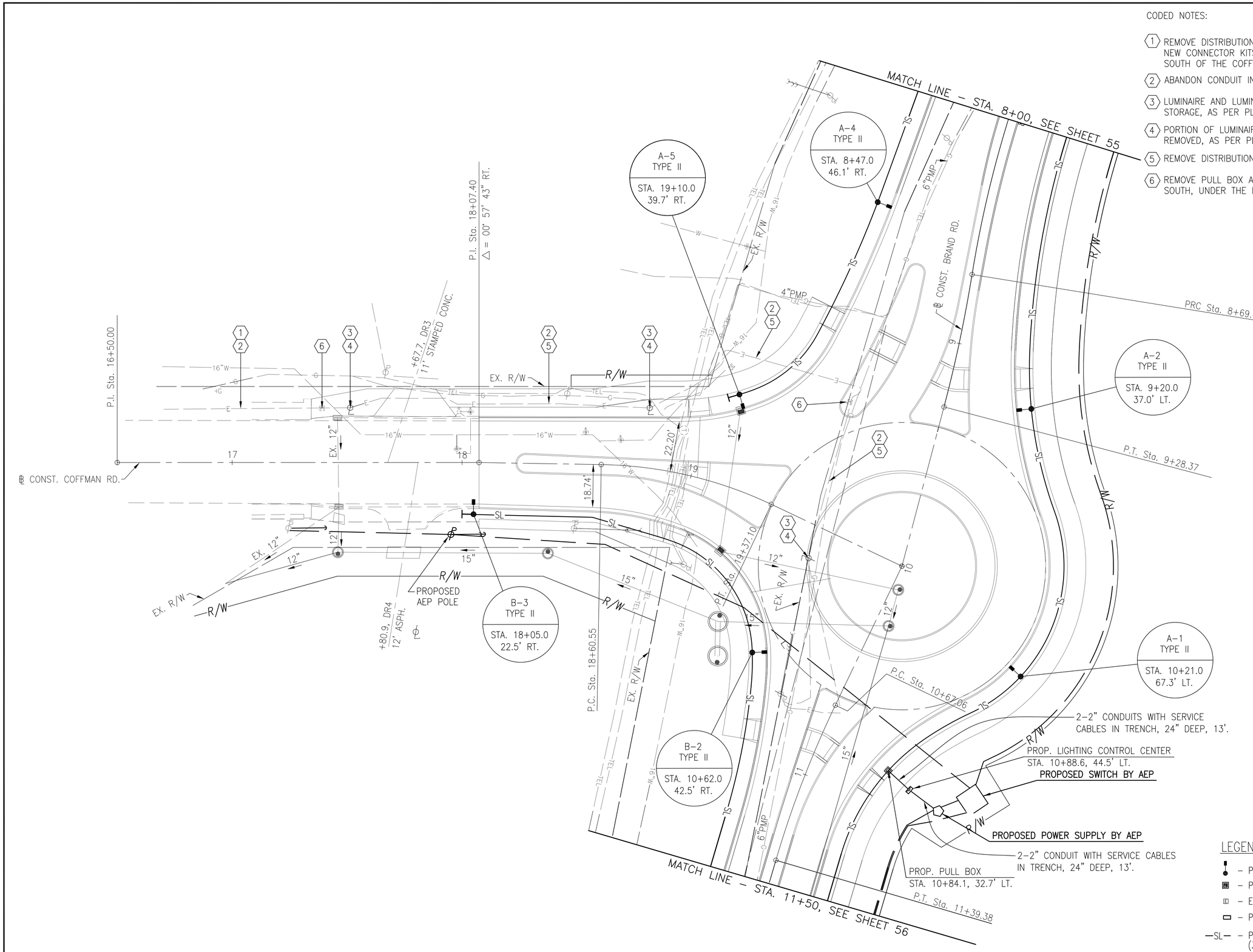
CALCULATED NLC
CHECKED SDS

STREET LIGHTING CIRCUIT SCHEMATIC

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

CODED NOTES:

1. REMOVE DISTRIBUTION CABLES AND INSTALL THREE (3) NEW CONNECTOR KITS AT THE EX. LIGHT POLE JUST SOUTH OF THE COFFMAN ROAD BRIDGE.
2. ABANDON CONDUIT IN PLACE.
3. LUMINAIRE AND LUMINAIRE SUPPORT REMOVED FOR STORAGE, AS PER PLAN.
4. PORTION OF LUMINAIRE SUPPORT FOUNDATION REMOVED, AS PER PLAN.
5. REMOVE DISTRIBUTION CABLES.
6. REMOVE PULL BOX AND CAP CONDUIT STUB TO THE SOUTH, UNDER THE BRIDGE.



LEGEND

- PROPOSED LIGHT POLE
- PROPOSED PULL BOX
- EXISTING PULL BOX
- PROPOSED 480V CONTROL CENTER
- —SL— PROPOSED LIGHTING CIRCUIT (3 – #4 AWG, 600V CABLES)

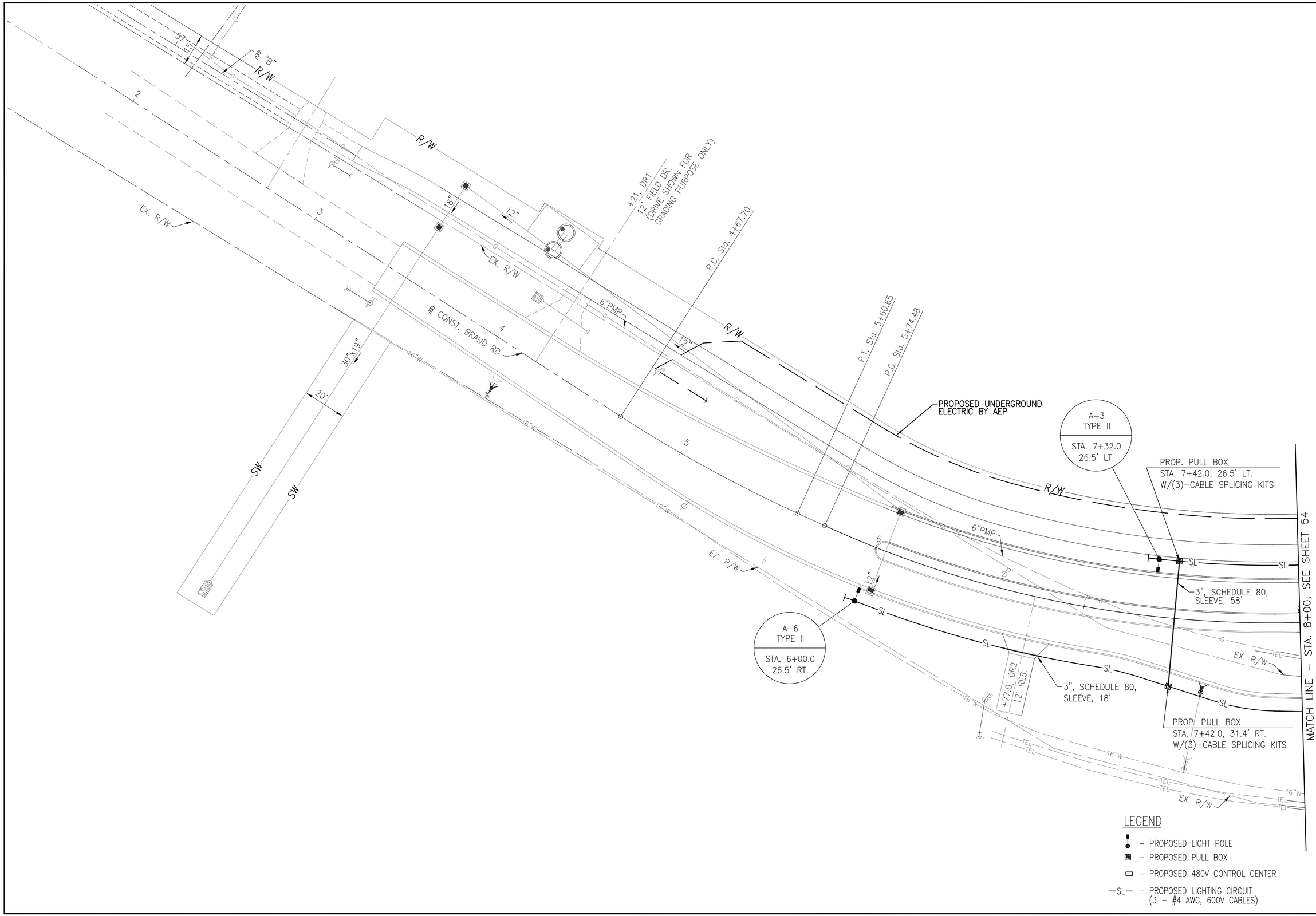
N

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED NLC
CHECKED SDS

LIGHTING PLAN - BRAND RD. / COFFMAN ROAD
STA. 16+50 TO 20+00 / STA. 8+00 TO 11+50

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



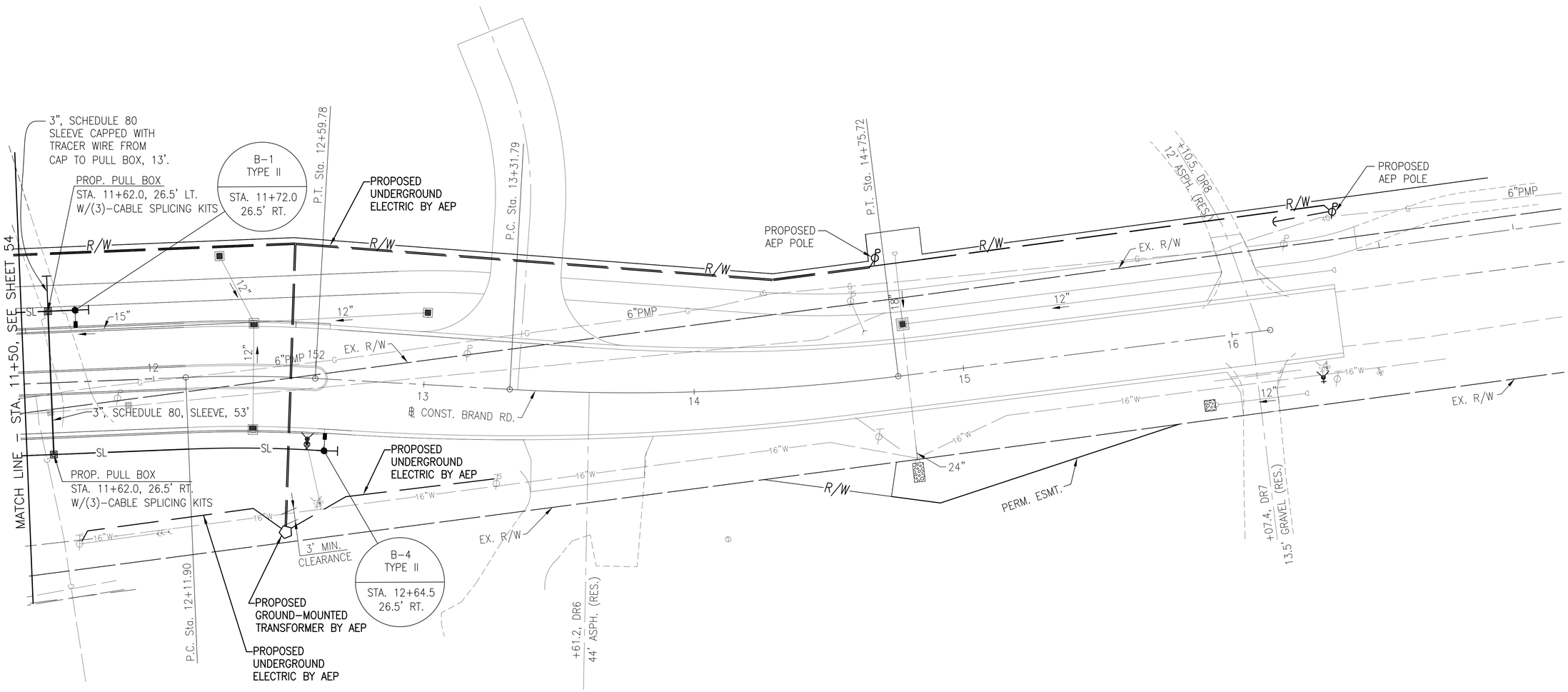
N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED NLC
CHECKED SDS

LIGHTING PLAN - BRAND ROAD
STA. 2+00 TO STA. 8+00

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT



LEGEND

- PROPOSED LIGHT POLE
- PROPOSED PULL BOX
- PROPOSED 480V CONTROL CENTER
- SL – PROPOSED LIGHTING CIRCUIT (3 – #4 AWG, 600V CABLES)

SHEET 57 IS NOT USED

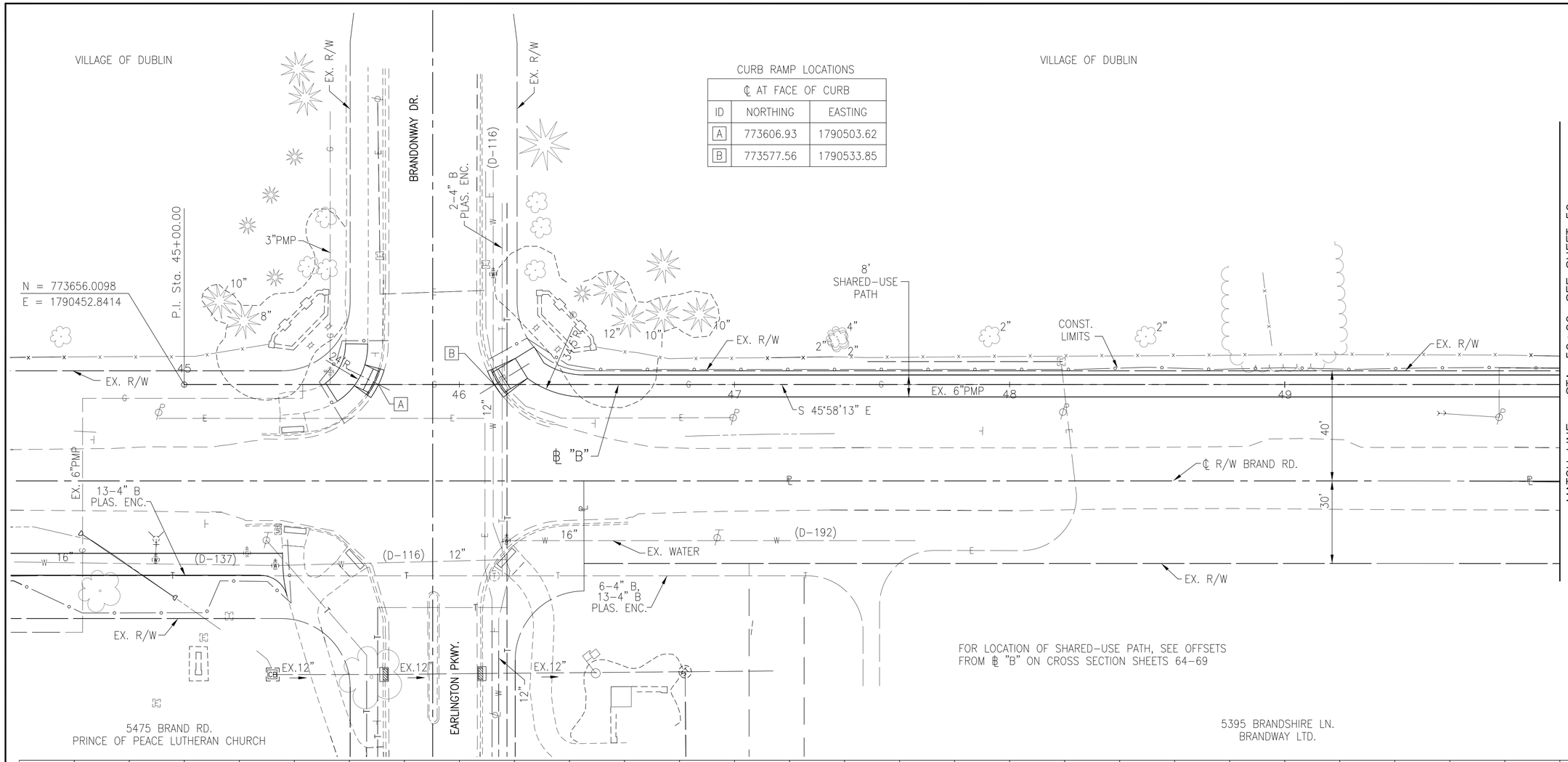
N

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED NLC
CHECKED SDS

LIGHTING PLAN - BRAND ROAD STA. 11+50 TO STA. 17+00

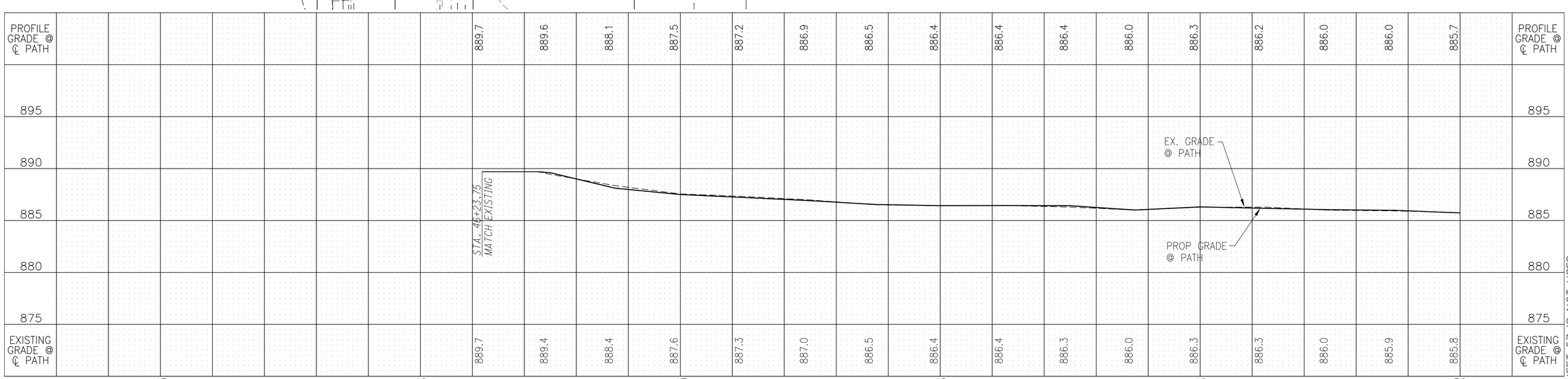
BRAND ROAD / COFFMAN ROAD ROUNDABOUT



CURB RAMP LOCATIONS

℄ AT FACE OF CURB		
ID	NORTHING	EASTING
A	773606.93	1790503.62
B	773577.56	1790533.85

FOR LOCATION OF SHARED-USE PATH, SEE OFFSETS FROM ℄ "B" ON CROSS SECTION SHEETS 64-69



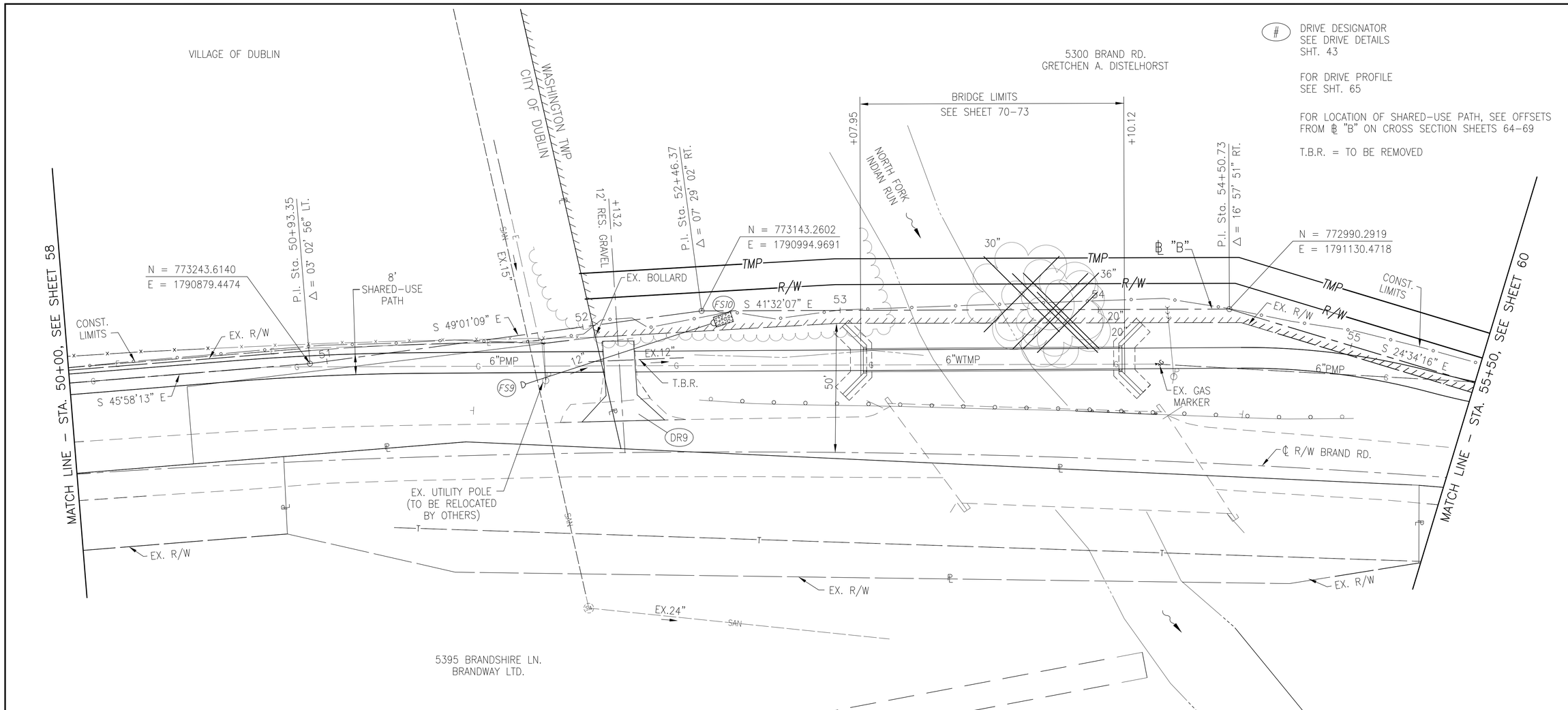
SHEET 57 IS NOT USED

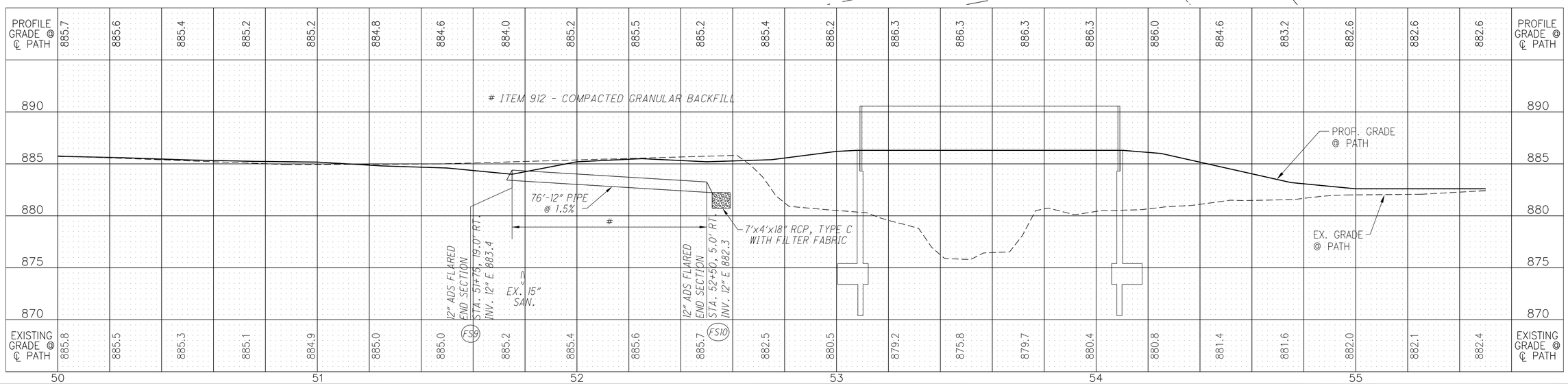
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE (SHARED-USE PATH)
℄ "B" STA. 45+00 TO STA. 50+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



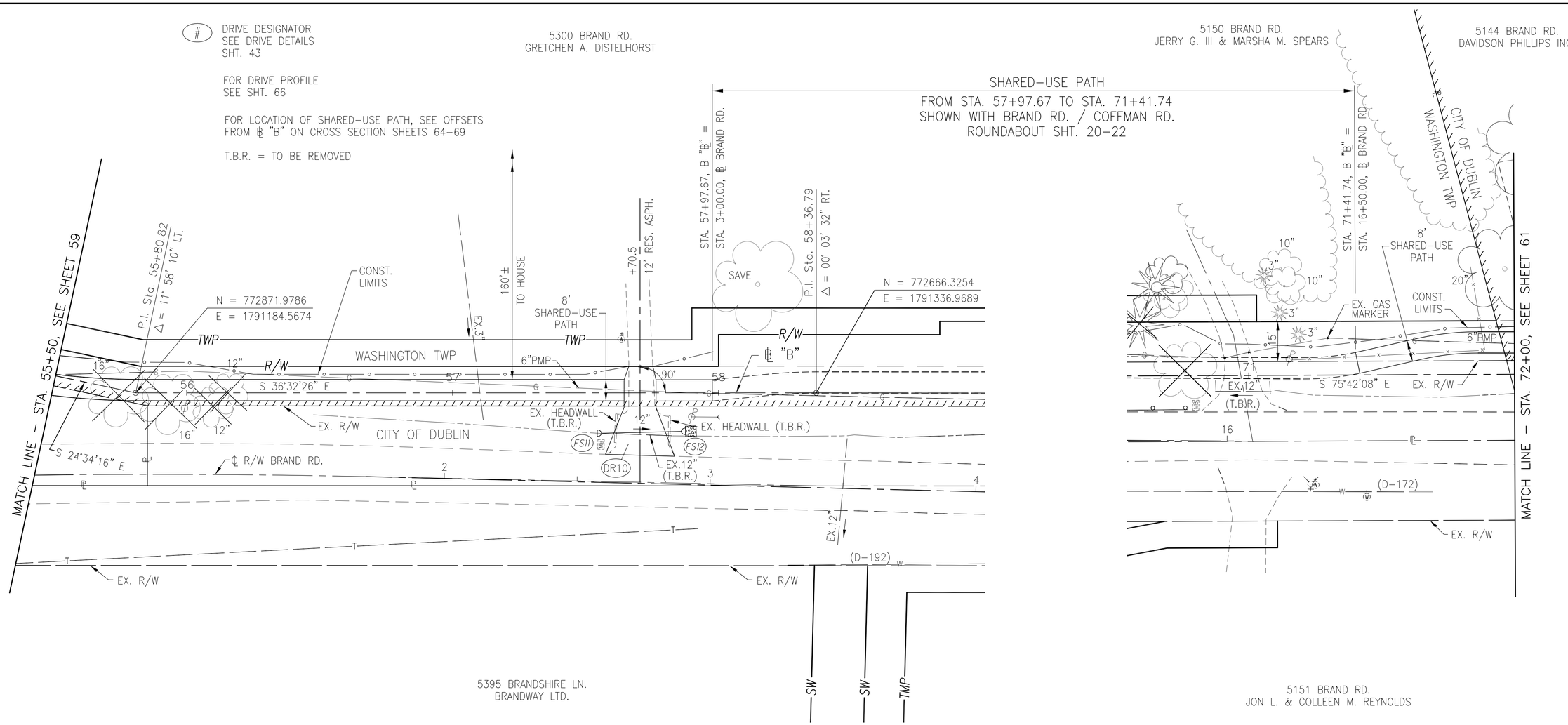


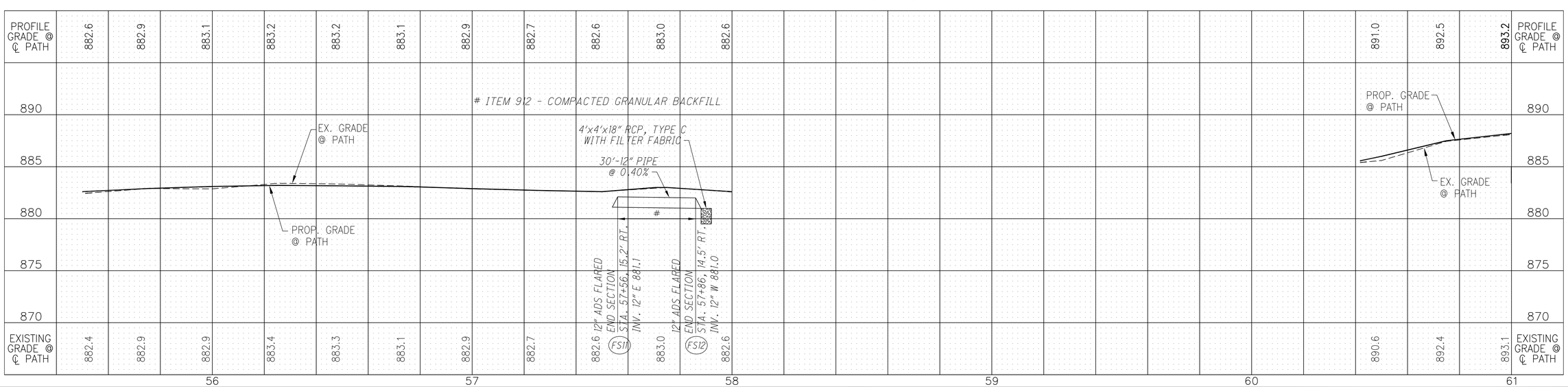
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE (SHARED-USE PATH)
℄ "B" STA. 50+00 TO STA. 55+50

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



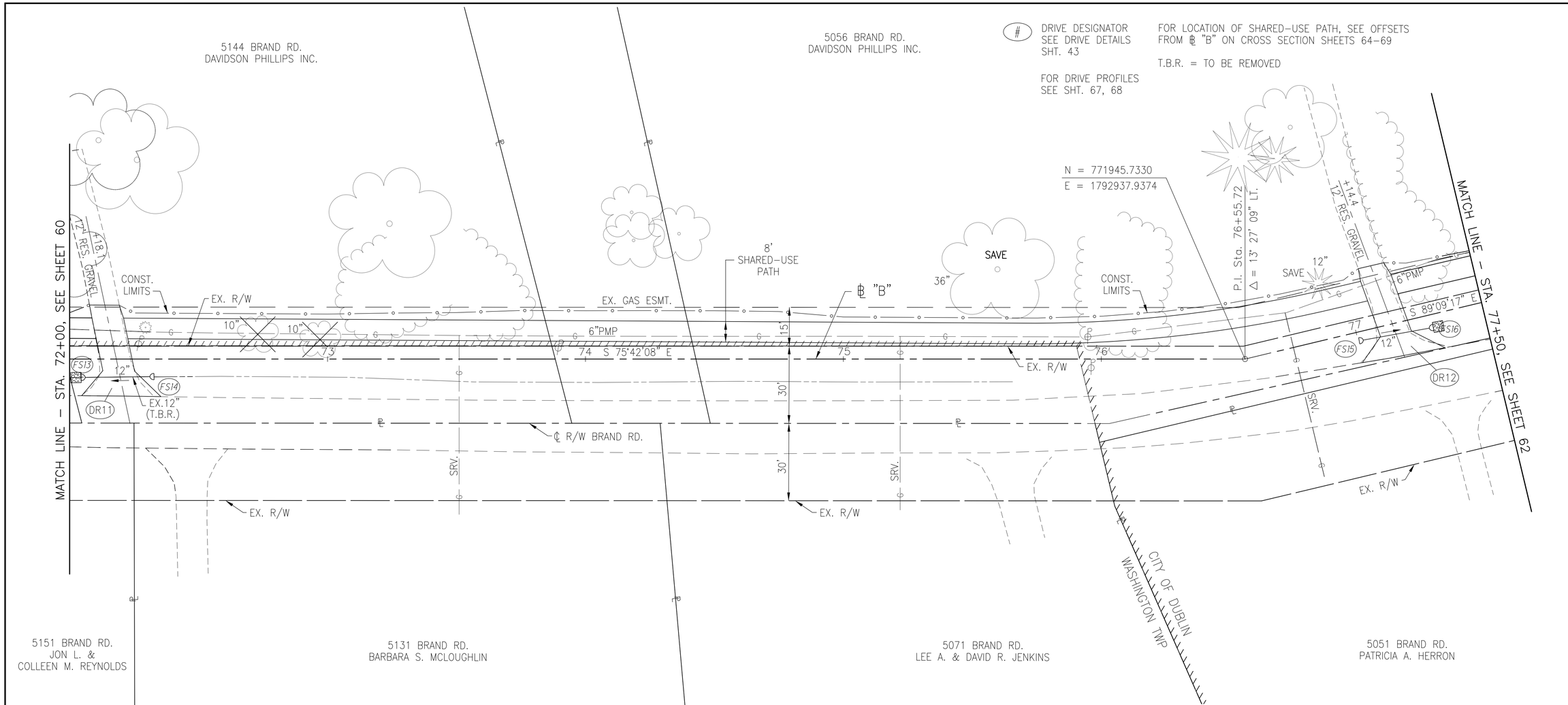


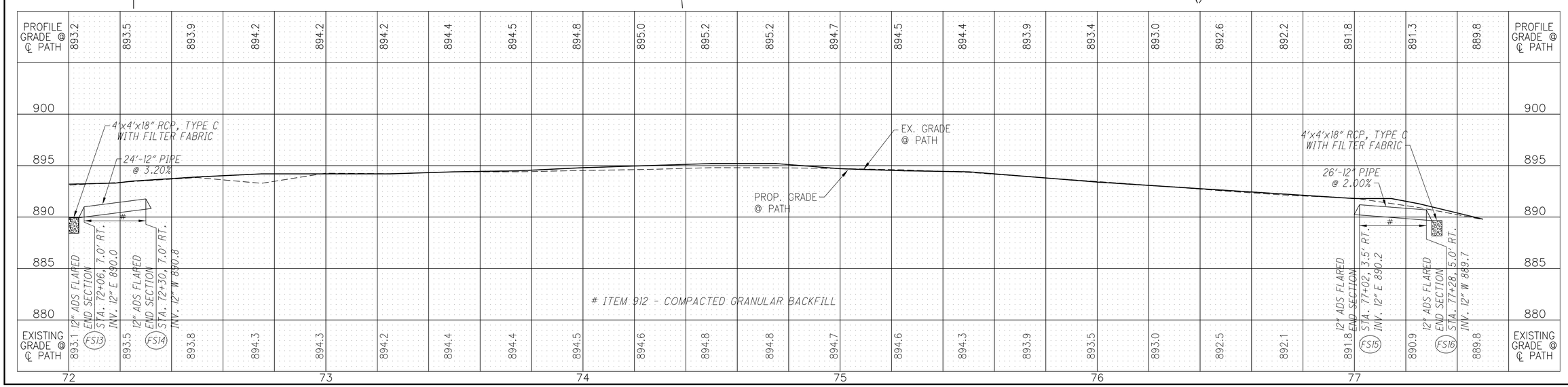
CALCULATED LAM
CHECKED KJG

HORIZONTAL SCALE IN FEET 0 10 20 40

PLAN AND PROFILE (SHARED-USE PATH)
℄ "B" STA. 55+50 TO STA. 61+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT





N

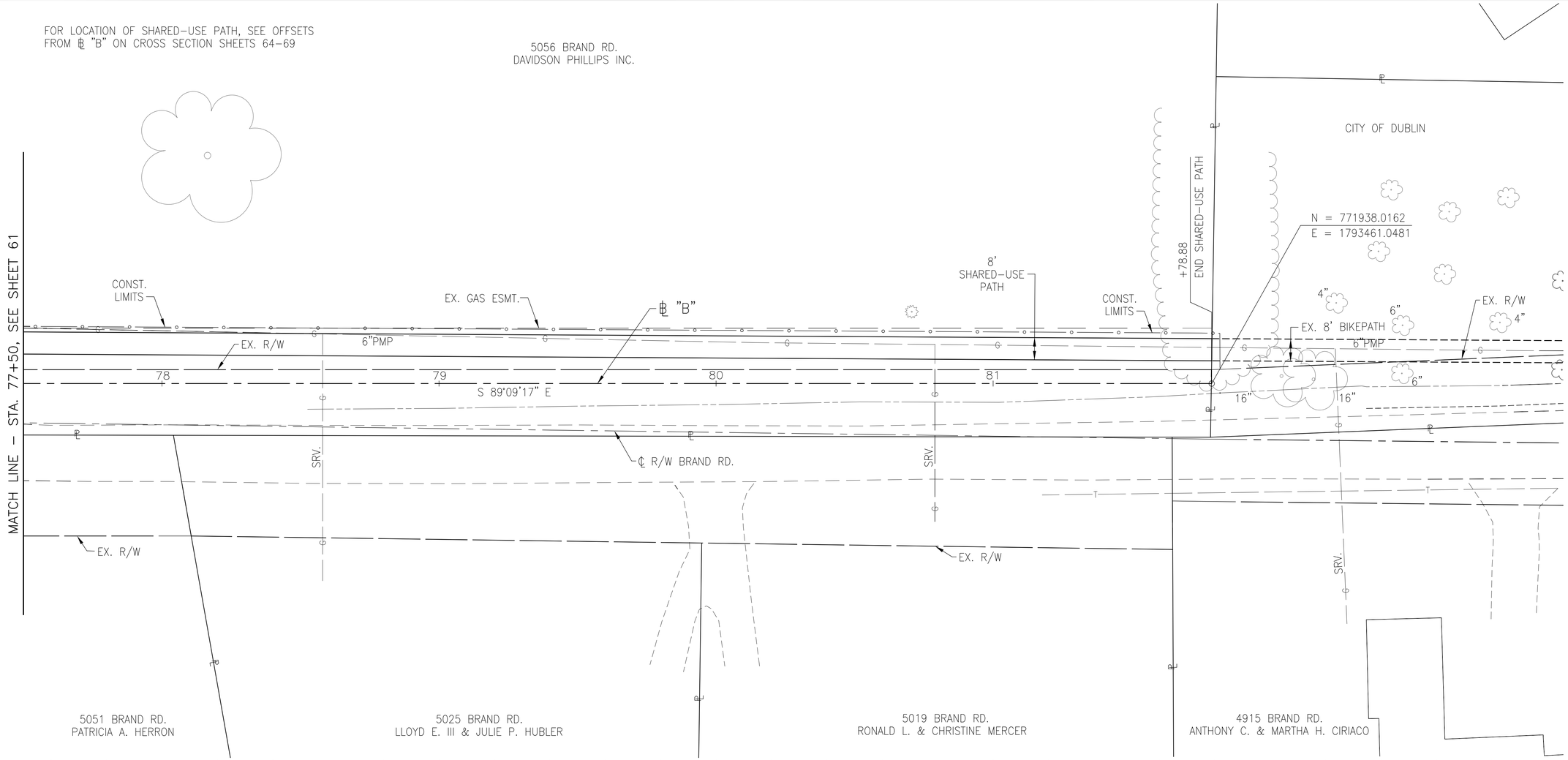
HORIZONTAL SCALE IN FEET
0 10 20 40

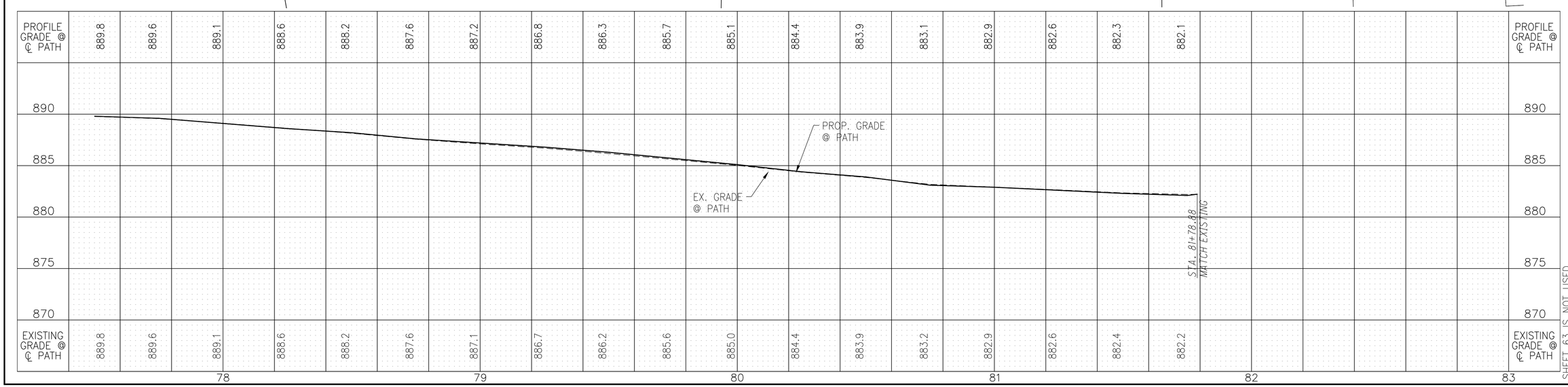
CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE (SHARED-USE PATH)
℄ "B" STA. 72+00 TO STA. 77+50

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

FOR LOCATION OF SHARED-USE PATH, SEE OFFSETS FROM ℄ "B" ON CROSS SECTION SHEETS 64-69





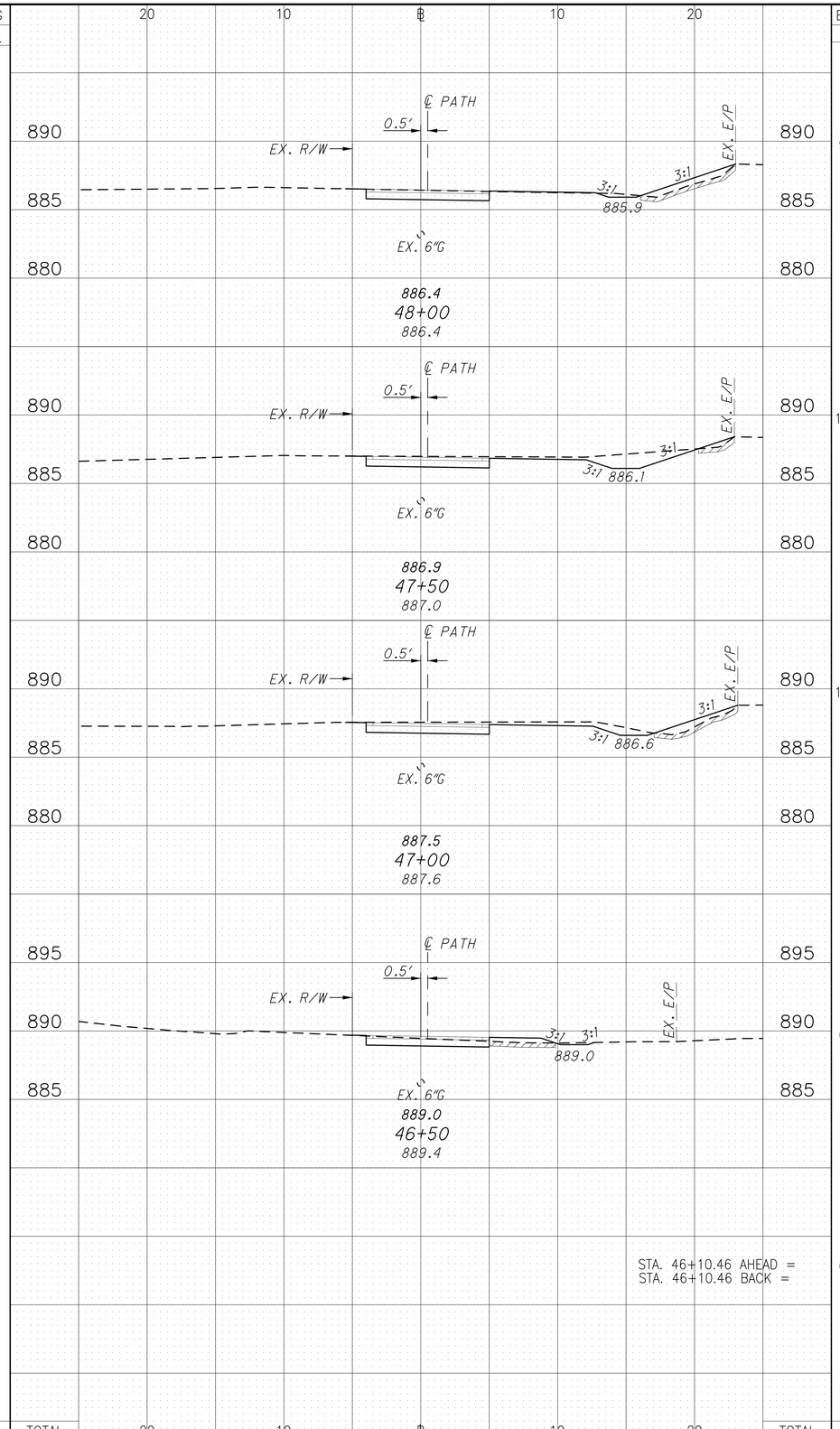
SHEET 63 IS NOT USED

HORIZONTAL SCALE IN FEET 0 10 20 40

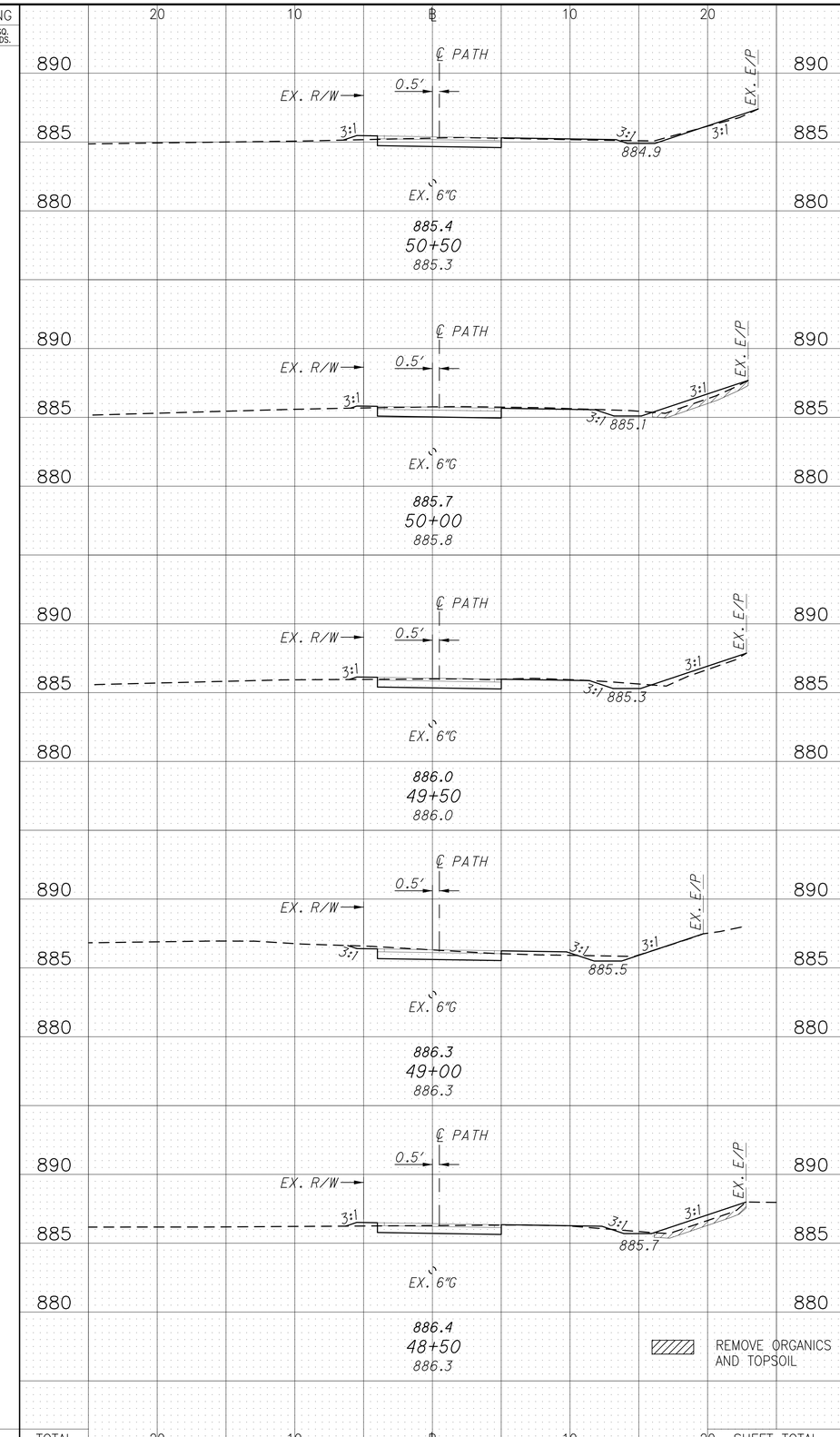
CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE (SHARED-USE PATH)
℄ "B" STA. 77+50 TO STA. 83+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		9.3	5.6		
				22	6
		14.6	1.4		
				26	6
		13.3	4.6		
				19	6
		6.8	2.1		
				5	3
		6.8	2.1		
		0	0		



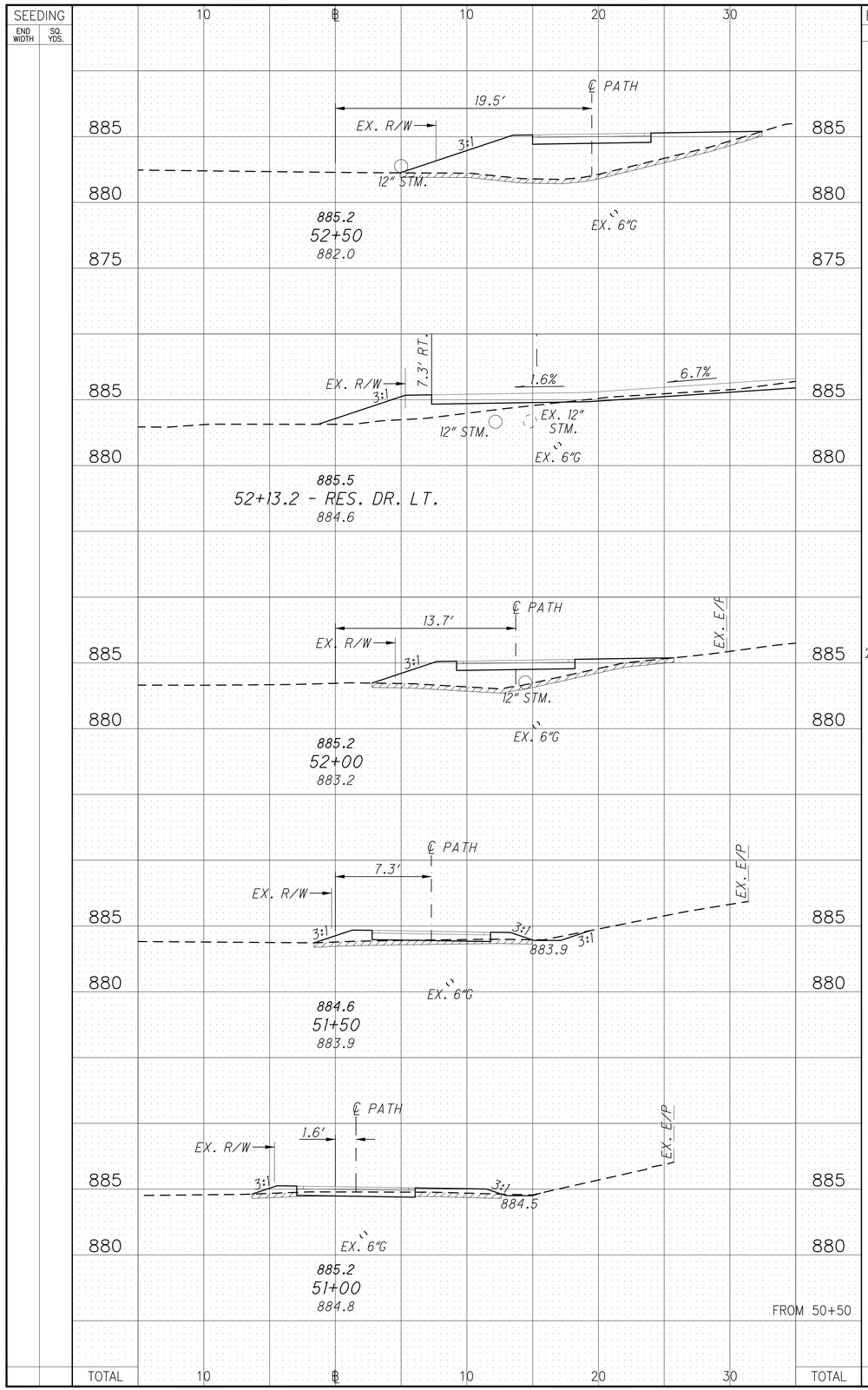
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6.2	1.4		
		16	6
10.7	4.7		
		17	6
7.5	2		
		14	3
7.6	1.3		
		14	7
8	6.6		
		16	11
	SHEET TOTAL	149	54

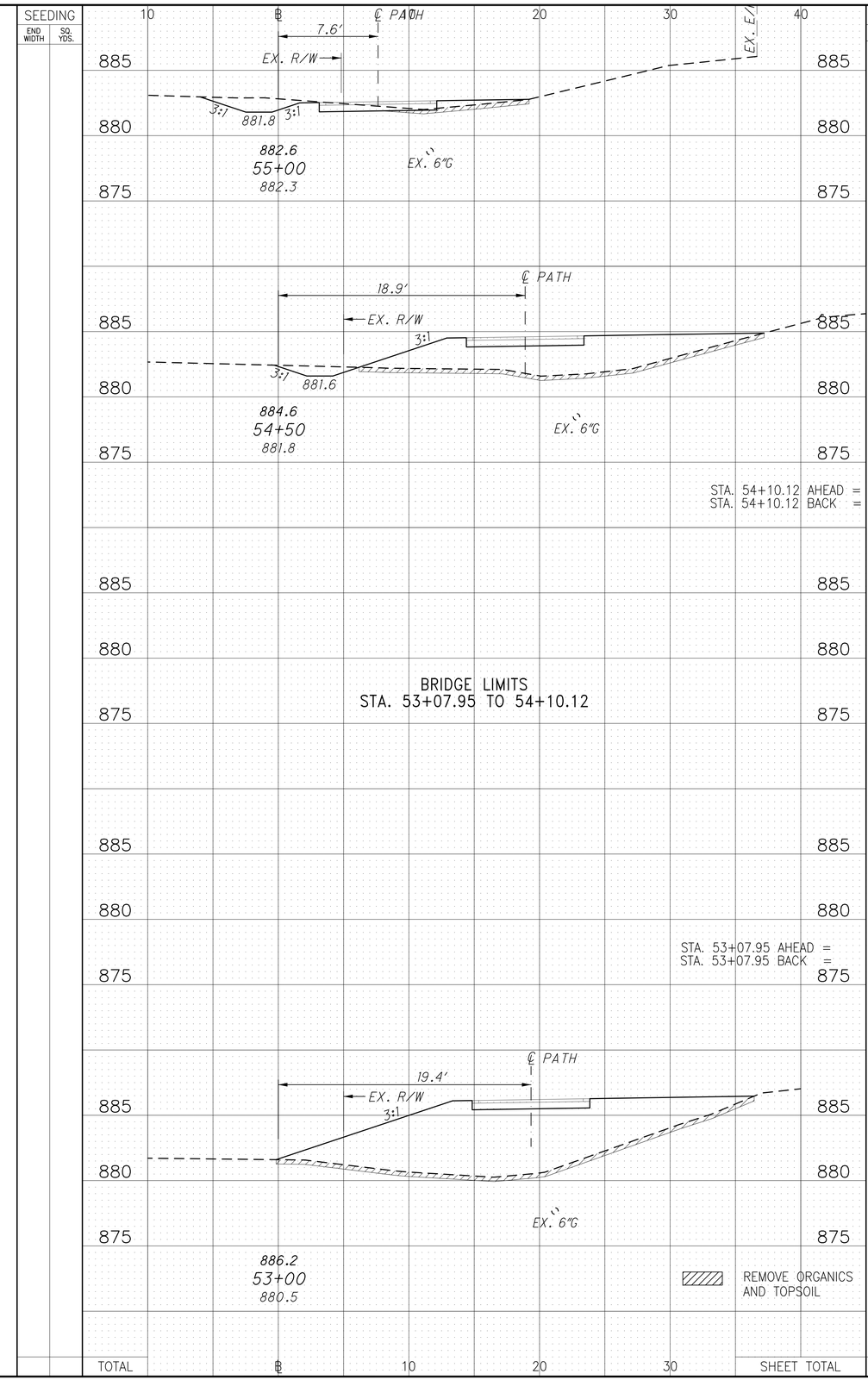
CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - (SHARED-USE PATH)
℄ "B" STA. 46+50 TO STA. 50+50

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT

SHEET 63 IS NOT USED

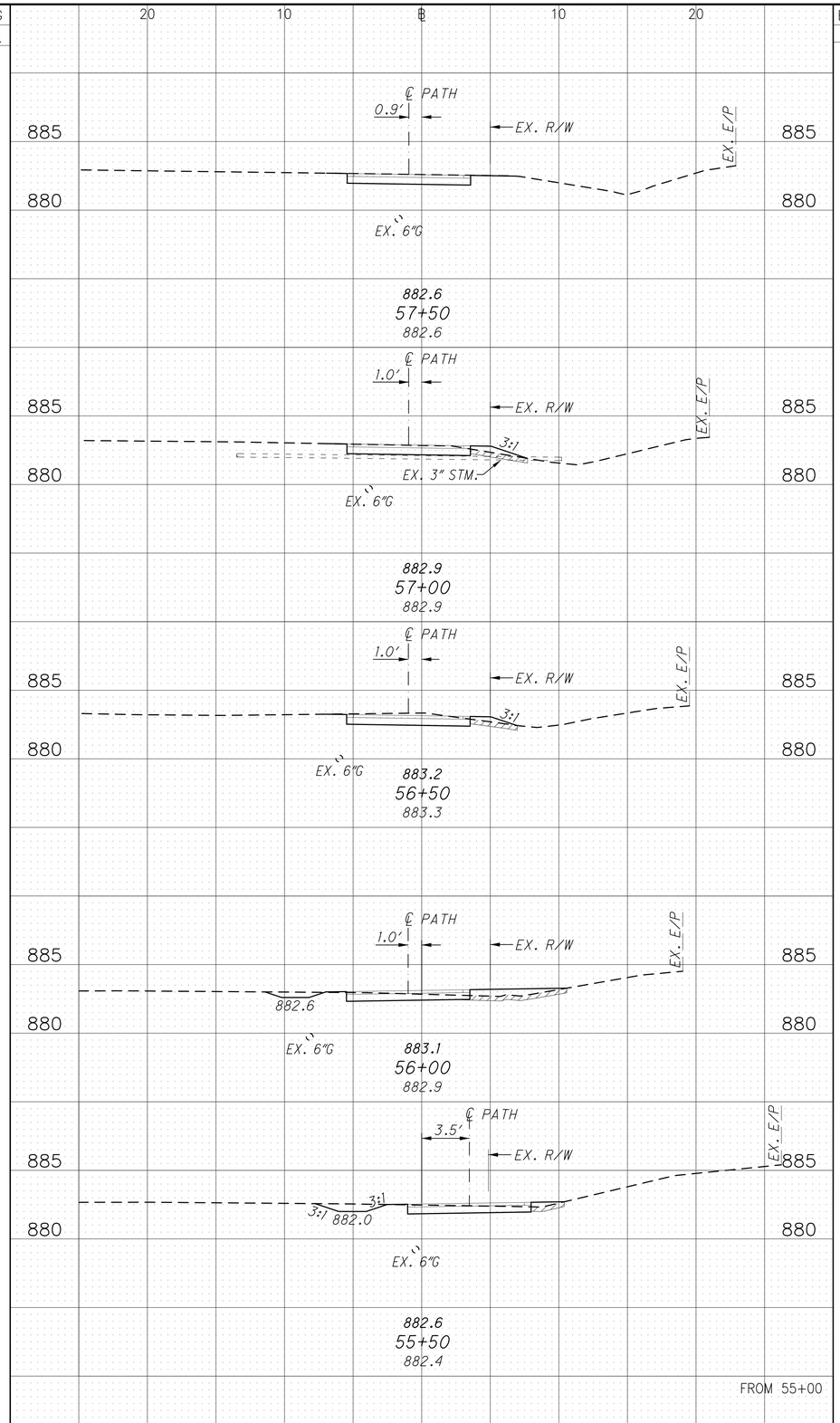


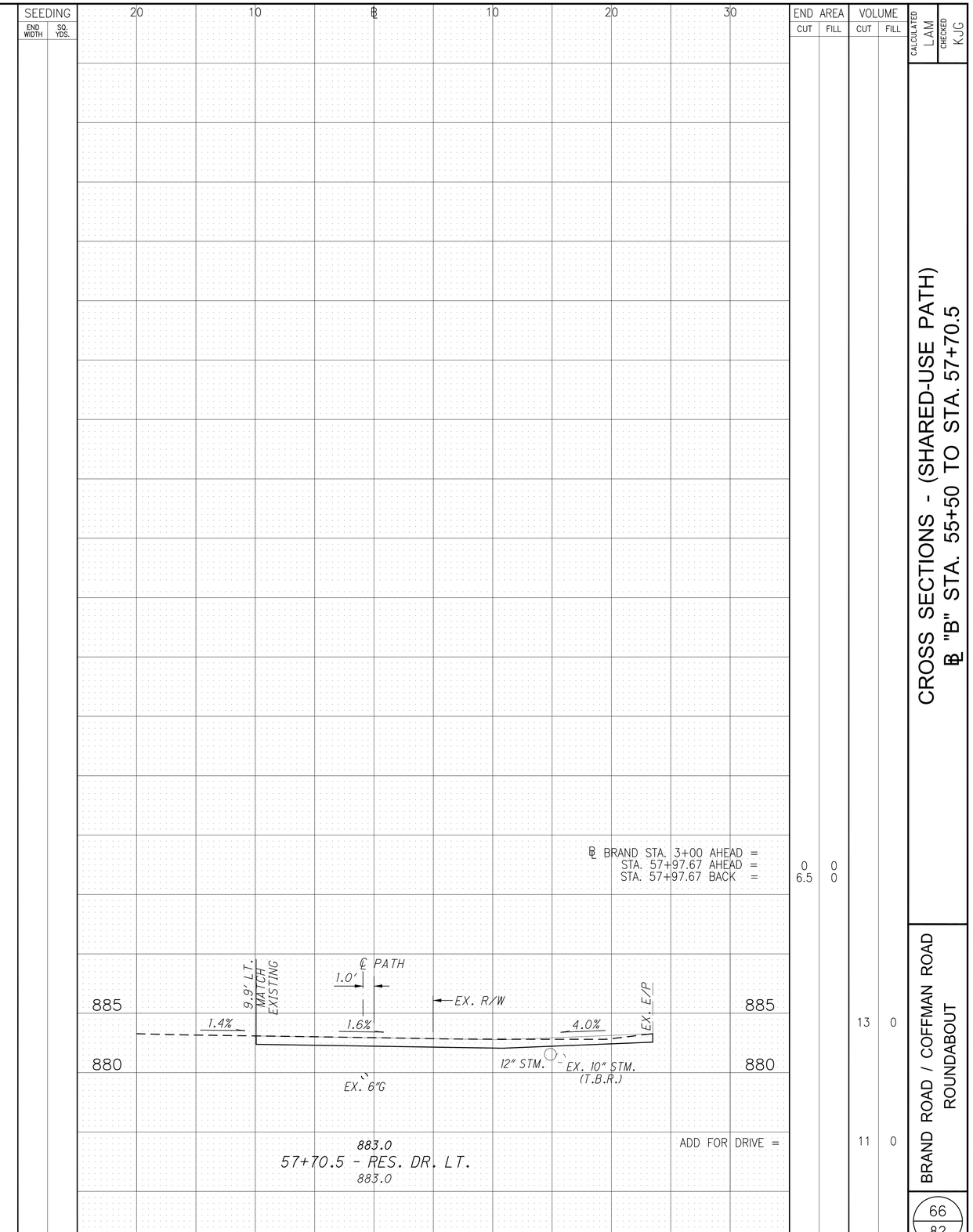


CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - (SHARED-USE PATH)
℄ "B" STA. 51+00 TO STA. 55+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



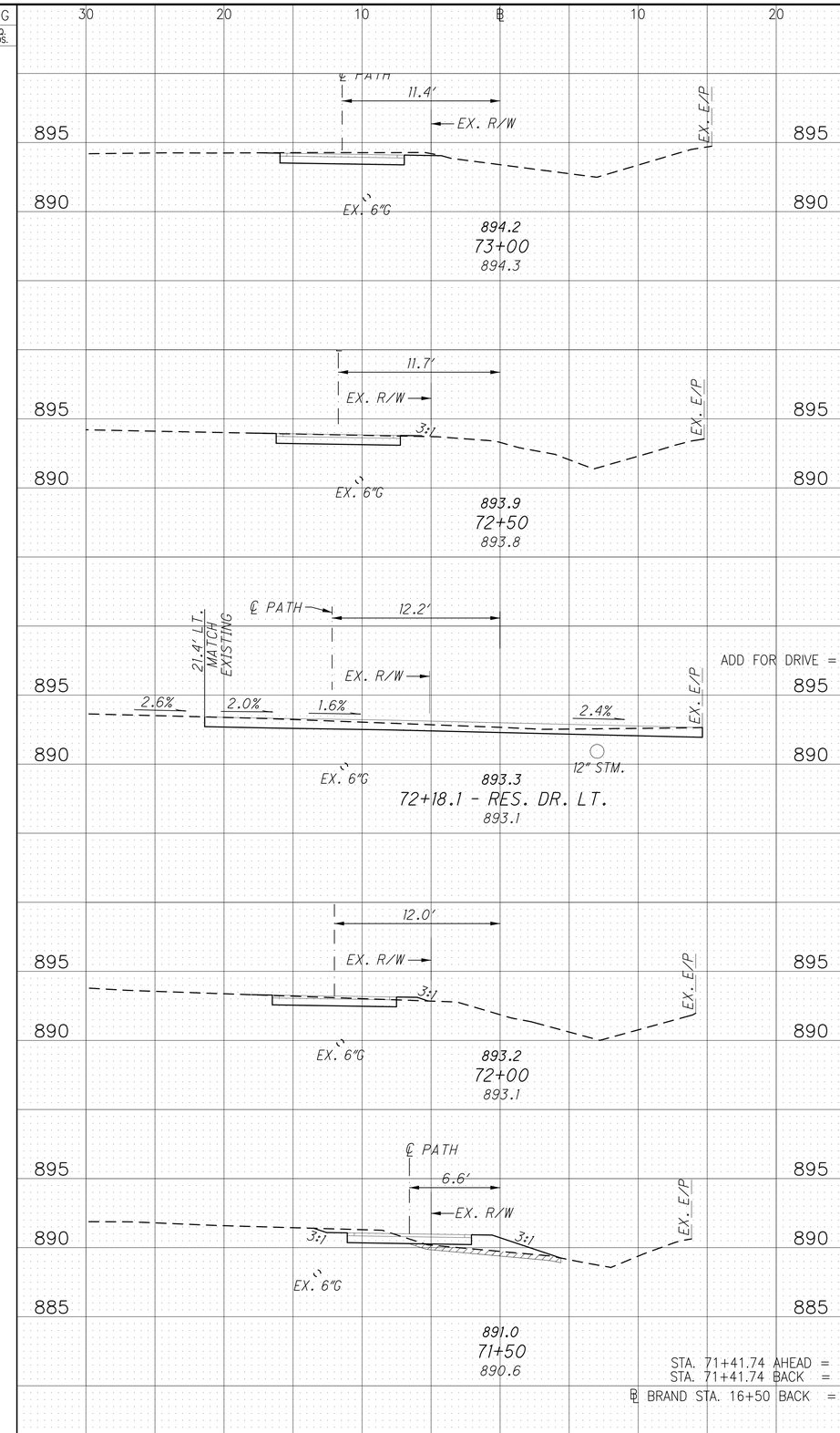


CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - (SHARED-USE PATH)
℄ "B" STA. 55+50 TO STA. 57+70.5

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

SEEDING END WIDTH	SEEDING SQ. YDS.	30	20	10	℄	10	20	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
TOTAL		20	10	℄	10		TOTAL				

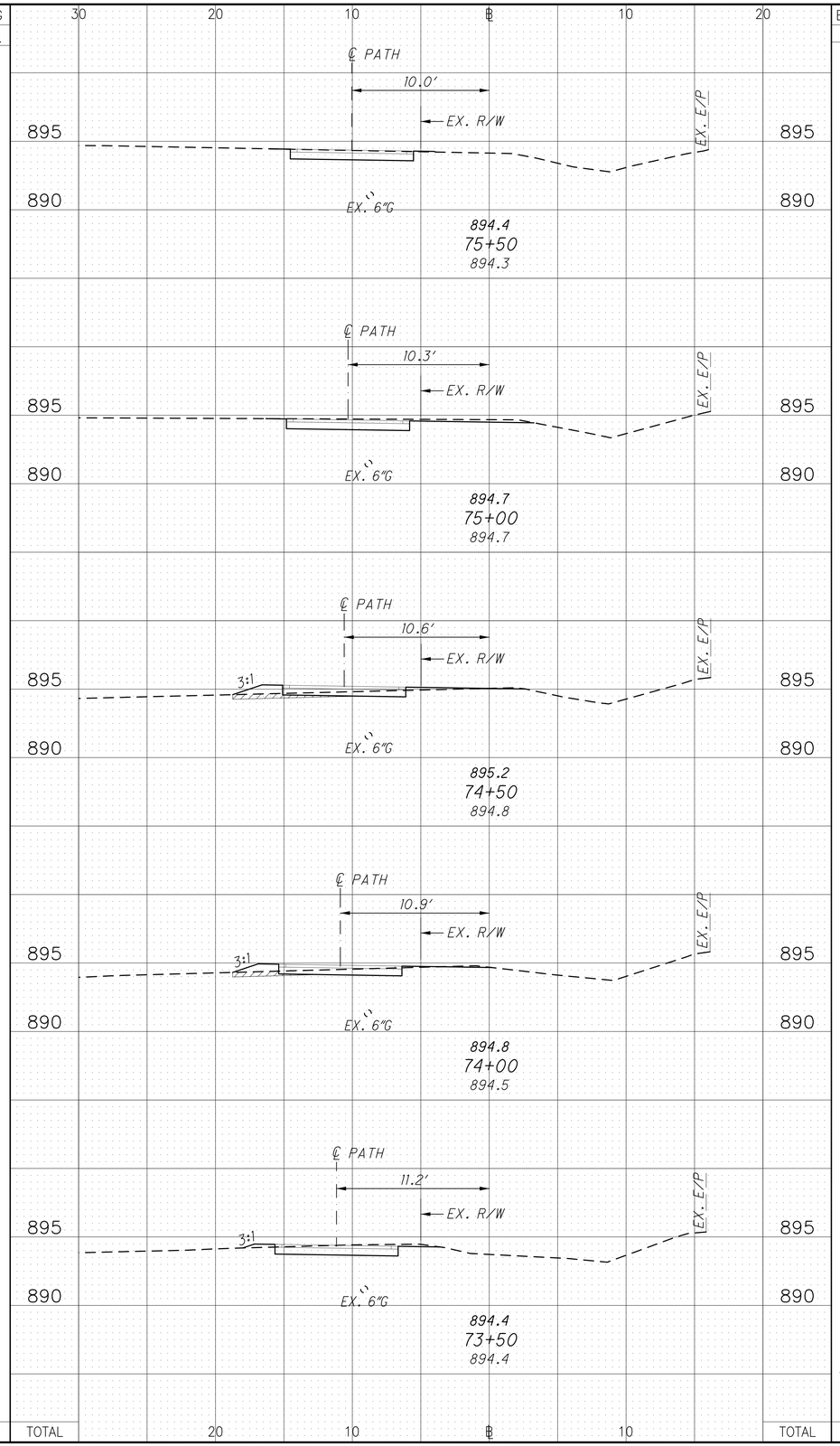


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7.8	0		
		13	0
6.2	0.1		
		11	0
		5	0
5.3	0.4		
		9	5
4.4	4.8		
		1	1
4.4	4.8		
0	0		
		39	6

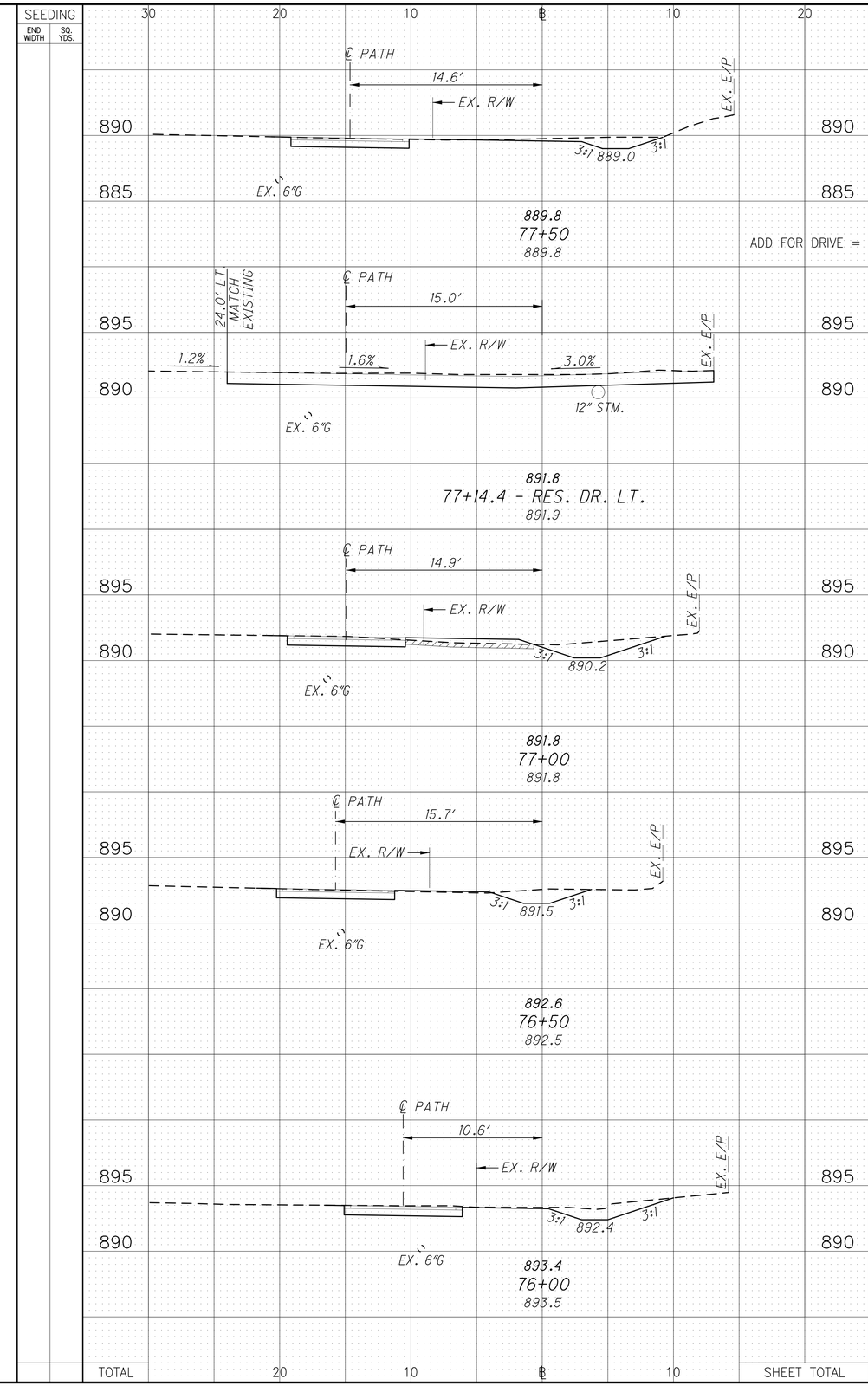
CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - (SHARED-USE PATH)
℄ "B" STA. 71+50 TO STA. 73+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6.2	0.1		
		14	0
8.4	0		
		12	4
4.5	4.2		
		9	6
5.1	2.8		
		11	3
6.6	0.5		
		13	0
7.8	0		

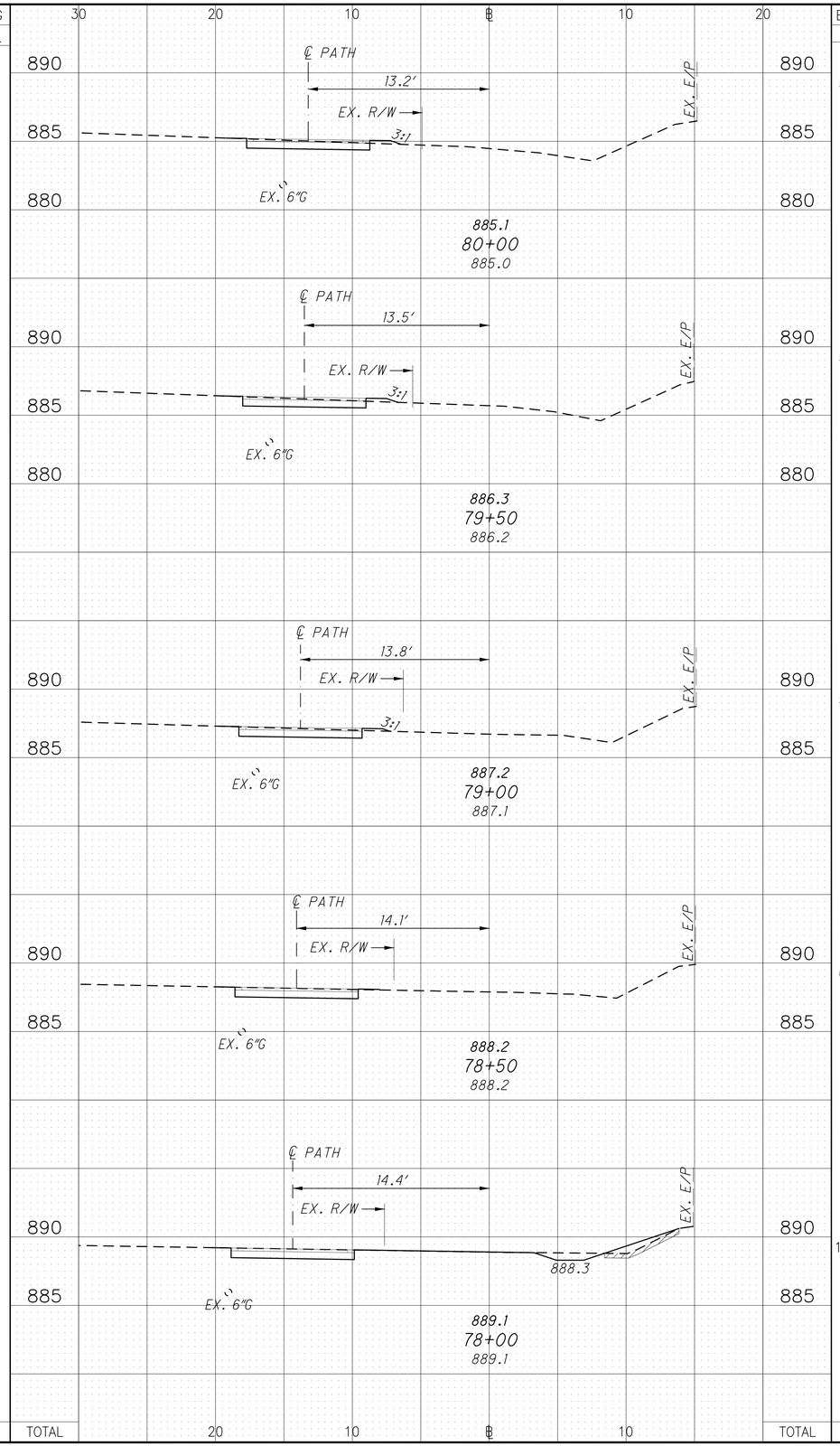


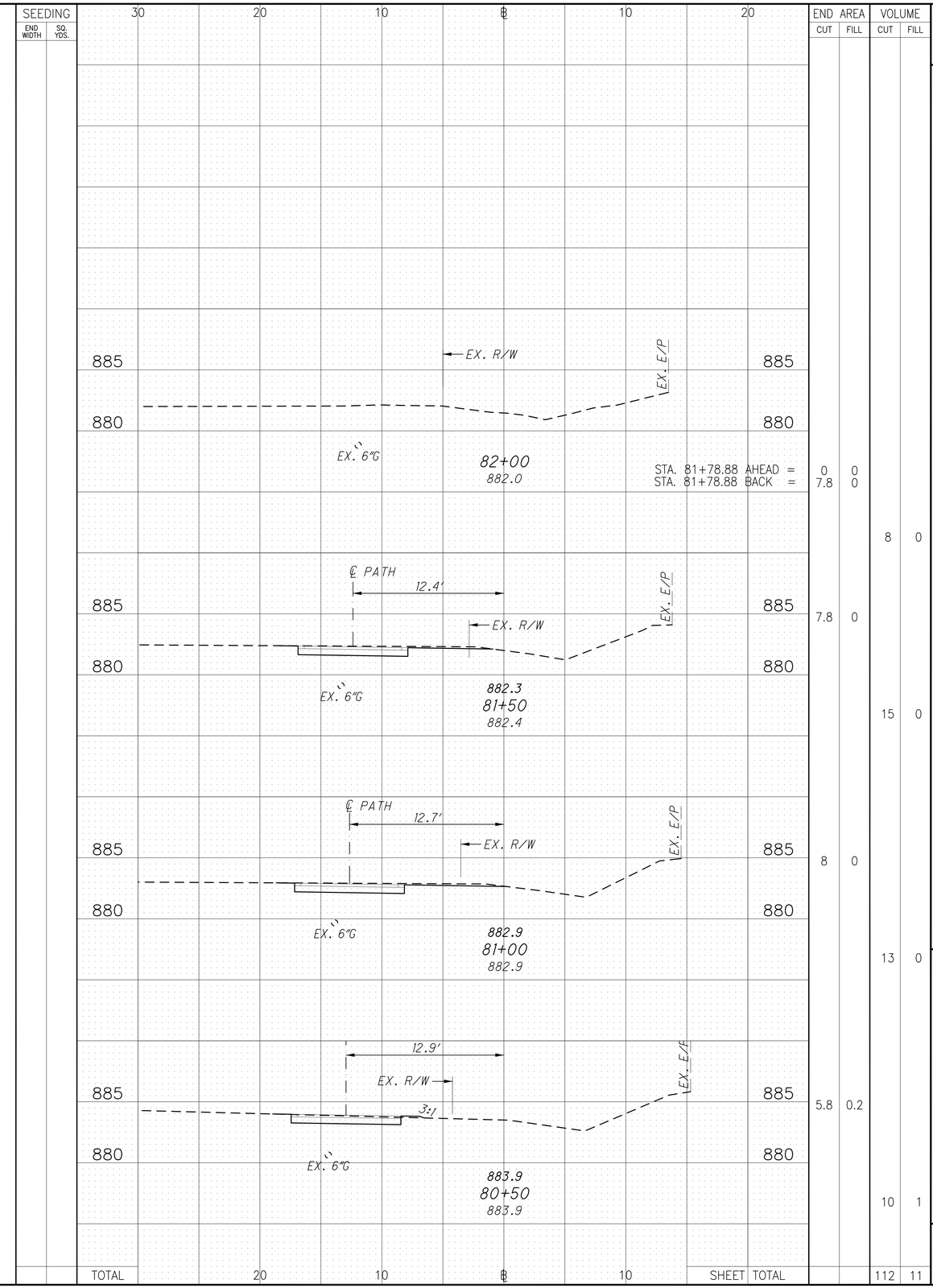
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11	0.2		
		13	0
		25	6
16.4	6.2		
		25	6
11	0.6		
		22	1
13.2	0		
		18	0
		162	26

CALCULATED LAM
CHECKED KJG

CROSS SECTIONS - (SHARED-USE PATH)
℄ "B" STA. 73+50 TO STA. 77+50

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT

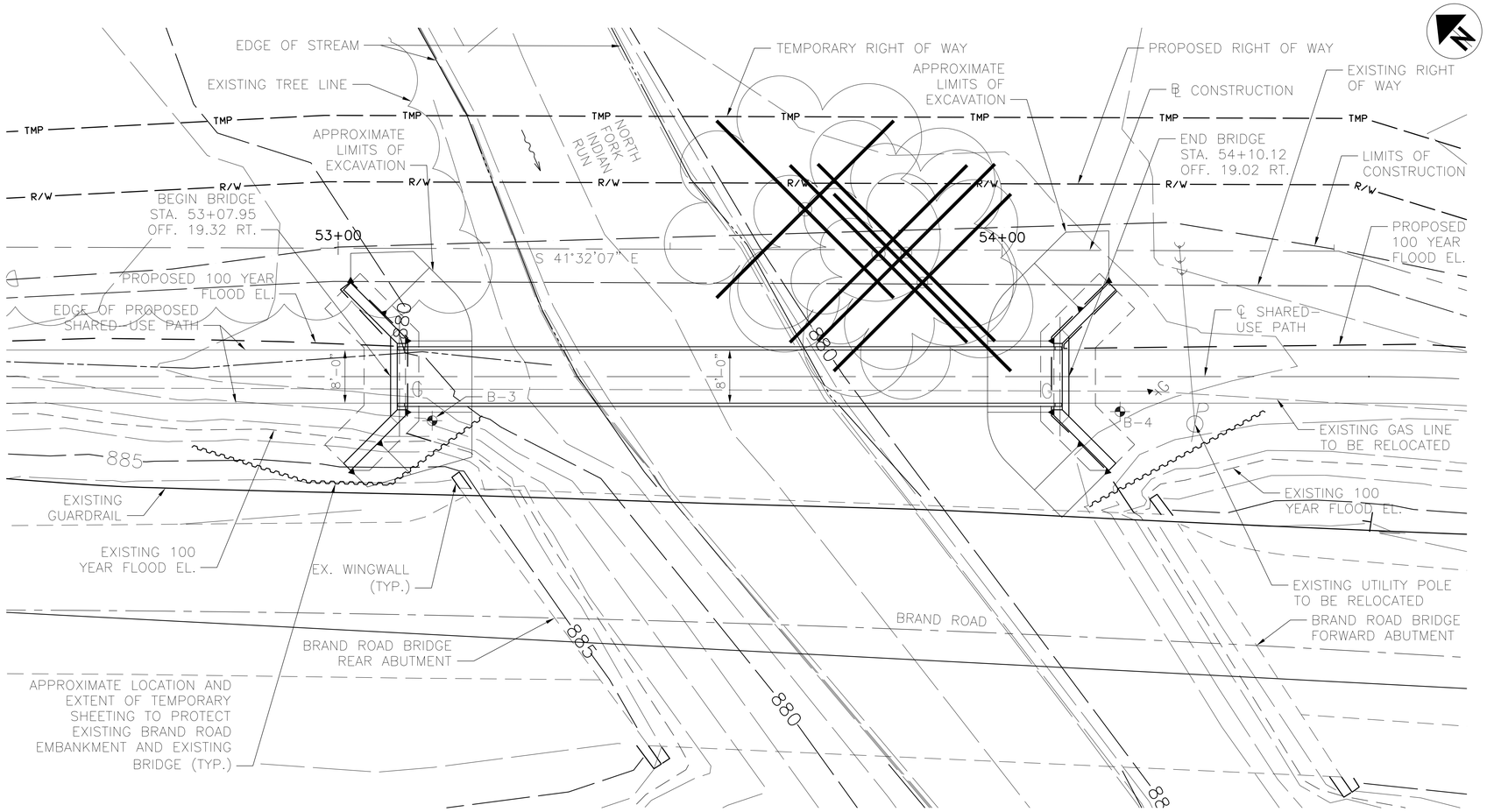




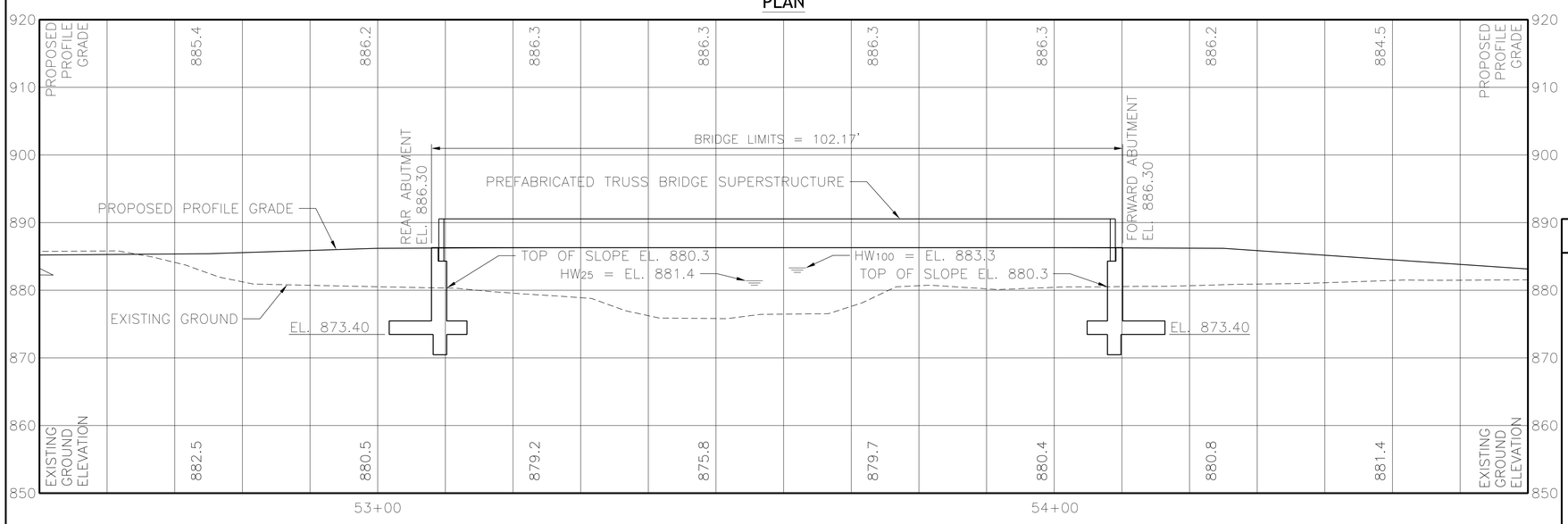
CALCULATED LAM
CHECKED KJG

CROSS SECTIONS (SHARED-USE PATH)
℄ "B" STA. 78+00 TO STA. 82+50

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



PLAN



PROFILE ALONG ℄ PEDESTRIAN TRAIL

BENCHMARK DATA					
BM #1	STA.54+76.27	ELEV. 886.79	OFFSET 76.14	RT	
BM #2	STA.65+03.52	ELEV. 890.40	OFFSET 10.72	RT	

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 59/82

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

0 1 2

SCALE: 1" = 10'

LEGEND

BORING LOCATION

HYDRAULIC DATA (Q'S PROVIDED BY CDM MODEL FROM THE CITY OF DUBLIN)

DRAINAGE AREA = 9.9 SQ. MILES
Q (25) = 601 CFS V (25) = 2.4 FT/S
Q (100) = 1330 CFS V (100) = 2.4 FT/S
STRUCTURE CLEARS THE 100 YEAR DESIGN HW BY 1.5 FEET.

PROPOSED STRUCTURE

TYPE: SINGLE SPAN PREFABRICATED STEEL TRUSS SUPERSTRUCTURE SUPPORTED ON REINFORCED CONCRETE ABUTMENTS

SPANS: 100'-0" OUT-TO-OUT BRIDGE TRUSS
ROADWAY: 8'-0" FACE/FACE TRUSS
LOADING: 85 PSF (PEDESTRIAN LOAD) AND 8 KIP VEHICLE
SKEW: 0° 00' 00"
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: LEVEL
COORDINATES: LATITUDE 40° 07' 14" N
LONGITUDE 83° 08' 04" W

DESIGN AGENCY
RW ARMSTRONG
471 E. BROAD ST., SUITE 2010
COLUMBUS, OH 43215

DATE 03/2013
REVIEWED FRR
STRUCTURE FILE NUMBER N/A
DRAWN ALM
REVISED
DESIGNED ALM
CHECKED JNS

FRANKLIN COUNTY
STA. 53+07.95
STA. 54+10.12

SITE PLAN
SHARED-USE PATH BRIDGE OVER NORTH FORK INDIAN RUN
ALONG BRAND ROAD

BRAND ROAD/COFFMAN ROAD ROUNDABOUT

File Name: O:\Projects\FRA\Dublin\Brand Road Multi-Use Path\structures\FRA_C0044_0209C\sheets\C0044_0209C_SP001.dwg - Sheet
Modified / By: May 15, 2013 10:17:27 AM / AMoorman
Plotted / By: May 15, 2013 10:17:41 AM / Adam Moorman

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2012, INCLUDING ANY INTERIM SPECIFICATIONS AND ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:

DESIGN LOADING: 0.085 KIPS/SQ.FT PEDESTRIAN LOADING AND 8.0 KIP VEHICLE

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60000 PSI

ITEM SPECIAL - STONE VENEER

ALL EXPOSED ABUTMENT AND WINGWALL CONCRETE ON THE SHARED-USE PATH BRIDGE OVER NORTH FORK INDIAN RUN ALONG BRAND ROAD SHALL HAVE A STONE FACING. MANUFACTURED SYNTHETIC STONE VENEER (COLOR BEIGE) SHALL BE GREAT LAKES LIMESTONE AS MANUFACTURED BY DUTCH QUALITY STONE, INC. (330-359-7866) OR APPROVED ALTERNATIVE. MORTAR AND GROUTING TYPE SHALL BE PER THE MANUFACTURER'S INSTRUCTIONS. USE TYPE "S" MORTAR. A SCRATCH COURSE OF MORTAR SHALL BE APPLIED AND CURED BEFORE PLACEMENT OF THE STONE. THE STONE SHALL BE PLACED IN A RANDOM PATTERN. THE STONE MUST COVER ALL EXPOSED SURFACES AND SHALL EXTEND 6 INCHES BELOW FINAL GRADE.

ITEM SPECIAL - POLYSULFIDE CAULKING FOR STONE VENEER

CAULK VERTICAL JOINTS AND AROUND RAILING POSTS WITH POLYSULFIDE CAULKING MATERIAL MANUFACTURED FOR OUTDOOR MASONRY. COLOR TO MATCH MORTARED JOINTS. METHODS, PROCEDURES AND MATERIAL SHALL ADHERE TO MANUFACTURES SPECIFICATIONS.

CONSTRUCTION CONSTRAINTS

FILL THE VOID CREATED BY EXCAVATING FOR THE ABUTMENT FOOTINGS WITH TYPE B GRANULAR MATERIAL, 703.16.C. AFTER THE FOOTING AND THE BREASTWALL HAVE BEEN CONSTRUCTED, FILL THE VOID BEHIND EACH ABUTMENT UP TO THE BEAM SEAT ELEVATION AND FROM THE BEAM SEAT UP ON A 1:1 SLOPE TO THE SUBGRADE ELEVATION PRIOR TO CONSTRUCTING THE BACKWALL AND SETTING THE TRUSSES ON THE ABUTMENT.

ITEM 203 EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

FOUNDATION BEARING RESISTANCE

SHARED-USE PATH BRIDGE OVER NORTH FORK INDIAN RUN ALONG BRAND ROAD:
SPREAD FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 3.56 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 4.89 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 7.5 KIPS PER SQUARE FOOT.

ITEM 503 - COFFERDAM AND EXCAVATION BRACING, AS PER PLAN

TEMPORARY SHORING SHALL BE REMOVED AFTER COMPLETION OF WORK.

ITEM 518 - 6" NON-PERFORATED CORRUGATED PIPE, INCLUDING SPECIALS,720.08, AS PER PLAN

IN ADDITIONS TO THE PIPE AND ALL SPECIALS, THE COST OF THE PRECAST REINFORCED CONCRETE OUTLET SHALL BE INCLUDED IN THE UNIT COST FOR ITEM 518 - 6" NON-PERFORATED CORRUGATED PIPE, INCLUDING SPECIALS,720.08, AS PER PLAN. THE PRECAST REINFORCED CONCRETE OUTLET SHALL BE IN ACCORDANCE WITH ODOT STANDARD DRAWING DM-1.1 (REVISED 1-18-13).

ITEM 511 - CLASS C CONCRETE FOOTING, AS PER PLAN
ITEM 511 - CLASS C CONCRETE, WINGWALL ABOVE FOOTING, AS PER PLAN
ITEM 511 - CLASS C CONCRETE, ABUTMENT ABOVE FOOTING, AS PER PLAN

USE EPOXY COATED REINFORCING STEEL, 60 KSI MINIMUM YIELD STRENGTH, CONFORMING TO SPECIFICATION SECTION 509. SUBMIT SHOP DRAWINGS FOR THE FABRICATION, BENDING, AND PLACEMENT OF REINFORCING STEEL BARS, INCLUDING BAR SCHEDULES, AT LEAST 7 DAYS PRIOR TO FABRICATION, FOR THE ENGINEER'S APPROVAL.

ALL STEEL REINFORCING IN CONCRETE SHALL BE CONSIDERED INCIDENTAL TO THE CONCRETE. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR THE CONCRETE.

UTILITIES

SUPPORT AND PROTECTION OF ALL UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COSTS FOR THE REPAIR AND RESTORATION OF EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COSTS ASSOCIATED WITH THE ABOVE WORK RESPONSIBILITIES SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS.

PRIOR TO EXCAVATION, THE CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE(OUPS) BY CALLING 811. A 48-HOUR NOTICE SHALL BE GIVEN TO THE OWNERS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE.

EXISTING STRUCTURE VERIFCATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMSC SECTIONS 102.05 AND 105.02.

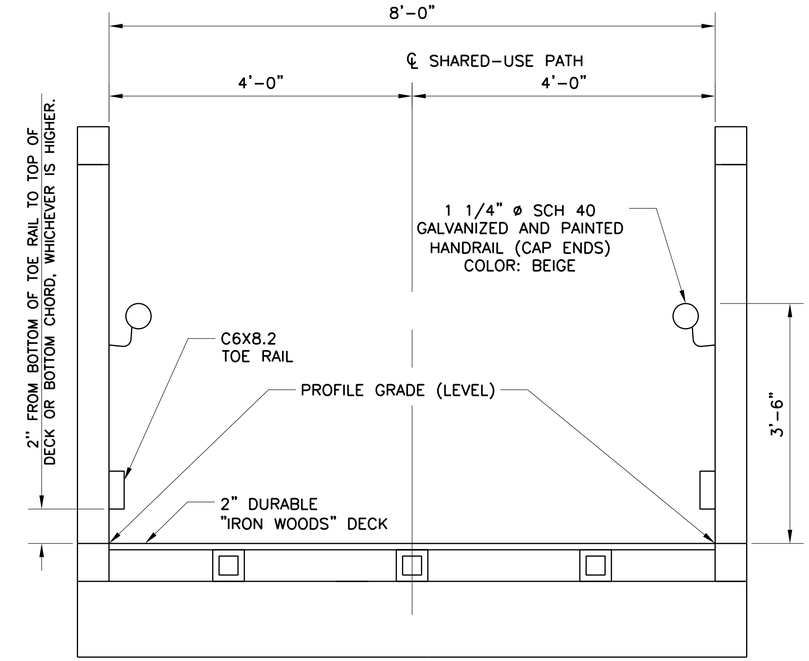
CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE CITY OF DUBLIN.

DEMOLITION AND CONSTRUCTION: IN REMOVING EXISTING MATERIAL, THE CONTRACTOR SHALL EXERCISE CARE TO PREVENT DAMAGE TO THOSE PARTS OF THE STRUCTURES WHICH ARE TO REMAIN IN PLACE. ANY PORTION OF THE STRUCTURES DAMAGED DURING DEMOLITION AND CONSTRUCTION BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

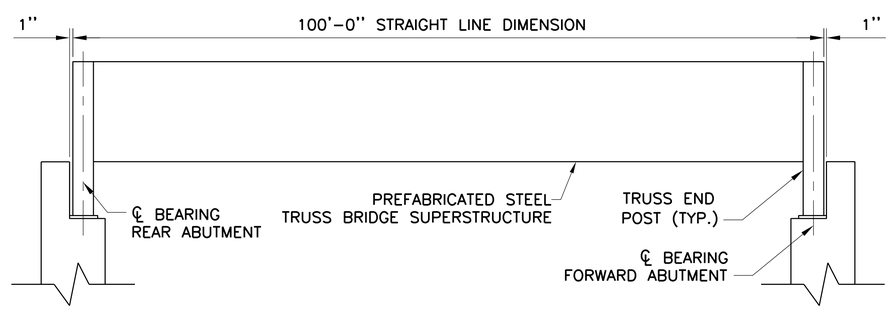
ABBREVIATIONS

℄	BASELINE
℄	CENTERLINE
B.F.	BACK FACE
BOTT.	BOTTOM
C.P.P.	CORRUGATED PLASTIC PIPE
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
DIA.	DIAMETER
E.F.	EACH FACE
EL.	ELEVATION
E.P.	EDGE OF PAVEMENT
EQ.	EQUAL
EX.	EXISTING
EXIST.	EXISTING
F.A.	FORWARD ABUTMENT
F.F.	FRONT FACE
FL	FLOW LINE
MAX.	MAXIMUM
MIN.	MINIMUM
N.F.I.R	NORTH FORK INDIAN RUN
OFF.	OFFSET
P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
P.G.	PROFILE GRADE
R.A.	REAR ABUTMENT
R.F.	REAR FACE
RT.	RIGHT
SPA.	SPACE
S.O.	SERIES OF
STA.	STATION
STR.	STRAIGHT
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
W/	WITH



TRANSVERSE SECTION

GENERAL SUMMARY				
ITEM	TOTAL	UNIT	DESCRIPTION	REF. SHEET
503	1	LUMP	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	2/4
503	1	LUMP	UNCLASSIFIED EXCAVATION	
511	66	CU YD	CLASS C CONCRETE, FOOTING, AS PER PLAN	2/4
511	37	CU YD	CLASS C CONCRETE, WINGWALL ABOVE FOOTING, AS PER PLAN	2/4
511	20	CU YD	CLASS C CONCRETE, ABUTMENT ABOVE FOOTING, AS PER PLAN	2/4
518	36	CU YD	POROUS BACKFILL WITH FILTER FABRIC	
518	61	FT	6" PERFORATED CORRUGATED PIPE, INCLUDING SPECIALS, 720.12	
518	56	FT	6" NON-PERFORATED CORRUGATED PIPE, INCLUDING SPECIALS,	2/4
			720.08, AS PER PLAN	
SPECIAL	1	LUMP	PREFABRICATED STEEL TRUSS BRIDGE SUPERSTRUCTURE	
SPECIAL	960	SQ FT	STONE VENEER	
SPECIAL	2880	FT	POLYSULFIDE CAULKING FOR STONE VENEER	



ELEVATION

NOT TO SCALE

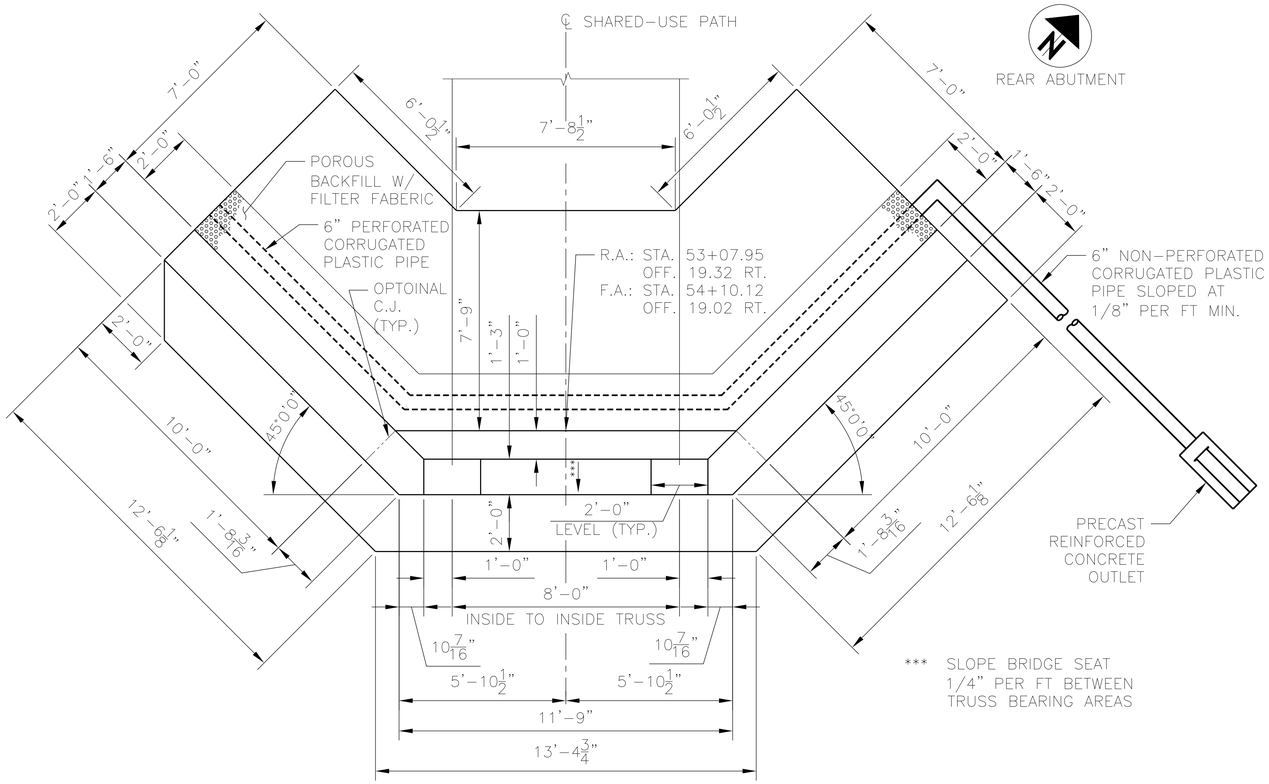
DESIGN AGENCY
RWARMSTRONG
471 E. BROAD ST., SUITE 2010
COLUMBUS, OH 43215

DESIGNED	DRAWN	REVIEWED	DATE
ALM	ALM	FRR	03/2013
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JNS		N/A	

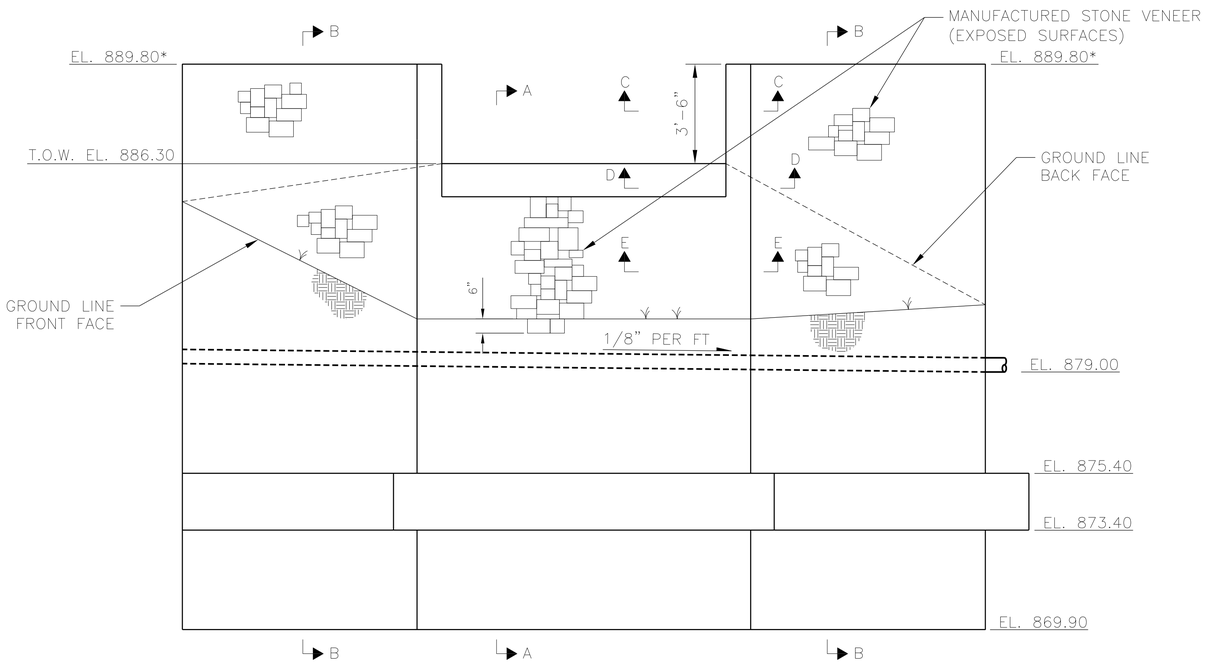
STRUCTURE GENERAL NOTES (1 OF 2)
SHARED-USE PATH BRIDGE OVER NORTH FORK INDIAN RUN ALONG BRAND ROAD

BRAND ROAD/COFFMAN ROAD ROUNDABOUT

File Name: O:\Projects\FRA\Dublin\Brand Road Multi-Use Path\structures\FRA_C0044_0209\Csheets\000_0010C_EQ001.dwg - STRUCTURAL NOTES
Modified / By: May 22, 2013 2:34:59 PM / AMoorman
Plotted / By: May 22, 2013 2:35:45 PM / Adam Moorman



PLAN - REAR ABUTMENT SHOWN - FORWARD ABUTMENT, OPPOSITE HAND

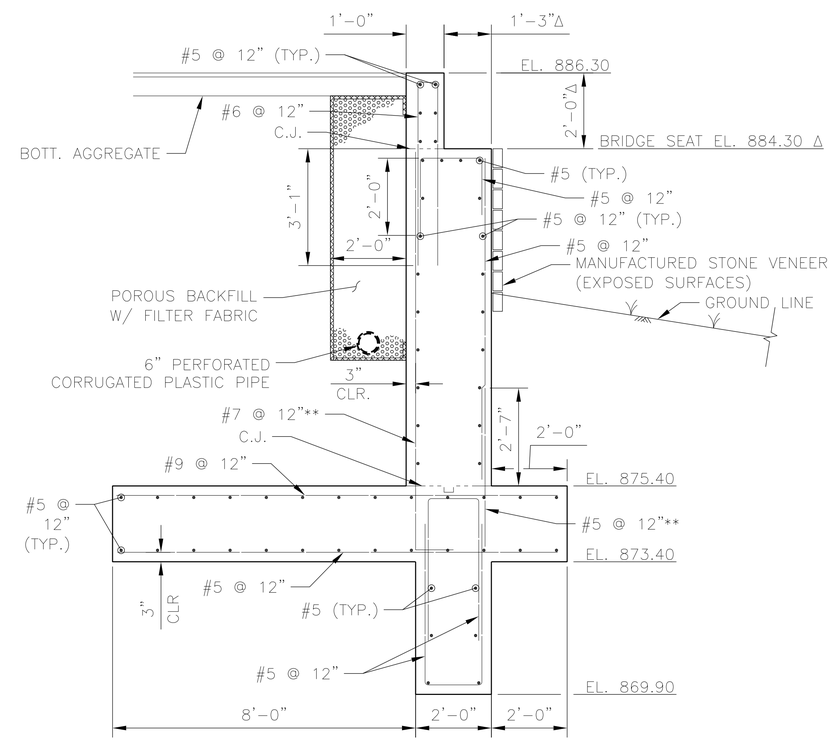


ELEVATION

* ELEVATION TO THE TOP OF THE VENEER ON TOP OF THE WALL.

NOTE:

1. SEE SHEET 2/4 FOR GENERAL NOTES.
2. SEE SHEET 4/4 FOR SECTIONS B-B, C-C, D-D, & E-E.
3. ANCHOR BOLTS FOR TRUSS BEARINGS ARE NOT SHOWN. CONTRACTOR SHALL COORDINATE WITH THE PREFABRICATOR FOR ANCHOR BOLT INSTALLATION.



MIN. LAP LENGTH (U.N.O.)

#5	3'-5"
#6	3'-8"

SECTION A-A

** VERTICAL BARS SHALL EXTEND TO BOTTOM REINFORCEMENT MAT.

Δ VERIFY DIMENSIONS WITH PREFABRICATED BRIDGE SHOP DRAWINGS

DESIGN AGENCY
RWARMSTRONG
471 E. BROAD ST., SUITE 2010
COLUMBUS, OH 43215

DESIGNED	DRAWN	REVIEWED	DATE
ALM	ALM	FRR	03/2013
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JNS		N/A	

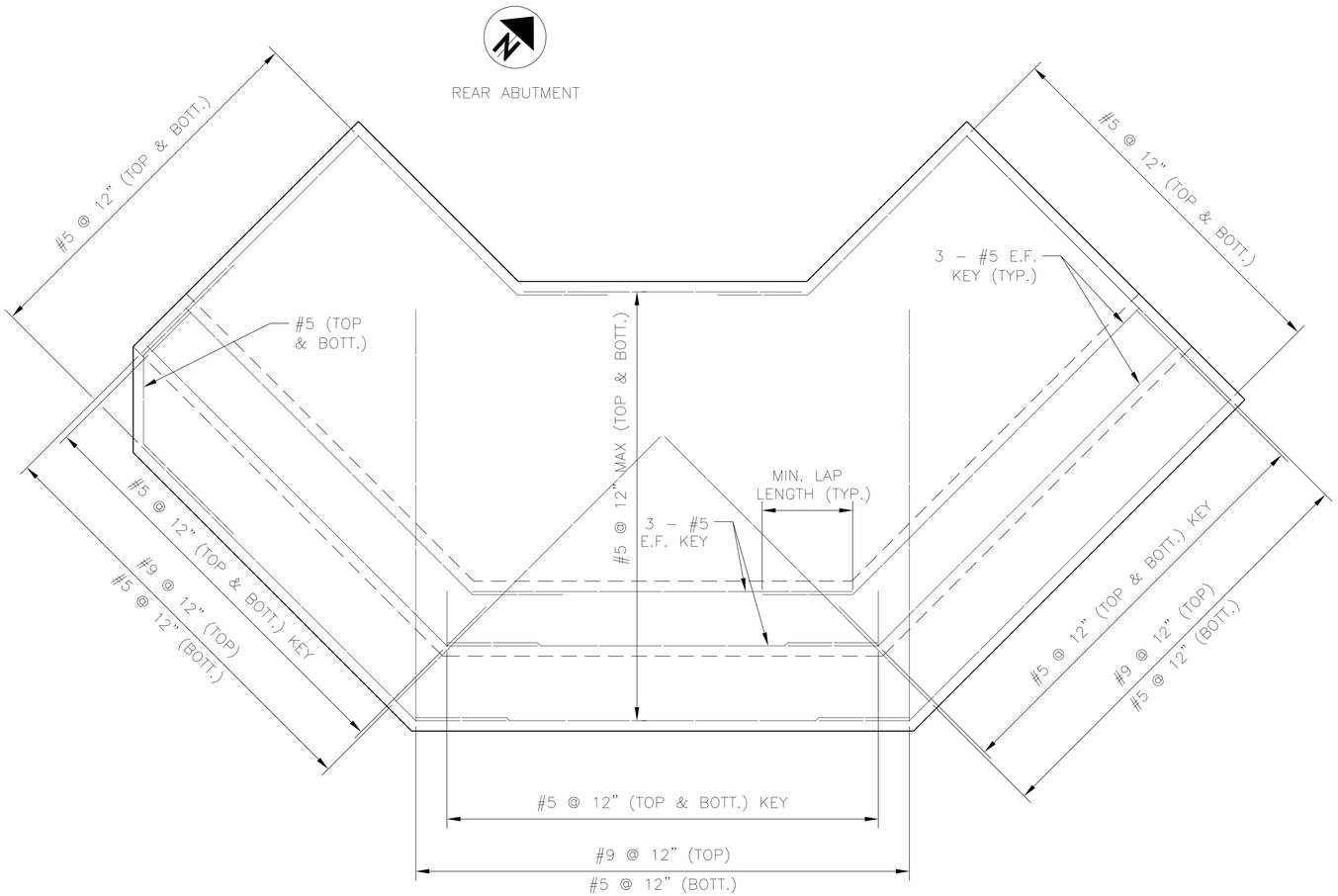
ABUTMENT DETAILS
SHARED-USE PATH BRIDGE OVER NORTH FORK INDIAN RUN
ALONG BRAND ROAD

BRAND ROAD/COFFMAN ROAD ROUNDABOUT

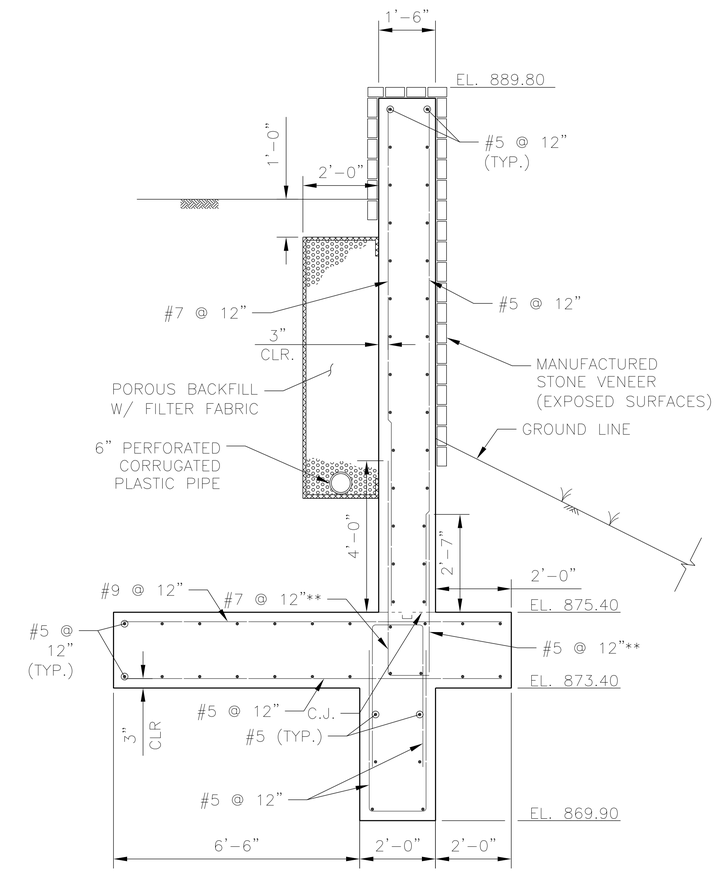
3 / 4

72 / 82

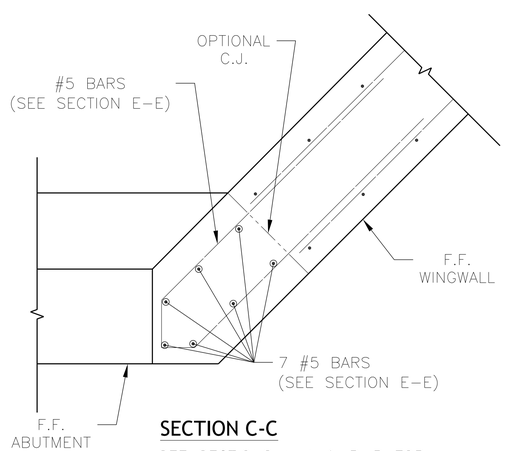
File Name: O:\Projects\FRA\Dublin\Brand Road Multi-Use Path\structures\FRA_C0044_0209C\sheets\C0044_0209C_AR001.dwg - Abutment Details
Modified / By: May 15, 2013 10:15:47 AM / AMoorman
Plotted / By: May 22, 2013 2:37:51 PM / Adam Moorman



FOUNDATION PLAN - REAR ABUTMENT SHOWN - FORWARD ABUTMENT, OPPOSITE HAND

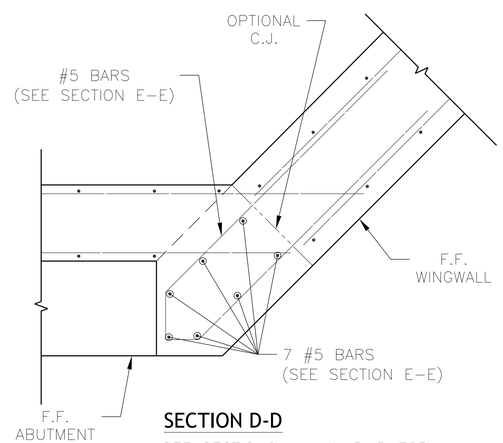


SECTION B-B



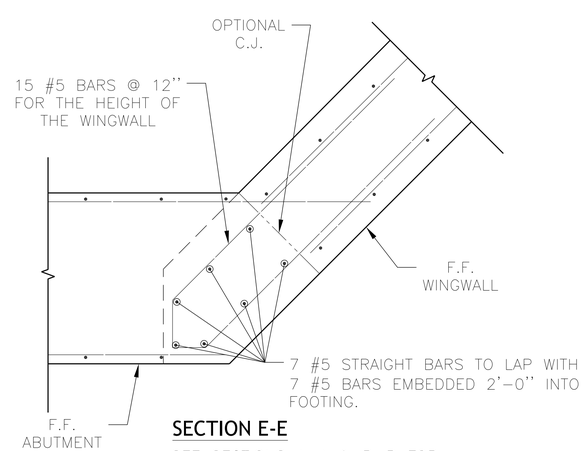
SECTION C-C

SEE SECTIONS A-A & B-B FOR THE REMAINING BARS.
(TYPICAL AT BOTH ABUTMENT CORNERS)



SECTION D-D

SEE SECTIONS A-A & B-B FOR THE REMAINING BARS.
(TYPICAL AT BOTH ABUTMENT CORNERS)



SECTION E-E

SEE SECTIONS A-A & B-B FOR THE REMAINING BARS.
(TYPICAL AT BOTH ABUTMENT CORNERS)

** VERTICAL BARS SHALL EXTEND TO BOTTOM REINFORCEMENT MAT.

MIN. LAP LENGTH U.N.O.

#5	3'-5"
#6	3'-8"

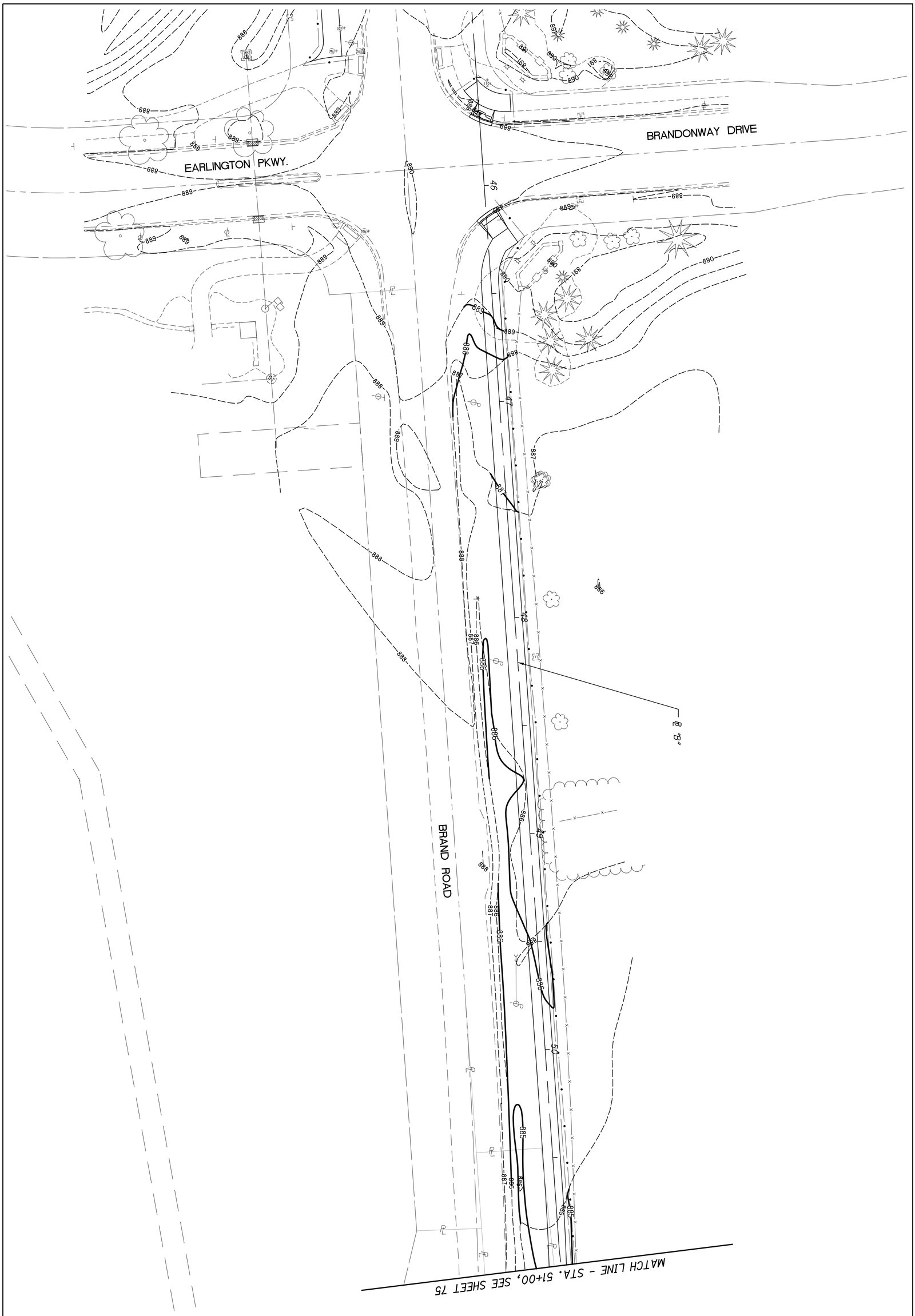
DESIGN AGENCY
RWARMSTRONG
471 E. BROAD ST., SUITE 2010
COLUMBUS, OH 43215

DESIGNED	DRAWN	REVIEWED	DATE
ALM	ALM	FRR	03/2013
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JNS		N/A	

FOUNDATION & WINGWALL DETAILS
SHARED-USE PATH BRIDGE OVER NORTH FORK INDIAN RUN
ALONG BRAND ROAD

BRAND
ROAD/COFFMAN
ROAD ROUNDABOUT

File Name: O:\Projects\FRA\Dublin\Brand Road Multi-Use Path\structures\FRA_C0044_0209C\sheets\C0044_0209C_AR001.dwg - Foundation & Wingwall Details
Modified / By: May 15, 2013 8:07:34 AM / AMoorman
Plotted / By: May 15, 2013 8:18:37 AM / Adam Moorman



74 / 82	BRAND ROAD / COFFMAN ROAD ROUNDABOUT	GRADING PLAN - ℄ "B" STA. 45+50 TO STA. 51+00	CALCULATED LAM / CHECKED KJG	0 10 20 40 HORIZONTAL SCALE IN FEET

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

GRADING PLAN - ℄ "B"
STA. 51+00 TO STA. 56+50

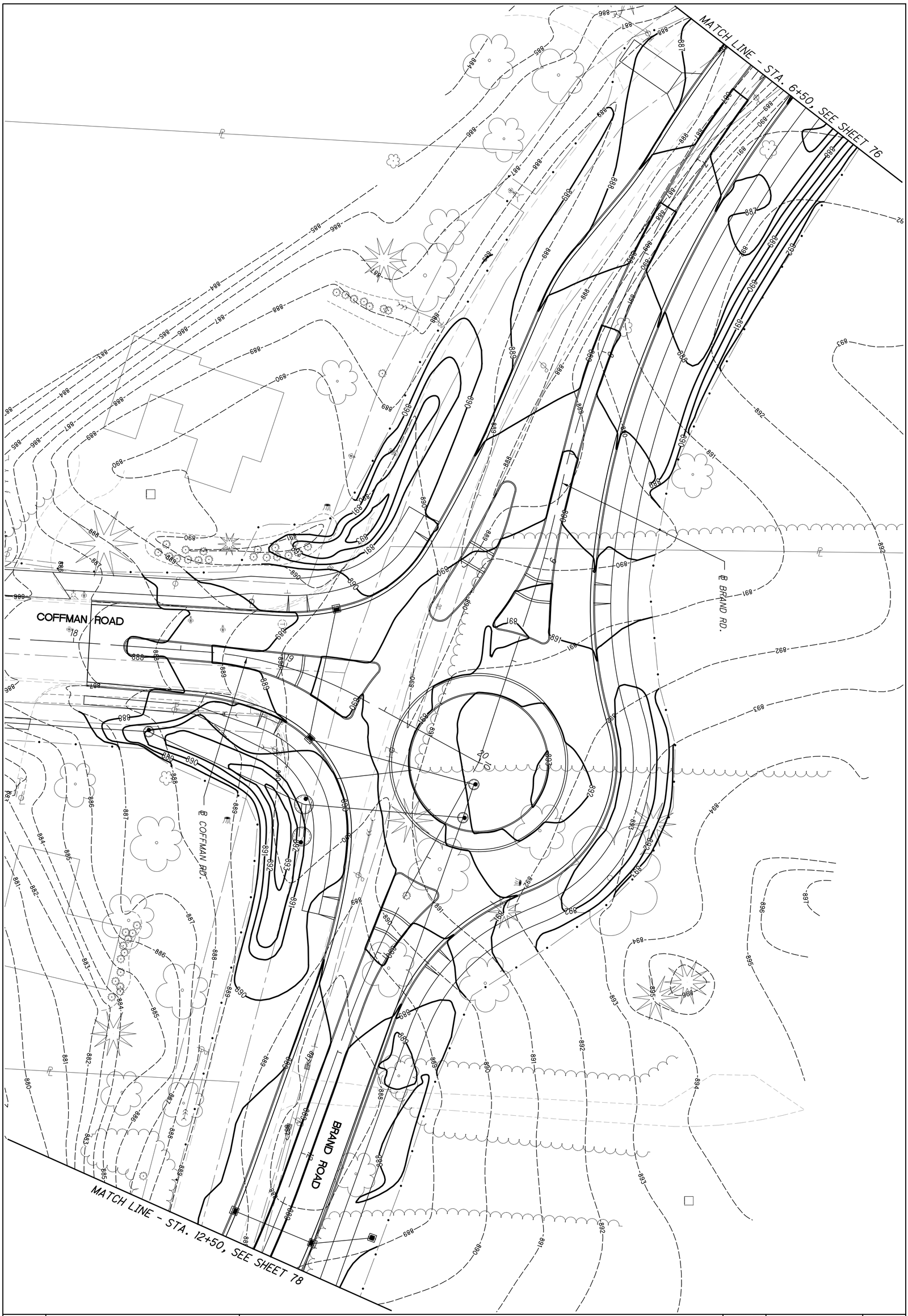
BRAND ROAD / COFFMAN ROAD ROUNDABOUT

HORIZONTAL SCALE IN FEET
0 10 20 40

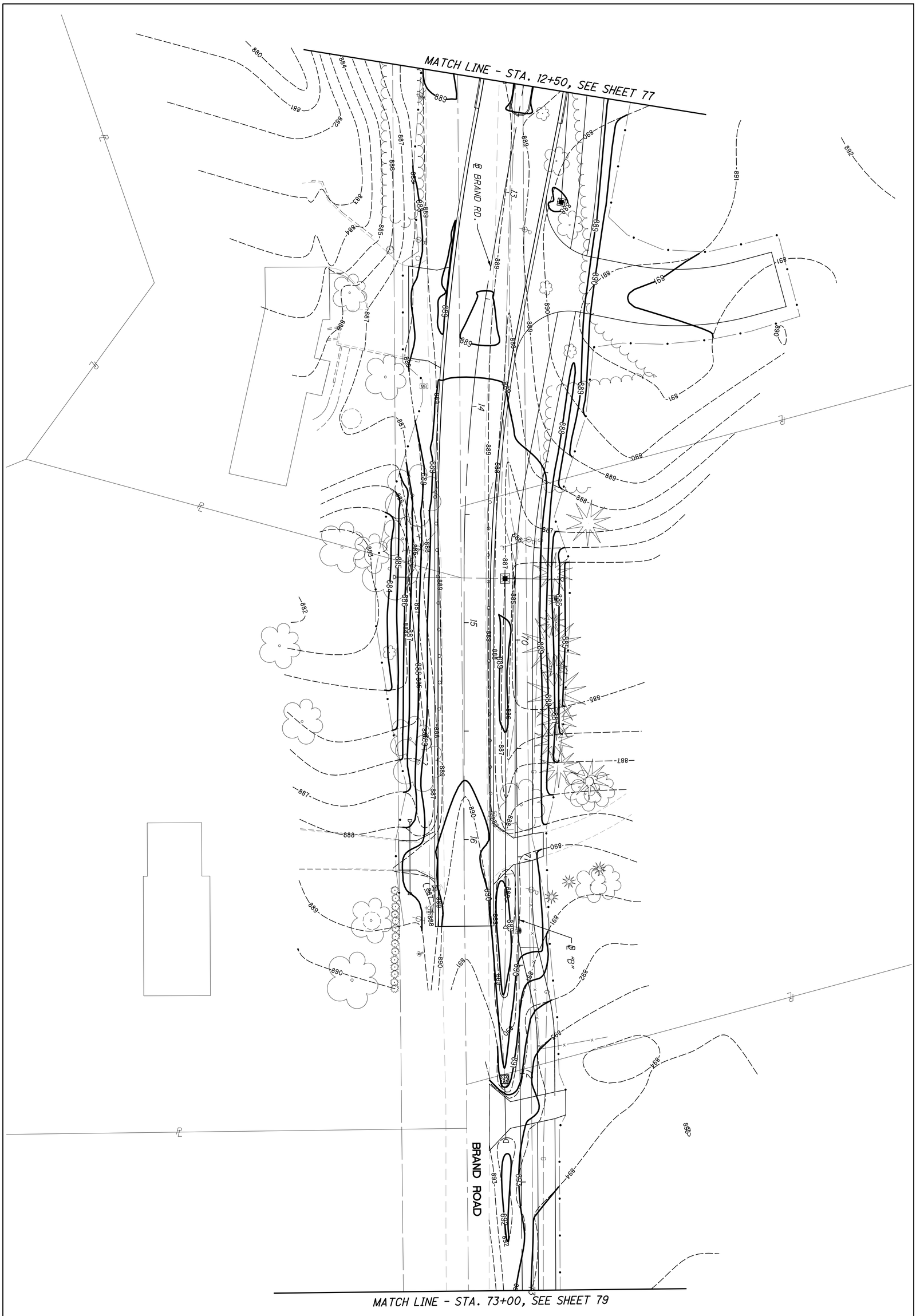
CALCULATED LAM
CHECKED KJG

GRADING PLAN - BRAND RD. / ℄ "B"
STA. 56+50 TO STA. 6+50

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



77 / 82	BRAND ROAD / COFFMAN ROAD ROUNDABOUT	GRADING PLAN - BRAND RD. / COFFMAM RD. STA. 6+50 TO STA. 12+50	CALCULATED LAM / CHECKED KJG	0 10 20 40 HORIZONTAL SCALE IN FEET



78 / 82	BRAND ROAD / COFFMAN ROAD ROUNDABOUT	GRADING PLAN - BRAND RD. / ℄ "B" STA. 12+50 TO STA. 73+00	CALCULATED LAM / CHECKED KJG	0 10 20 40 HORIZONTAL SCALE IN FEET

N

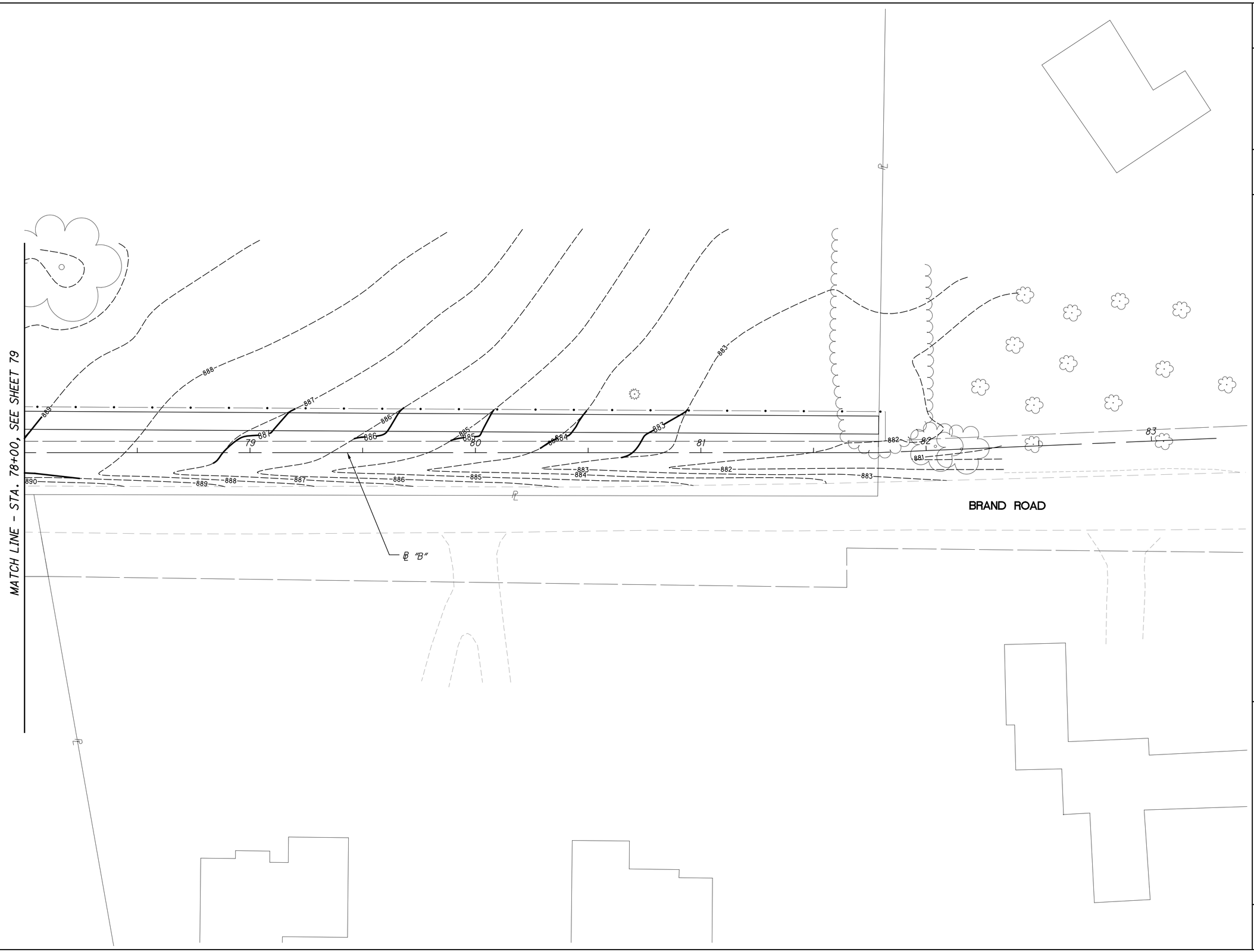
0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED LAM
CHECKED KJG

GRADING PLAN - ℄ "B"
STA. 73+00 TO STA. 78+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT

S:\PRODUCTION\PROJECTS\121018.00 Dublin - Brand & Coffman Roundabout\Roadway\Sheets\XG006.dgn 5/16/2013 12:18:57 PM lmilliron2

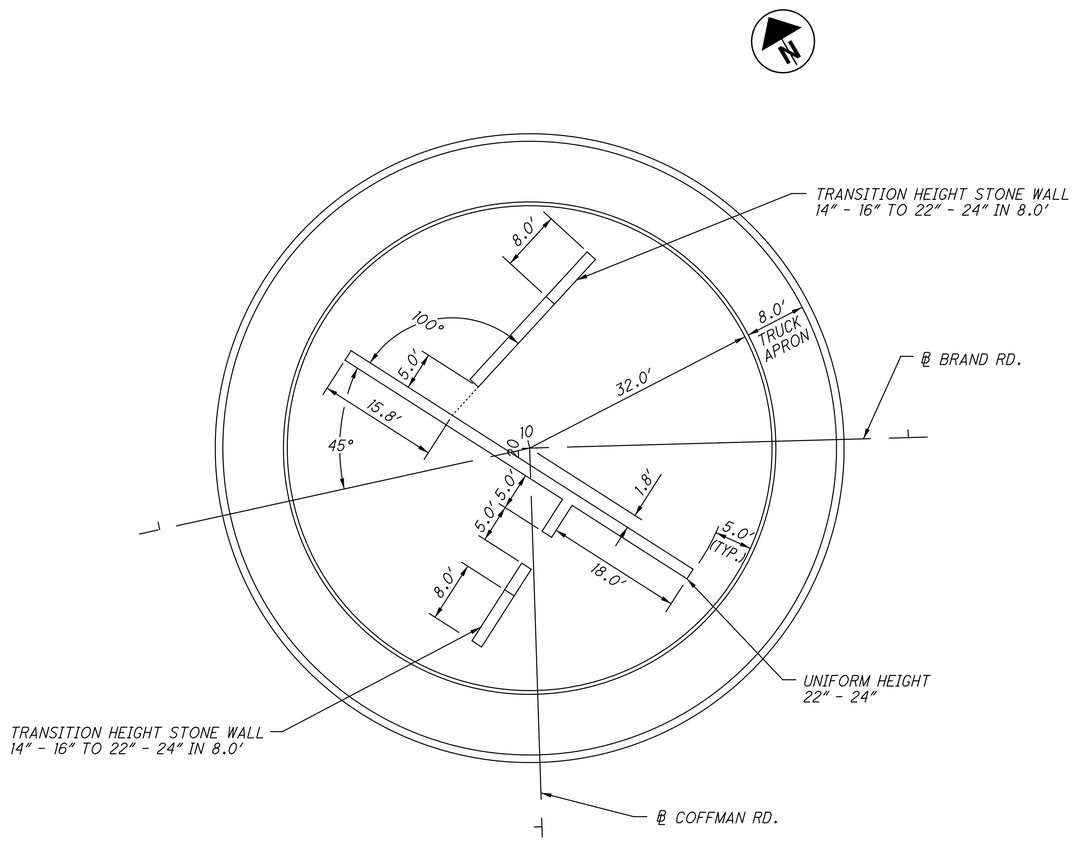


HORIZONTAL SCALE IN FEET
0 10 20 40

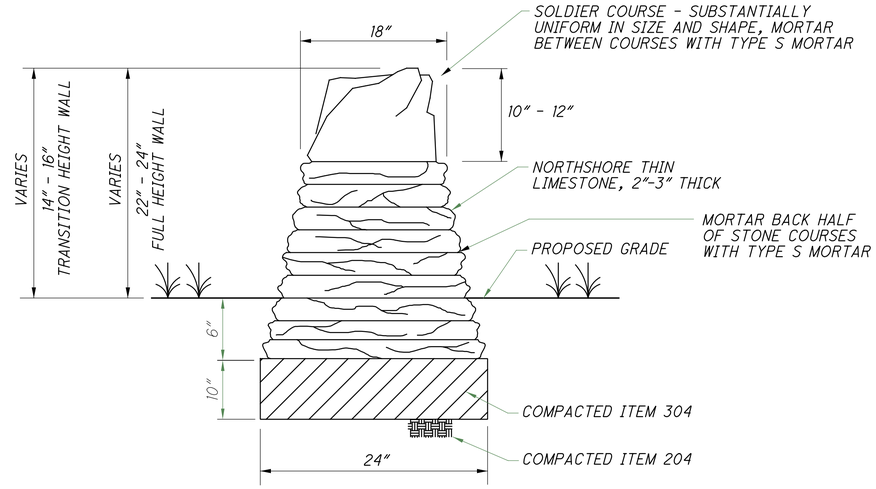
CALCULATED LAM
CHECKED KJG

GRADING PLAN - ℄ "B"
STA. 78+00 TO STA. 83+00

BRAND ROAD / COFFMAN ROAD ROUNDABOUT



CENTRAL ISLAND PLAN



SECTION B–B
SCALE: 1" = 10"

NOTES:

1. BATTER WALL BOTH FACES. MAINTAIN COURSES LEVEL AND SHIM WITH STONE CHIPS TO PROVIDE STABLE COURSING. AMOUNT OF SHIMS TO BE APPROVED BY ENGINEER.

2. NORTHSHORE THIN LIMESTONE (BUFF TO BLUE VEIN COLOR) QUARRIED IN OHIO PROVIDED BY NORTHSHORE OF COLUMBUS (OR APPROVED EQUAL).

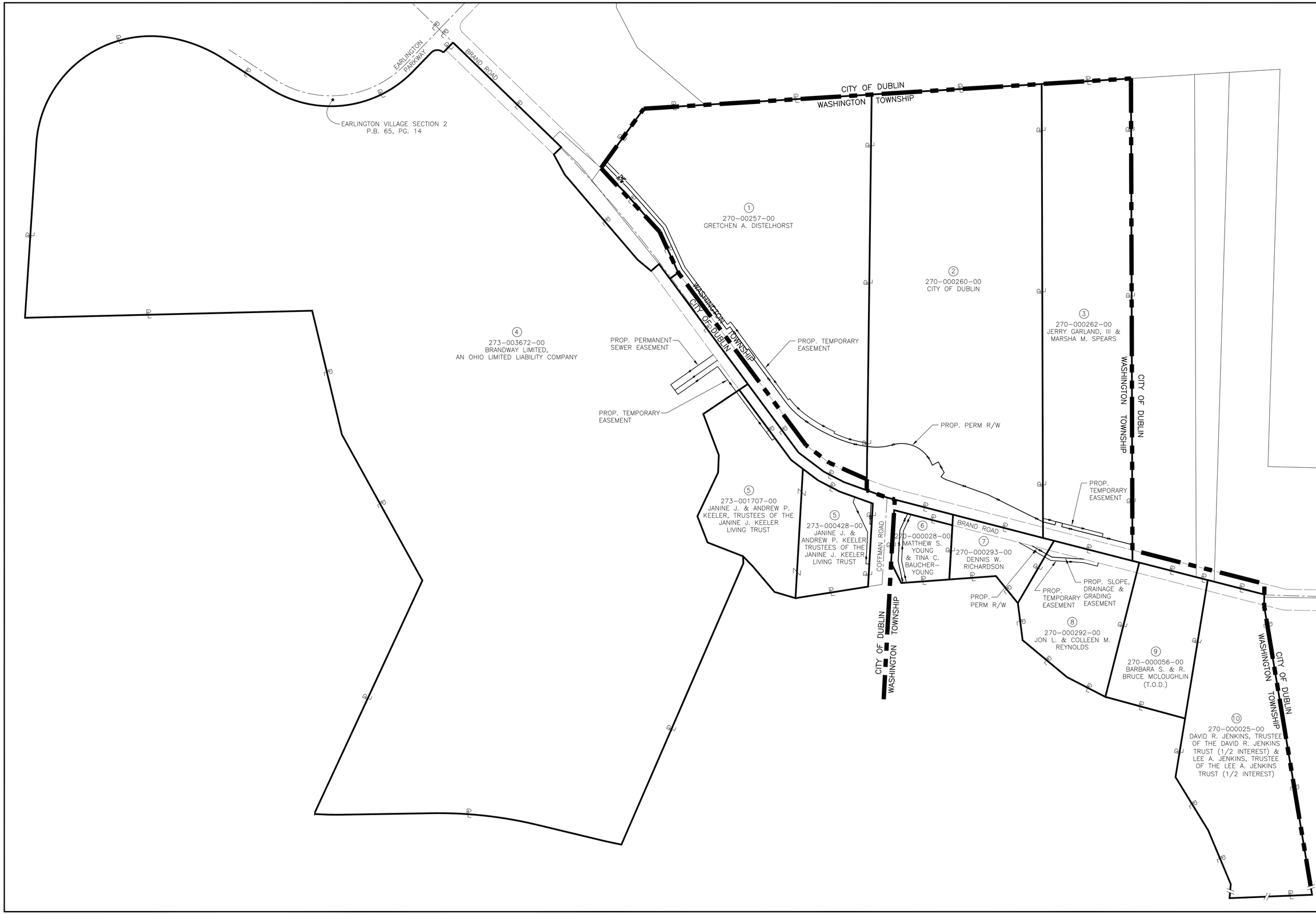
DRY-LAID STONE WALL DETAIL

NO SCALE

CALCULATED LAM
CHECKED KJG

HARDSCAPE PLAN

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT



CALCULATED NLC
CHECKED JJR

PROPERTY INDEX MAP

BRAND ROAD / COFFMAN ROAD
ROUNDABOUT

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS ARE IN ACRES

GRANTEE:
ALL EASEMENTS AND WARRANTY DEEDS ACQUIRED IN THE NAME OF THE CITY OF DUBLIN UNLESS OTHERWISE SHOWN.

CALCULATED NL C
CHECKED JJR

PARCEL NO.	OWNER	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	REMARKS	AS ACQUIRED INSTRUMENT NO.
1-WD	GRETCHEN A. DISTELHORST	O.R. 26330, PG. C08	270-000257-00	12.5804	0.576	1.364	0.576	0.788	NO	11.2164			
1-T						0.280	0.000	0.280				FOR GRADING	
2-WD	CITY OF DUBLIN	INST. #201203160036653	270-000260-00	14.118	0.363	1.264	0.363	0.901		12.854			
3-WD	JERRY GARLAND, III & MARSHA M. SPEARS	O.R. 5537, PG. I04	270-000262-00	8.000	0.184	0.280	0.184	0.096		7.720			
		D.V. 3245, PG. 95											
3-T1		D.V. 2992, PG. 359				0.009	0.000	0.009				FOR GRADING	
3-T2						0.028	0.000	0.028				FOR GRADING	
	"T" TOTAL					0.037	0.000	0.037					
4-WD1	BRANDWAY, LIMITED, AN OHIO LIMITED LIABILITY COMPANY	O.R. 30785, PG. B15	273-003672-00	59.396	0.595	0.299	0.299	0.000					
4-WD2						0.296	0.296	0.000					
	"WD" TOTAL					0.595	0.595	0.000			58.801		
4-S						0.069	0.000	0.069				FOR STORM SEWER CONSTRUCTION	
4-T						0.073	0.000	0.073				FOR GRADING	
5-WD	JANINE J. & ANDREW P. KEELER, TRUSTEES OF THE JANINE J.	INST. #201002050015310	273-000428-00	1.446	0.000	0.007	0.000	0.007			1.439		
	KEELER LIVING TRUST												
5-T1		INST. #201002050015308	273-001707-00	2.573	0.000	0.040	0.000	0.040				FOR GRADING	
5-T2			273-000428-00			0.088	0.000	0.088				FOR GRADING AND DRIVEWAY CONSTRUCTION	
6-WD	MATTHEW S. YOUNG & TINA C. BAUCHER-YOUNG	INST. #201204030045757	270-000028-00	0.701	0.027	0.098	0.027	0.071			0.603		
6-T						0.047	0.000	0.047				FOR GRADING AND STORM SEWER CONSTRUCTION	
7-WD	DENNIS W. RICHARDSON	INST. #200701290017158	270-000293-00	0.998	0.203	0.210	0.203	0.007			0.788		
7-T						0.015	0.000	0.015				FOR GRADING	
8-WD	JON L. & COLLEEN M. REYNOLDS	INST. #200708290152547	270-000292-00	2.319	0.178	0.178	0.178	0.000			2.141		
8-P						0.023	0.000	0.023				SLOPE, DRAINAGE & GRADING EASEMENT	
8-T						0.036	0.000	0.036				FOR GRADING AND DRIVEWAY CONSTRUCTION	
9-WD	BARBARA S. & R. BRUCE MCLOUGHLIN (T.O.D.)	INST. #200709100159092	270-000056-00	2.044	0.141	0.141	0.141	0.000			1.903		
		O.R. 8836, PG. E19											
10-WD	DAVID R. JENKINS,	INST. #199906230159176	270-000025-00	6.342	0.118	0.118	0.118	0.000	NO		6.224		
	TRUSTEE OF THE DAVID R. JENKINS TRUST (1/2 INTEREST) &												
	LEE A. JENKINS,	INST. #199906230159175											
	TRUSTEE OF THE LEE A. JENKINS TRUST (1/2 INTEREST)												

LEGEND:
WD = WARRANTY DEED
S = STORMWATER AND DRAINAGE EASEMENT
T = TEMPORARY EASEMENT

NOTES:
1. ALL TEMPORARY EASEMENTS EXPIRE UPON COMPLETION OF PROJECT.
2. UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

REV. BY	DATE	DESCRIPTION

EASEMENT SUMMARY

BRAND ROAD / COFFMAN ROAD ROUNDABOUT