COMMUNTITY ANALYSIS:

- THE PROPOSED DEVELOPMENT IS NOT EXPECTED TO SIGNIFICANTLY IMPACT LOCAL SCHOOLS. THE SURROUNDING USES CONSIST OF ST. PAUL MISSIONARY BAPTIST CHURCH (NORTH), CITY STREET/PLATT (EAST), THE SWIFT RUN DRAINAGE DISTRICT (WEST), AND A VACANT LOT (SOUTH). THESE USES ARE NOT EXPECTED TO BE NEGATIVELY IMPACTED BY THIS DEVELOPMENT.
- THE SITE WILL BE SCREENED FROM THE SURROUNDING USES BY LANDSCAPING AND EXISTING TREES, MITIGATING IMPACTS ON THE RESIDENTS.
- THE SITE IS CURRENTLY VACANT, CONSISTING OF PERIMETER TREES, GRASS AND SCRUB BRUSH. A MAJORITY OF THE SITE IS VOID OF NATURAL FEATURES. EIGHT LANDMARK TREES EXIST ON THE SITE, OF WHICH THREE WILL BE REMOVED AND REPLACED PER MITIGATION REQUIREMENTS.
- THE SITE WILL NOT CAUSE ANY ADVERSE IMPACTS TO AIR AND WATER QUALITY. THERE ARE NO KNOWN HISTORIC SITES ON THE PROPERTIES.
- THE PROPOSED DEVELOPMENT IS NOT EXPECTED TO SIGNIFICANTLY IMPACT LOCAL TRAFFIC USING ITE TRIP GENERATION METHODS, THE AVERAGE VEHICLE TRIP GENERATION PER DWELLING UNIT IS CALCULATED AS 0.51 FOR MULTIFAMILY HOUSING (LOW-RISE) AND 0.40 FOR MULTIFAMILY HOUSING (MID-RISE). THE DEVELOPMENT MAY BE ALL OF EITHER OF THESE USES OR A MIXTURE OF THE TWO; HOWEVER, SINCE A TRANSPORTATION IMPACT ANALYSIS IS REQUIRED ONLY IF A PROPOSED DEVELOPMENT WILL GENERATE THREE PEAK HOUR TRIPS PER DWELLING UNIT ONE IS NOT REQUIRED FOR THIS PROJECT.
- ALL SIDEWALKS ARE TO BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME. PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALK IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.

<u>SITE ANALYSIS:</u>

- THE SITE IS CURRENTLY VACANT. SITE CONDITIONS:
- SOIL TYPES ON SITE ARE CONOVER LOAM AND MIANMI LOAM PER THE WASHTENAW COUNTY 2.1. SOIL SURVEY. A GEOTECHNICAL INVESTIGATION PERFORMED IN 2004 REPORTED PRIMARILY CLAY AND SILTY CLAY BELOW THE OVERLYING TOPSOIL, WITH ISOLATED AREAS OF SAND LAYERS. INFILTRATION TESTING PERFORMED IN 2015 REVEALED SIMILAR RESULTS, WITH NO INDICATION OF SOIL SUITABILITY FOR STORM WATER INFILTRATION. SITE VEGETATION CONSISTS PRIMARILY OF SCRUB BRUSH AND GRASSES OVER THE MAJORITY OF THE SITE, WITH TREES LOCATED AROUND THE PERIMETER, INCLUDING A STAND OF MATURE SPRUCE AND PINE TREES ALONG THE WEST BOUNDARY OF THE SITE. REFER TO SHEETS P-2 AND P-2.1, "TOPOGRAPHIC SURVEY" FOR SITE TOPOGRAPHY. SITE NATURAL FEATURES
- THERE IS NO KNOWN ENDANGERED SPECIES HABITAT ON SITE. THE 100-YEAR FLOOD PLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN PARTIALLY 3.2.
- ENCROACHES ON THE WEST EDGE OF THE PROPERTY. EIGHT LANDMARK TREES EXIST ON THE SITE. REFER TO SHEETS L-1, L-2 AND L-3 FOR 3.3. MORE INFORMATION.
- NO STEEP SLOPES EXIST ON THE SITE
- THERE ARE NO WATERCOURSES ON THE PROPERTY. 3.5. THERE ARE THREE DISTINCT WETLANDS ON THE PROPERTY. ONE IN THE CENTER OF THE SITE, 3.6. ONE ON THE NORTHERN BOUNDARY OF THE SITE, AND ONE ALONG THE WEST EDGE OF THE SITE CORRESPONDING TO THE SWIFT RUN DRAIN FLOODPLAIN. 3.7. THERE ARE NO WOODLANDS ON THE PROPERTY.
- SITE NATURAL FEATURES ALTERNATIVES ANALYSIS AN INITIAL MORE DENSE CONCEPT INCLUDED 55 UNITS, 12 MORE THAN THE CURRENT DESIGN THIS CONCEPT WOULD HAVE REQUIRED AN EXPANSION OF THE LIMITS OF GRADING FOR THE SITE, MORE TREE REMOVAL AND MITIGATION FOR IMPACTS TO THE FLOODPLAIN. ADDITIONALLY, THE INITIAL CONCEPT DID NOT INCLUDE THE ADDITIONAL TEN FOOT BUFFER ABOVE AND BEYOND THE 25 FOOT WETLAND BUFFER, AS IS CURRENTLY DESIGNED.
- THERE ARE NO EXISTING STRUCTURES ON THE SITE.
- THE SITE WILL BE ACCESSED VIA A PROPOSED DRIVEWAY ON PLATT ROAD. THE SITE SIDEWALKS WILL CONNECT TO AN EXISTING PUBLIC WALK ON PLATT ROAD AND WILL CONNECT TO ALL LOTS. ALL SIDEWALKS PROPOSED SHALL MEET ALL REQUIREMENTS AS SET FORTH IN THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
- PUBLIC UTILITIES
- PUBLIC WATER MAIN WILL BE EXTENDED THROUGH THE SITE. CONNECTING TO THE EXISTING MAIN WITHIN PLATT ROAD AT TWO SEPARATE LOCATIONS TO CREATE A LOOP. 40' WIDE WATER MAIN EASEMENTS WILL BE PROVIDED ON SITE. PUBLIC SANITARY SEWER WILL CONNECT TO THE EXISTING SANITARY SEWER ON PLATT ROAD. 7.2.
- THE SITE CURRENTLY DRAINS UN-DETAINED VIA SHEET FLOW TO THE PLATT ROAD RIGHT-OF-WAY STORM SEWER SYSTEM AND TO THE SWIFT RUN DRAIN. THE PROPOSED DEVELOPMENT INCLUDES TWO NEW DETENTION BASINS WITH A MECHANICAL SEDIMENT REMOVAL STRUCTURES.A NEW ON-SITE ENCLOSED STORM SEWER SYSTEM DESIGNED PER THE WASHTENAW COUNTY WATER RESOURCES COMMISSIONER STANDARDS IS ALSO INCLUDED. THE DETENTION BASINS WILL CAPTURE STORM WATER RUNOFF FROM EXISTING ON-SITE TRIBUTARY DRAINAGE AREAS. THE DETENTION BASINS WILL DISCHARGE TO THE EXISTING STORM SEWER SYSTEM IN THE PLATT ROAD RIGHT-OF-WAY AND THE SWIFT RUN DRAIN AT A LOWER PEAK FLOW RATE THAN CURRENTLY EXISTS.
- SITE LIGHTING WILL BE PROVIDED BY BUILDING MOUNTED LIGHTS ON EACH UNIT.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL BE IN COMPLETE CONFORMANCE WITH THE CITY OF ANN ARBOR STANDARDS.

DEVELOPMENT PROGRAM

THE PROPOSED PROJECT IS LOCATED ON ONE PARCEL OF CURRENTLY VACANT LAND ZONED R3, TOWNHOUSE DWELLING. THE DEVELOPMENT WILL CONSIST OF 43 THREE-STORY TOWNHOUSE BUILDINGS RANGING IN FLOOR AREAS. EACH UNIT WILL HAVE A PRIVATE GARAGE AND ENTRANCE.

THE DEVELOPMENT WILL BE ACCESSED VIA TWO DRIVE OPENINGS FROM PLATT ROAD AND INCLUDES 43 PRIVATE GARAGE SPACES (PROVIDING 43 CLASS 'A' BIKE PARKING SPACES).

IN ALL, THE PROPOSED DEVELOPMENT CONSISTS OF 43 TOWNHOUSE UNITS.

SITE DENSITY WILL BE 5.28 UNITS/ACRE (43 UNITS/8.14 ACRES).

PROBABLE SITE CONSTRUCTION COST = \$5,750,000

PLATT ROAD TOWNHOMES 3680, 3696, 3746, 3788 PLATT ROAD ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

COMPARISON CHART OF REQUIREMENTS AND PROPOSED CONDITIONS:

- ZONING CLASSIFICATION: R3 TOWNHOUSE DWELLING ADJACENT ZONING: NORTH R1C, SOUTH R1C, EAST R3, WEST PL
- 2. LOT AREA: 8.14 ACRES (354,512 SQ.FT.) NET AND GROSS
- TOTAL AREA OF ALL FLOORS PROPOSED USE: 43 TOWNHOUSE DWELLING UNITS (D.U.)

	LOT INFORMATION: MAXIMUM DENSITY MINIMUM LOT AREA GROSS LOT AREA GROSS LOT WIDTH	21,780 SF MIN.	PROPOSEI 5.28 D.U _/
4.	<u>OPEN SPACE:</u> MINIMUM ACTIVE OPEN SPACE MINIMUM OPEN SPACE	<u>REQUIRED:</u> 300 SF PER D.U. 65% OF LOT AREA	<u>PROPOSEI</u> 5,146 SF 69%
	FRONT	<u>REQUIRED:</u> 15' MIN./40' MAX. 20' MIN. 30' MIN.	PROPOSEI 16.6' 50.1', 107 31.6'
6.	HEIGHTS AND STORIES		
	<u>BUILDING:</u> HEIGHT SPACING	<u>REQUIRED:</u> 35' MAX. 20' MIN.	<u>PROPOSEI</u> 31'-9", 3
7.	OFF-STREET VEHICLE PARKING: OFF-STREET	REQUIRED: 2 PER D.U.	PROPOSEI 2 PER D. 86 TOTAL

SITE SOILS INFORMATION: ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR WASHTENAW COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:

1 PER 5 D.U.

• Nab - NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES Pe – PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES

LEGAL DESCRIPTION:

BICYCLE PARKING

(LEGAL DESCRIPTION PER WASHTENAW COUNTY)

3680 PLATT ROAD

COM AT TH E 1/4 POST OF SEC TH S 42 RDS IN THE E LINE OF SEC FOR A PL OF BEG TH W 80 RDS TH S 15 RDS IN W LINE OF E 1/2 OF SE 1/4 TH E 80 RDS TH N 15 RDS IN THE E LINE OF SEC TO THE PL OF BEG EXCEPT THAT PORTION TAKEN BY COUNTY DRAIN COMM BEING A PART OF E 1/2 OF SE 1/4 SEC 10 T3S R6E

3696 PLATT ROAD

PRT SE 1/4 SEC 10, T3S, R6E, COM E 1/4 COR OF SEC 10, TH S 1 DEG W 941.50 FT FOR POB, TH CONT S 1 DEG W 165 FT, TH N 89 DEG 57 MIN W 470.65 FT, TH N 12 DEG 23 MIN 30 SEC E 168.88 FT, TH S 89 DEG 57 MIN E 437.29 FT TO POB, EXC E 33 FT FOR ROW

3746 PLATT ROAD

SEC 10, TH 1 DEG 00 MIN W 1338.58 FT FOR POB, TH S 89 DEG 59 MIN 30 SEC W 470.65 FT, TH N 1 DEG 00 MIN E 232.56 FT, TH S 89 DEG 57 MIN E 470 FT M/L, TH S 1 DEG 00 MIN W TO POB, EXC E 33 FT 3788 PLATT ROAD

THE N 112 FT OF THE SE 1/4 OF THE SE 1/4 LYING NELY OF I-94 ROW IN SEC 10, T3S, R6E, SUBJECT TO THE ROW IN PLATT ROAD AND EASEMENTS AND ROW RECORDED

DESIGN TEAM

OWNER/APPLICANT/DEVELOPER CIVIL ENGINEER

TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326 CONTACT: ANTHONY RANDAZZO PHONE: 248.373.2440 EMAIL: AFRANDAZZO@ME.COM

ARCHITECT

JARRATT ARCHITECTURE 108 N. LAFAYETTE STREET SOUTH LYON, MI 48175 CONTACT: BILL JARRATT PHONE: 248.446.1100 EMAIL BILLJ@JARRATTARCHITECTURE.COM

PEA GROUP 7927 NEMCO WAY, STE. 115 BRIGHTON, MI 48116 CONTACT: JONATHAN E. CURRY, PE PHONE: 844.813.2949 EMAIL: JCURRY@PEAGROUP.COM

LANDSCAPE ARCHITECT

VERT VERDE LANDSCAPE ARCHITECTURE PLYMOUTH, MI CONTACT: JAMES GRAY PHONE: 734.249.3568 EMAIL: JAMES@VERTVERDE.COM

PRELIMINARY SITE PLANS

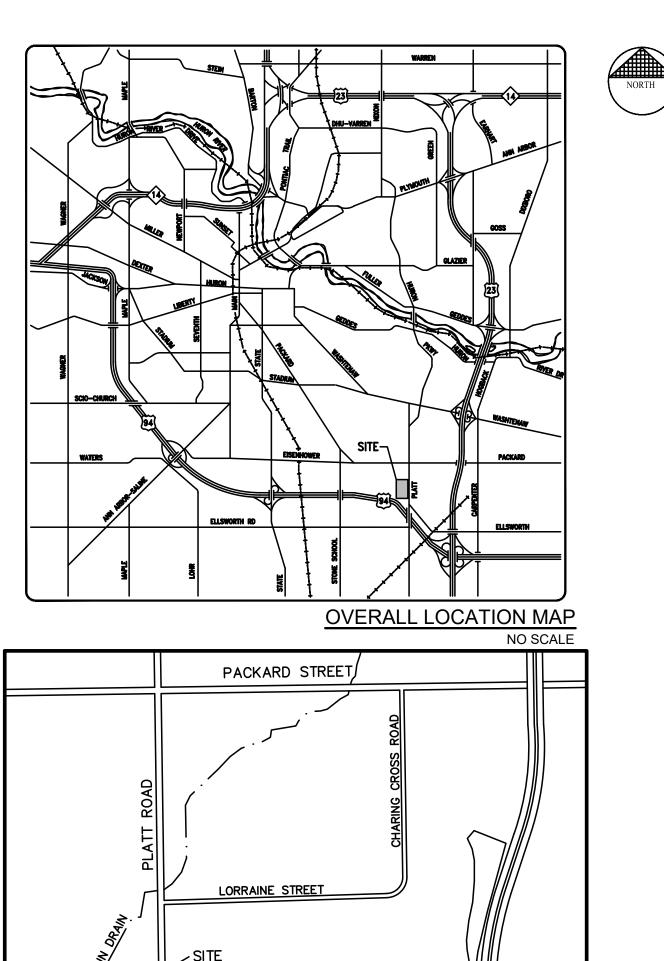
J/ACRE (43/8.14)

PER D.U.

07.9

31'-11" MIDPT. OF ROOF L SPACES 1 PER D.U.

SOUTHEAST AREA PARK



TURNBERRY PARK SCARLETT-MITCHEL NATURE AREA E. ELLSWORTH ROAD SWIFT RUN DOG PARK NORTH DETAILED LOCATION MAP

NO SCALE

GROUP

PERMIT / APPROVAL SUMMARY DATE SUBMITTED DATE APPROVED PERMIT / APPROVAL

NUMBER	TITLE
P-0.0	COVER
P-1.0	OVERALL TOPOGRAPHIC SURVEY
P-1.1	NORTH TOPOGRAPHIC SURVEY
P-1.2	SOUTH TOPOGRAPHIC SURVEY
P-1.3	TREE INVENTORY
P-1.4	ALTA/ASCM LAND TITLE SURVEY
P-2.0	NATURAL FEATURES PLAN
P-2.1	NATURAL FEATURES OVERLAY PLAN
P-2.2	NATURAL FEATURES ALTERNATIVES ANALYSIS
P-2.3	DEMOLITION PLAN
P-3.0	OVERALL DIMENSIONAL LAYOUT PLAN
P-3.1	TURNING MOVEMENTS
P-3.2	SIGHT DISTANCE TRIANGLES
P-3.3	ADDRESSING PLAN
P-4.0	GRADING PLAN
P-4.1	ROAD PROFILES
P-5.0	SOIL EROSION CONTROL PLAN
P-6.0	UTILITY PLAN
P-6.1	FIRE PROTECTION PLAN
P-7.0	STORM WATER MANAGEMENT PLAN
P-7.1	STORM WATER MANAGEMENT DRAINAGE AREAS
P-7.2	STORM WATER MANAGEMENT CALCULATIONS
P-7.3	WCWRC WORKSHEETS - NORTH BASIN
P-7.4	WCWRC WORKSHEETS - SOUTH BASIN
P-8.0	NOTES AND DETAILS
L-1	TREE PRESERVATION & REMOVAL PLAN
L-2	TREE INVENTORY
L-3	LANDSCAPE PLAN
A1	TYPICAL UNIT A PLANS
A2	EXTERIOR ELEVATIONS
A3	SAMPLE CLUSTER
PM-1	PHOTOMETRIC PLAN
PM-2	PHOTOMETRIC PLAN

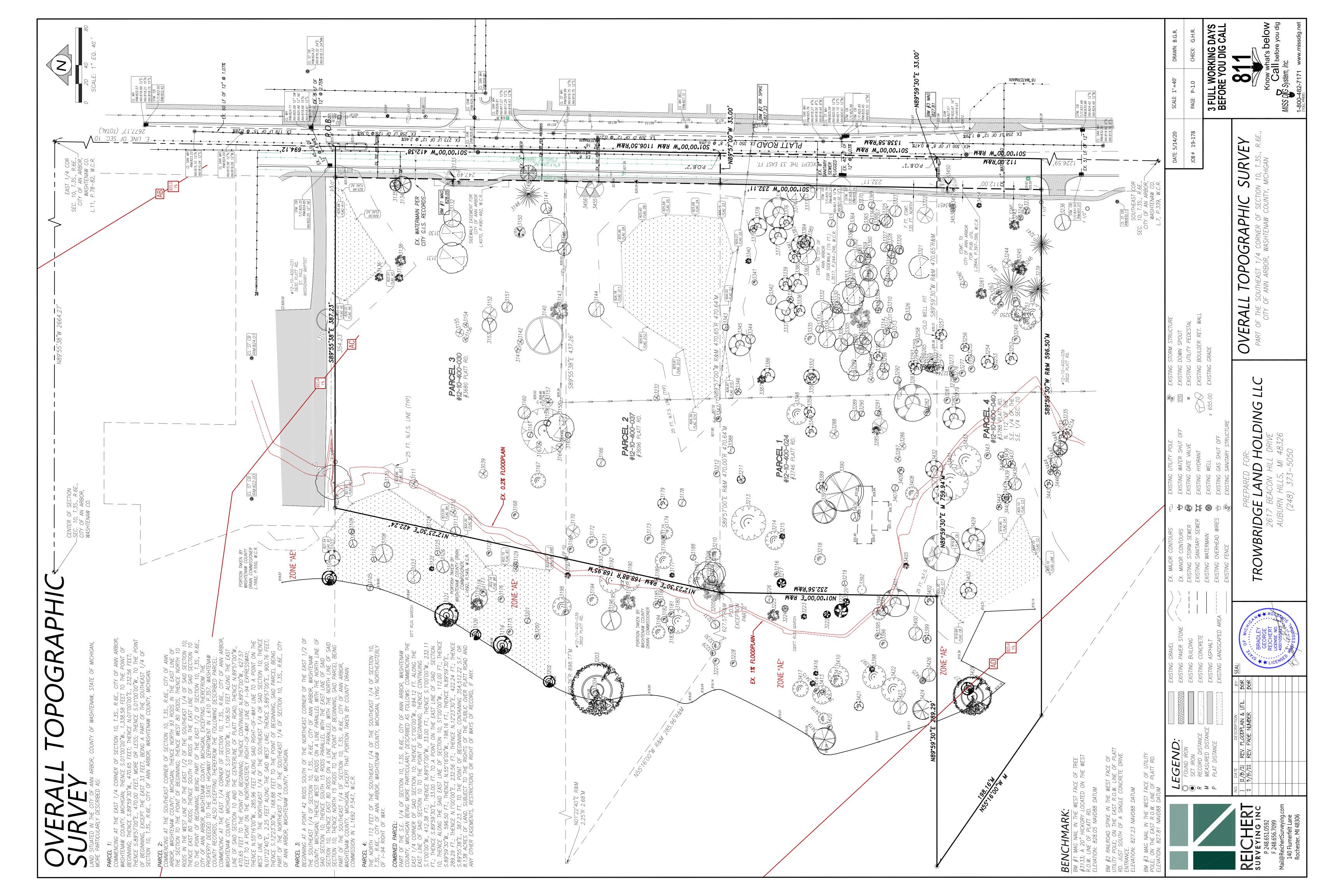
REVISIONS DESCRIPTION

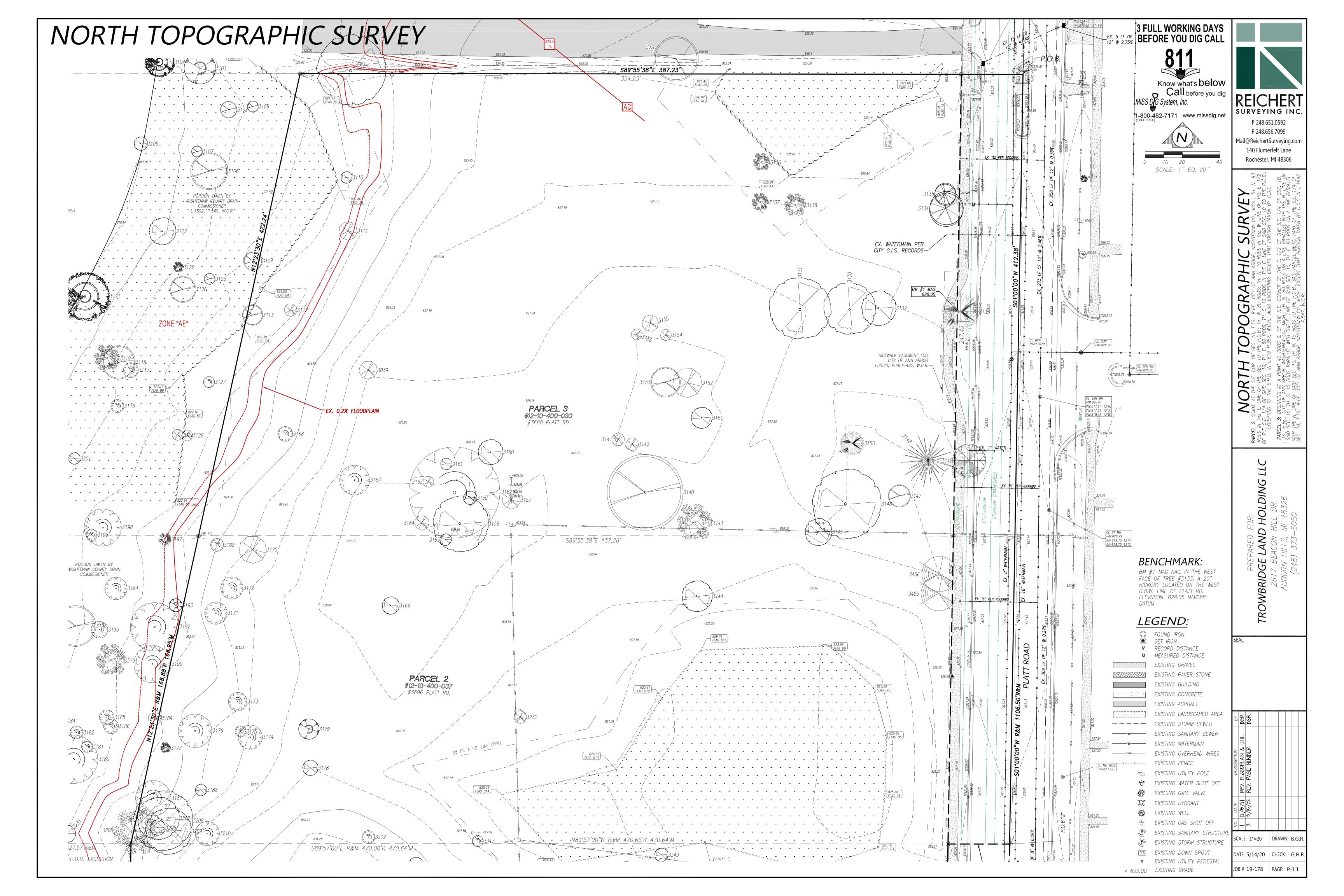
SITE PLAN SUBMITTAL WASHTENAW COUNTY WATER RESOURCE COMMISSION REVIEW WCWRC/CITY OF ANN ARBOR RESUBMITTA

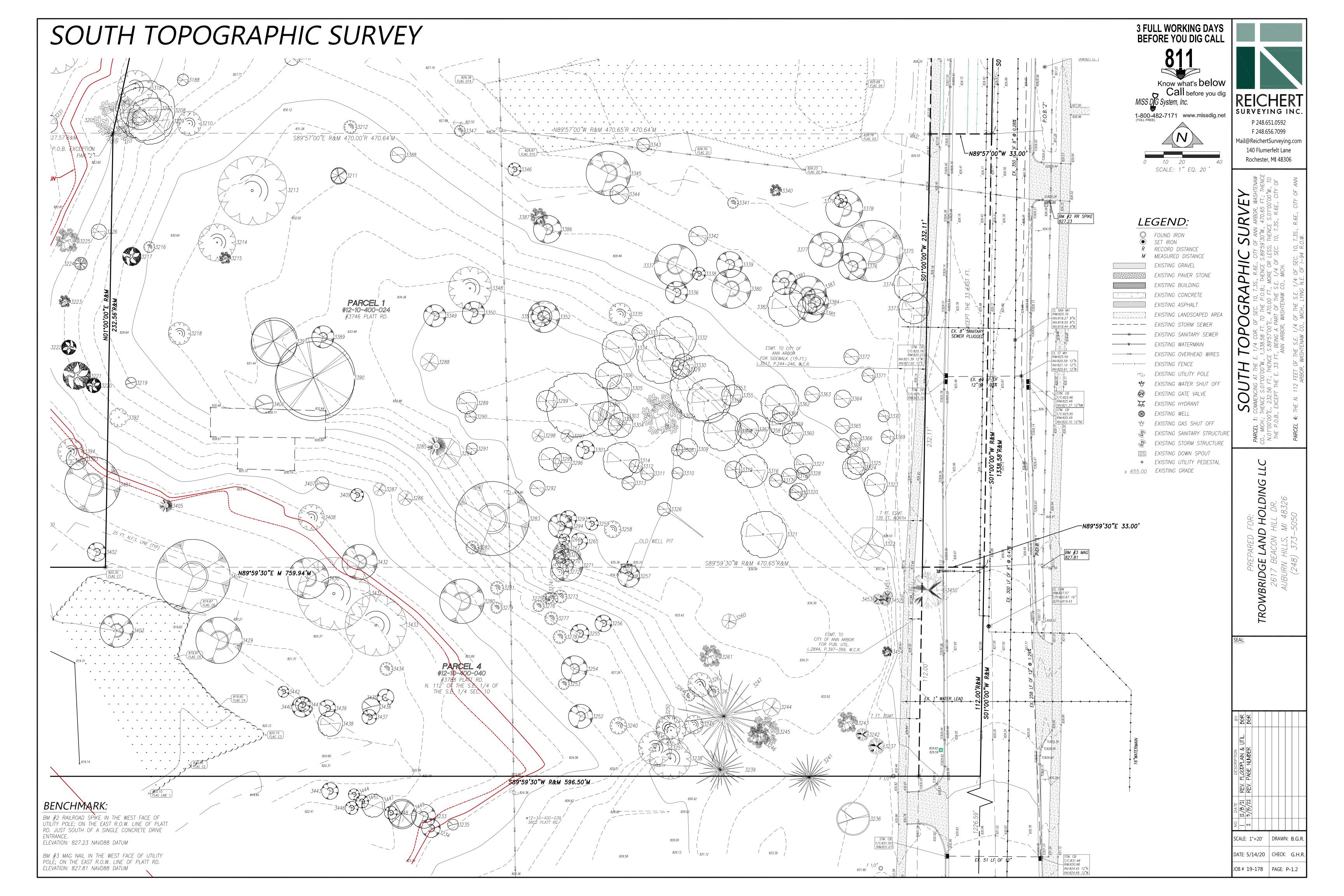
DATE 1/13/2022 1/13/2022 4/7/2022

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S







TREE INVENTORY

	TREE TABLE	
#	DESC.	ELEV.
3039	10" WALNUT	827.90
3101	24" MAPLE	826.73
3102	14"22"ELM	824.14
3103	17" BOXELDER	820.73
3104	16" WILLOW	819.66
3105	7" ELM	819.19
3106	7" 13" MAPLE	820.77
3107	6" MAPLE	820.41
3108	9" MAPLE	820.76
3109	6" MAPLE	821.14
3110	6" ELM	822.85
3111	10" WALNUT	823.49
3112	7" WALNUT	822.82
3113	11" MAPLE	822.42
3114	20" WILLOW	819.44
3115	7" CHERRY	820.11
3116	7" CHERRY	821.09
3117	8" CHERRY	821.70 821.09
3118 3119	18" MAPLE 6" 9" APPLE	820.64
3120	12" WILLOW	819.18
3121	10" 16" WILLOW	819.20
3122	6" APPLE	821.04
3123	14" ELM	819.90
3124	10" MAPLE	822.18
3125	6" MAPLE	821.63
3126	14" MAPLE	821.62
3127	6" CHERRY	822.48
3128	6" WALNUT	822.52
3129	6" WALNUT	822.61
3130	11"16"ELM	827.63
3131	14" ELM	828.05
3132	18" ELM	827.12
3133	20" HICKORY	826.94
3134	9" 10" POPLAR	826.78
3135	12" POPLAR	826.78
3136	10" APPLE	826.75
3137	10" APPLE	827.14
3138 3140	6"7"APPLE 6"6"7"7"7"MAPLE	826.91 828.57
3141	7" WALNUT	829.02
3142	7" WALNUT	829.08
3143	10" 11" APPLE	828.30
3144	16" ELM	828.03
3145	6" 8" ELM	829.26
3146	18" 18" ELM	829.03
3147	12" MAPLE	829.48
3148	14" PINE	828.92
3149	18" OAK	827.56
3150	13" HICKORY	829.52
3151	11" ELM	829.52
3152	16" WALNUT	829.47
3153	16" MAPLE	829.30
3154	6" WALNUT	828.96
3155	9" WALNUT	828.72
3156	6" WALNUT	828.98
3157	10" WALNUT	829.34
3158	6"6"7"10"ELM	829.61
3159 3160	7" ELM 13" ELM	828.98 828.81
3160	13 ELM 6" ELM	828.81
3162	6 ELM 9"9"10"10"11"CHERRY	829.11
3163	6" WALNUT	828.95
3164	8" WALNUT	829.96
3165	6" ELM	829.59
L	1	1

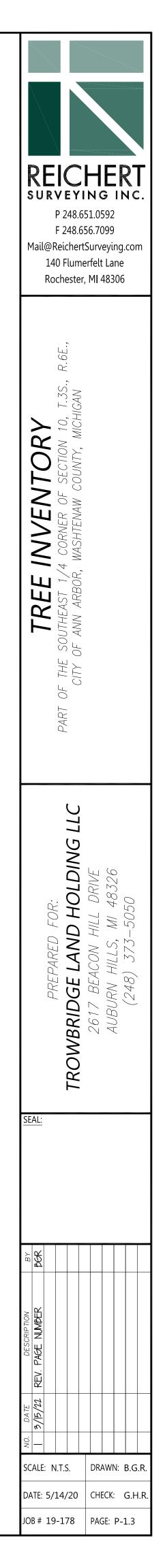
	TREE TABLE	
#	DESC.	ELEV.
3166	9" ELM	829.80
3167	16" CHERRY	828.92
3168 3169	8" CHERRY	824.38 825.03
3170	7" CHERRY 15" WALNUT	826.12
3171	6" 6" CHERRY	825.83
3172	6" 6" CHERRY	826.49
3173	10" CHERRY	825.77
3174	6"7"CHERRY	827.06
3175	6" CHERRY	826.65
3176	6" 12" CHERRY	825.60
3177	6" APPLE	824.17
3178	8" ELM	828.98
3179	11" BOXELDER	828.76
3180	6" CHERRY	822.12
3181	6" CHERRY	822.4
3182	7" CHERRY	822.10
3183	7" BOXELDER	822.08
3184	7"7"CHERRY	821.99
3185	8" CHERRY	822.84
3186	8" CHERRY	822.9
3187	6"6"7"CHERRY	824.47
3188	6" ELM	826.02
3189	7" CHERRY	823.70
3190	6" 7" 7"CHERRY	823.58
3191	9"9"APPLE	822.9
3192	6"6"7"7"CHERRY	823.56
3193	7" BOXELDER	823.63
3194	6"6"CHERRY	822.5
3195	9" CHERRY	822.28
3196	11"11" MAPLE	821.85
3197	7" MULBERRY	823.4
3198	9"11"CHERRY	822.50
3199	6" CHERRY	822.23
3200	6" CHERRY	820.33
3201	6" ELM	820.88
3202	6"7"WILLOW	819.04
3203	10"12"16"19"WILLOW	819.82
3204	9" CHERRY	820.62
3205	13" 13" APPLE	825.13
3206	8" ELM	825.66
3207	8"14"ELM	825.75
3208	9"10"12"ELM	825.86
3209	11" 13" ELM	826.39
3210	13" CHERRY	828.46
3211	9" POPLAR	831.85
3212	7" CHERRY	830.66
3213	6"9"11"11"CHERRY	831.37
3214	6"7"7"CHERRY	831.2
3215	7" APPLE	831.3
3216	6" CHERRY	830.03
3217	10" HAWTHORNE	829.49
3218	6" 6" CHERRY	831.3
3219	6" MAPLE	829.04
3220	8" HAWTHORNE	826.95
3221	15" HAWTHORNE	826.05
3222	8" HAWTHORNE	826.22
3223	7" APPLE	825.99
3224	7" OAK	825.97
3225	6" 8" APPLE	824.5
3226	8" ELM	826.20
7007	7" CHERRY	820.87
3227		001 01
3227 3228 3229	7" CHERRY 6" CHERRY	821.05 821.20

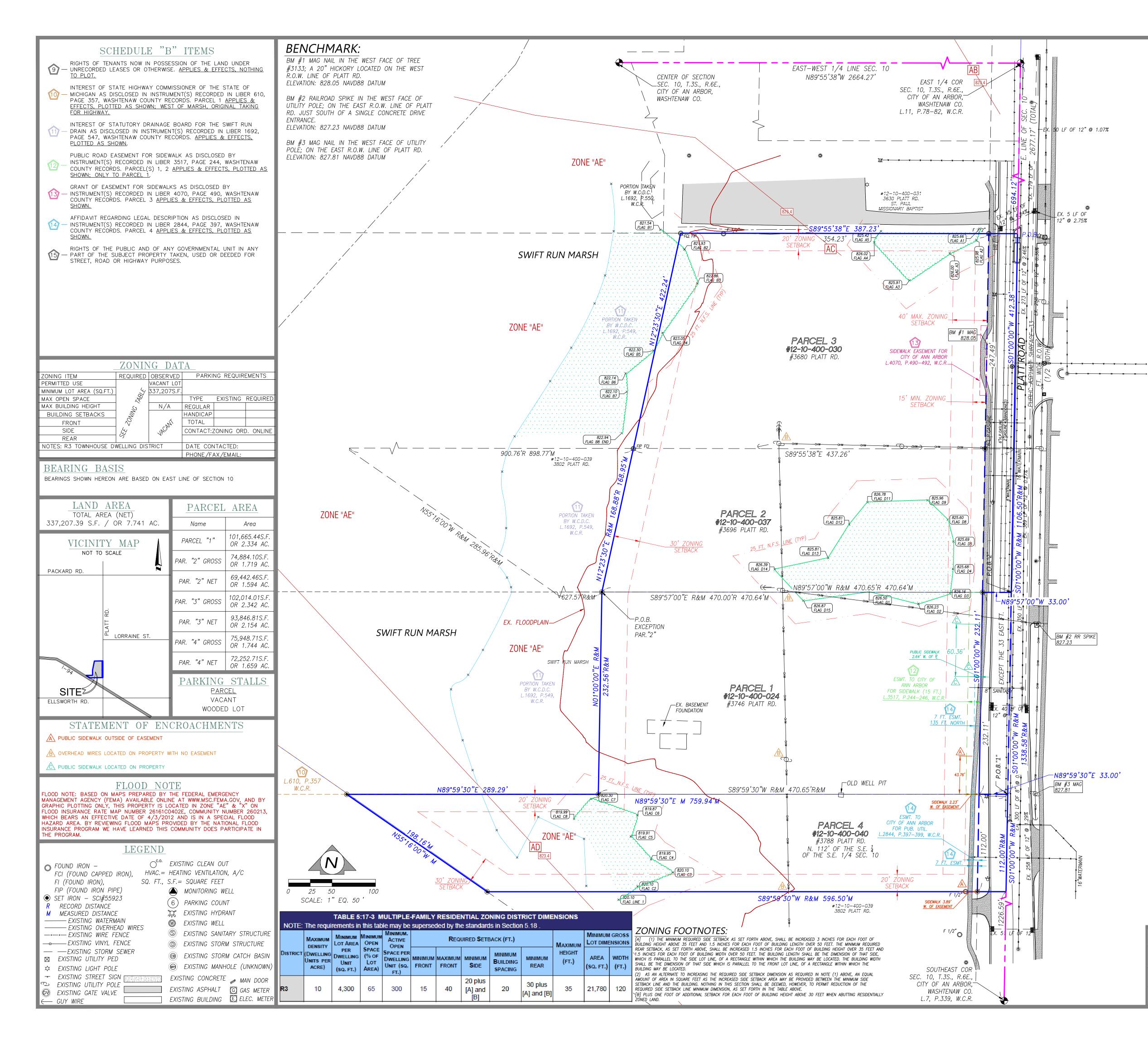
	TREE TABLE			TREE TABLE	
#	DESC.	ELEV.	#	DESC.	ELI
231	9" ELM	823.05	3296	10" ELM	835
232	7" WALNUT	828.06	3297	7" WALNUT	835
233	13" BOXELDER	823.16	3298	7" WALNUT	835
234	10" BOXELDER	823.64	3299	11" ELM	836
3235	6" MAPLE	823.89	3300	6"9"9"9"ELM	836
3236	18" MAPLE	831.90	3301	10" BOXELDER	835
237	9" HICKORY	832.19	3302	9"9"ELM	836
3238	11"11"CHERRY	828.99	3303	11" CEDAR	83
3239	14" PINE	830.86	3304	13" ELM	836
3240	9" CHERRY	826.78	3305	13" ELM	836
3241	12" PINE	832.41	3306	14" ELM	835
3242	7" HICKORY	832.35	3307	11" 13" APPLE	836
3243	6"6"APPLE	832.74	3308	6" ELM	834
3244	10" WALNUT	833.44	3309	11" ELM	834
3245	8"9"APPLE	832.72	3310	6" ELM	834
246	6" 7"APPLE	832.56	3311	7" ELM	835
247	6"6"6"6"PINE	832.24	3312	7" ELM	835
248	10" CHERRY	831.38	3313	7" ELM	835
249	16" CHERRY	829.58	3314	9"10"ELM	835
250	13" CHERRY	828.61	3315	9" ELM	83.
3251	9"9"CHERRY	827.66	3316	17" ELM	83.
252	13" BOXELDER	825.77	3317	7" ELM	83
253	6" CHERRY	826.38	3318	8" ELM	83
254	14" BOXELDER	827.07	3319	7" ELM	83
3255	10" BOXELDER	828.10	3320	9" ELM	83
256	9" BOXELDER	828.58	3321	6"7"11"ELM	83.
257	12" BOXELDER	834.99	3322	18" WALNUT	83
258	9" CHERRY	835.40	3323	12" ELM	82:
259	7" BOXELDER	835.38	3324	6"6"ELM	83
260	8" WALNUT	834.93	3325	6"6"ELM	83
261	6"6"APPLE	833.28	3326	7" ELM	83
262	6" CHERRY	832.56	3327	10" ELM	83
263	6"7"CHERRY	832.38	3328	7" ELM	83
264	6" CHERRY	831.45	3329	10" ELM	83
265		834.65	3330		83
	9" BOXELDER			12" ELM	
266	6" BOXELDER	834.66	3331	8"8"9"ELM	832
267	7" CHERRY	834.47	3332	9"13"ELM	83
268	8" CHERRY	834.48	3333	8" ELM	833
269	9" CHERRY	834.53	3334	9"9"ELM	83
270	7" CHERRY	834.14	3335	6" 6" CHERRY	83
3271	6" 11" BOXELDER	833.77	3336	12" BOXELDER	82
272	10" CHERRY	833.69	3337	10" 13" BOXELDER	82
273	7" CHERRY	829.57	3338	7" BOXELDER	82
3274	7" CHERRY	829.08	3339	14" BOXELDER	828
275	6" CHERRY	829.06	3340	7" APPLE	82
276	6" CHERRY	828.76	3341	6" CHERRY	82
277	7" CHERRY	828.13	3342	10" FI M	82
		827.42	3343		82
278	7" CHERRY			7" ELM	
279	6" CHERRY	826.63	3344	10" ELM	82
280	9"15"BOXELDER	825.52	3345	12" 12" BOXELDER	82
281	7" CHERRY	827.04	3346	7" BOXELDER	82
282	7" CHERRY	827.75	3347	6" CHERRY	82
283	20" 20" BOXELDER	832.75	3348	6"8"9"CHERRY	83
284	17" WALNUT	832.63	3349	12" BOXELDER	83.
285	10" MULBERRY	832.42	3350	12" BOXELDER	83.
286	8" WALNUT	826.71	3351	11" BOXELDER	83
287	7" WALNUT	825.45	3352	6"11" BOXELDER	83
288	10" WALNUT	835.39	3353	15"19"ELM	83
5289	11" ELM	836.16	3354	10" 13" ELM	83.
290	6" ELM	836.01	3355	11" ELM	83
3291	6" ELM	834.52	3356	8"12"ELM	83.
3292	8" ELM	835.69	3357	11" ELM	83
293	9" BOXELDER	835.26	3358	8" 10" ELM	83
	J DUALLUER				
	A - 77 · · ·		3359	12" ELM	83
294	13" BOXELDER	835.29			

"10°10°10°329610°835.3032977" WALNUT835.40329811" ELM836.6033006" 9" 9" 9" ELM836.70330110° BOXELDER835.4033029" 9" ELM836.703303111" CEDAR835.70330413" ELM835.70330513" ELM835.70330611" TELM835.703307111" 13" APPLE835.7033086" ELM834.70331016" ELM835.7033117" ELM835.7033127" ELM835.7033137" ELM835.7033149" 10" ELM835.7033159" ELM835.70331617" ELM835.7033179" ELM835.7033187" ELM835.7033197.7" ELM835.7033209" ELM831.7033216" 6" ELM830.70332212" ELM830.7033239.7" ELM831.7033247.7" ELM835.70332510" ELM831.7033267.7" ELM831.70332710.7" ELM831.7033287.7" ELM831.70333912" ELM831.7033308" 8" 9" ELM831.7033338" 8" 9" ELM831.7033349.7" APPLE825.7233356" 6" 6" CHERRY825.72334010" 1		TREE TABLE	
1.1. ELI 3.1. ELI 3299 7." WALNUT 835.49 3299 1.1." ELM 836.60 3301 10" BOXELDER 835.49 3302 9." 9" 9" ELM 836.63 3303 1.1." CEDAR 835.42 3304 1.3." ELM 836.22 3305 1.1." CEDAR 835.42 3304 1.1." ELM 835.42 3305 1.1." CEDAR 835.42 3306 1.1." ELM 835.42 3307 1.1." ELM 835.42 3308 6.6" ELM 835.42 3310 7." ELM 835.60 3311 7." ELM 835.60 3313 7." ELM 835.60 3314 9." 1.0" ELM 831.64 3315 9." ELM 831.64 3316 7." ELM 831.64 3317 7." ELM 831.64 3318 8." ELM 831.64 3321 6." 6." ELM 830.13 3322	#	DESC.	ELEV.
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3299 11" ELM 836.66 3300 6" 9" 9" 9" ELM 836.73 3301 10" BOXELDER 835.49 3302 9" 9" ELM 836.63 3303 11" CEDAR 837.21 3304 113" ELM 836.52 3305 113" ELM 836.52 3306 11" 13" APPLE 836.52 3307 11" 13" APPLE 835.62 3308 6" ELM 835.62 3310 6" ELM 835.62 3311 7" ELM 835.62 3313 7" ELM 835.62 3314 9" 10" ELM 831.62 3315 9" ELM 831.62 3316 17" ELM 831.62 3317 7" ELM 831.62 3318 8" ELM 831.62 3320 9" ELM 831.62 3321 6" 6" ELM 831.62 3322 9" ELM 831.62 3323 12" ELM 831.62 3324	.3298		835.56
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Nome Nome 3310 6" ELM 835.02 3311 7" ELM 835.02 3313 7" ELM 835.02 3314 9" 10" ELM 835.02 3315 9" ELM 835.02 3316 9" ELM 831.02 3317 7" ELM 831.22 3318 8" ELM 831.22 3319 7" ELM 831.22 3310 7" ELM 831.22 3312 6" 7" 11" ELM 834.14 3320 9" ELM 831.02 3321 6" 6" ELM 830.01 3322 18" WALNUT 830.01 3323 12" ELM 830.01 3324 6" 6" ELM 830.01 3325 6" 6" ELM 830.01 3326 7" ELM 831.37 3327 10" ELM 831.37 3330 12" ELM 831.37 3331 8" 8" 9" ELM 831.37 3333 9" 9" ELM 831.37 <td>3308</td> <td>6" ELM</td> <td>834.96</td>	3308	6" ELM	834.96
3311 7" ELM 835.27 3312 7" ELM 835.63 3313 7" ELM 835.63 3314 9" 10" ELM 835.63 3315 9" ELM 833.56 3316 17" ELM 833.56 3317 7" ELM 833.56 3318 8" ELM 831.64 3319 7" ELM 831.64 3320 9" ELM 831.64 3321 6" 7" 11" ELM 830.13 3322 18" WALNUT 830.13 3323 12" ELM 830.96 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.97 3326 7" ELM 833.64 3331 8" 8" 9" ELM 833.64 3332 10" ELM 833.64 3333 8" ELM 833.64 3334 9" 9" ELM 833.64 3335 6" 6" CHERRY 826.92 3336 12" BOXELDER 829.02 3337 <t< td=""><td>3309</td><td>11" ELM</td><td>834.37</td></t<>	3309	11" ELM	834.37
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3313 7" ELM 835.60 3314 9" 10" ELM 835.40 3315 9" ELM 834.14 3316 17" ELM 833.50 3317 7" ELM 831.97 3318 8" ELM 831.60 3320 9" ELM 831.60 3321 6" 7" 11" ELM 834.14 3322 18" WALNUT 830.45 3323 12" ELM 830.13 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.13 3326 7" ELM 830.45 3327 10" ELM 830.45 3328 7" ELM 831.64 3330 12" ELM 831.64 3331 8" 8" 9" ELM 831.97 3332 9" 13" ELM 831.97 3333 9" 9" ELM 832.22 3334 9" 9" ELM 832.22 3335 6" 6" CHERRY 829.02 3335 10" 13" BOXELDER 829.02 3344 <td>3311</td> <td>7" ELM</td> <td>835.27</td>	3311	7" ELM	835.27
3314 9" 10" ELM 835.80 3315 9" ELM 834.14 3316 17" ELM 833.56 3317 7" ELM 831.25 3318 8" ELM 831.25 3319 7" ELM 831.25 3320 9" ELM 831.64 3321 6" 7" 11" ELM 834.30 3322 18" WALNUT 830.45 3323 6" 6" ELM 830.13 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.97 3326 7" ELM 831.06 3327 10" ELM 830.97 3328 7" ELM 831.37 3330 12" ELM 831.37 3331 8" 8" 9" ELM 831.37 3333 9" 13" ELM 831.37 3334 9" 9" ELM 834.34 3335 6" 6" CHERRY 829.02 3334 9" 9" ELM 834.34 3335 10" 13" BOXELDER 829.02 3334 </td <td>3312</td> <td>7" ELM</td> <td>835.63</td>	3312	7" ELM	835.63
3315 9" ELM 833.14 3316 17" ELM 833.56 3317 7" ELM 831.97 3318 8" ELM 831.97 3319 7" ELM 831.64 3320 9" ELM 831.64 3321 6" 7" 11" ELM 834.30 3322 18" WALNUT 830.13 3323 12" ELM 830.13 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.13 3326 7" ELM 835.06 3327 10" ELM 831.06 3328 7" ELM 831.97 3329 10" ELM 831.37 3331 8" 8" 9" ELM 831.37 3332 9" 13" ELM 831.97 3333 9" 9" ELM 834.91 3334 9" 9" ELM 834.91 3335 6" 6" CHERRY 829.02 3336 12" BOXELDER 829.02 3337 10" 13" BOXELDER 828.02 3341 </td <td>3313</td> <td>7" ELM</td> <td>835.60</td>	3313	7" ELM	835.60
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N. Y. C.L.M. N. Y. C.L.M. 3317 7." ELM 831.97 3318 8" ELM 831.25 3319 7." ELM 831.64 3320 9" ELM 831.64 3321 6" 7" 11" ELM 834.30 3322 18" WALNUT 830.45 3323 12" ELM 830.45 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.96 3326 7" ELM 833.01 3327 10" ELM 833.01 3328 7" ELM 833.01 3329 10" ELM 833.01 3330 12" ELM 833.01 3331 8" 8" 9" ELM 833.01 3333 9" 13" ELM 831.37 3333 9" 9" ELM 834.91 3333 9" 9" ELM 834.91 3334 9" 9" ELM 834.91 3335 6" 6" CHERRY 829.02 3336 12" BOXELDER 828.02 3341 <td< td=""><td>3315</td><td>9" ELM</td><td>834.14</td></td<>	3315	9" ELM	834.14
3318 8" ELM 831.25 3319 7" ELM 831.64 3320 9" ELM 831.64 3321 6" 7" 11" ELM 834.30 3322 18" WALNUT 830.13 3323 12" ELM 829.68 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.13 3326 7" ELM 835.06 3327 10" ELM 833.04 3330 12" ELM 831.84 3331 8" 8" 9" ELM 831.84 3333 9" 13" ELM 831.37 3334 9" 9" ELM 831.37 3335 6" 6" CHERRY 832.22 3336 12" BOXELDER 829.02 3337 10" 13" BOXELDER 829.02 3338 7" BOXELDER 828.02 3340 7" APPLE 826.92 3341 6" CHERRY 826.92 3342 10" ELM 828.02 3343 7" BOXELDER 828.02	3316	17" ELM	833.56
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3320 9" ELM 831.64 3321 6" 7" 11" ELM 834.30 3322 18" WALNUT 830.45 3323 12" ELM 829.68 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.13 3326 7" ELM 830.98 3327 10" ELM 830.96 3328 7" ELM 833.01 3329 10" ELM 833.01 3330 12" ELM 833.01 3331 8" 8" 9" ELM 833.01 3333 9" 13" ELM 833.37 3334 9" 9" ELM 834.34 3335 6" 6" CHERRY 829.02 3336 12" BOXELDER 829.02 3337 10" 13" BOXELDER 828.02 3340 7" APPLE 826.02 3341 6" CHERRY 826.02 3342 10" ELM 828.02 3343 7" BOXELDER 827.72 3344 10" ELM 828.02 <	3318	8" ELM	831.25
3320 9" ELM 831.64 3321 6" 7" 11" ELM 834.30 3322 18" WALNUT 830.45 3323 12" ELM 829.68 3324 6" 6" ELM 830.13 3325 66" 6" ELM 830.13 3326 7" ELM 830.98 3327 10" ELM 830.98 3328 7" ELM 830.98 3329 10" ELM 830.98 3320 12" ELM 833.91 3321 8" 8" 9" ELM 833.91 3330 12" ELM 831.97 3331 8" 8" 9" ELM 833.91 3332 9" 13" ELM 832.92 3333 12" BOXELDER 829.02 3334 9" 9" ELM 829.02 3335 10" 13" BOXELDER 829.02 3340 7" APPLE 826.02 3341 6" CHERRY 826.02 3342 10" ELM 828.02 3343 7" BOXELDER 827.72	3319	7" ELM	831.66
3321 6" 7" 11" ELM 834.30 3322 18" WALNUT 830.45 3323 12" ELM 829.68 3324 6" 6" ELM 830.14 3325 6" 6" ELM 830.14 3326 7" ELM 830.14 3327 10" ELM 830.04 3328 7" ELM 831.06 3329 10" ELM 831.06 3330 12" ELM 831.07 3331 8" 8" 9" ELM 831.37 3333 9" 13" ELM 831.37 3334 9" 9" ELM 834.91 3335 6" 6" CHERRY 829.02 3336 12" BOXELDER 829.02 3337 10" 13" BOXELDER 829.02 3339 14" BOXELDER 828.32 3340 7" APPLE 826.92 3341 6" CHERRY 826.92 3342 10" ELM 826.92 3343 7" BOXELDER 827.72 3344 10" ELM 827.72	3320		831.64
3322 18" WALNUT 830.45 3323 12" ELM 829.68 3324 6" 6" ELM 830.13 3325 6" 6" ELM 830.13 3326 7" ELM 830.93 3327 10" ELM 830.93 3328 7" ELM 831.97 3329 10" ELM 831.97 3330 12" ELM 831.97 3331 8" 8" 9" ELM 831.97 3333 9" 13" ELM 833.97 3334 9" 9" ELM 834.91 3335 6" 6" CHERRY 829.87 3336 12" BOXELDER 829.82 3337 10" 13" BOXELDER 829.92 3339 14" BOXELDER 828.92 3340 7" BOXELDER 828.92 3341 6" CHERRY 828.92 3342 10" ELM 828.92 3343 7" BOXELDER 827.52 3344 10" ELM 827.52 3345 12" 12" BOXELDER 837.97 <t< td=""><td></td><td></td><td></td></t<>			
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112 DONELDEIN Renne 3337 10" 13" BOXELDER 829.02 3338 7" BOXELDER 829.02 3339 14" BOXELDER 828.32 3340 7" APPLE 826.72 3341 6" CHERRY 826.92 3342 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.02 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.59 3347 6" CHERRY 827.59 3348 6" 8" 9" CHERRY 827.59 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.07 3352 6" 11" BOXELDER 835.07 3353 15" 19" ELM 835.07 3354 10" 13" ELM 831.96 3355 11" BOXELDER 835.07 3354 10" 13" ELM 831.36 3355 11" ELM 831	3335	6"6"CHERRY	832.22
3338 7" BOXELDER 829.02 3339 14" BOXELDER 828.32 3340 7" APPLE 826.72 3341 6" CHERRY 826.98 3342 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.02 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.59 3347 6" CHERRY 825.72 3348 6" 8" 9" CHERRY 827.59 3349 12" BOXELDER 827.59 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.07 3352 6" 11" BOXELDER 835.06 3353 15" 19" ELM 831.96 3354 10" 13" ELM 831.96 3355 11" ELM 831.36 3356 8" 12" ELM 831.81 3358 8" 10" ELM 831.81	3336	12" BOXELDER	829.87
3339 14" BOXELDER 828.32 3340 7" APPLE 826.72 3341 6" CHERRY 826.98 3342 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.02 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.79 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 834.34 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.07 3352 6" 11" BOXELDER 835.07 3353 15" 19" ELM 831.96 3354 10" 13" ELM 831.96 3355 11" ELM 831.36 3356 8" 12" ELM 831.87 3357 11" ELM 831.88	3337	10" 13" BOXELDER	829.05
3340 7" APPLE 826.72 3341 6" CHERRY 826.98 3342 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.02 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.79 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 827.79 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.07 3352 6" 11" BOXELDER 835.07 3353 15" 19" ELM 831.96 3354 10" 13" ELM 831.96 3355 11" ELM 831.36 3356 8" 12" ELM 831.87 3357 11" ELM 831.81	3338	7" BOXELDER	829.02
3341 6" CHERRY 826.98 3342 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 825.72 3344 10" ELM 828.05 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.79 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 827.79 3349 12" BOXELDER 834.34 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.07 3352 6" 11" BOXELDER 835.07 3353 15" 19" ELM 835.07 3354 10" 13" ELM 831.96 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.87 3358 8" 10" ELM 831.88	3339	14" BOXELDER	828.32
3342 10" ELM 828.02 3343 7" ELM 825.72 3344 10" ELM 828.05 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.59 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 827.79 3349 12" BOXELDER 834.34 3350 12" BOXELDER 835.05 3351 11" BOXELDER 835.05 3352 6" 11" BOXELDER 835.06 3353 15" 19" ELM 831.96 3354 10" 13" ELM 831.36 3355 11" ELM 831.36 3356 8" 12" ELM 831.86 3357 11" ELM 831.86	3340	7" APPLE	826.72
3343 7" ELM 825.72 3344 10" ELM 828.05 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.79 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 834.34 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.07 3352 6" 11" BOXELDER 835.07 3353 15" 19" ELM 834.90 3354 10" 13" ELM 831.96 3355 11" ELM 831.36 3356 8" 12" ELM 831.81 3358 8" 10" ELM 831.81	3341	6" CHERRY	826.98
3344 10" ELM 828.05 3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.79 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 834.34 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.06 3352 6" 11" BOXELDER 835.06 3353 15" 19" ELM 831.96 3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.86 3358 8" 10" ELM 831.86	3342	10" ELM	828.02
3345 12" 12" BOXELDER 827.59 3346 7" BOXELDER 827.81 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 834.34 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.06 3352 6" 11" BOXELDER 835.06 3353 15" 19" ELM 831.96 3354 10" 13" ELM 832.74 3355 11" ELM 831.36 3357 11" ELM 831.86 3358 8" 10" ELM 831.86	3343	7" ELM	825.72
3346 7" BOXELDER 827.84 3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 834.34 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.06 3352 6" 11" BOXELDER 835.06 3353 15" 19" ELM 831.96 3354 10" 13" ELM 831.36 3355 11" ELM 832.74 3357 11" ELM 831.86 3358 8" 10" ELM 831.86	3344	10" ELM	828.05
3347 6" CHERRY 827.79 3348 6" 8" 9" CHERRY 834.34 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.05 3351 11" BOXELDER 834.90 3352 6" 11" BOXELDER 835.06 3353 15" 19" ELM 831.96 3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 831.86 3358 8" 10" ELM 831.86	3345	12" 12" BOXELDER	827.59
3348 6" 8" 9" CHERRY 834.34 3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.05 3351 11" BOXELDER 834.90 3352 6" 11" BOXELDER 835.06 3353 15" 19" ELM 831.96 3354 10" 13" ELM 831.36 3355 11" ELM 831.36 3356 8" 12" ELM 831.86 3358 8" 10" ELM 831.86	3346	7" BOXELDER	827.81
3349 12" BOXELDER 835.07 3350 12" BOXELDER 835.07 3351 11" BOXELDER 835.07 3352 6" 11" BOXELDER 834.90 3353 15" 19" ELM 835.07 3354 10" 13" ELM 831.96 3355 11" ELM 832.74 3357 11" ELM 831.86 3358 8" 10" ELM 831.86	3347	6" CHERRY	827.79
3350 12" BOXELDER 835.05 3351 11" BOXELDER 834.90 3352 6" 11" BOXELDER 835.00 3353 15" 19" ELM 835.00 3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.81 3358 8" 10" ELM 831.86	3348	6"8"9"CHERRY	834.34
3351 11" BOXELDER 834.90 3352 6" 11" BOXELDER 835.00 3353 15" 19" ELM 831.96 3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.81 3358 8" 10" ELM 831.81	3349	12" BOXELDER	835.07
3352 6" 11" BOXELDER 835.00 3353 15" 19" ELM 831.96 3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.86 3358 8" 10" ELM 831.86	3350	12" BOXELDER	835.05
3352 6" 11" BOXELDER 835.00 3353 15" 19" ELM 831.96 3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.86 3358 8" 10" ELM 831.86	3351		834.90
3353 15" 19" ELM 831.96 3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.81 3358 8" 10" ELM 831.81			835.00
3354 10" 13" ELM 832.60 3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.81 3358 8" 10" ELM 831.81			831.96
3355 11" ELM 831.36 3356 8" 12" ELM 832.74 3357 11" ELM 831.86 3358 8" 10" ELM 831.86			
3356 8" 12" ELM 832.74 3357 11" ELM 831.81 3358 8" 10" ELM 831.88			
3357 11" ELM 831.81 3358 8" 10" ELM 831.88			
3358 8" 10" ELM 831.88			
		1 12" FLM	831.14
	3359 3360	11" ELM	830.77

	TREE TABLE	
#	DESC.	ELEV.
3361	8" ELM	830.81
3362	8"12"ELM	830.71
3363	8" ELM	829.24
3364	9" ELM	829.49
3365	8" ELM	829.72
3366	6" ELM	829.98
3367	6" ELM	830.13
3368	7" ELM	830.10
3369	7" ELM	829.23
3370 3371	6" ELM 7" ELM	829.11 829.25
3372	8" ELM	828.70
3373	16" ELM	826.90
3374	18" ELM	827.08
3375	9" 10" 14" BOXELDER	827.14
3376	15" BOXELDER	827.58
3377	7"12"BOXELDER	827.10
3378	9"11" BOXELDER	826.55
3379	7" BOXELDER	826.55
3380	10"11" BOXELDER	828.92
3381	6"7"BOXELDER	827.96
3382	20" ELM	828.24
3383	10"10"BOXELDER	827.74
3384	14" BOXELDER	827.86
3385	15" BOXELDER	827.92
3386	15" BOXELDER	828.91
3387	10" APPLE	828.95
3388	8" ELM	830.45
3389	12" BOXELDER	833.42
3390	14" 14" 17" POPLAR	832.95
3391 3392	26" POPLAR 10" LOCUST	832.90 826.58
3393	11" ELM	823.15
3394	7"7"CHERRY	822.98
3395	7" CHERRY	822.06
3396	9" CHERRY	821.75
3397	7" APPLE	820.85
3398	6"6"6"7"CHERRY	820.73
3399	9" BOXELDER	819.84
3400	14" ELM	820.65
3401	13" 17" BOXELDER	822.67
3402	10" BOXELDER	821.16
3403	18" BOXELDER	820.01
3404	7"7"7"7"12" BOXELDER	821.52
3405	7" MULBERRY	823.04
3406 3407	10" MAPLE 7" ELM	832.61 824.89
3407	14" CHERRY	823.84
3409	7" BOXELDER	824.68
3410	6" 8" 8" CHERRY	821.29
3411	6"7"CHERRY	821.11
3412	6" CHERRY	820.68
3413	6"7"7"CHERRY	820.47
3414	6" CHERRY	820.84
3415	7" APPLE	821.15
3416	6" APPLE	821.69
3417	8"9"CHERRY	820.75
3418	6"6"CHERRY	821.05
3419	25" POPLAR	820.31
3420	6" CHERRY	820.99
3421	10" BOXELDER	821.20
3422	6" 6" 7" 7"CHERRY	820.35
3423 3424	14" ELM POOR 22" POPLAR	820.41 820.45
3424	7" OAK	820.45
5120		020.04

TREE TABLE						
#	DESC.	ELEV.				
3426	14" ELM	820.94				
3427	14" WILLOW	819.41				
3428	42" WILLOW	819.29				
3429	25" BOXELDER	820.92				
3430	22" BOXELDER	822.65				
3431	6"6"8"9"10"CHERRY	822.65				
3432	19" BOXELDER	823.99				
3433	6"7"10"10"CHERRY	821.97				
3434	7" CHERRY	821.52				
3435	9" BOXELDER	821.30				
3436	10" MAPLE	821.04				
3437	8" BOXELDER	821.37				
3438	13" ELM	821.26				
3439	9" BOXELDER	821.28				
3440	11" BOXELDER	820.84				
3441	8" BOXELDER	820.92				
3442	6" BOXELDER	820.87				
3443	9" BOXELDER	821.48				
3444	6" BOXELDER	821.41				
3445	7" BOXELDER	821.95				
3446	7" BOXELDER	822.00				
3447	12" ELM	822.41				
3448	7" BOXELDER	822.96				
3449	16" POPLAR	822.94				
3450	20" HICKORY	828.99				
3451	6" HICKORY	832.17				
3452	6" HICKORY	832.50				
3453	6" HICKORY	832.92				
3454	6" APPLE	833.24				
3455	13" CEDAR	828.91				
3456	13" CEDAR	829.03				





LEGAL DESCRIPTION

PAGE: P - 1.4

LAND SITUATED IN THE CITY OF ANN ARBOR, COUNTY OF WASHTENAW, STATE OF MICHIGAN, MORE PARTICULARLY DESCRIBED AS:

PARCEL 1: COMMENCING AT THE EAST 1/4 CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE SOUTH 01°00'WEST 1,338.58 FEET TO THE POINT OF BEGINNING; THENCE S.89°59'30"W., 470.65 FEET; THENCE N.01°00'E., 232.56 FEET; THENCE S.89°57'., 470.00 FEET, MORE OR LESS; THENCE S.01°00'W., TO THE POINT OF BEGINNING, EXCEPT THE EAST 33 FEET, BEING A PART OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN.

PARCEL 2

COMMENCING AT THE SOUTHEAST CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE NORTH 93 RODS IN THE EAST LINE OF THE SECTION TO THE POINT OF BEGINNING; THENCE WEST 80 RODS; THENCE NORTH 10 RODS IN THE WEST LINE OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 10; THENCE EAST 80 RODS; THENCE SOUTH 10 RODS IN THE EAST LINE OF SAID SECTION 10 TO THE POINT OF BEGINNING BEING PART OF THE EAST 1/2 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, EXCEPTING THEREFROM THE PROPERTY DEEDED TO THE STATE HIGHWAY DEPARTMENT IN LIBER 610 PAGE 357, WASHTENAW COUNTY RECORDS, ALSO EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCEL: COMMENCING AT THE EAST 1/4 CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE S.01°00'00"W. 1,106.50 FEET ALONG THE EAST LINE OF SAID SECTION 10 AND THE CENTERLINE OF PLATT ROAD; THENCE N.89°57'00"W., 470.65 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING N.89°57'00"W., 627.57 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF I-94 EXPRESSWAY; THENCE N.55°16'00"W., 285.96 FEET ALONG SAID RIGHT-OF-WAY LINE TO A POINT ON THE WEST LINE OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OR SAID SECTION 10; THENCE N.01°22'40"E., 2.25 FEET ALONG THE SAID WEST LINE; THENCE S.89°57'00"E., 900.76 FEET; THENCE S.12°23'30"W., 168.88 FEET TO THE POINT OF BEGINNING, SAID PARCEL BEING PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN.

PARCEL 3

BEGINNING AT A POINT 42 RODS SOUTH OF THE NORTHEAST CORNER OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE WEST 80 RODS ON A LINE PARALLEL WITH THE NORTH LINE OF SAID SECTION 10; THENCE SOUTH 15 RODS PARALLEL WITH THE EAST LINE OF SAID SECTION 10; THENCE EAST 80 RODS ON A LINE PARALLEL WITH THE NORTH LINE OF SAID SECTION 10; THENCE NORTH 15 RODS TO THE POINT OF BEGINNING, SAID PARCEL BEING PART OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, EXCEPT THAT PORTION TAKEN BY COUNTY DRAIN COMMISSION IN LIBER 1692 PAGE 547, WASHTENAW COUNTY RECORDS.

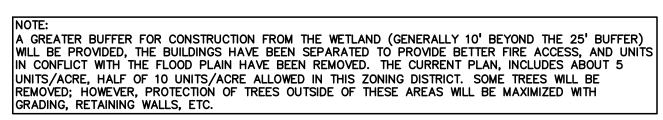
PARCEL 4:

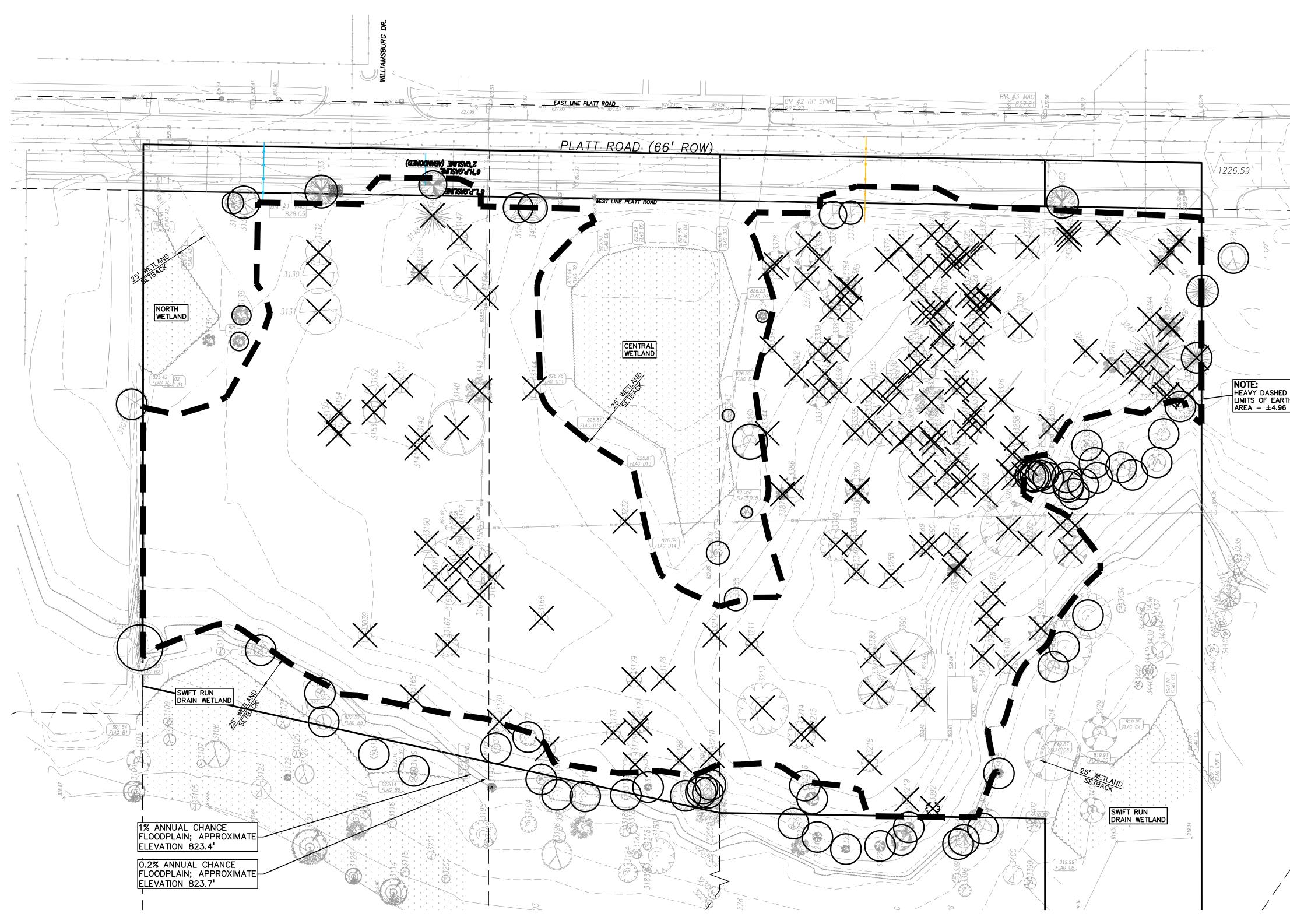
THE NORTH 112 FEET OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, LYING NORTHEASTERLY OF I-94 RIGHT OF WAY.

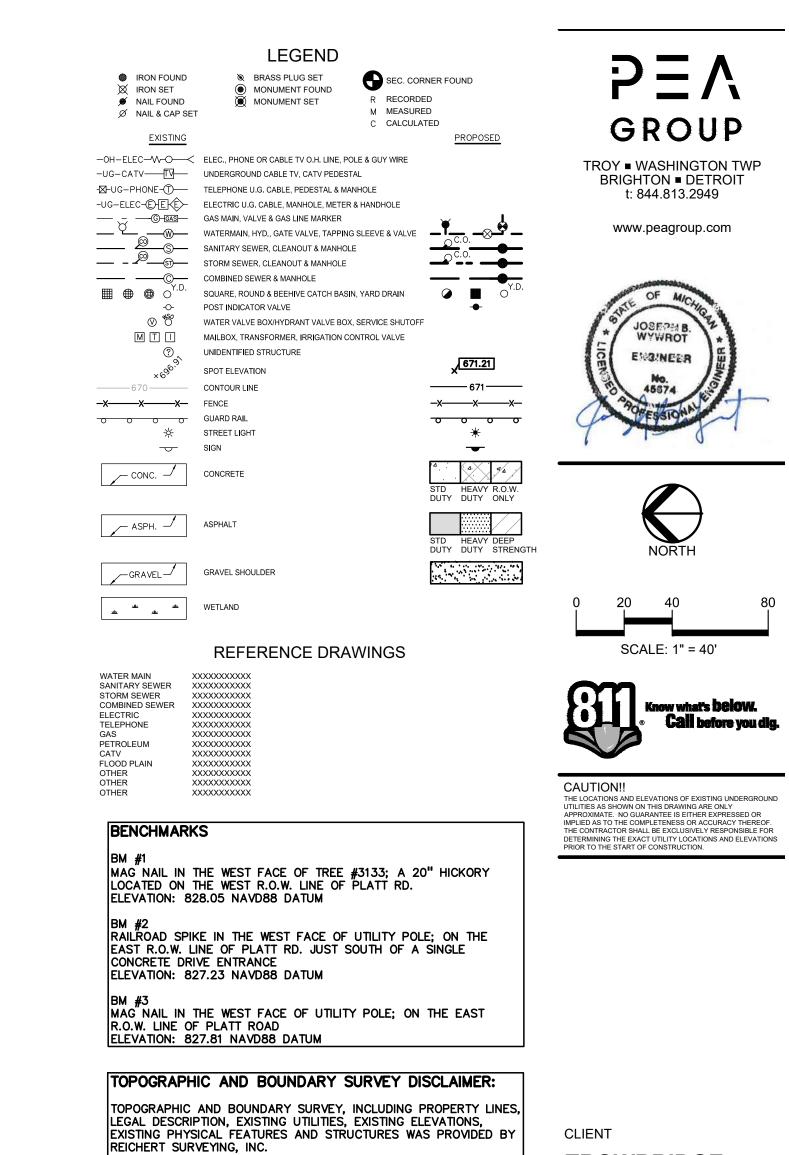
TITLE COMMITMENT INFORMATION

THE PROPERTY HEREON DESCRIBED IS THE SAME AS THE PERTINENT PROPERTY AS DESCRIBED IN VANGUARD TITLE COMPANY, COMMITMENT NO. VGA212014, WITH AN EFFECTIVE DATE OF FEBRUARY 26, 2019 AT 8:00 A.M.

	GENERAL NOTES 1. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS SURVEY, ONLY ABOVE GROUND VISIBLE EVIDENCE OF UTILITIES ARE SHOWN. 2. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, DADED WITHIN C. DADED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, DADED WITHING DADED TO: UTILITIES, AND ENORDACIMENTS, ADDED ADDED ADDED WITHING DADED TO: UTILITIES, AND ENORDACIMENTS, ADDED ADDED ADDED WITHING DADED TO: UTILITIES, AND ENORDACIMENTS, ADDED ADDED TO: MALE DADED TO: UTILITIES, ADDED TO: UTILITIES, ADDED TO: UTILITIES, ADDED ADDED TO: MALE DADED TO: UTILITIES, ADDED TO: UTILITIES ADDED TO: UTIL	BY:	BGR		
	 PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND ENCROACHMENTS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON. THIS SURVEY MEETS OR EXCEEDS THE SURVEY STANDARDS/STANDARDS OF CARE AS SET FORTH IN SECTION 3 OF THE 2016 ALTA/NSPS SURVEY REQUIREMENTS. THE SUBJECT PROPERTY HAS ACCESS TO PLATT ROAD., A PUBLIC STREET OR HIGHWAY. THERE IS NO VISIBLE EVIDENCE OF CEMETERIES ON SUBJECT PROPERTY. THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS. THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, GORES OR OVERLAPS. BUILDING AREAS SHOWN HEREON ARE FOR THE FOOTPRINT OF THE BUILDING ONLY. NO APPARENT CHANGES IN STREET RIGHT OF WAY LINES EITHER COMPLETED OR PROPOSED, AND AVAILABLE FROM THE CONTROLLING JURISDICTION. NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A MICHIGAN/SEAL OF A LICENSED SURVEYOR AND MAPPER. ADDITIONS AND DELETIONS TO SURVEY MAPS, SKETCHES, OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES. WETLANDS DETERMINED BY ASTI DATED 6/24/19 OR OTHER ENVIRONMENTAL ISSUES, UNLESS OTHERWISE NOTED. 	REVISION HISTORY	PAGE NUMBER		
	ALTA/ACSM LAND TITLE SURVEY PROJECT NAME TROWBRIDGE LAND HOLDINGS, LLC 3788, 3746, 3696 & 3680 PLATT RD.	TE	3/15/22 REV. P/		
	WASHTENAW COUNTY ANN ARBOR, MI	DATE	3/1		
	SURVEYOR'S CERTIFICATE TO: TROWBRIDGE LAND HOLDINGS, LLC, A MICHIGAN LIMITED LIABILITY COMPANY, TO BE DETERMINED ENTITY, AND RODWAN K. RAJJOUB AND ZOKAA K. RAJJOUB, HUSBAND AND WIFE, AND VANGUARD TITLE COMPANY: THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND		Р Ц	U I N C .	vii 40300 eichertSurveving.com
	TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6A, 6B, 7A, 7B1, 7C, 8, 9, 11, 13, 14, 16, 17, 18, 19, 20 AND 21 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON MAY 14, 2020.		Ĺ	Rochester N	Mail@ReichertSu
	DATE OF PLAT OR MAP: DECEMBER 4, 2020		ノ	ш ·	ı
JOB NUMBER: 19-178	★ BRADLEA G ★ RENCHERT → RENCHERT → SURVEYOR NO SURVEYOR NO SURVEYOR		ロ と	SUR/	F 248.656.7099
SCALE: 1" = 50' DRAWN BY:	Bradley GReater 10/16/20				0592
G.H.R. Approved by: B.G.R.	REGISTERED SURVEYOR: BRADLEY G/REICHERT DATE PROFESSIONAL LAND SURVEYOR NO.: 55923 STATE OF MICHIGAN				P 248.651







HEAVY DASHED LINE INDICATES LIMITS OF EARTH DISRUPTION. AREA = ± 4.96 ACRES

TREE	то	BE	PROTECTED
TREE	то	BE	REMOVED

DEMOLITION LEGEND:

PEA GROUP WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

FLOODPLAIN NOTE: BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE



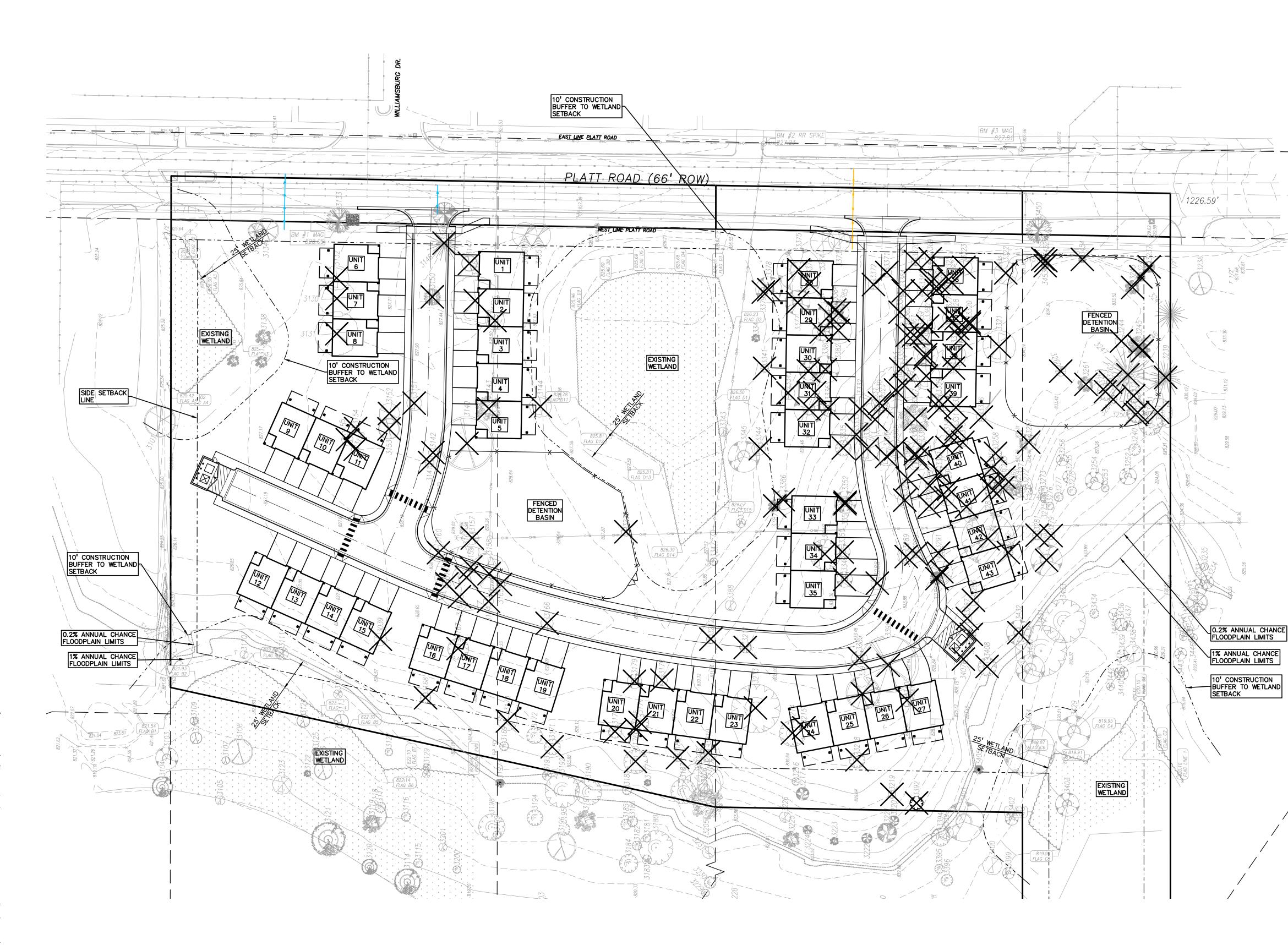
REVISIONS OWNER REVIEW 9/18/2020 CONCEPT REVIEW MEETING 1/13/2021 SPA/WCWRC REVIEW 1/13/2022 SPA/WCWRC RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE:

SEPTEMBER, 2020 DRAWING TITLE

NATURAL FEATURES PLAN

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	R:





	LEGEND			\neg –	•
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	GAS MAIN, VALVE & GAS LINE MARKER WATERMAIN, HYD., GATE VALVE, TAPPINO SANITARY SEWER, CLEANOUT & MANHOL STORM SEWER, CLEANOUT & MANHOLE		∑.c.o. 0 c.o.	www.peagrou	p.com
C ■ ● ● ○Y.D. ○- ② [®]	COMBINED SEWER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BASI POST INDICATOR VALVE WATER VALVE BOX/HYDRANT VALVE BOX			STATE OF MIC	HOW
M T I ?.	MAILBOX, TRANSFORMER, IRRIGATION CO UNIDENTIFIED STRUCTURE	ONTROL VALVE		TO ENGINEER	
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	REFERENCE DRA	WINGS		SCALE: 1" =	: 40'
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OTHER OTHER	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			CAUTION!! THE LOCATIONS AND ELEVATIONS OF E	
				THE LOOK HONG AND LEEVATIONS OF E	LAISTING UNDERGROU



BM #1 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE ELEVATION: 827.23 NAVD88 DATUM

BM #3 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER: TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.

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THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

PROJECT TITLE



REVISIONS OWNER REVIEW 9/18/2020 CONCEPT REVIEW MEETING 1/13/2021 SPA/WCWRC REVIEW 1/13/2022 SPA/WCWRC RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE: SEPTEMBER, 2020

DRAWING TITLE

NATURAL FEATURES **OVERLAY PLAN**

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	R:





ALTERNATIVE ANALYSIS #2



ALTERNATIVE ANALYSIS #1 THIS OPTION INCLUDES EIGHT ADDITIONAL TOWNHOME UNITS FOR A TOTAL OF 51; HOWEVER, THE FOOTPRINT OF SEVERAL UNITS ARE WITHIN THE LIMITS OF THE FLOODPLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN. ADDITIONALLY, IN ORDER TO GRADE THE SITE WITH MAINTAINABLE SLOPES, EARTH DISTURBANCE WITHIN THE WETLAND SETBACK WOULD BE REQUIRED. 222 TREES WOULD NEED TO BE REMOVED (187 TREES REMOVED IN THE PREFERRED OPTION). CONSEQUENTLY, THIS OPTION WAS REJECTED.

ALTERNATIVE ANALYSIS #2 THIS OPTION INCLUDES 22 TOWNHOME UNITS AND 68 APARTMENT UNITS; HOWEVER, THE FOOTPRINT OF SEVERAL UNITS ARE WITHIN THE LIMITS OF THE FLOODPLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN. ADDITIONALLY, IN ORDER TO GRADE THE SITE WITH MAINTAINABLE SLOPES, EARTH DISTURBANCE WITHIN THE WETLAND SETBACK WOULD BE REQUIRED. 215 TREES WOULD NEED TO BE REMOVED (187 TREES REMOVED IN THE REFERENCE OPTION) THE TREES REMOVED IN THE PREFERRED OPTION). THE INTRODUCTION OF THE APARTMENT UNITS WOULD ALSO REQUIRE THE SITE TO BE REZONED FROM R3 TO R4B. FOR THESE REASONS, THIS OPTION WAS REJECTED.

	LEGEND		$\neg - \land$
 IRON FOUND IRON SET NAIL FOUND NAIL & CAP SET 	 BRASS PLUG SET MONUMENT FOUND MONUMENT SET 	SEC. CORNER FOUND R RECORDED M MEASURED	SEV
EXISTING		C CALCULATED <u>PROPOSED</u>	GROUP
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	COMBINED SEWER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BAS POST INDICATOR VALVE WATER VALVE BOX/HYDRANT VALVE BOX MAILBOX, TRANSFORMER, IRRIGATION C UNIDENTIFIED STRUCTURE SPOT ELEVATION CONTOUR LINE FENCE GUARD RAIL STREET LIGHT SIGN	X, SERVICE SHUTOFF	AND ESTONY
CONC	CONCRETE	STD HEAVY R.O.W. DUTY DUTY ONLY	
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SANITARY SEWER XX STORM SEWER XX COMBINED SEWER XX ELECTRIC XX TELEPHONE XX GAS XX PETROLEUM XX CATV XX FLOOD PLAIN XX OTHER XX	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXX		Know what's below. Call before you dig.
	××××××××××××××××××××××××××××××××××××××		CAUTION!! THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

BENCHMARKS

MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE ELEVATION: 827.23 NAVD88 DATUM

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TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE

PLATT ROAD TOWNHOMES PLATT ROAD ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS OWNER REVIEW

CONCEPT REVIEW MEETING	1/13/2021
SPA/WCWRC REVIEW	1/13/2022
SPA/WCWRC RESUBMITTAL	4/7/2022

9/18/2020

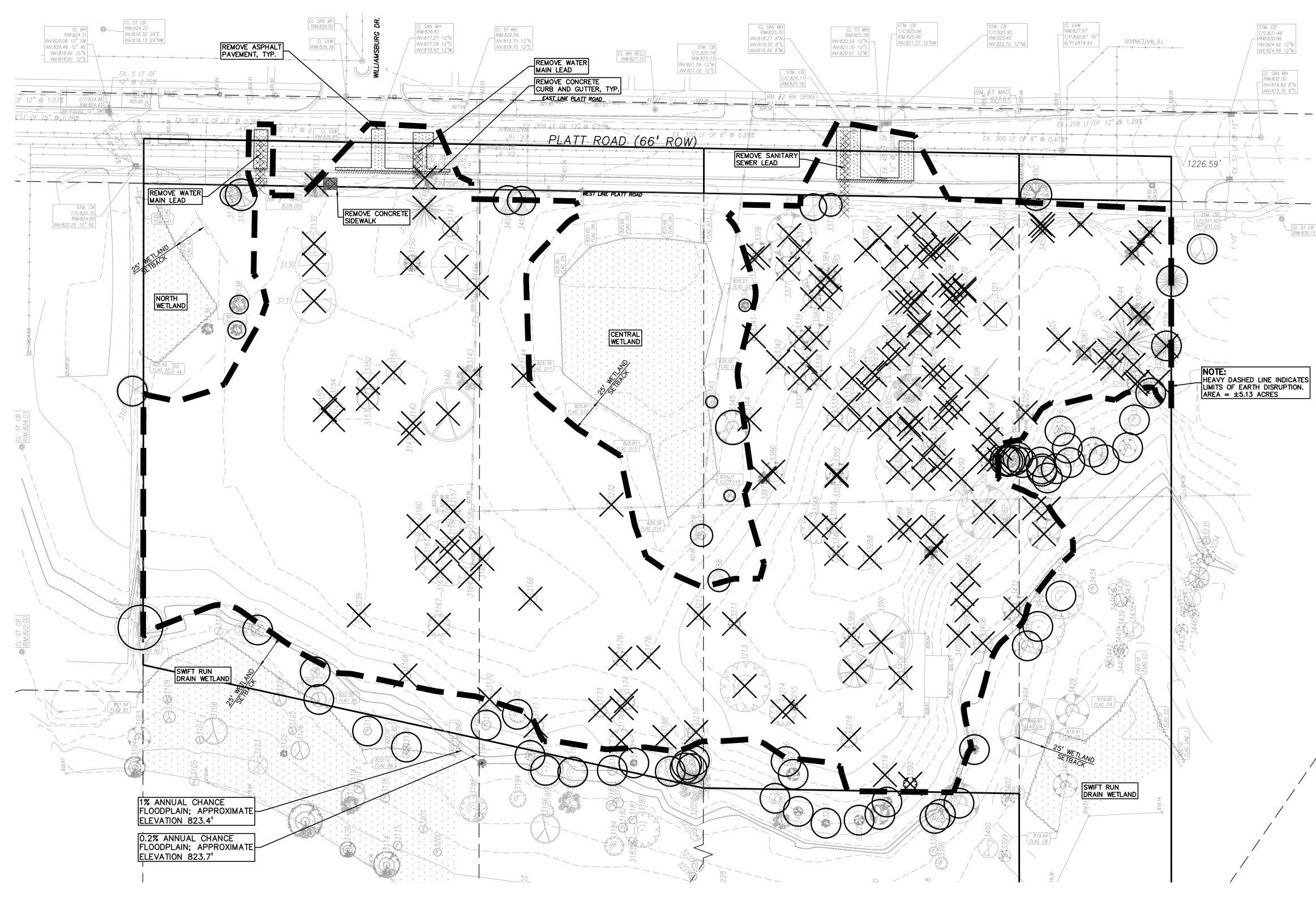
ORIGINAL ISSUE DATE:

SEPTEMBER, 2020

DRAWING TITLE

NATURAL FEATURES ALTERNATIVES ANALYSIS

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER:	





- ALL MATERIAL TO BE REMOVED, WHETHER SPECIFICALLY NOTED IN THE PLANS OR NOT, SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN A LEGAL MANNER. NO ON-SITE BURY OR BURN PITS SHALL BE
- ALLOWED. ALL DEMOLITION WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES.
- STAGING/PHASING OF DEMOLITION AND CONSTRUCTION IS TO BE COORDINATED WITH THE OWNER AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
- SPECIFIC DEMOLITION ITEMS HAVE BEEN INDICATED ON THE PLANS AS A GUIDE TO THE GENERAL SCOPE OF THE WORK. IT IS THE INTENT THAT THESE ITEMS SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR ABOVE AND BELOW GROUND, UNLESS SPECIFICALLY NOTED OTHERWISE, AND THAT DEMOLITION WILL INCLUDE BUT WILL NOT NECESSARILY BE LIMITED TO THESE ITEMS. CONTRACTOR SHALL VISIT SITE TO VERIFY EXISTING CONDITIONS AND EXTENTS OF THE DEMOLITION THAT WILL BE REQUIRED PRIOR TO SUBMITTING A BID.
- REMOVE ALL STRUCTURES DESIGNATED FOR REMOVAL ACCORDING TO THE DEMOLITION PLAN. THIS INCLUDES FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, FLOOR SLABS, UNDERGROUND UTILITIES, CONCRETE, ASPHALT, TREES, ETC.
- THE CONTRACTOR SHALL, AS A MINIMUM, PROVIDE TREE PROTECTION FENCING AROUND EXISTING TREES TO BE SAVED THAT ARE WITHIN 15 FEET OF CONSTRUCTION ACTIVITIES AND AS INDICATED IN THE PLANS OR PER LOCAL AGENCY REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP, NOISE, DUST CONTROL, STREET SWEEPING AND HOURS OF OPERATION IN ACCORDANCE WITH THE LOCAL CODES.

- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, SIGNAGE, MARKINGS, LIGHTS AND OTHER TRAFFIC CONTROL DEVICES TO PROTECT THE WORK ZONE AND SAFELY MAINTAIN TRAFFIC PER AGENCY REQUIREMENTS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES TO CONFIRM THAT UTILITY LEADS HAVE BEEN TAKEN OUT OF SERVICE PRIOR TO DEMOLITION.
- 10. ALL BUILDING GAS LEADS, METERS AND ASSOCIATED EQUIPMENT SHALL BE REMOVED AS SHOWN ON THE PLANS. COORDINATE ALL ASSOCIATED WORK WITH THE APPROPRIATE UTILITY COMPANY.
- REMOVE ALL OVERHEAD AND UNDERGROUND ELECTRICAL LINES WITHIN THE AREA OF CONSTRUCTION AS SHOWN ON THE PLANS. COORDINATE SHUTDOWNS AND REMOVALS WITH ELECTRICAL SERVICE PROVIDER OR THE APPROPRIATE UTILITY COMPANY. (NOTE: PHONE AND CABLE T.V. SERVICES MAY ALSO BE LOCATED ON OVERHEAD LINES.)
- 12. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF SIGNS AND SUPPORTS WITHIN THE WORK AREA, AS NECESSARY TO FACILITATE CONSTRUCTION. SIGNS SHALL BE PROTECTED OR STOCKPILED FOR REUSE AS SPECIFIED IN THE PLANS OR AS REQUIRED BY THE AGENCY OF JURISDICTION. THE CONTRACTOR SHALL REPLACE ANY DAMAGED SIGNS AND SUPPORTS AT NO ADDITIONAL COST TO THE OWNER.
- 13. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE 811/ONE CALL UTILITY LOCATING CENTER, THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.



HEAVY DASHED LINE INDICATES LIMITS OF EARTH DISRUPTION. AREA = ± 5.13 ACRES

IRON FOUND BRASS PLUG SET SEC. CORNER FOUND 💢 IRON SET MONUMENT FOUND R RECORDED 👏 NAIL FOUND MONUMENT SET M MEASURED Ø NAIL & CAP SET C CALCULATED PROPOSED EXISTING -UG-CATV-TV-UNDERGROUND CABLE TV, CATV PEDESTAL -X-UG-PHONE-T- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE -UG-ELEC-EEE ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE GAS MAIN, VALVE & GAS LINE MARKER WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE _____ SANITARY SEWER, CLEANOUT & MANHOLE COMBINED SEWER & MANHOLE —________ SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN POST INDICATOR VALVE WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF мті MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE UNIDENTIFIED STRUCTURE 671.21 SPOT ELEVATION хĠ CONTOUR LINE _____670 _____ -X-X-X- FENCE _x____x____x___ O O O O GUARD RAIL 0 0 0 0 -☆- STREET LIGHT * SIGN $\neg \neg$ ----TD HEAVY R.O.W. DUTY DUTY ONLY CONCRETE - CONC. -_— ASPH. — ASPHALT STD HEAVY DEEP DUTY DUTY STRENGTH GRAVEL SHOULDER ____GRAVEL__ WETLAND ىلكى يلكى يلكى يلك REFERENCE DRAWINGS WATER MAIN XXXXXXXXXXXX SANITARY SEWER XXXXXXXXX STORM SEWER XXXXXXXXXXXX COMBINED SEWER ELECTRIC TELEPHONE (XXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXXX PETROLEUM XXXXXXXXXXXX CATV FLOOD PLAIN XXXXXXX XXXXXXXXXXXX OTHER OTHER OTHER XXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXX BENCHMARKS MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE ELEVATION: 827.23 NAVD88 DATUM

LEGEND

BM #3 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD ELEVATION: 827.81 NAVD88 DATUM

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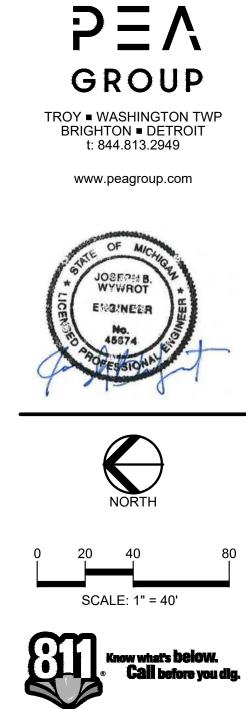
FLOODPLAIN NOTE: BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

ITEM TO BE PROTECTED CURB/FENCE REMOVAL CONCRETE PAVEMENT AND SIDEWALK REMOVAL UTILITY REMOVAL

ASPHALT REMOVAL TREE REMOVAL

TREE PROTECTION

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THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CAUTION!!

CLIENT TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE UBURN HILLS, MI 48326

PROJECT TITLE



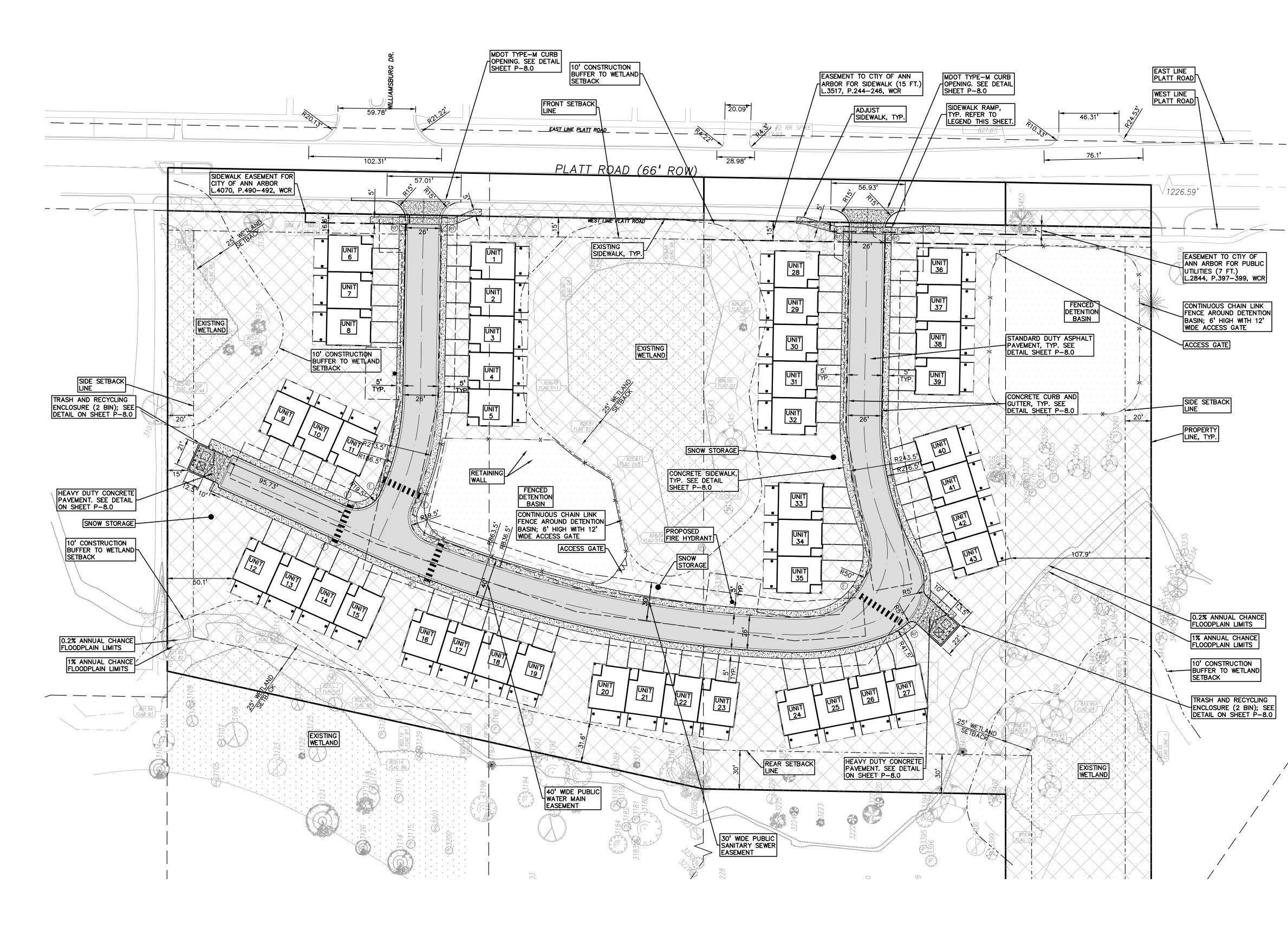
REVISIONS OWNER REVIEW 9/18/2020 CONCEPT REVIEW MEETING 1/13/2021 SPA/WCWRC REVIEW 1/13/2022 SPA/WCWRC RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE:

SEPTEMBER, 2020 DRAWING TITLE

DEMOLITION PLAN

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	? :



	LEGEND			
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	GAS MAIN, VALVE & GAS LINE MARKER WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VAL		www.peagroup.com	m
	SANITARY SEWER, CLEANOUT & MANHOLE STORM SEWER, CLEANOUT & MANHOLE			
© ■ ● ● ○ ^{Y.D.} -0-	COMBINED SEWER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN POST INDICATOR VALVE		OF MICH	
Ö ⊘ □ T M	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHU MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	TOFF	ANTE OF MICHING	1
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			THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THIS DRAWING ARE ON APPROXIMATE. NO GUARANTEE IS EITHER EXP IMPLIED AS TO THE COMPLETENESS OR ACCUR	NLY RESSED OR ACY THEREOF.
BENCHMARK	(5		THE CONTRACTOR SHALL BE EXCLUSIVELY RES DETERMINING THE EXACT UTILITY LOCATIONS A PRIOR TO THE START OF CONSTRUCTION.	
MAG NAIL IN 1 LOCATED ON 1	THE WEST FACE OF TREE #3133; A THE WEST R.O.W. LINE OF PLATT RI 28.05 NAVD88 DATUM	20" HICKORY).		
BM #2				
RAILROAD SPI EAST R.O.W. L CONCRETE DRI	KE IN THE WEST FACE OF UTILITY F INE OF PLATT RD. JUST SOUTH OF IVE ENTRANCE	POLE; ON THE A SINGLE		
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	27.81 NAVD88 DATUM			
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LEGAL DESCRIF	AND BOUNDARY SURVEY, INCLUDIN PTION, EXISTING UTILITIES, EXISTING SICAL FEATURES AND STRUCTURES	ELEVATIONS,	CLIENT	
REICHERT SUR			TROWBRIDGE	
OF THE SURVE	EL NOT BE HELD RESPONSIBLE FOR EY OR FOR DESIGN ERRORS/OMISSIC INACCURACIES.		COMPANIES 2617 BEACON HILL DRIVE	
FLOODPLAIN			AUBURN HILLS, MI 48326	
BY GRAPHICAL DEVELOPED IS	PLOTTING, THE PORTION OF THE S WITHIN ZONE 'X', AREA DETERMINE	D TO BE OUTSIDE		
	ANNUAL CHANCE FLOODPLAIN PER MBER 26161C0402E DATED APRIL 3			
	SPACE (228,171 SF)]		
230,871/43 DU	J = 5,369 SF/DU			
OPEN SPACE (5.87/8.14 = 7			PLATT ROAD TOWNHOMES	
		-	PLATT ROAD ANN ARBOR, WASHTENAW COUNTY, MI	
SIDEWALK RAM	Ŭ			
	EST MDOT R-28 STANDARD			
	TECTABLE WARNING DETAILS		REVISIONS	
			OWNER REVIEW CONCEPT REVIEW MEETING	9/18/2020 1/13/2021
			SPA/WCWRC REVIEW	1/13/2022
			SPA/WCWRC RESUBMITTAL	4/7/2022

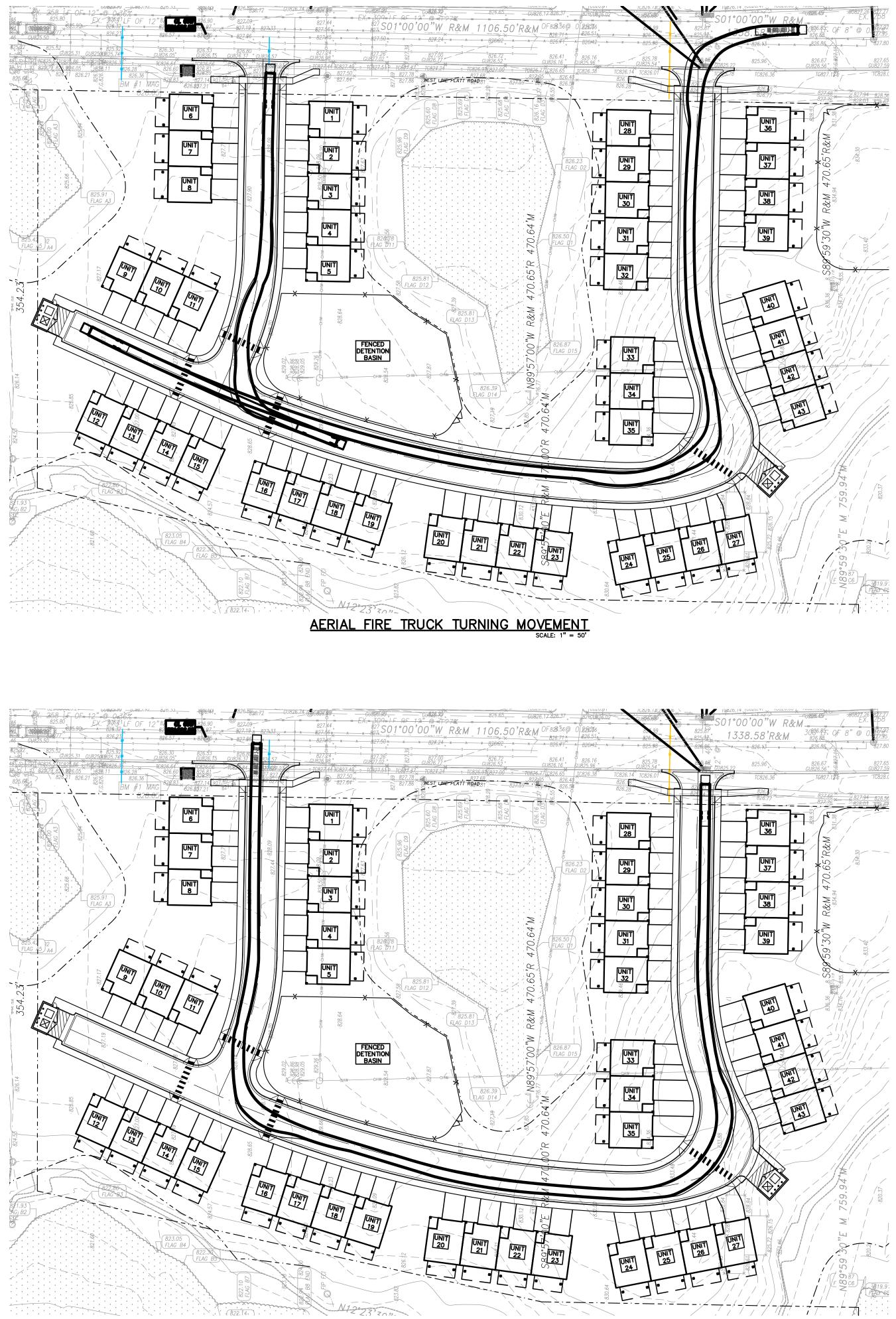
ORIGINAL ISSUE DATE:

SEPTEMBER, 2020 DRAWING TITLE

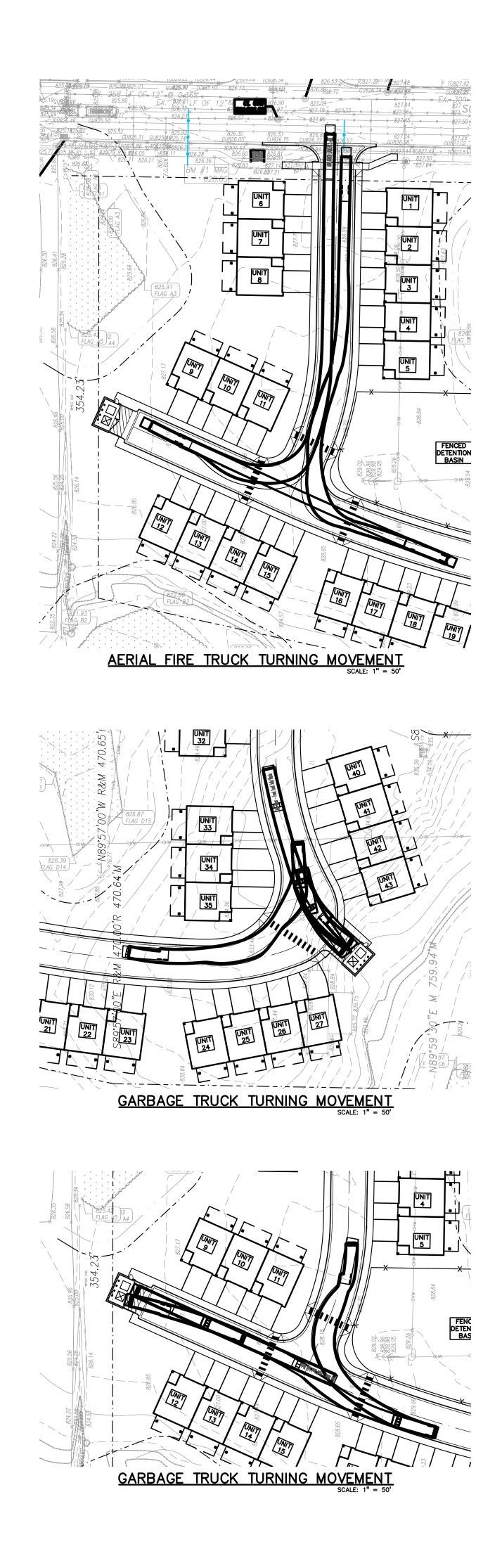
OVERALL DIMENSIONAL LAYOUT PLAN

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	२:

P-3.0



AERIAL FIRE TRUCK TURNING MOVEMENT



	LEGEND		
 IRON FOUND IRON SET NAIL FOUND NAIL & CAP SET 	 Image: BRASS PLUG SET Image: MONUMENT FOUND Image: MONUMENT SET 	R RECORDED M MEASURED	でリン
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© ■ ● ● ○ ^{Y.D.} ○ [№] ◎ [№] M □ □ ⑦.	STORM SEWER, CLEANOUT & MANHOLE COMBINED SEWER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BASII POST INDICATOR VALVE WATER VALVE BOX/HYDRANT VALVE BOX MAILBOX, TRANSFORMER, IRRIGATION CO UNIDENTIFIED STRUCTURE	N, YARD DRAIN	SATE OF MICHIQY SOUTH JOSEPHIE WYWROT ENGINEER
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BENCHMARKS	S		IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

BENCHMARKS

MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE ELEVATION: 827.23 NAVD88 DATUM

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PROJECT TITLE



REVISIONS OWNER REVIEW 9/18/2020 CONCEPT REVIEW MEETING 1/13/2021 SPA/WCWRC REVIEW 1/13/2022 SPA/WCWRC RESUBMITTAL 4/7/2022

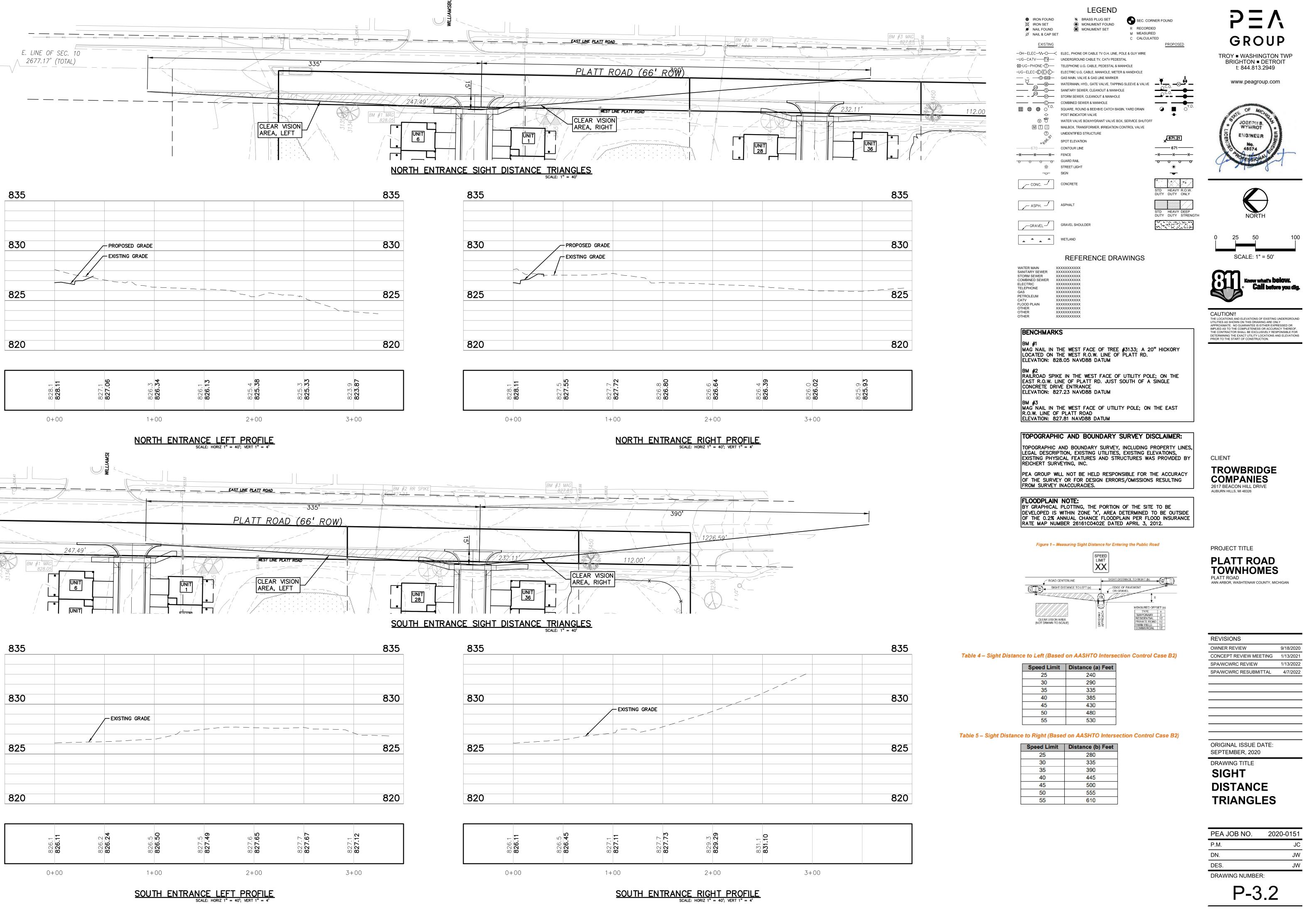
ORIGINAL ISSUE DATE: SEPTEMBER, 2020

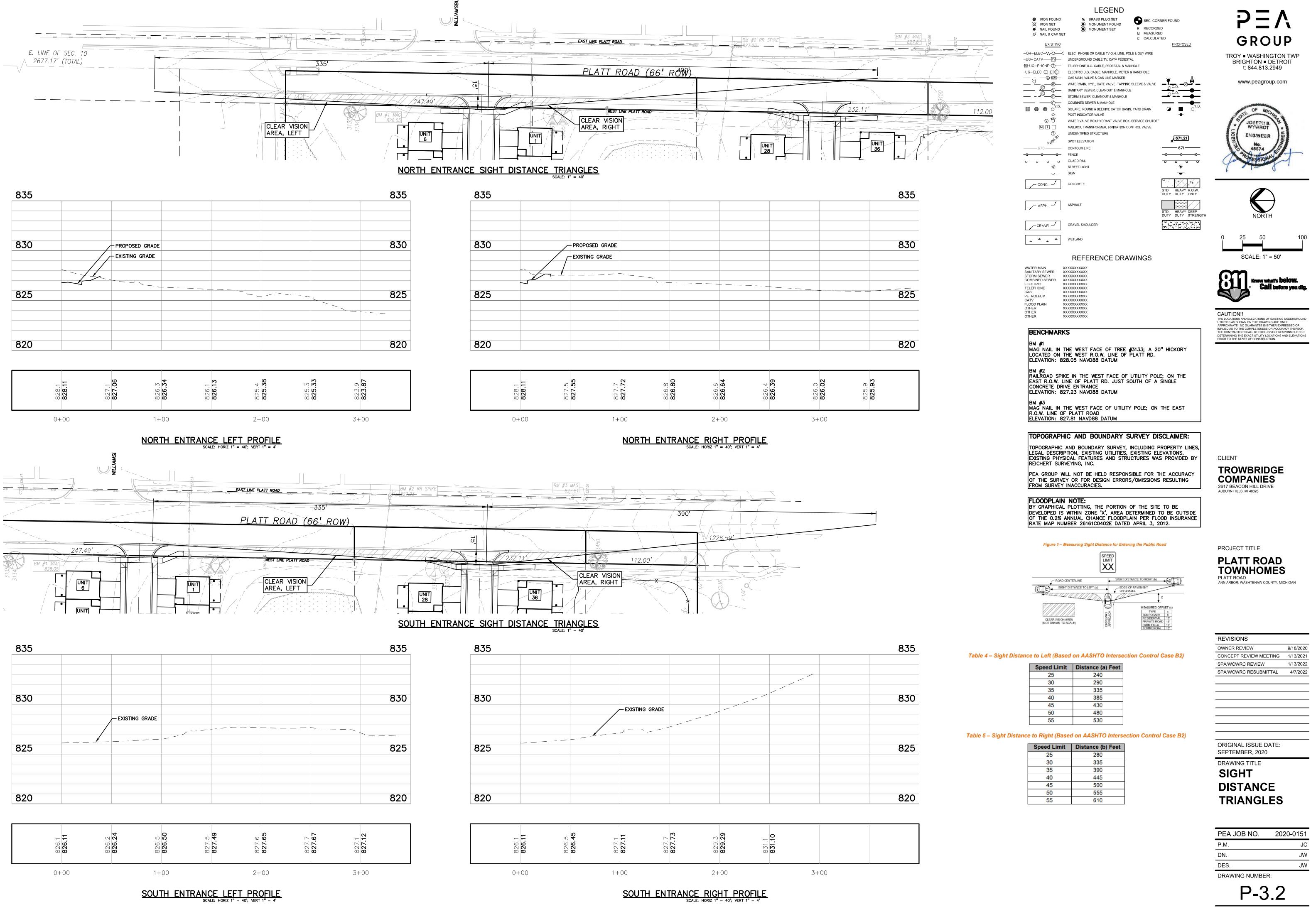
DRAWING TITLE

TURNING MOVEMENTS

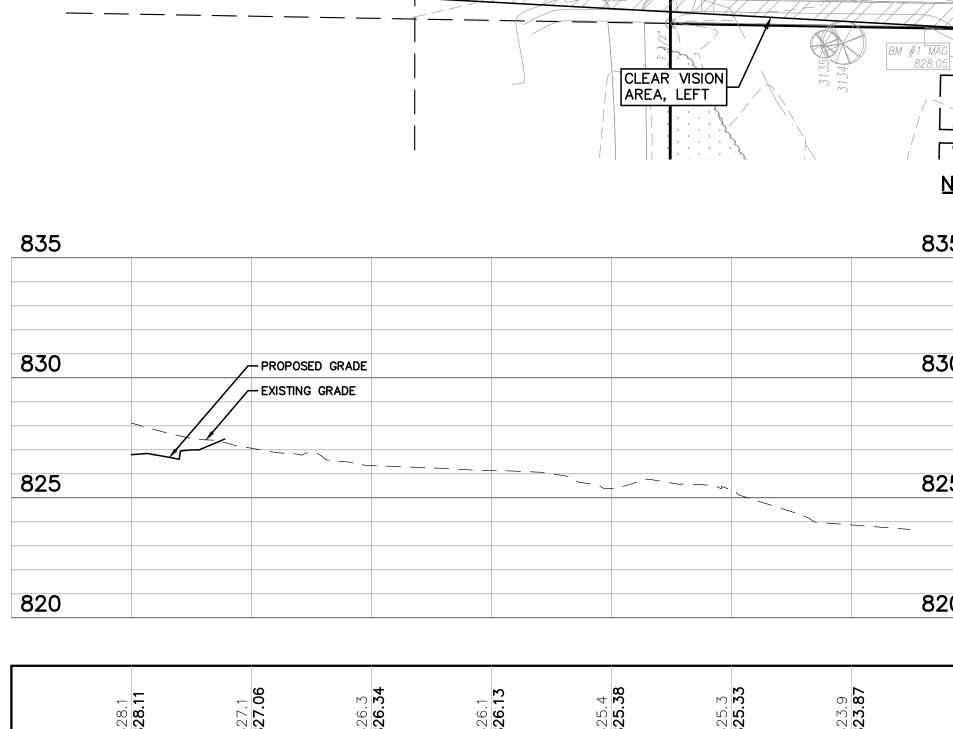
PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
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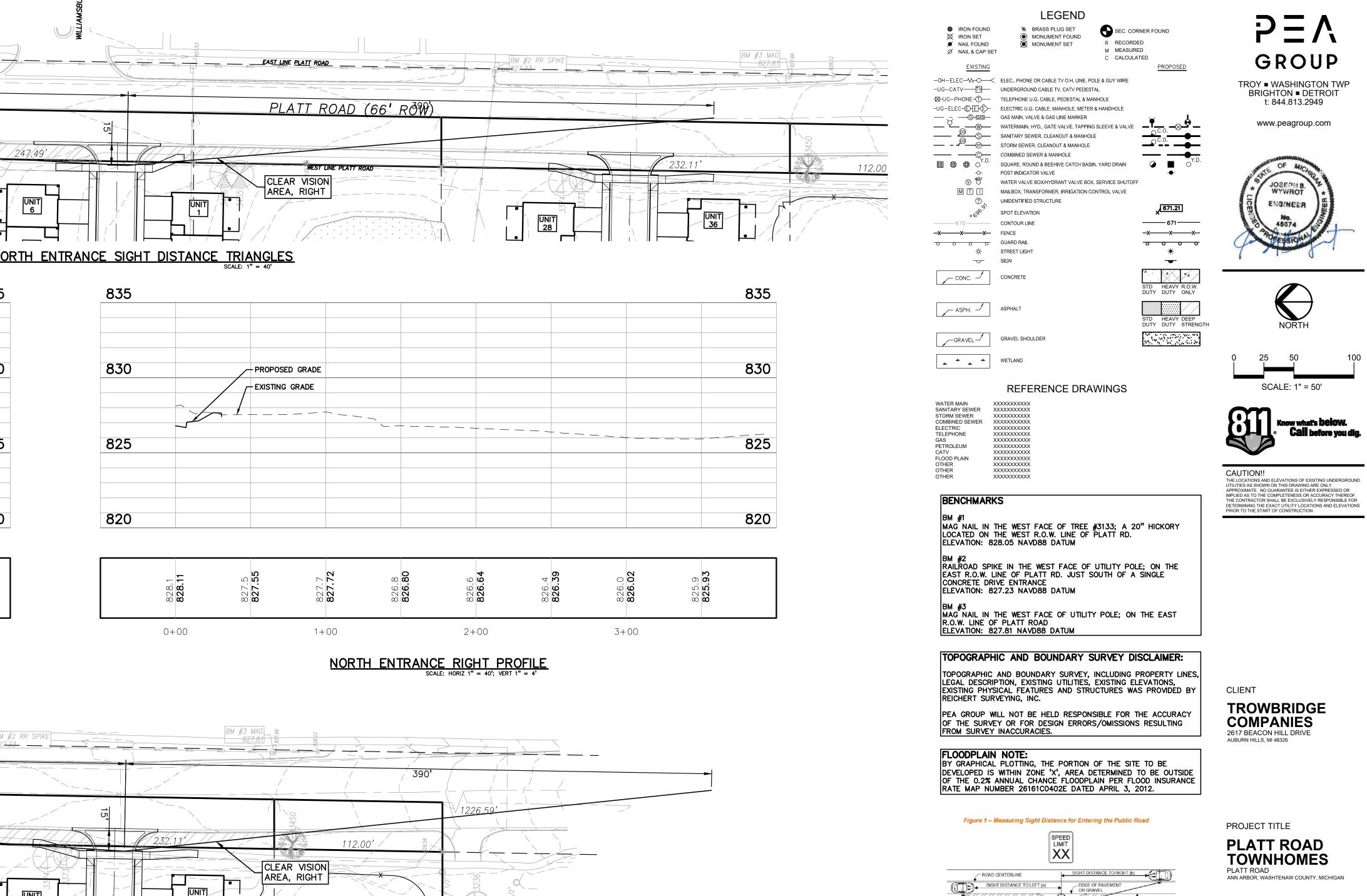
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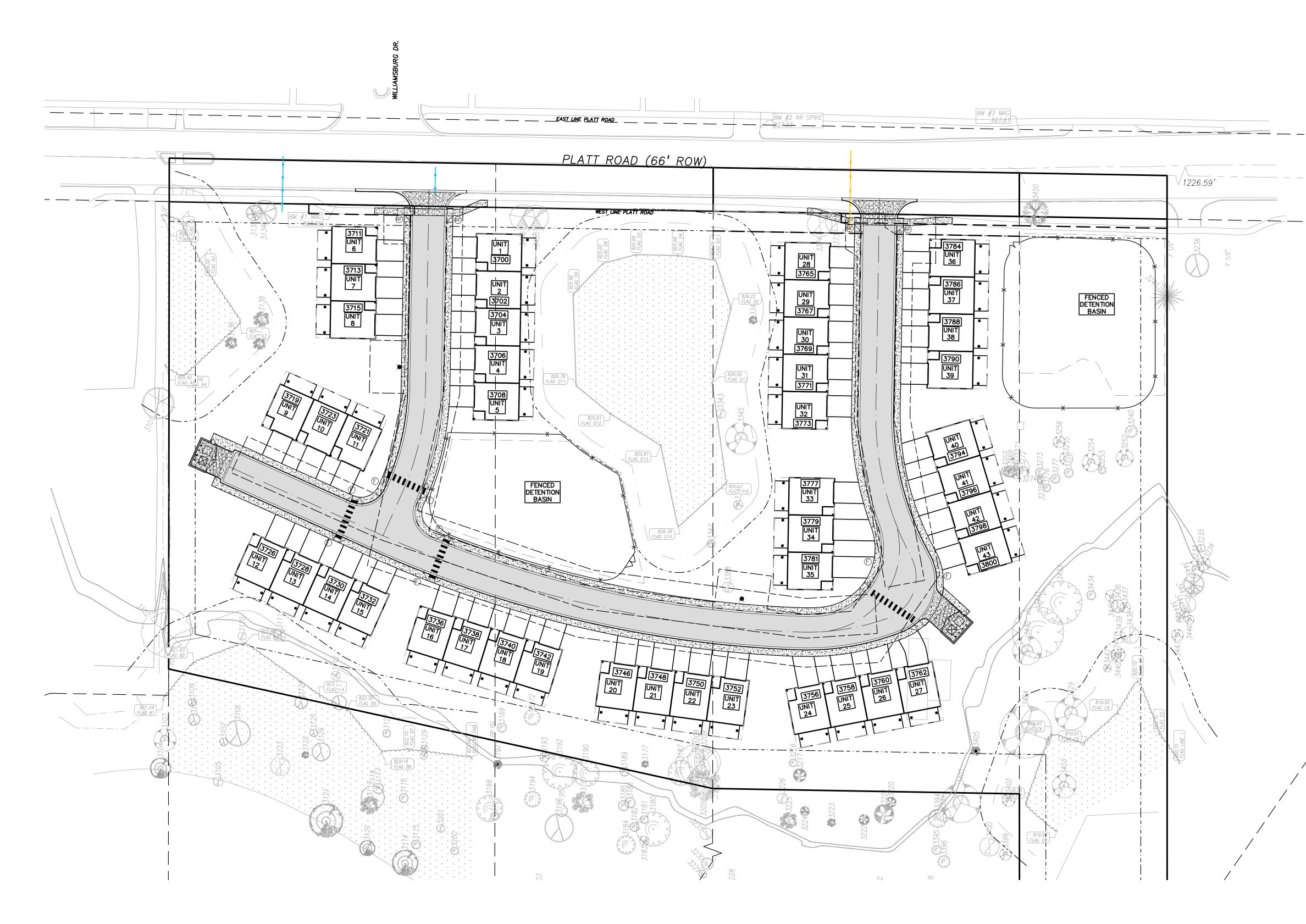




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Speed Limit	Distance (a) Feet
25	240
30	290
35	335
40	385
45	430
50	480
55	530

Speed Limit	Distance (b) Feet
25	280
30	335
35	390
40	445
45	500
50	555
55	610

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBEI	R:



	LEGEND			
 IRON FOUND IRON SET NAIL FOUND NAIL & CAP SET 	 BRASS PLUG SET MONUMENT FOUND MONUMENT SET 	R RECORDED M MEASURED C CALCULATED	ン ヨイ	
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Image: Constraint of the second s	COMBINED SEVER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BAS POST INDICATOR VALVE WATER VALVE BOX/HYDRANT VALVE BOX MAILBOX, TRANSFORMER, IRRIGATION C UNIDENTIFIED STRUCTURE SPOT ELEVATION CONTOUR LINE FENCE GUARD RAIL STREET LIGHT SIGN	K, SERVICE SHUTOFF	ASSTA	-
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BENCHMARKS

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	STREET
UNIT	ADRESS
1	3700
2	3702
3	3704
4	3706
5	3708
6	3711
7	3713
8	3715
9	3719
10	3721
11	3723
12	3726
13	3728
14	3730
15	3732
16	3736
17	3738
18	3740
19	3742
20	3746
21	3748
22	3750
23	3752
24	3756
25	3758
26	3760
27	3762
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	3784
37	3786
38	3788
39	3790
40	3794
41	3796
42	3798
43	3800



CLIENT

TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE



REVISIONS	
OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
SPA/WCWRC REVIEW	1/13/2022
SPA/WCWRC RESUBMITTAL	4/7/2022

ORIGINAL ISSUE DATE:

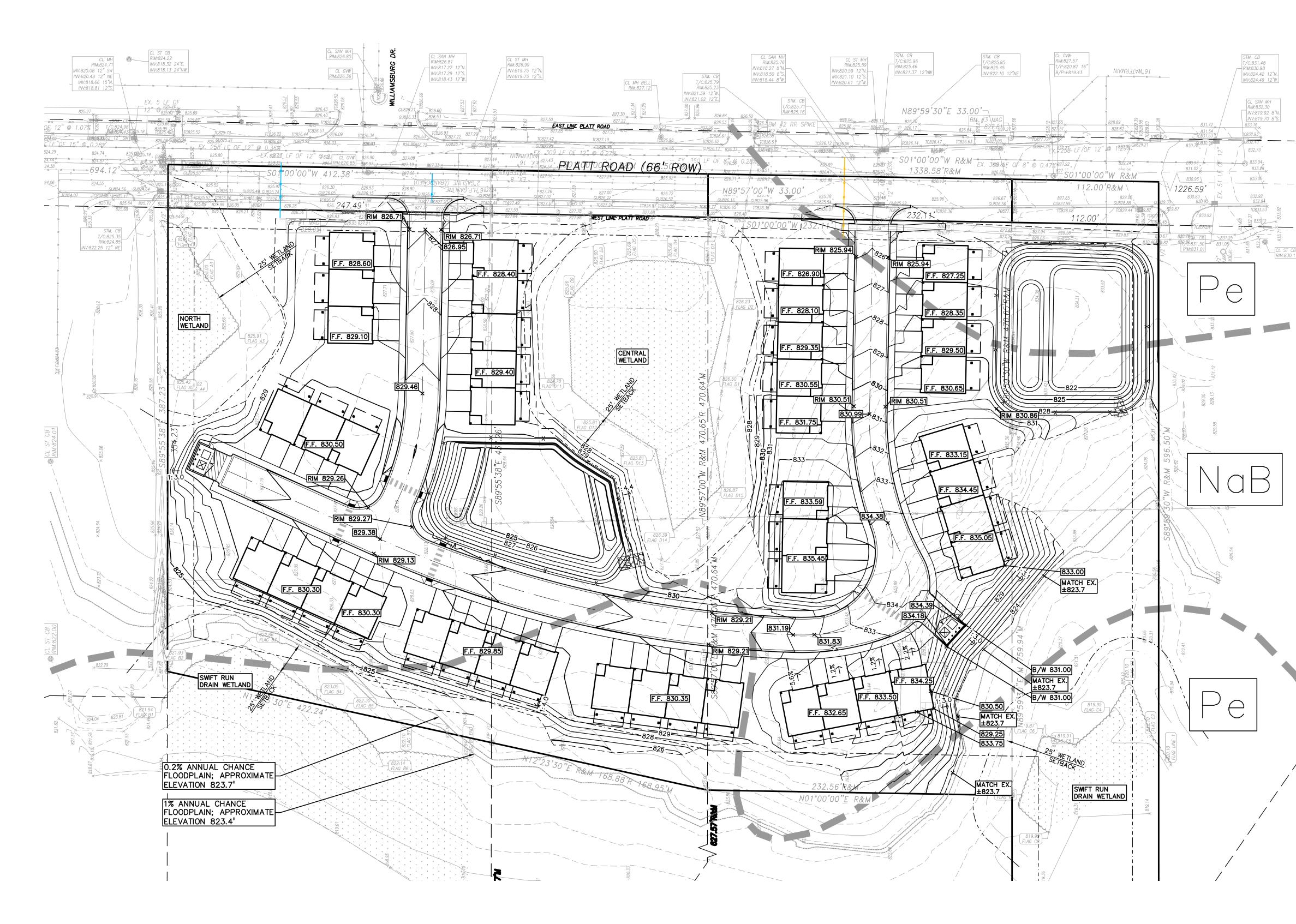
SEPTEMBER, 2020

DRAWING TITLE

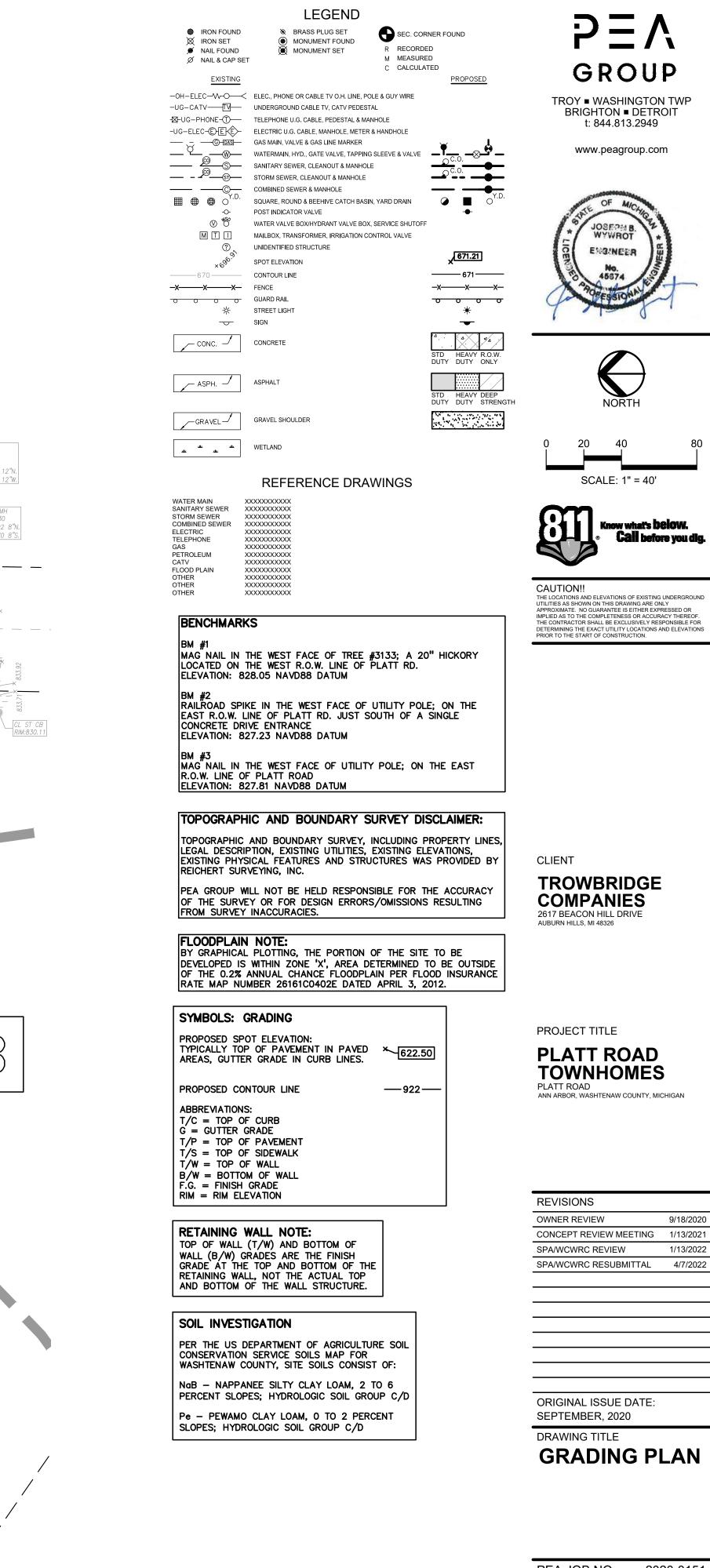
ADDRESSING PLAN

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	:

P-3.3

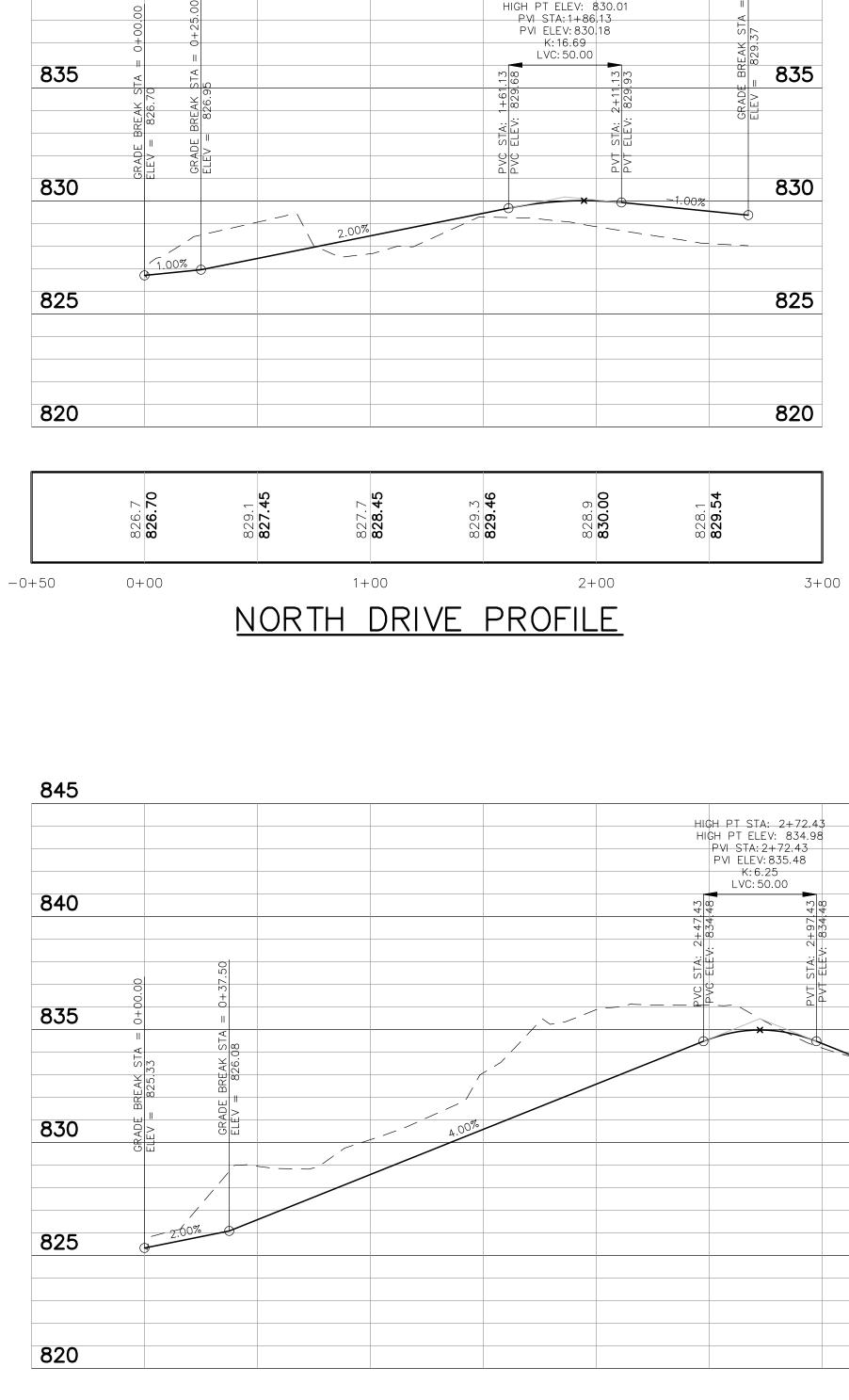


ROJECTS\2020\2020-0151 PLATT ROAD TOWNHOMES -JC\DWG\SITE PLANS\(P-7) GRADE-200151.dwg



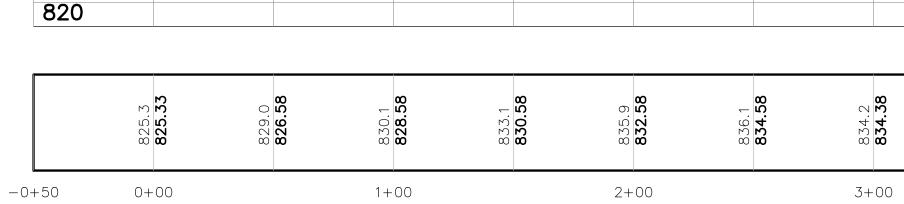
PEA JOB NO.	2020-0151
P.M.	JC
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DES.	JW
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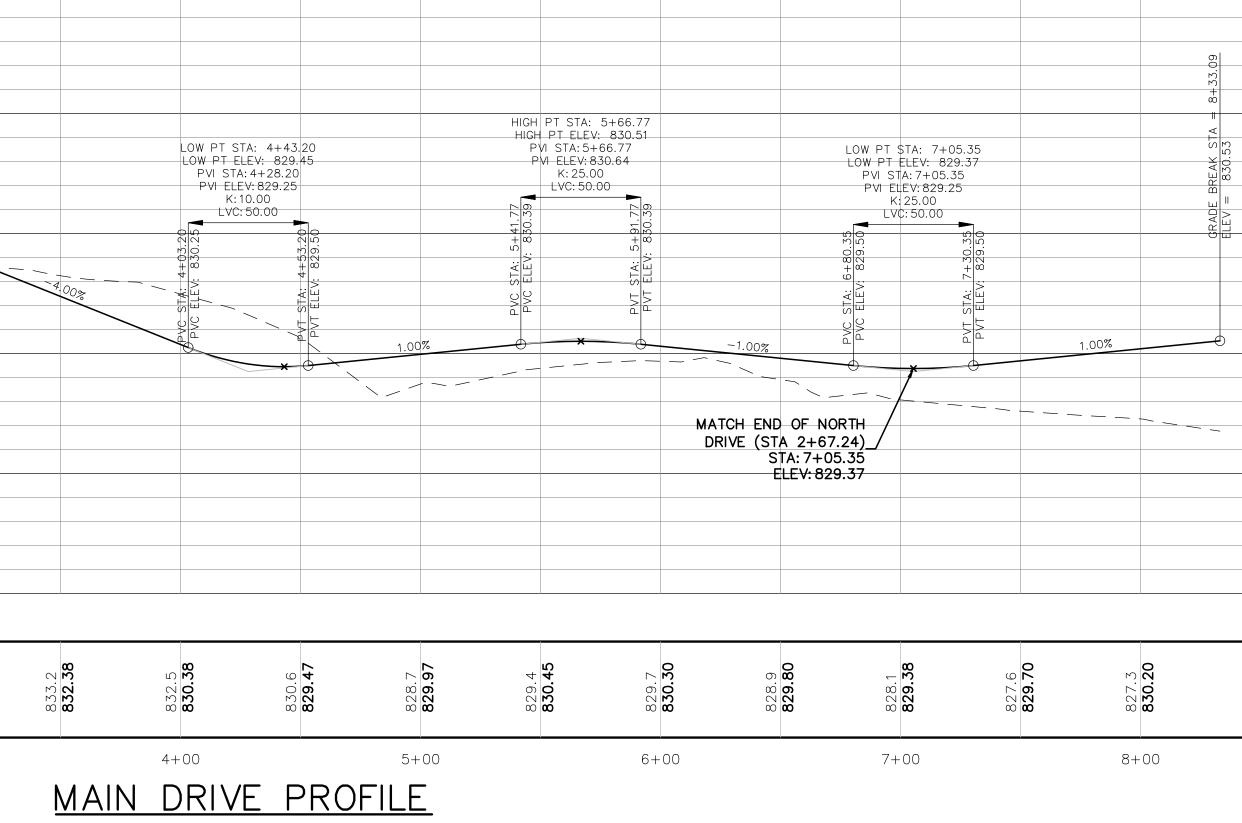


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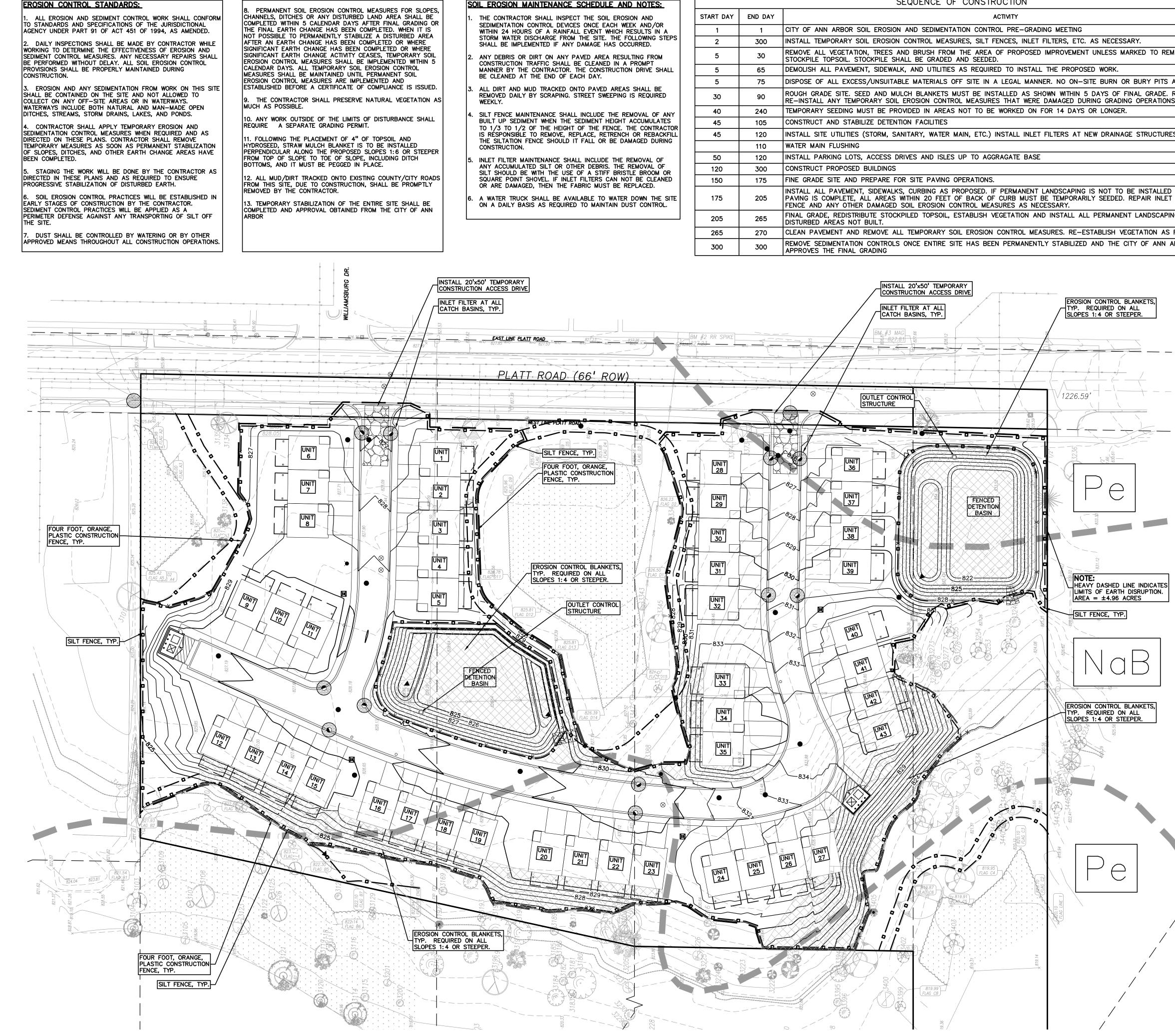


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SEQUENCE OF CONSTRUCTION			
START DAY	END DAY	ΑCΤΙVITY	
1	1	CITY OF ANN ARBOR SOIL EROSION AND SEDIMENTATION CONTROL PRE-GRADING MEETING	
2	300	INSTALL TEMPORARY SOIL EROSION CONTROL MEASURES, SILT FENCES, INLET FILTERS, ETC. AS NECESSARY.	
5	30	REMOVE ALL VEGETATION, TREES AND BRUSH FROM THE AREA OF PROPOSED IMPROVEMENT UNLESS MARKED TO REMAIN. STRIP AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE GRADED AND SEEDED.	
5	65	DEMOLISH ALL PAVEMENT, SIDEWALK, AND UTILITIES AS REQUIRED TO INSTALL THE PROPOSED WORK.	
5	75	DISPOSE OF ALL EXCESS/UNSUITABLE MATERIALS OFF SITE IN A LEGAL MANNER. NO ON-SITE BURN OR BURY PITS ALLOWED.	
30	90	ROUGH GRADE SITE. SEED AND MULCH BLANKETS MUST BE INSTALLED AS SHOWN WITHIN 5 DAYS OF FINAL GRADE. REPAIR AND/OR RE-INSTALL ANY TEMPORARY SOIL EROSION CONTROL MEASURES THAT WERE DAMAGED DURING GRADING OPERATIONS.	
40	240	TEMPORARY SEEDING MUST BE PROVIDED IN AREAS NOT TO BE WORKED ON FOR 14 DAYS OR LONGER.	
45	105	CONSTRUCT AND STABILIZE DETENTION FACILITIES	
45	120	INSTALL SITE UTILITIES (STORM, SANITARY, WATER MAIN, ETC.) INSTALL INLET FILTERS AT NEW DRAINAGE STRUCTURES.	
	110	WATER MAIN FLUSHING	
50	120	INSTALL PARKING LOTS, ACCESS DRIVES AND ISLES UP TO AGGRAGATE BASE	
120	300	CONSTRUCT PROPOSED BUILDINGS	
150	175	FINE GRADE SITE AND PREPARE FOR SITE PAVING OPERATIONS.	
175	205	INSTALL ALL PAVEMENT, SIDEWALKS, CURBING AS PROPOSED. IF PERMANENT LANDSCAPING IS NOT TO BE INSTALLED SOON AFTER PAVING IS COMPLETE, ALL AREAS WITHIN 20 FEET OF BACK OF CURB MUST BE TEMPORARILY SEEDED. REPAIR INLET FILTERS, SILT FENCE AND ANY OTHER DAMAGED SOIL EROSION CONTROL MEASURES AS NECESSARY.	
205	265	FINAL GRADE, REDISTRIBUTE STOCKPILED TOPSOIL, ESTABLISH VEGETATION AND INSTALL ALL PERMANENT LANDSCAPING IN ALL DISTURBED AREAS NOT BUILT.	
265	270	CLEAN PAVEMENT AND REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES. RE-ESTABLISH VEGETATION AS REQUIRED.	
300	300	REMOVE SEDIMENTATION CONTROLS ONCE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED AND THE CITY OF ANN ARBOR APPROVES THE FINAL GRADING	

	LEGEND	
 IRON FOUND IRON SET NAIL FOUND NAIL & CAP SET EXISTING 		D
	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE UNDERGROUND CABLE TV, CATV PEDESTAL TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE ELECTRIC U.G. CABLE, PEDESTAL & MANHOLE GAS MAIN, VALVE & GAS LINE MARKER WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE SANITARY SEWER, CLEANOUT & MANHOLE STORM SEWER, CLEANOUT & MANHOLE COMBINED SEWER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN POST INDICATOR VALVE	 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
₩ T I	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE UNIDENTIFIED STRUCTURE SPOT ELEVATION CONTOUR LINE FENCE GUARD RAIL STREET LIGHT SIGN	x 671.21
CONC	CONCRETE	STD HEAVY R.O.W. DUTY DUTY ONLY STD HEAVY DEEP DUTY DUTY STRENG
GRAVEL	GRAVEL SHOULDER	
	REFERENCE DRAWINGS	

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXXXX
SANITARY SEWER	XXXXXXXXXXXX
STORM SEWER	XXXXXXXXXXXX
COMBINED SEWER	XXXXXXXXXXXX
ELECTRIC	XXXXXXXXXXXX
TELEPHONE	XXXXXXXXXXXX
GAS	XXXXXXXXXXXX
PETROLEUM	XXXXXXXXXXXX
CATV	XXXXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX

BENCHMARKS

MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE ELEVATION: 827.23 NAVD88 DATUM

BM #3 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD ELEVATION: 827.81 NAVD88 DATUM

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DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

SYMBOLS: EROSION CONTROL

	SILT FENCE (REFER TO DETAIL ON SHEET P-8.0)
X	FOUR FOOT, ORANGE, CONSTRUCTION FENCE
	STORM SEWER INLET FILTER (REFER TO DETAIL ON SHEET $P-8.0$)
<u>[25-7462746</u>]	TEMPORARY CONSTRUCTION ACCESS DRIVE (REFER TO DETAIL ON SHEET P-8.0)
	EROSION CONTROL BLANKET (REFER TO DETAIL ON SHEET P-8.0)

SOIL INVESTIGATION PER THE US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE SOILS MAP FOR WASHTENAW COUNTY, SITE SOILS CONSIST OF: NaB - NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES; HYDROLOGIC SOIL GROUP C/E Pe - PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES; HYDROLOGIC SOIL GROUP C/D

EROSION CONTROL COST ESTIN	MATE (CON	ISTRUC	<u>TION)</u>
INSTALL SILT FENCE	2,817 LF.	\$1.60	\$4,508
INSTALL INLET FILTERS	16 EA.	\$120	\$1,920
INSTALL TEMPORARY ACCESS DRIVES	2 EA.	\$1,200	\$2,400
TEMPORARY SEEDING	±12,500 S.Y.	\$1.05	\$ 13 , 125
INSTALL TEMP. END SECTION SED. TRAP	5 EA.	\$120	\$600
INSTALL EROSION CONTROL BLANKET	5,528 S.Y.	\$5.00	\$27,640
EXPOSED SOIL PROTECTION FROM EROSION SHOULD CONSTRUCTION DISCONTINUE		\$1.15	\$27,632

SCALE: 1" = 40' **Call before you** CAUTION!! THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

PΞΛ

GROUP

TROY **WASHINGTON TWP**

BRIGHTON

DETROIT

t: 844.813.2949

www.peagroup.com

OSE:

ENGINEER

CLIENT TROWBRIDGE **COMPANIES** 2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE

PLATT ROAD TOWNHOMES PLATT ROAD ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS	
OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
SPA/WCWRC REVIEW	1/13/2022
SPA/WCWRC RESUBMITTAL	4/7/2022

ORIGINAL ISSUE DATE: SEPTEMBER, 2020

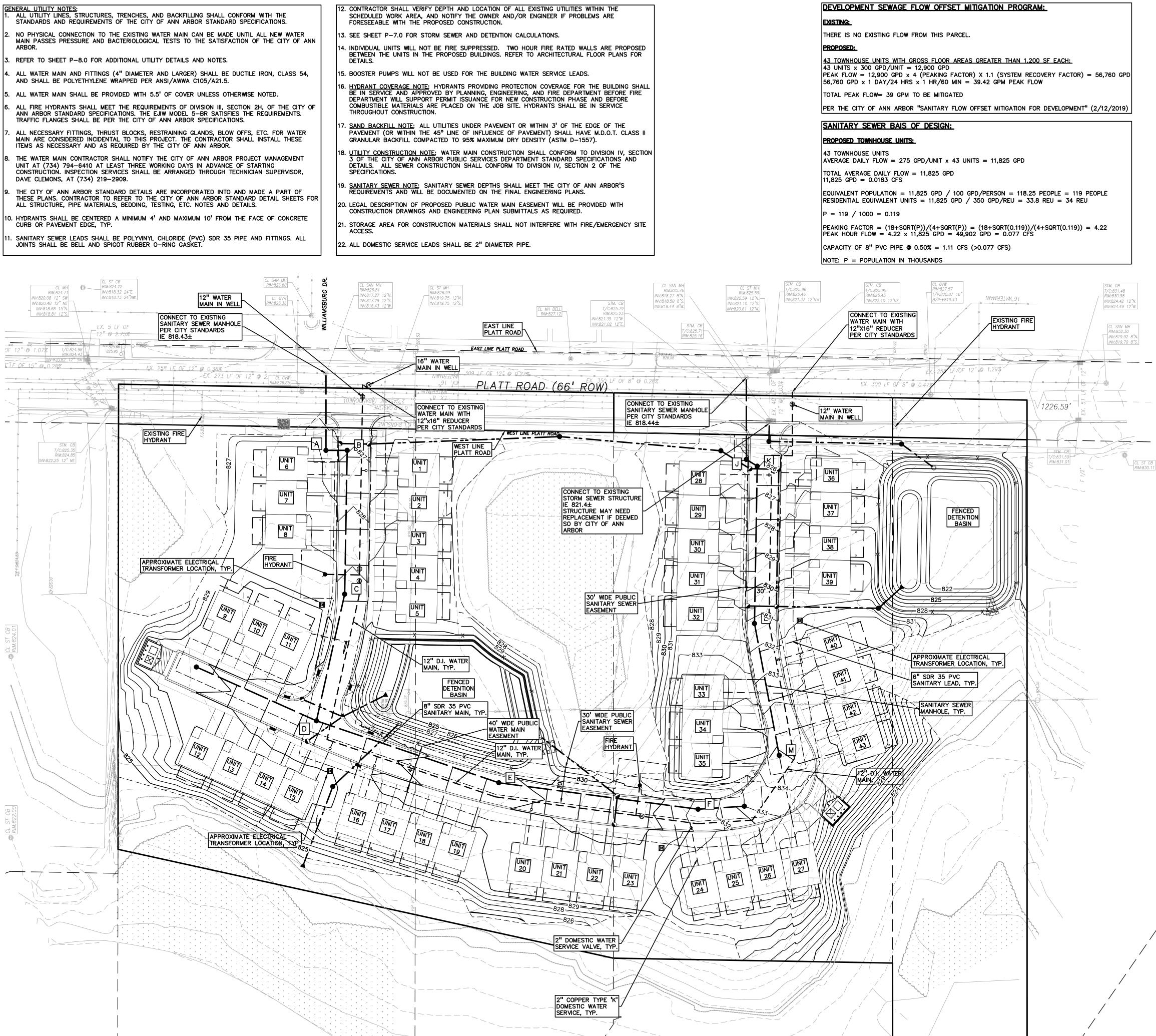
DRAWING TITLE

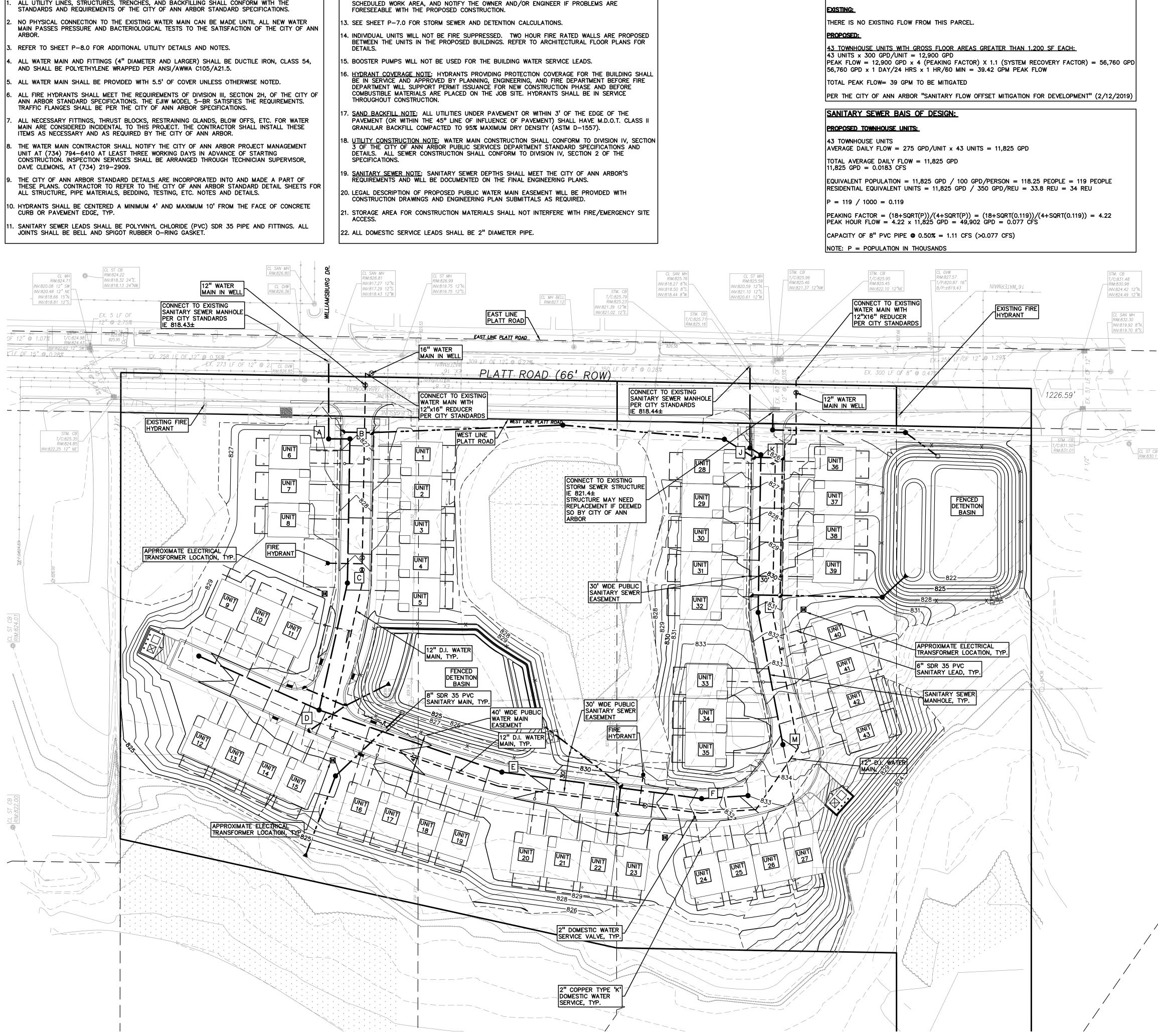
\$77,825

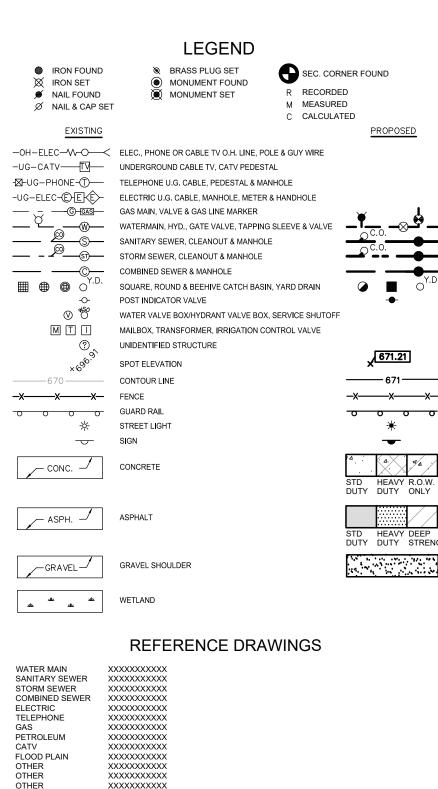
SOIL EROSION CONTROL PLAN

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	٦:

P-5.0







BENCHMARKS

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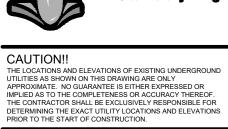
	SANITARY STRUCTURES
A	MH (4' DIA.) RIM = 827.60 8" S 820.18 12" E 818.75
В	MH (4' DIA.) RIM = 826.95 8" W 820.27 8" N 820.27
с	MH (4' DIA.) RIM = 829.34 8" W 820.97 8" E 820.87
D	MH (4' DIA.) RIM = 829.35 8" S 821.61 8" NE 821.61 8" E 821.51
E	MH (4' DIA.) RIM = 830.28 8" S 822.51 8" N 822.41
F	MH (4' DIA.) RIM = 831.29 8" S 823.45 8" N 823.35

	SANITARY STRUCTURES
G	MH (4' DIA.) RIM = 832.98 8" N 823.64
н	MH (4' DIA.) RIM = 830.21 8" SW 822.16
J	MH (4' DIA.) RIM = 826.08 8" SW 820.14 8" E 818.78
к	MH (4' DIA.) RIM = 825.97 8" W 820.29 8" NE 820.19
L	MH (4' DIA.) RIM = 831.21 8" W 821.04 8" E 820.94
м	MH (4' DIA.) RIM = 834.88 8" E 821.60

BRIGHTON DETROIT t: 844.813.2949 www.peagroup.com JOSE? ENGINEER 4557 NOR SCALE: 1" = 40' **Call before you d**

GROUP

TROY
WASHINGTON TWP



CLIENT TROWBRIDGE COMPANIES

2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE

PLATT ROAD TOWNHOMES

PLATT ROAD ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

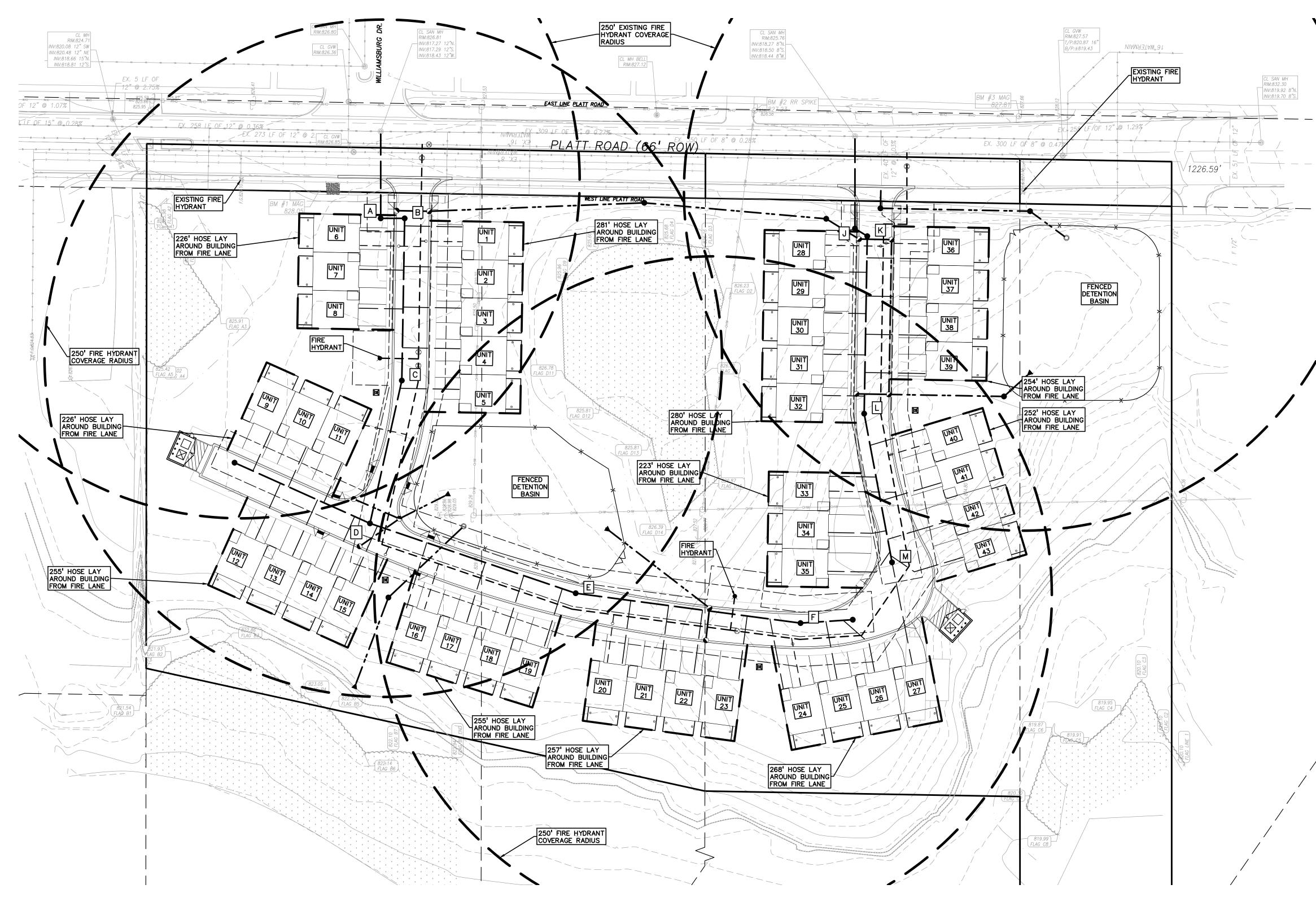
REVISIONS	
OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
SPA/WCWRC REVIEW	1/13/2022
SPA/WCWRC RESUBMITTAL	4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020
DRAWING TITLE

UTILITY PLAN

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER:	

P-6.0



	LEGEND			
 IRON FOUND IRON SET NAIL FOUND 	BRASS PLUG SET MONUMENT FOUND MONUMENT SET	R RECORDED	マヨン	
Ø NAIL & CAP SET	~	M MEASURED C CALCULATED PROPOSED	GROUI	D
-0H-ELEC-W-O-<	ELEC., PHONE OR CABLE TV O.H. LINE, POLE			
-UG-CATV	UNDERGROUND CABLE TV, CATV PEDESTAL TELEPHONE U.G. CABLE, PEDESTAL & MANH ELECTRIC U.G. CABLE, MANHOLE, METER & F	IOLE	TROY ■ WASHINGTON BRIGHTON ■ DETRC t: 844.813.2949	
	GAS MAIN, VALVE & GAS LINE MARKER WATERMAIN, HYD., GATE VALVE, TAPPING SI SANITARY SEWER, CLEANOUT & MANHOLE STORM SEWER, CLEANOUT & MANHOLE		www.peagroup.com	I
© ∰ ⊕ ⊕ ○ ^{Y.D.} ->- ⊗ ੴ	COMBINED SEWER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BASIN, Y POST INDICATOR VALVE WATER VALVE BOX/HYDRANT VALVE BOX, SE	•	SINE OF MICHINE	
₩ T I ©, × ^{6%}	MAILBOX, TRANSFORMER, IRRIGATION CONT UNIDENTIFIED STRUCTURE SPOT ELEVATION			
670 XXX	CONTOUR LINE FENCE	671	10 45574 S	+
<u> </u>	GUARD RAIL STREET LIGHT SIGN	- <u>○ ○ ○ ○</u> ★ - ▼ -	Your	1
CONC.	CONCRETE	STD HEAVY R.O.W. DUTY DUTY ONLY		
ASPH	ASPHALT	STD HEAVY DEEP DUTY DUTY STRENGT	NORTH	
GRAVEL	GRAVEL SHOULDER			
یلاد یلاد یلاد یلاد	WETLAND			80
	REFERENCE DRAW	/INGS	SCALE: 1" = 40'	
SANITARY SEWER STORM SEWER COMBINED SEWER SELECTRIC SELECTRIC GAS SANTA GAS			Know what's be Call before	łow. ∋ you dig.



BENCHMARKS

PETROLEUM

CATV FLOOD PLAIN OTHER OTHER OTHER

XXXXXXXXXXXX

XXXXXXXXXXX

XXXXXXXXXXXX

XXXXXXXXXXXX

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AUBURN HILLS, MI 48326

PROJECT TITLE

PLATT ROAD TOWNHOMES

PLATT ROAD ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS	
OWNER REVIEW	9/18/2020
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SPA/WCWRC RESUBMITTAL	4/7/2022

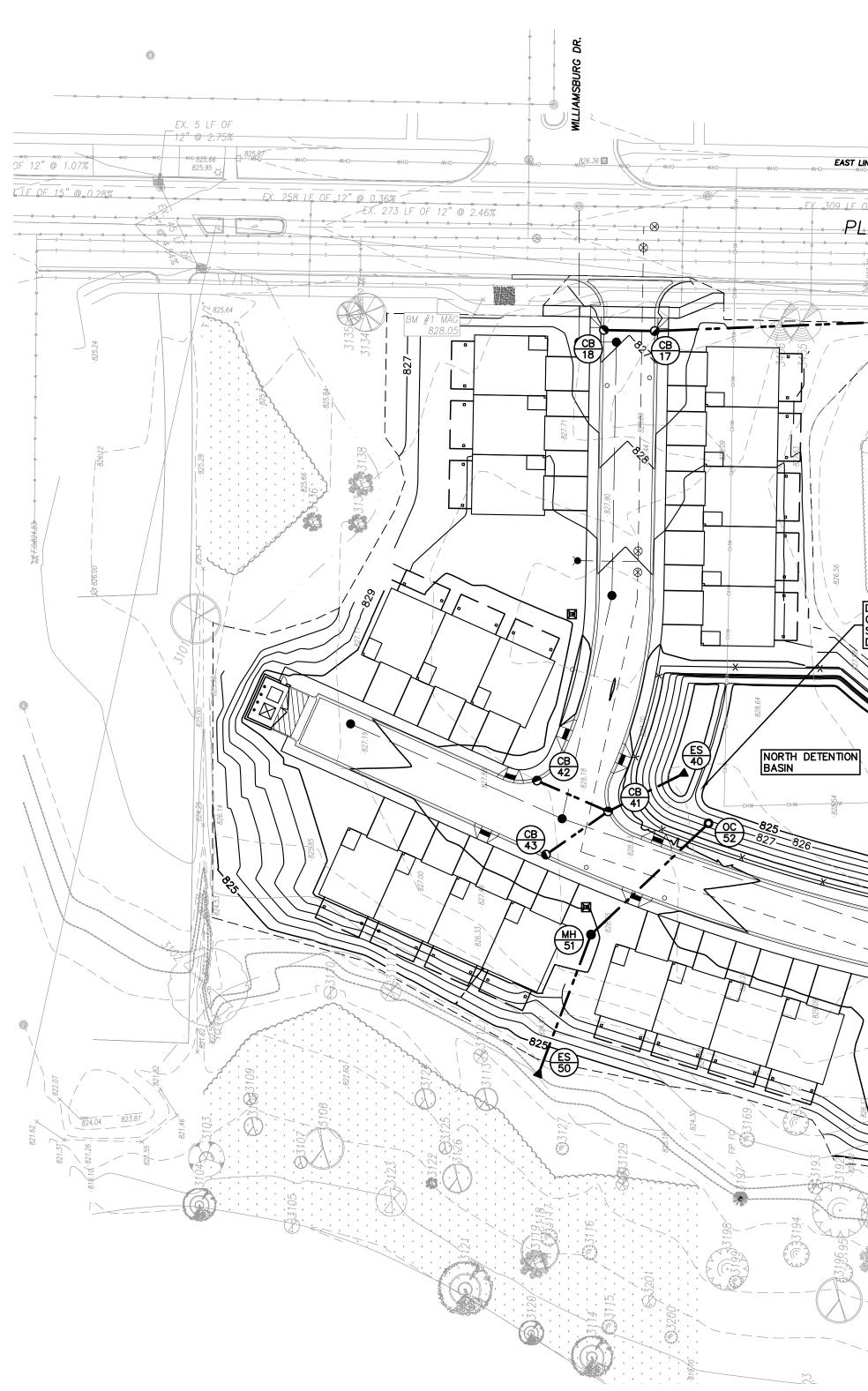
ORIGINAL ISSUE DATE: SEPTEMBER, 2020

DRAWING TITLE

FIRE PROTECTION PLAN

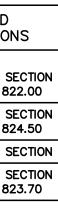
2020-0151 PEA JOB NO. P.M. DN. JW DES. JW DRAWING NUMBER:

P-6.1

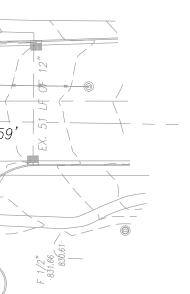


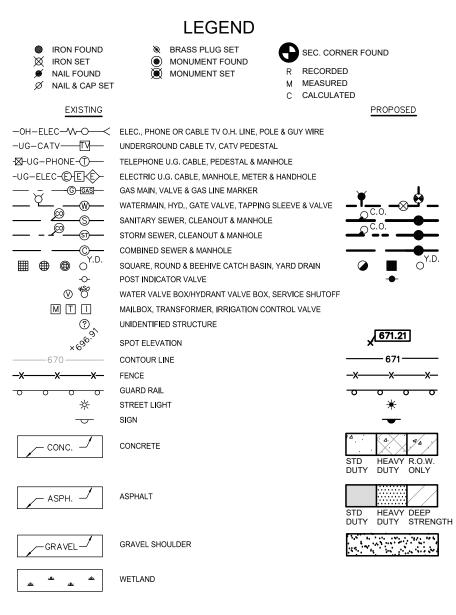


	мн		ORM STRUCTURES (4' DIA./0' SUMP) RIM = 830.86	мн	30	(4' DIA./0' SUMP) RIM = 826.28 12" S 821.24 12" E 821.14	СВ	41	(4' DIA./2' SUMP) RIM = 829.27 12" NE 824.83 12" NW 824.83 15" SE 824.63	END SECTIONS
	СВ		18" N 822.17 18" SE 822.07 (4' DIA./2' SUMP) RIM = 830.51 12" N 822.78	мн	31	(4' DIA./0' SUMP) RIM = 827.80 12" SW 821.82 12" N 821.72	СВ	42	(4' DIA./2' SUMP) RIM = 829.26 12" SW 824.99 (4' DIA./2' SUMP)	10 END SECTION 18" 822.00 40 END SECTION 15" 824.50
			12 N 822.78 15" E 822.58 18" S 822.38 (4' DIA./2' SUMP) RIM = 825.94	СВ	41	(4' DIA./2' SUMP) RIM = 829.27 12" NE 824.83 12" NW 824.83	СВ		RIM = 829.13 12" SE 824.99 (4' DIA./2' SUMP) RIM = 829.21	45 END SECTION 50 END SECTION 12" 823.70
	CB		15" N 823.05 15" W 822.95 (4' DIA./2' SUMP) RIM = 825.94	СВ	42	15" SE 824.63 (4' DIA./2' SUMP) RIM = 829.26 12" SW 824.99	СВ	46 47	12" W 825.01 15" NE 824.81 (4' DIA./2' SUMP) RIM = 829.21	OVERFLOW CONTROL
	СВ	14	12" NE 823.32 15" S 823.12 (4' DIA./2' SUMP)	СВ	43	(4' DIA./2' SUMP) RIM = 829.13 12" SE 824.99	мн	51	12" E 825.11 (4' DIA./0' SUMP) RIM = 830.08	STRUCTURES STORM STRUCTURES
	мн	15	RIM = 826.27 12" N 823.55 12" SW 823.45 (4' DIA./0' SUMP)	СВ	46	(4' DIA./2' SUMP) RIM = 829.21 12" W 825.01 15" NE 824.81			12" SE 824.11 12" W 824.01	OC 32 (3' DIA./0' SUMP) RIM = 825.29 12" NE 822.00
	мн	16	RIM = 828.23 12" N 824.22 12" S 824.12 (4' DIA./2' SUMP)	СВ		(4' DIA./2' SUMP) RIM = 829.21 12" E 825.11		ST	STING STORM IRUCTURES	OC 52 (3' DIA./0' SUMP) RIM = 827.44 12" NW 824.50
	СВ	17	RIM = 826.71 12" N 825.01 12" S 824.91	мн	51	(4' DIA./0' SUMP) RIM = 830.08 12" SE 824.11 12" W 824.01	EX	1 F	RIM = 825.79 12" W 821.08 12" E 821.02	
	СВ		(4' DIA./2' SUMP) RIM = 826.71 12" S 825.11 (4' DIA./2' SUMP)							
	СВ	20	(4' DIA./2' SUMP) RIM = 830.51 12" S 822.88							BASIN
ST LINE PLATT ROAD		BM #	2 RR SPIKE			BM #3 MAG 827.81		*		REFER TO SHEET P-7.2
EF 0E 12" @ 0.27% ■ EX 350 LE 0E 8" @ 0		827.2			MHO				58 LF/OF 12" @ 1.29%	
PL*ATT* ROAD* (66* ROW) * * * *		M				EX. 300 LF 0/= 8"	@ 0.4; 	7% * ©		1226.59
WEST LINE PLATT ROAD		4 		EX 1 MH 30		1455				
MH 16 					 _/[
	 								32	F 1/2"
]//(□/ /						· 834.30	_	-834.31 /	
									SOUTH DETENTION BASIN	d£.EEB.
	/ / / /	┛						1		31.12
	/						121-121 121-121-121-121-121-121-121-121-	-825	822	- 830.42 - 829.02 / 29.00 - 1.8 329.13 - 1.8
OUTLET CONTROL STRUCTURE. REFER TO DETAIL ON SHEET P-7.2	828 9 9		GB CB 20 12				<u>-828</u> 331 }	× 0077	2726 C	OVERFLOW SPILLWAY; REFER TO DETAIL ON SHEET P-7.2
0verflow spillway;	829	- 831- 831-	-833		T)		3273-	3278 3233	824.08 824.08 932552 824.08	598922
N	$\left \right $		83,	J_k	5		32756000 03276 6033276		C)	
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				. 852.66	/	262262 24 24		/		
820.33 228			0	/	ğ		/	/		



LOW CONTROL RUCTURES	
STRUCTURES	
DIA./0' SUMP) = 825.29 NE 822.00	
DIA./0' SUMP) = 827.44 NW 824.50	





REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXXXX
SANITARY SEWER	XXXXXXXXXXXX
STORM SEWER	XXXXXXXXXXXX
COMBINED SEWER	XXXXXXXXXXXX
ELECTRIC	XXXXXXXXXXXX
TELEPHONE	XXXXXXXXXXXX
GAS	XXXXXXXXXXXX
PETROLEUM	XXXXXXXXXXXX
CATV	XXXXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX

BENCHMARKS

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PROJECT TITLE



REVISIONS

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SPA/WCWRC RESUBMITTAL	4/7/2022

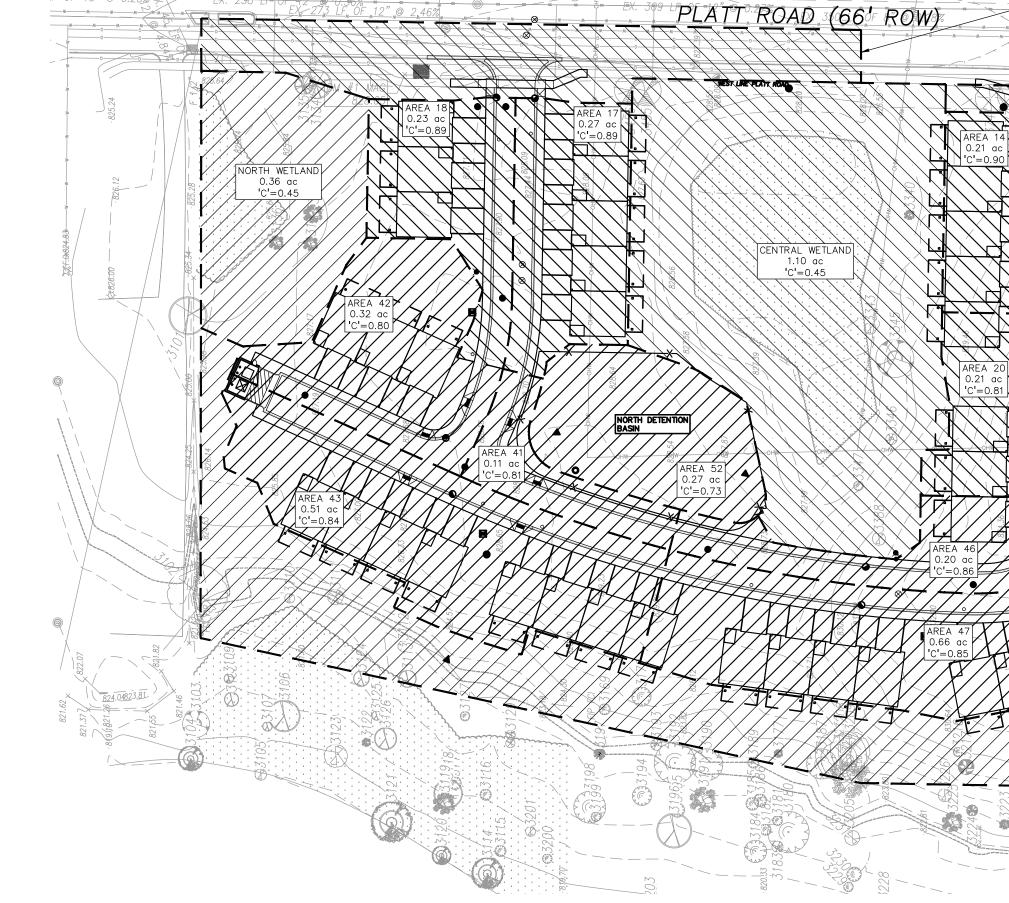
ORIGINAL ISSUE DATE:

SEPTEMBER, 2020

DRAWING TITLE **STORM WATER** MANAGEMENT PLAN

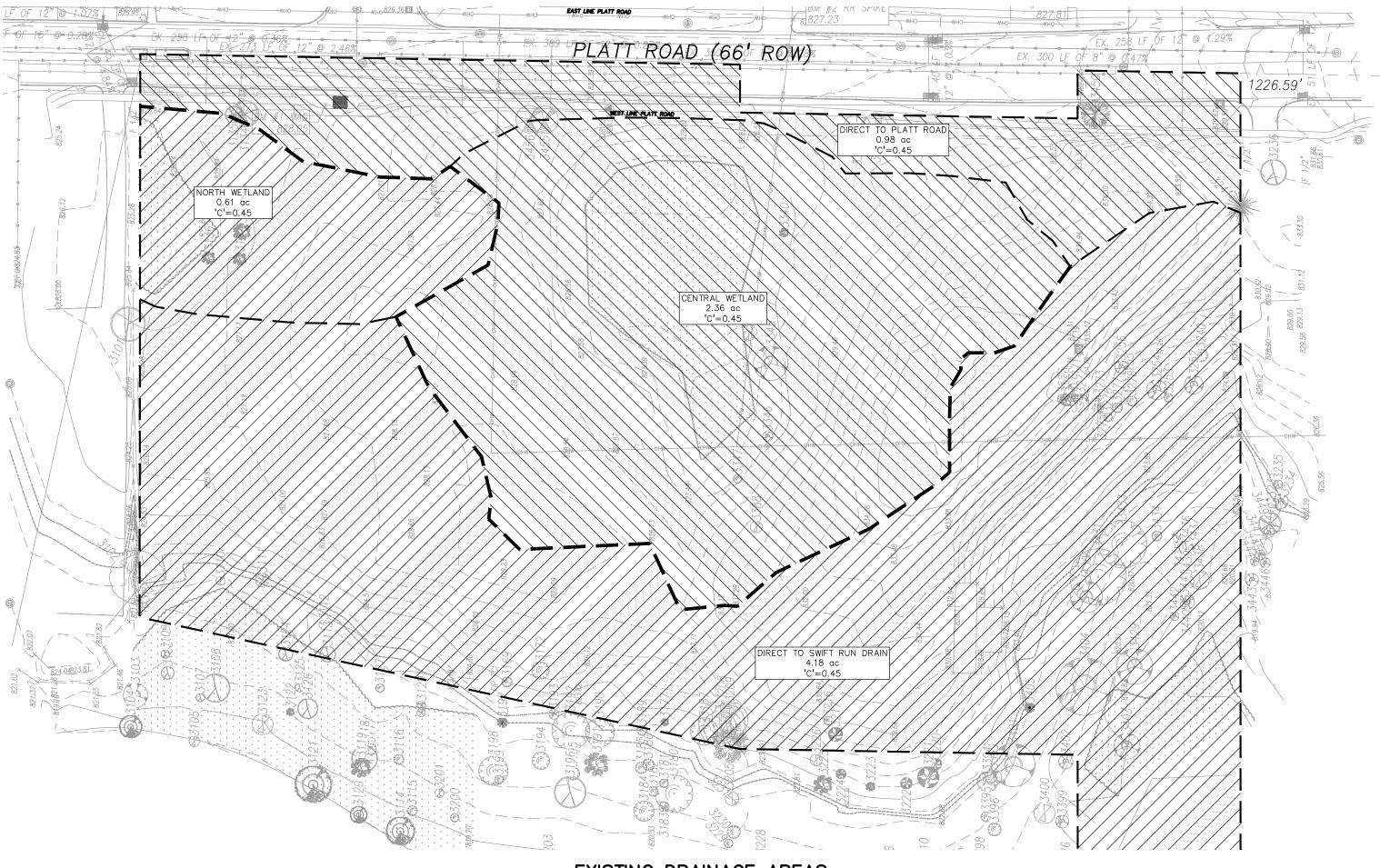
PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	۲:

P-7.0



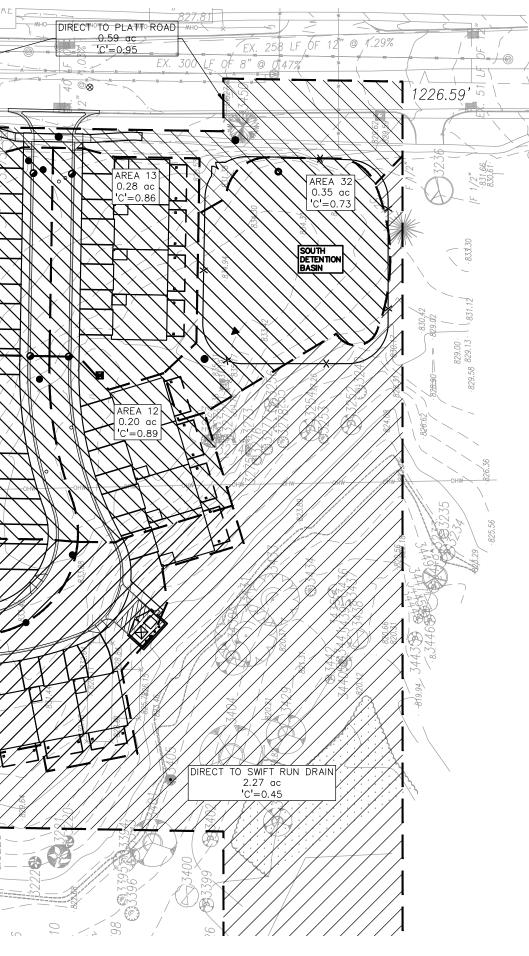
EXISTING DRAINAGE AREAS

EAST LINE PLATT ROAD



- AF 15" @ A 2

-258 LF OF 42" @ 11.36% "



DRAINAGE AREA	EXISTIN	IG AREA	PROPOS	ED AREA	DIFFE	RENCE					
	SF ACRES		SF	ACRES	SF	ACRES					
	DRAINAGE TO PLATT ROAD										
CENTRAL WETLAND	102,928	2.36	47,770	1.10	-55,158	-1.27					
DIRECT RUNOFF	42,763	0.98	25,522	0.59	-17,241	-0.40					
SOUTH DETENTION BASIN			76,543	1.76							
SUB-TOTAL	145,691	3.34	149,835	3.44	4,144	0.10					
	DRAINAC	GE TO SWIF	T RUN DRA	AIN							
NORTH WETLAND	26,674	0.61	15,842	0.36	-10,832	-0.25					
DIRECT RUNOFF	182,147	4.18	98,730	2.27	-83,417	-1.91					
NORTH DETENTION BASIN			90,085	2.07							
SUB-TOTAL	208,821	4.79	204,657	4.70	-4,164	-0.10					
TOTAL	354,512	8.14	354,492	8.14	-20.00	0.00					

RUNOFF CO	EFFICIENT		1.00	98								
RUNOFF CO	EFFICIENT	, IMPERVIC	DUS AREA,	TYPE D SOI	LS				0.95	98		
RUNOFF CO	EFFICIENT	, PERVIOUS	S AREA, TYI	PE D SOILS					0.45	80		
DRAINAGE	IMPER	VIOUS	PERV	lous	WA	TER	TO	TAL	RUNOFF	CURVE		
AREA	SF	ACRES	SF	ACRES	SF	ACRES	SF	ACRES	COEFFICIENT	NUMBER		
	SOUTH DETENTION BASIN											
12	7,901	0.18	998	0.02	0	0	8,899	0.20	0.89	96		
13	9,982	0.23	2,336	0.05	0	0	12,318	0.28	0.86	95		
14	8,282	0.19	975	0.02	0	0	9,257	0.21	0.90	96		
17	10,337	0.24	1,302	0.03	0	0	11,639	0.27	0.89	96		
18	8,790	0.20	1,251	0.03	0	0	10,041	0.23	0.89	96		
20	6,670	0.15	2,657	0.06	0	0	9,327	0.21	0.81	93		
32	0	0.00	7,531	0.17	7,531	0.17	15,062	0.35	0.73	89		
SUB-TOTAL	44,061	1.01	16,052	0.37	7,531	0.17	76,543	1.76	0.74	83		
				NOR	TH DETENT	TON BASIN	l		-			
41	3,613	0.08	1,338	0.03	0	0	4,951	0.11	0.81	93		
42	9,619	0.22	4,179	0.10	0	0	13,798	0.32	0.80	93		
43	17,238	0.40	4,961	0.11	0	0	22,199	0.51	0.84	94		
46	7,249	0.17	1,618	0.04	0	0	8,867	0.20	0.86	95		
47	22,922	0.53	5,614	0.13	0	0	28,536	0.66	0.85	94		
52	0	0.00	5,867	0.13	5,867	0.13	11,734	0.27	0.73	89		
SUB-TOTAL	60,641	1.39	23,577	0.54	5,867	0.13	90,085	2.07	0.82	93		
TOTAL	104,702	2.40	39,629	0.91	13,398	0.31	166,628	3.83	0.78	88		

PROPOSED & EXISTING RUNOFF TO SITE OUTLET EXISTING RUNOFF

- DRAINAGE TO PLATT ROAD (UNRESTRICTED)
- A = 2.36 + 0.98 = 3.34 ACC = 0.45
- TC = 20 MIN $l(100-YEAR) = \frac{275}{(T+25)} = \frac{275}{(20+25)} = 6.11 \text{ in/hr}$
- $Q(100-YEAR) = CIA = 0.45 \times 6.11 \times 3.34 = 9.18 CFS$
- DRAINAGE TO SWIFT RUN DRAIN (UNRESTRICTED)
- A = 0.61 + 4.18 = 4.79 AC• C = 0.45TC = 20 MIN
- I(100-YEAR) = 275/(T+25) = 275/(20+25) = 6.11 in/hrQ(100-YEAR) = CIA = 0.45 X 6.11 X 4.79 = 13.17 CFS

PROPOSED RUNOFF (OFF-SITE, ON SITE, AND BASIN)

- DRAINAGE TO PLATT ROAD, (RESTRICTED AND UNRESTRICTED) A = 1.10 + 0.59 = 1.69 AC
- C = 0.45TC = 20 MIN
- I(100-YEAR) = 275/(T+25) = 275/(20+25) = 6.11 in/hr $Q(100-YEAR) = CIA = 0.45 \times 6.11 \times 1.69 = 4.65 CFS$
- Q (SOUTH BASIN) = 0.22 CFS (FROM CALCS ON SHEET P-7.4) PROPOSED Q (TOTAL) = 4.65 + 0.22 = 4.87 CFS
- 4.87 CFS (PROPOSED) < 9.18 CFS (EXISTING)
- DRAINAGE TO SWIFT RUN DRAIN, (RESTRICTED AND UNRESTRICTED) A = 0.36 + 2.27 = 2.63 AC
- C = 0.45TC = 20 MIN
- I(100-YEAR) = 275/(T+25) = 275/(20+25) = 6.11 in/hrQ(100-YEAR) = CIA = 0.45 X 6.11 X 2.63 = 7.23 CFS
- Q (NORTH BASIN) = 0.30 CFS (FROM CALCS ON SHEET P-7.3) PROPOSED Q (TOTAL) = 7.23 + 0.30 = 7.53 CFS 7.53 CFS (PROPOSED) < 13.17 CFS (EXISTING)

STORM WATER NARRATIVE

THE EXISTING PARCEL CURRENTLY DRAINS, UN-DETAINED, VIA SHEET FLOW TO THE PLATT ROAD RIGHT-OF-WAY AND THE SWIFT RUN DRAIN.

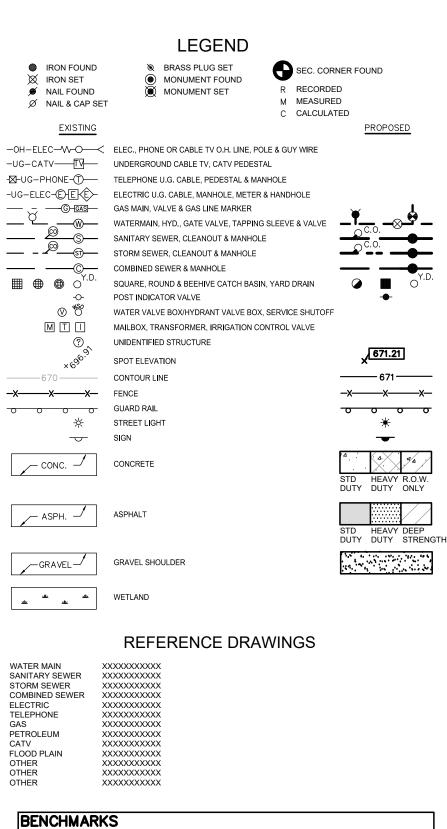
INFILTRATION TESTING WAS PERFORMED ON THE SUBJECT PARCEL IN ACCORDANCE WITH THE WASHTENAW COUNTY WATER RESOURCES COMMISSIONER RULES AND GUIDELINES. ONLY ONE LOCATION PROVED TO BE SUITABLE FOR INFILTRATION

THE PROPOSED DEVELOPMENT INCLUDES TWO NEW DETENTION BASINS. ONE BASIN WILL BE LOCATED WHERE THE SUITABLE SOILS WERE FOUND AND WILL INCLUDE INFILTRATION. THE OTHER BASIN WILL BE OVERSIZED TO COMPENSATE FOR NO INFILTRATION.

A NEW ON-SITE ENCLOSED STORM SEWER SYSTEM DESIGNED PER THE WASHTENAW COUNTY WATER RESOURCES COMMISSIONER STANDARDS WILL ALSO BE INCLUDED.

THE DETENTION BASINS WILL CAPTURE STORM WATER RUNOFF FROM ON-SITE TRIBUTARY DRAINAGE AREAS. THE SOUTH DETENTION BASIN WILL DISCHARGE TO THE EXISTING STORM SEWER SYSTEM IN THE PLATT ROAD RIGHT-OF-WAY AND THE NORTH DETENTION BASIN WILL DISCHARGE TO THE SWIFT RUN DRAIN. PLEASE REFER TO THE CALCULATIONS PROVIDED ON SHEETS P-7.3 AND P-7.4 FOR RELEASE RATES.

SOME ON-SITE AREAS AROUND THE PERIMETER OF THE PARCEL CURRENTLY DISCHARGE OFF-SITE, UN-DETAINED. SOME OF THESE AREAS CONTAIN EXISTING WETLANDS, TREES AND VEGETATION THAT ARE TO BE LEFT UNDISTURBED AND ARE LOCATED OUTSIDE OF THE PROPOSED GRADING LIMITS.



MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE ELEVATION: 827.23 NAVD88 DATUM

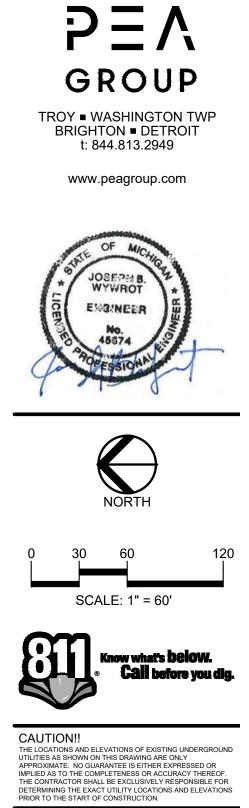
BM #3 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER: TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.

PEA GROUP WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

FLOODPLAIN NOTE:

BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.



CLIENT TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE

PROJECT TITLE

AUBURN HILLS, MI 48326

PLATT ROAD TOWNHOMES PLATT ROAD ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS

OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
SPA/WCWRC REVIEW	1/13/2022
SPA/WCWRC RESUBMITTAL	4/7/2022

ORIGINAL ISSUE DATE:

SEPTEMBER, 2020 DRAWING TITLE

STORM WATER MANAGEMENT DRAINAGE AREAS

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	R:

P-7.1

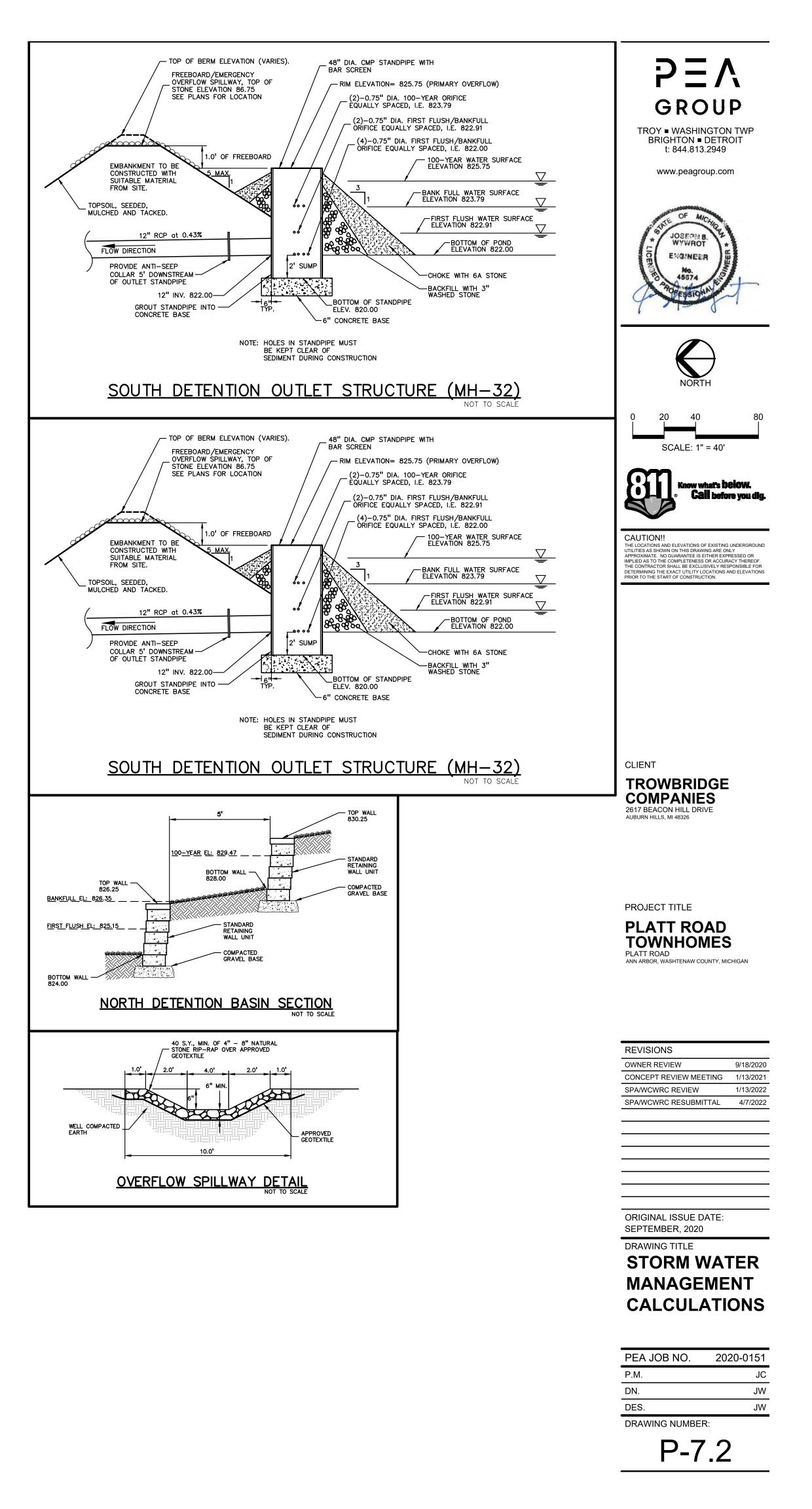
SIOR		=WER	SYS		DESIG																					
C =	B/(T+I varies 20	D) ^ E (min.)			175.0 1" Value :	D =	25.0 0.013	E =	1																	
		· · ·																								
FROM STR	TO STR	AREA (A)	COEF. C	AxC		TOTAL AREA	TIME	INT.	FLOW Q	PIPE CAP.	PIPE DIA.	PIPE LENGTH	PIPE SLOPE	MIN HG PER "Q"	VEL. FULL	FLOW	H.G.L UP	DOWN	RIM I UP	ELEV. DOWN		T ELEV.	PIPE C		HGL C	COVER DOWN
	9 IX	(Acres)	.				(min.)	(in/hr)	(cfs)	(cfs)	(in.)	(ft.)	(%)		(ft./sec)	(min.)	STREAM	STREAM	STREAM	STREAM	STREAM	STREAM	STREAM	STREAM	STREAM	STREAM
18	17	0.23	0.89	0.20	0.20	0.23	20.00	3.89	0.80	2.34	12	24	0.43	0.05%	3.0	0.1	825.91	825.81	827.26	826.71	825.11	825.01	0.99	0.54	1.35	0.91
17	16	0.27	0.88	0.24	0.44			3.88	1.72	2.34	12	159	0.43	0.23%	3.0	0.9	825.71	825.02	826.71	828.23	824.91	824.22	0.64	2.84	1.01	3.21
16	15	0.00	0.00	0.00	0.44	0.50	21.00	3.80	1.72	2.34	12	135	0.43	0.23%	3.0	0.8	824.92	824.39	828.23	826.27	824.12	823.55	2.94	1.56	3.31	1.88
15	14	0.00	0.00	0.00	0.44			3.74	1.72	2.34	12	28	0.43	0.23%	3.0	0.2	824.39	824.32	826.27	825.94	823.45	823.32	1.66	1.45	1.88	1.62
14	13	0.21	0.91	0.19	0.63			3.72	2.36	3.65	15	24	0.32	0.13%	3.0	0.1	824.32	824.29	825.94	825.94	823.12	823.05	1.38	1.46	1.62	1.66
13	12	0.28	0.86	0.24	0.88			3.72	3.25	3.65	15	114	0.32	0.25%	3.0	0.6	824.29	824.00	825.94	830.51	822.95	822.58	1.56	6.50	1.66	6.52
12 11	11 10	0.20	0.91	0.18	1.23 1.23			3.67 3.63	4.52 4.52	5.25 5.25	18 18	85 27	0.25 0.25	0.19% 0.19%	3.0 3.0	0.5	824.00 823.84	823.84 823.79	830.51 830.86	830.86 823.25	822.38 822.07	822.17 822.00	6.43 7.08	6.98	6.52 7.01	7.01
	10	0.00	0.00	0.00	1.20	1.40	20.20	0.00	7.52	0.20	10	21	0.25	0.1070	0.0	0.2	020.04	020.75	000.00	023.23	022.07	022.00	7.00		7.01	
20	12	0.21	0.82	0.17	0.17	0.21	20.00	3.89	0.67	2.34	12	24	0.43	0.04%	3.0	0.1	824.01	824.00	830.51	830.51	822.88	822.78	6.46	6.57	6.51	6.52
32	31	0.00	0.00	0.00	0.00	0.00		3.89	0.00	2.34	12	41	0.43	0.00%	3.0	0.2	822.80	822.62	824.00	827.80	822.00	821.82		4.81		5.18
31	30	0.00	0.00	_	0.00			3.87	0.00	2.34	12	110	0.43	0.00%	3.0	0.6	822.52	822.04	827.80	826.28	821.72	821.24	4.91	3.87	5.28	4.24
30	EX CB	0.00	0.00	0.00	0.00	0.00	20.80	3.82	0.00	2.34	12	15	0.43	0.00%	3.0	0.1	821.94	821.88	826.28	825.79	821.14	821.08	3.97	3.54	4.34	3.91
42	41	0.32	0.79	0.25	0.25	0.32	20.00	3.89	0.98	2.34	12	37	0.43	0.08%	3.0	0.2	827.11	827.08	829.26	829.27	824.99	824.83	3.11	3.27	2.16	2.19
41	40	0.02	0.73	_	0.23			3.87	2.99	3.65	12	41	0.32	0.00%	3.0	0.2	827.08	826.99	829.27	825.75	824.63	824.50	3.20		2.10	
				0.00						0.00					0.0											<u> </u>
43	41	0.51	0.84	0.43	0.43	0.51	20.00	3.89	1.66	2.34	12	36	0.43	0.22%	3.0	0.2	827.16	827.08	829.13	829.27	824.99	824.83	2.98	3.27	1.98	2.19
	46								2.17	2.34	12	24	0.43	0.37%	3.0	0.1	827.27	827.18	829.21	829.21	825.11	825.01	2.93	3.03	1.94	2.03
46	45	0.20	0.87	0.17	0.73	0.86	20.10	3.88	2.84	3.65	15	96	0.32	0.19%	3.0	0.5	827.18	826.99	829.21	825.75	824.81	824.50	2.96		2.03	
52	51	0.00	0.00	0.00	0.00	0.00	20.00	3 80	0.00	2.34	12	92	0.43	0.00%	3.0	0.5	825.30	824.91	825.67	830.08	824.50	824.11		4.80		5.17
52	50	0.00			0.00					2.34	12	72	0.43	0.00%	3.0	0.3	823.30	824.50	830.08	824.95	824.00	823.70	4.90	4.00	5.27	
		0.00		0.00	0.00	0.00				2.01				0.0070	0.0											<u> </u>

		MAINTEN	ANCE TASKS	AND SCHEDU	JLE DURING CO	ONSTRUCTIO	N			
				COMPO	ONENTS					
TASKS	STORM SEWER SYSTEM	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	DITCHES AND SWALES	OUTFLOW CONTROL STRUCTURE	RIP-RAP	SEDIMENT BASINS	STORM DETENTION AREAS	SCHEDULE	
INSPECT FOR SEDIMENT ACCUMULATION	х	Х		х	X		x	x	WEEKLY	
REMOVAL OF SEDIMENT ACCUMULATION	х	х		х	x		x	X	AS NEEDED* & PRIOR TO TURNOVER	
INSPECT FOR FLOATABLES AND DEBRIS			х	х	X		x	x	QUARTERLY	
CLEANING OF FLOATABLES AND DEBRIS			Х	х	х		x	I X	QUARTERLY & AT TURNOVER	
INSPECTION FOR EROSION				Х	X		Х	Х	WEEKLY	
RE-ESTABLISH PERMANENT VEGETATION ON ERODED SLOPES				х	x		x	I Y	AS NEEDED & PRIOR TO TURNOVER	
REPLACEMENT OF STONE					x	х			AS NEEDED & PRIOR TO TURNOVER	
MOWING				х	x		x	x	0-2 TIMES PER YEAR	
INSPECT STORM WATER SYSTEM COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS			x	х	x	х	x	I Y	ANNUALLY AND AT TURNOVER	
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION	х	Х	x	х	x	х	x	x	AS NEEDED	

* AS NEEDED MEANS WHEN SEDIMENT HAS ACCUMULATED TO A MAXIMUM DEPTH OF ONE FOOT

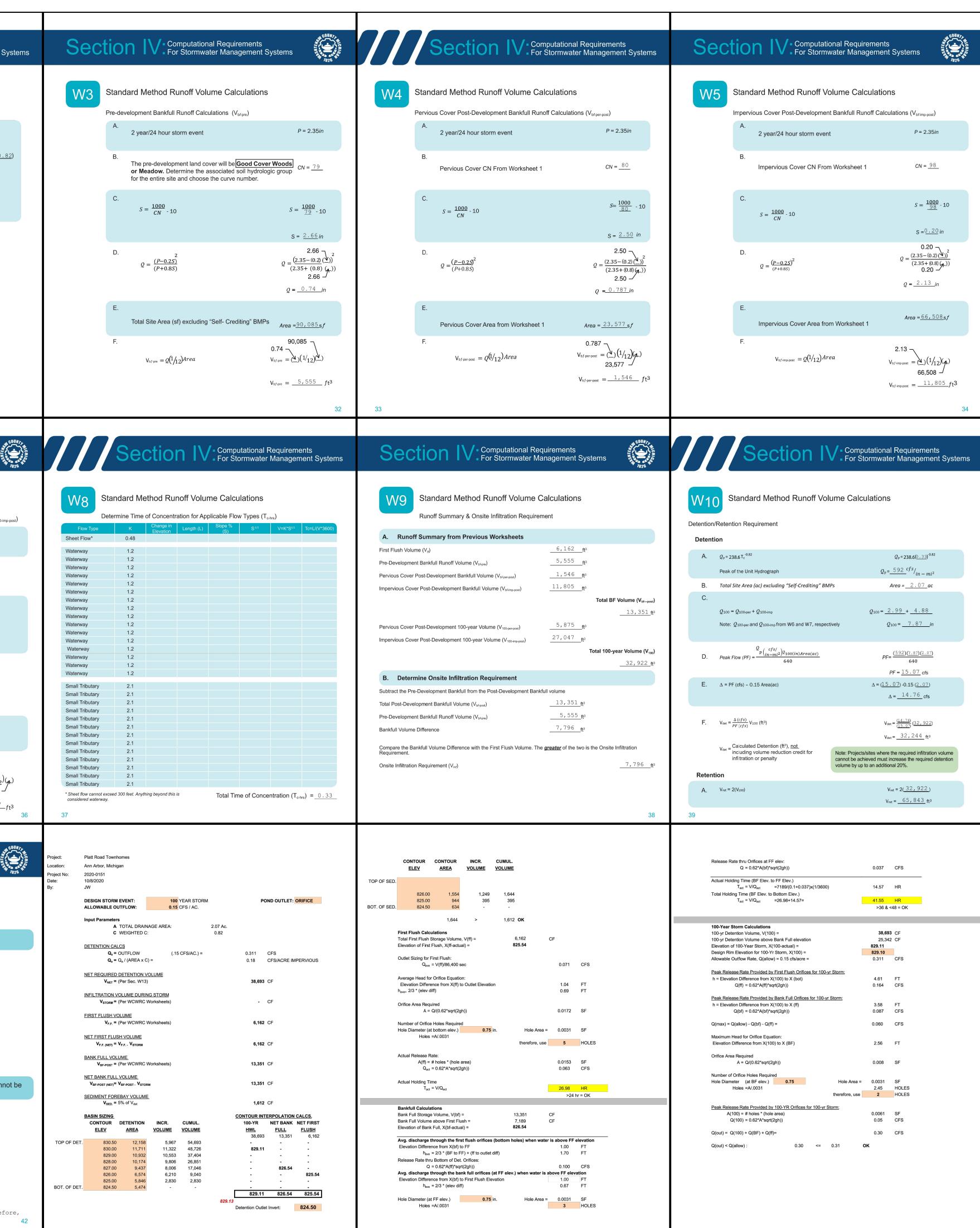
								ESTIMATE	ED ANNUAI	L BUDO
TASKS	CATCH BASIN INLET CASTINGS	DITCHES AND SWALES	OUTFLOW CONTROL STRUCTURE	RIP-RAP	SEDIMENT BASINS	STORM DETENTION AREAS	SCHEDULE	1ST YEAR	2ND YEAR	3RI YEA
INSPECT FOR SEDIMENT ACCUMULATION		Х	X		х	х	ANNUALLY	\$100	\$100	\$10
REMOVAL OF SEDIMENT ACCUMULATION		Х	X		x	х	EVERY 2 YEARS AS NEEDED	\$300	\$100	\$0
INSPECT FOR FLOATABLES AND DEBRIS	X	Х	X		X	х	ANNUALLY	\$75	\$75	\$75
CLEANING OF FLOATABLES AND DEBRIS	Х	Х	X		х	х	ANNUALLY	\$150	\$50	\$0
INSPECTION FOR EROSION		Х	Х		Х	Х	ANNUALLY	\$125	\$100	\$10
RE-ESTABLISH PERMANENT VEGETATION ON ERODED SLOPES		х	x		x	х	AS NEEDED	\$250	\$100	\$10
REPLACEMENT OF STONE			X	Х			EVERY 3-5 YEARS AS NEEDED	\$150	\$0	\$25
MOWING		Х	X		X	х	0-2 TIMES PER YEAR	\$2,500	\$1,750	\$1,7
INSPECT STORM WATER SYSTEM COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS	x	Х	x	х	x	x	ANNUALLY	\$75	\$75	\$75
INSPECT INFILTRATION BASIN FOLLOWING STORMS OF 1- INCH OR MORE					x	x	AS NEEDED	\$75	\$75	\$75
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION	x	х	x	х	x	x	AS NEEDED	\$300	\$300	\$30
KEEP RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES							ANNUALLY	\$0	\$0	\$0
KEEP RECORDS OF ALL COSTS FOR INSPECTIONS, MAINTENANCE, AND REPAIRS							ANNUALLY	\$0	\$0	\$0
	1				1	1	TOTAL BUDGET	\$4,100	\$2,725	\$2,8
							SESC BUDGET	925	400	550

NOTE: LONG-TERM STORM WATER MAINTENANCE WILL BE PERFORMED BY THE PROPERTY OWNER, TROWBRIDGE COMPANIES.



GET						
D \R	SESC TASKS					
00	х					
2	х					
5						
כ						
00	Х					
00	х					
50	х					
750						
5						
5						
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325						
0						

Sec	Ction IV - Computational Requirements For Stormwater Management Systems	Section IV - Computational Requirements For Stormwater Management Sy
STAND/ VOLUM	ARD METHOD RUNOFF W1 Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Total Site Area =2.07_ac 2.07_ac	W2 Standard Method Runoff Volume Calculations First Flush Runoff Calculations (Vπ) A.
	Cover Type Soil Type Area (ft²) Area(ac) Runoff Coefficient (c) (C) (Area) Pervious D 23,577 0.54 0.45 10,609.7 Impervious D 66,508 1.53 0.95 63,182.6	$V_{ff} = (1'') \left(\frac{1'}{12''}\right) \left(\frac{43560 f t^2}{1 a c}\right) AC \qquad V_{ff} = (1'') \left(\frac{1'}{12''}\right) \left(\frac{43560 f t^2}{1 a c}\right) (2 \cdot 0.7) (0 \cdot 8)$ $V_{ff} = \underline{6, 162} f t^3$
NRCS Variables ^c	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	A = Total Site Areas (ac) excluding "Self-Crediting" BMPs from Worksheet 1 C= Weighted Runoff Coefficient from Worksheet 1
	Total - Σ(CN)(Area) = 1,886,160 Area Total - Σαc σr Σsf = 23,577 Weighted CN - Σ(CN)(Area)/Σαc σr Σsf = 80	
NRCS Variables ^c	Impervious Cover Type Soil Type Area (ft²) Area(ac) Curve Number (CN) (Area) Impervious D 66,508 1.53 98 6,517,784	
^B Required for	$Total - \sum(CN)(Area) = \frac{6,517,784}{66,508}$ or first flush runoff calculations or bankfull and 100-year runoff calculations $Weighted CN - \sum(CN)(Area)/\sum ac \text{ or } \sum sf = \frac{98}{98}$	31
	Section IV - Computational Requirements For Stormwater Management Systems	Section IV: Computational Requirements For Stormwater Management Systems
W6	Standard Method Runoff Volume Calculations Pervious Cover Post-Development 100-year Storm Runoff Calculations (V _{100-per-post})	Standard Method Runoff Volume Calculations
	A. 100-year Storm Event $P = 5.11in$ B.	A. 100-year Storm Event $P = 5.11in$ B.
	Pervious Cover CN From Worksheet 1 $CN = \frac{80}{}$ C.	Impervious Cover CN From Worksheet 1 $CN = \frac{98}{}$ C.
	$S = \frac{1000}{CN} - 10$ $S = \frac{1000}{2.50} - 10$ $S = \frac{2.50}{2.50}$ in	$S = \frac{1000}{CN} - 10$ $S = \frac{1000}{98} - 10$ $S = \frac{0.20}{98} \text{ in}$
	D. $Q_{100-per} = \frac{(P-0.2S)^2}{(P+0.8S)^2}$ $Q_{100-per} = \frac{2.50}{(5.11-(0.2)(1))}^2$ $Q_{100-per} = \frac{2.99}{(5.11+0.8)}$ in	D. $Q_{100-imp} = \frac{(P-0.2S)^2}{(P+0.8S)^2}$ $Q_{100-imp} = \frac{(5.11-(0.2))^2}{(5.11+0.8)^2}$ $Q_{100-imp} = -\frac{4.88}{in}$
	E. Pervious Cover Area from Worksheet 1 $Area = 23, 577 \text{ s}f$	E. Impervious Cover CN From Worksheet 1 $Area = \frac{66,508}{508} sf$
	F. $V_{100-per-post} = Q(1/12)Area$ $V_{100-per-post} = \underbrace{2.99}_{V_{100-per-post}} \underbrace{(1/12)}_{23,577} \underbrace{(1/12)}_{23,577} \underbrace{(1/12)}_{ft^3} $	F. $V_{100-imp:post} = Q(1/_{12})Area$ $V_{100-imp:post} = \underbrace{27, 047}_{ft}$ $V_{100-imp:post} = \underbrace{27, 047}_{ft}$
Sec	Ction IV: Computational Requirements For Stormwater Management Systems	Section IV: Computational Requirements For Stormwater Management Systems
W11	Standard Method Runoff Volume Calculations	W13 Summary Site Summary of Infiltration & Detention
Pro	Applicable BMPs and Associated Volume Credits opposed BMP^ Area (ft²) Storage Volume ⁶ (ft³) Surface Soil Ave. Design Infiltration Rate (in/hr) Infiltration Volume During Storm ^o (ft³) Total Volume Reduction ^p (ft³)	A. Stormwater Management Summary Minimum Onsite Infiltration Requirement, V _{inf} 7, 796 ft ³
Bed Infiltration B		Designed/Provided Infiltration Volume
nfiltration Ti Bioretention	rench	% Minimum Required Infiltration Provided%
Rain Garder Dry Well Bioswale Vegetated F		Total Calculated Detention Volume, V_{det} 32,244ft³Net Required Detention Volume $(V_{det} - Designed/Provided Infiltration Volume)$ 32,244ft³
Green Roof	Total Volume Reduction Credit by Proposed Structural BMPs (ft³) 0 Runoff Volume Infiltration Requirement (V _{inf}) from Worksheet 9 - 7,796	B. Detention Volume Increase for sites where the required infiltration volume cannot achieved
	cklist from Section VI for each Structural BMP type	% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided) 100 %
	ne as defined in individual BMP write-ups	Net % Penalty
^B Storage volum ^C Approximated Infiltrat	as the average design infiltration rate over 6 hours multiplied by the BMP area: tion Rate x 6 hours x BMP Area x Unit Conversions = Infiltration Volume (ft ³) Reduction Credit is the sum of the Storage Volume and the Infiltration Volume During Storm	(20% x % Required Infiltration NOT Provided) 20 % Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume)] 38,693 ft ³



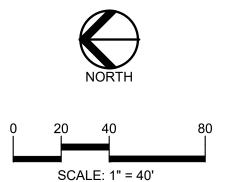
	Peak of the Unit Hydrograph	$Q_{\rm p} = \underline{592}^{cfs} / in - mi^2$
В.	Total Site Area (ac) excluding "Self-Crediting" BM	$Ps \qquad Area = \underline{2.07}ac$
C.	$Q_{100} = Q_{100\text{-per}} + Q_{100\text{-imp}}$ Note: $Q_{100\text{-per}}$ and $Q_{100\text{-imp}}$ from W6 and W7, respect	$Q_{100} = 2.99 + 4.88$ ively $Q_{100} = 7.87$ in
D.	$Peak \ Flow \ (PF) = \frac{Q_{p} {cfs/}_{(in-mi^{2})} Q_{100(in)Area(ac)}}{640}$	$PF = \frac{(592)(7.87)(2.07)}{640}$ $PF = \frac{15.07}{2} \text{ cfs}$
E.	Δ = PF (cfs) – 0.15 Area(ac)	$\Delta = (\underline{15.07}) \cdot 0.15 (\underline{2.07})$ $\Delta = \underline{14.76} \text{ cfs}$
F.	$V_{det} = \frac{\Delta (cfs)}{PF (cfs)} V_{100} (ft^3)$	$V_{det} = \frac{(14.76)}{(15.07)} (32,922)$ $V_{det} = \underline{32,244} \text{ ft}^3$
	V _{det} = Calculated Detention (ft ³), <u>not</u> including volume reduction credit for infiltration or penalty	Note: Projects/sites where the required infiltration volume cannot be achieved must increase the required detention volume by up to an additional 20%.
Retent	lion	
Α.	$V_{ret} = 2(V_{100})$	V _{ret} = 2(<u>32,922</u>) V _{ret} = <u>65,843</u> ft ³
9		

Release Rate thru Orifices at FF elev:							
Q = 0.62*A(bf)*sqrt(2gh))				0.037	CFS		
Actual Holding Time (BF Elev. to FF Elev.)							
$T_{act} = V/Q_{act}$ =7189/(0.1							
Total Holding Time (BF Elev. to Bottom Ele	,						
$T_{act} = V/Q_{act} = 26.98 + 14$.57=			41.55	HR		
				>36 & <4	8 = OK		
100-Year Storm Calculations							
100-yr Detention Volume, V(100) =				38,693			
100-yr Detention Volume above Bank Full e		ו		25,342	CF		
Elevation of 100-Year Storm, X(100-actual) Design Rim Elevation for 100-Yr Storm, X(829.11 829.10						
Allowable Outflow Rate, Q(allow) = 0.15 cfs	'		I	0.311	CFS		
				0.011	010		
Peak Release Rate Provided by First Flush	Orifices	s for 100-	yr Storm:				
h = Elevation Difference from X(100) to X (bot)			4.61	FT		
Q(ff) = 0.62*A(ff)*sqrt(2gh))				0.164	CFS		
Peak Release Rate Provided by Bank Full	Orifices	for 100-v	r Storm:				
h = Elevation Difference from X(100) to X (3.58	FT		
Q(bf) = 0.62*A(bf)*sqrt(2gh))				0.087	CFS		
Q(max) = Q(allow) - Q(bf) - Q(ff) =				0.060	CFS		
Maximum Head for Orifice Equation:							
Elevation Difference from X(100) to X (BF)				2.56	FT		
Orifice Area Required							
A = Q/(0.62*sqrt(2gh))				0.008	SF		
Number of Orifice Holes Required							
Hole Diameter (at BF elev.) 0.75			Hole Area =	0.0031	SF		
Holes =A/.0031				2.45	HOLES		
			therefore, use	2	HOLES		
Reals Relation Rate Resulted by 400 VR O	· · · · · · · ·		Channer				
Peak Release Rate Provided by 100-YR O A(100) = # holes * (hole area)	Thes to	r 100-yr	Storm:	0.0061	SF		
$Q(100) = 0.62^{*}A^{*}sqrt(2gh)$				0.0001	CFS		
				0.00			
Q(out) = Q(100) + Q(BF) + Q(ff)=				0.30	CFS		
Q(out) < Q(allow) :	0.30	<=	0.31	ок			

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CLIENT TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE



REVISIONS	
OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
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SPA/WCWRC RESUBMITTAL	4/7/2022

ORIGINAL ISSUE DATE:

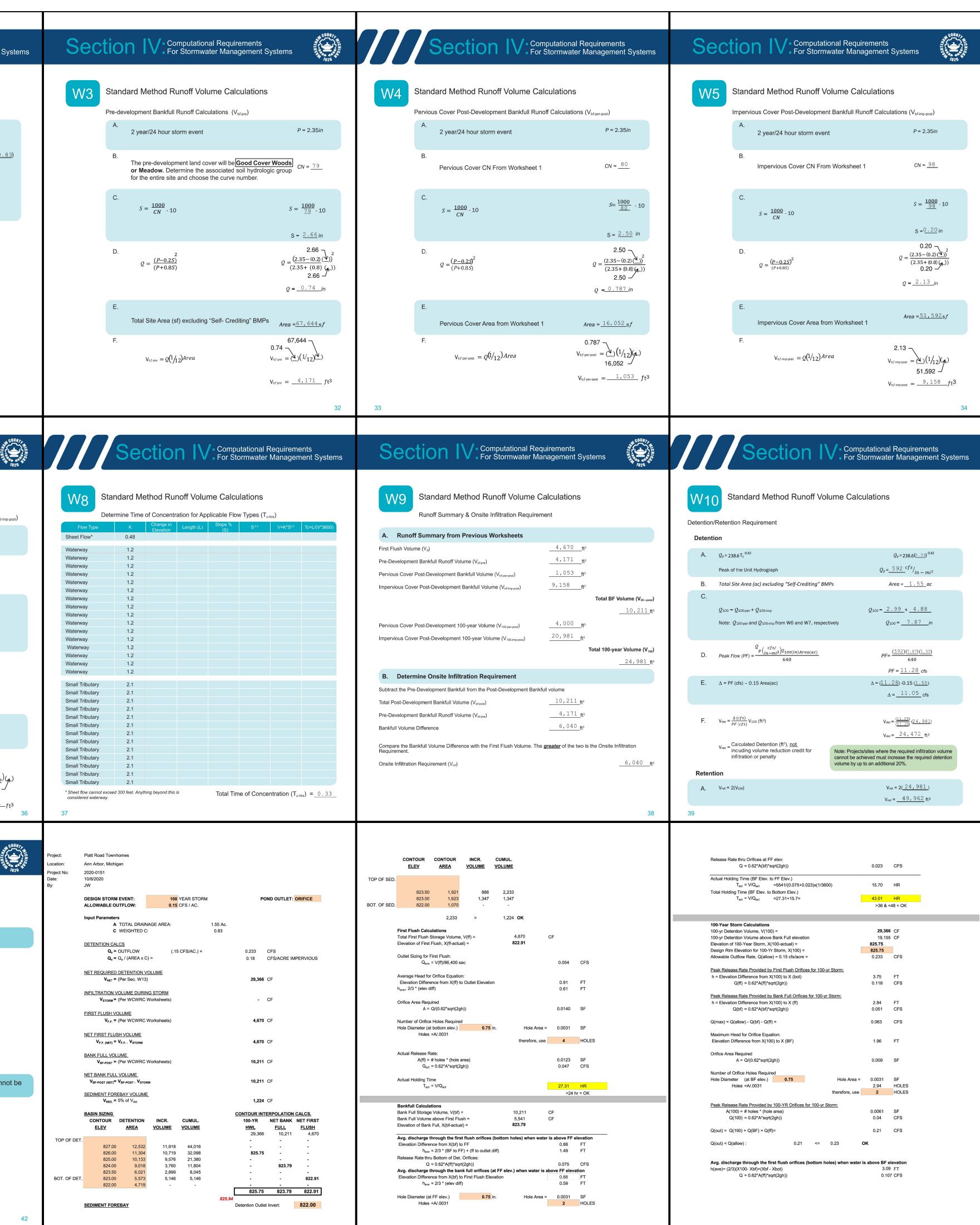
SEPTEMBER, 2020 DRAWING TITLE

WCWRC **WORKSHEETS -NORTH BASIN**

PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER	R:

P-7.3

	Ction IV Computational Requirements For Stormwater Management Systems	Section IV: Computational Requirements For Stormwater Management	t Sy
STAND VOLUN	ARD METHOD RUNOFF IE WORK SHEETS W1 Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients	W2 Standard Method Runoff Volume Calculations First Flush Runoff Calculations (Vn)	
	Total Site Area = 1.55 ac Total Site Area Excluding "Self- Crediting" BMPs = 1.55 ac ^A Cover Type Soil Type Area (ft ²) Area(ac) Runoff Coefficient (c) (C) (Area) Pervious D 16,052 0.37 0.45 7,223.4	A. $V_{ff} = (1'') \left(\frac{1'}{12''}\right) \left(\frac{43560ft^2}{1ac}\right) AC \qquad \qquad V_{ff} = (1'') \left(\frac{1'}{12''}\right) \left(\frac{43560ft^2}{1ac}\right) (\underline{1.55}) (1.55$	<u>0.8</u>
Rational Method Variables ^B	Pervious D 16,052 0.37 0.45 7,223.4 Impervious D 51,592 1.18 0.95 49,012.4		
Vatio	Total - Σ(C)(Area) = 56, 235.8	V _{ff} = <u>4,670</u> ft ³	
	Area Total - \sum ac or \sum sf =67,644.0Weighted C - \sum (C)(Area)/ \sum ac or \sum sf =0.83Pervious Cover TypeSoil TypeArea (ft²)Area(ac)Curve Number(CN) (Area)	A = Total Site Areas (ac) excluding "Self-Crediting" BMPs from Worksheet 1 C= Weighted Runoff Coefficient from Worksheet 1	
Variables ^c	Pervious D 16,052 0.37 80 1,284,160		
	$Total - \Sigma(CN)(Area) = 1,284,160$ $Area Total - \Sigmaac \text{ or } \Sigmasf = 16,052$ $Weighted CN - \Sigma(CN)(Area)/\Sigmaac \text{ or } \Sigmasf = 80$		
NRCS Variables ^c	Impervious Cover TypeSoil TypeArea (ft²)Area(ac)Curve Number(CN) (Area)ImperviousD51,5921.18985,056,016Impervious		
^A Use this at ^B Required	Total - $\Sigma(CN)(Area) = 5,056,016$ for first flush runoff calculations for bankfull and 100-year runoff calculations Weighted CN - $\Sigma(CN)(Area) = 5,056,016$ $Area Total - \Sigmaac or \Sigmasf = 51,592$ 98	31	
7	Section IV- Computational Requirements For Stormwater Management Systems	Section IV Computational Requirements For Stormwater Management Systems	MISHTENG
W6	Standard Method Runoff Volume Calculations	W7 Standard Method Runoff Volume Calculations	
	Pervious Cover Post-Development 100-year Storm Runoff Calculations ($V_{100-per-post}$) A. 100-year Storm Event $P = 5.11in$	Impervious Cover Post-Development 100-year Storm Runoff Calculations (V_1) A. 100-year Storm Event $P = 5.11in$)0-imp
	В.	В.	
	Pervious Cover CN From Worksheet 1 $CN = \frac{80}{2}$	Impervious Cover CN From Worksheet 1 $CN = 98$	
	C. $S = \frac{1000}{CN} - 10$ $S = \frac{1000}{80} - 10$ $S = \frac{2.50}{10} \text{ in}$	C. $S = \frac{1000}{CN} - 10$ $S = \frac{1000}{98} - 10$ $S = \frac{0.20}{98}$ in	
	D. $Q_{100-per} = \frac{(P-0.2S)^2}{(P+0.8S)^2}$ $Q_{100-per} = \frac{2.50}{(5.11-(0.2)(2))}^2$ $Q_{100-per} = \underline{2.99} \text{ in}$	D. $Q_{100-imp} = \frac{(P-0.2S)^2}{(P+0.8S)^2}$ $Q_{100-imp} = \frac{(5.11-(0.2))}{(5.11+0.8)}$ $Q_{100-imp} = -4.88 in$	2
	E. Pervious Cover Area from Worksheet 1 $Area = 16,052 \text{ sf}$	E. Impervious Cover CN From Worksheet 1 Area = $51,592$ sf	
	F. $V_{100-per-post} = Q(1/_{12})Area$ $V_{100-per-post} = (1/_{12})(1/_{12})(4)$ $V_{100-per-post} = -\frac{4,000}{ft^3}$	F. $V_{100-imp:post} = Q(1/12)Area$ $V_{100-imp:post} = \underbrace{Q(1/12)}_{100-imp:post} = \underbrace{20, 98}_{100-imp:post}$	<u></u>
Se	Ction IV Computational Requirements For Stormwater Management Systems	Section IV: Computational Requirements For Stormwater Management Systems	WINSHTENGA WINSCOMMAN
	Standard Method Runoff Volume Calculations	W13 Summary Site Summary of Infiltration & Detention	
W11	Applicable BMPs and Associated Volume Credits	A. Stormwater Management Summary	
etermine	roposed BMP ^A Area (ft ²) Storage Volume ^B (ft ³) Infiltration Rate Volume During Reduction ^D (ft ³)	Minimum Onsite Infiltration Requirement, V _{inf} 6,040 ft ³	
etermine Pi Pervious P Bed	Proposed BMP ^A Area (ft²) Volume ^a (ft³) Infiltration Rate (in/hr) Volume During Storm ^c (ft³) Infiltration Rate Reduction ⁰ (ft³)	Decigned/Drovided Infiltration Volume	
etermine Pr Pervious P Bed Infiltration I Subsurface Infiltration	Proposed BMP ^A Area (ft ²) Volume ^ā (ft ³) Surface ¹ Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft ³) Infiltration Volume Reduction ⁰ (ft ³) avement w/Infiltration Image: Soil Image: Soil <td>Designed/Provided Infiltration Volume 0 ft³ % Minimum Required Infiltration Provided 0 %</td> <td></td>	Designed/Provided Infiltration Volume 0 ft ³ % Minimum Required Infiltration Provided 0 %	
etermine Pervious P Bed Infiltration Subsurface Infiltration Bioretentio Rain Garde	Proposed BMP ^A Area (ft ²) Volume ^ā (ft ³) Surface ¹ , Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft ³) Infiltration Volume Reduction ⁰ (ft ³) avement w/Infiltration Image: Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft ³) Infiltration ⁰ (ft ³) Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Infiltration Bed Image: Soil Imag		
ermine Provident ervious P ed filtration 1 oretention ain Garde y Well oswale	Proposed BMP^ Area (ft²) Volume ^ā (ft³) Surface ¹ Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft³) Infiltration Rate Reduction ⁰ (ft³) avement w/Infiltration Image: Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft³) Infiltration ⁰ (ft³) Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image:	% Minimum Required Infiltration Provided%	
Pervious P Bed Infiltration I Subsurface Infiltration ' Bioretentio Rain Garde Dry Well Bioswale Vegetated	Proposed BMP^A Area (ft²) Volume ^ă (ft³) Surface ¹ , Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft²) Infiltration Reduction ² (ft²) avement w/Infiltration Image: Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft²) Infiltration ² Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil	% Minimum Required Infiltration Provided 0 % Total Calculated Detention Volume, V _{det} 24,472 ft³ Net Required Detention Volume 24,472 ft³ (V _{det} - Designed/Provided Infiltration Volume) 24,472 ft³ B. Detention Volume Increase for sites where the required infiltration volume can	nno
etermine Pi Peed offitration I subsurface offitration ' subsurface offitration ' subsurface offitration ' subsurface offitration ' subsurface offitration I subsurface offitration ' subsurface offitration I subsurface offitration I subsurface offi	Proposed BMP^A Area (ft²) Volume ^ă (ft³) Surface ¹ Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft²) Infiltration Reduction ² (ft³) avement w/Infiltration Image: Soil Infiltration Rate (in/hr) Volume During Storm ^c (ft²) Infiltration ² (ft²) Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Basin Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil Image: Soil	% Minimum Required Infiltration Provided 0 % Total Calculated Detention Volume, V _{det} 24,472 ft ³ Net Required Detention Volume 24,472 ft ³ (V _{det} - Designed/Provided Infiltration Volume) 24,472 ft ³ B. Detention Volume Increase for sites where the required infiltration volume calculated achieved	nno
Complete ch Storage volu	coposed BMP^A Area (ft°) Volume ⁵ (ft°) Infiltration Rate (m/hr) Volume During Storm ⁶ (ft°) Total Volume Reduction ⁹ (ft°) avement w/Infiltration Image: Soil Image: Soil Image: Soil Image: Soil Volume During Storm ⁶ (ft°) Image: Soil Basin Image: Soil Image: Soi	% Minimum Required Infiltration Provided 0 % Total Calculated Detention Volume, V _{det} 24,472 ft³ Net Required Detention Volume 24,472 ft³ (V _{det} - Designed/Provided Infiltration Volume) 24,472 ft³ B. Detention Volume Increase for sites where the required infiltration volume can	nnc
Determine Pervious P Bed Infiltration I Subsurface Infiltration I Bioretentio Rain Garde Dry Well Bioswale Vegetated Green Roc Green Roc	coposed BMP ³ Area (ft ²) Volume ⁶ (ft ²) Infiltration Rate (in/hr) Volume During Storm ⁶ (ft ²) Infiltration Rate Reduction ⁹ (ft ²) avement w/Infiltration Image: Solid	% Minimum Required Infiltration Provided 0 % Total Calculated Detention Volume, V _{det} 24,472 ft ³ Net Required Detention Volume 24,472 ft ³ (V _{det} - Designed/Provided Infiltration Volume) 24,472 ft ³ B. Detention Volume Increase for sites where the required infiltration volume calculated achieved % % Required Infiltration NOT provided	nnc

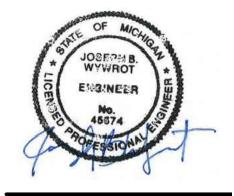


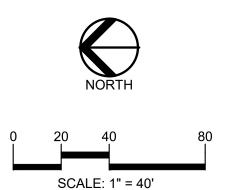
Detent	ion	
Α.	$Q_{\rm p}$ = 238.6 T _c ^{-0.82}	$Q_p = 238.6(0.33)^{-0.82}$
	Peak of the Unit Hydrograph	$Q_{\rm p} = \frac{592}{c} \frac{cfs}{in - mi^2}$
В.	Total Site Area (ac) excluding "Self-Crediting" BMI	$Ps \qquad Area = _1.55_ac$
C.		
	$Q_{100} = Q_{100\text{-per}} + Q_{100\text{-imp}}$	$Q_{100} = 2.99 + 4.88$
	Note: $\mathcal{Q}_{100\text{-per}}$ and $\mathcal{Q}_{100\text{-imp}}$ from W6 and W7, respect	ively $Q_{100} = 7.87$ in
D.	$Peak Flow (PF) = \frac{\mathcal{Q}_{p} \binom{cfs}{(in-mi^{2})} \mathcal{Q}_{100}(in)Area(ac)}{640}$	$PF = \frac{(592)(7.87)(1.55)}{640}$
	640	FF = 11.28 cfs
E.	$\Delta = PF (cfs) - 0.15 Area(ac)$	$\Delta = (11.28) \cdot 0.15 (1.55)$
L.		$\Delta = \frac{11.05}{\text{ cfs}}$
F.	$V_{det} = \frac{\Delta (cfs)}{PF (cfs)} V_{100} (ft^3)$	$V_{det} = \frac{(11.05)}{(11.28)} (24,981)$
	PF (CJS)	$V_{det} = 24, 472$ ft ³
	V _{det} = Calculated Detention (ft ³), <u>not</u> including volume reduction credit for	
	infiltration or penalty	Note: Projects/sites where the required infiltration volume cannot be achieved must increase the required detention volume by up to an additional 20%.
Reten	tion	
А.	V _{ret} = 2(V ₁₀₀)	V _{ret} = 2(<u>24</u> , 981)
		V _{ret} = <u>49,962</u> ft ³
39		

Release Rate thru Orifices at FF elev:			
Q = 0.62*A(bf)*sqrt(2gh))		0.023	CFS
Actual Holding Time (BF Elev. to FF Elev.) $T_{act} = V/Q_{act} = 5541/(0.075+0.023)x(1/3)$ Total Holding Time (BF Elev. to Bottom Elev.)	600)	15.70	HR
T _{act} = V/Q _{act} =27.31+15.7=		43.01	HR
		>36 & <4	18 = OK
100-Year Storm Calculations			
100-yr Detention Volume, V(100) =		29,366	
100-yr Detention Volume above Bank Full elevation		19,155	CF
Elevation of 100-Year Storm, X(100-actual) =		825.75	
Design Rim Elevation for 100-Yr Storm, X(100) =		825.75	050
Allowable Outflow Rate, Q(allow) = 0.15 cfs/acre =		0.233	CFS
Peak Release Rate Provided by First Flush Orifices for 100)-yr Storm:		
h = Elevation Difference from $X(100)$ to X (bot)		3.75	FT
Q(ff) = 0.62*A(ff)*sqrt(2gh))		0.118	CFS
Peak Release Rate Provided by Bank Full Orifices for 100-	yr Storm:		
h = Elevation Difference from X(100) to X (ff)		2.84	FT
Q(bf) = 0.62*A(bf)*sqrt(2gh))		0.051	CFS
Q(max) = Q(allow) - Q(bf) - Q(ff) =		0.063	CFS
Maximum Head for Orifice Equation:			
Elevation Difference from X(100) to X (BF)		1.96	FT
Orifice Area Required			
A = Q/(0.62*sqrt(2gh))		0.009	SF
Number of Orifice Holes Required			
Hole Diameter (at BF elev.) 0.75	Hole Area =	0.0031	SF
Holes =A/.0031		2.94	HOLES
	therefore, use	2	HOLES
Peak Release Rate Provided by 100-YR Orifices for 100-yr	Storm		
A(100) = # holes * (hole area)		0.0061	SF
Q(100) = 0.62*A*sqrt(2gh))		0.04	CFS
			050
Q(out) = Q(100) + Q(BF) + Q(ff) =		0.21	CFS
Q(out) < Q(allow) : 0.21 <=	0.23	ок	
	L - L -) L		
Avg. discharge through the first flush orifices (bottom h(ave)= (2/3)(X100- Xbf)+(Xbf - Xbot)	noles) when wate	r is above BF ei 3.09	
$Q = 0.62^*A(ff)^*sqrt(2gh))$		0.107	CFS

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CLIENT TROWBRIDGE COMPANIES

2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE



REVISIONS	
OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
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SPA/WCWRC RESUBMITTAL	4/7/2022

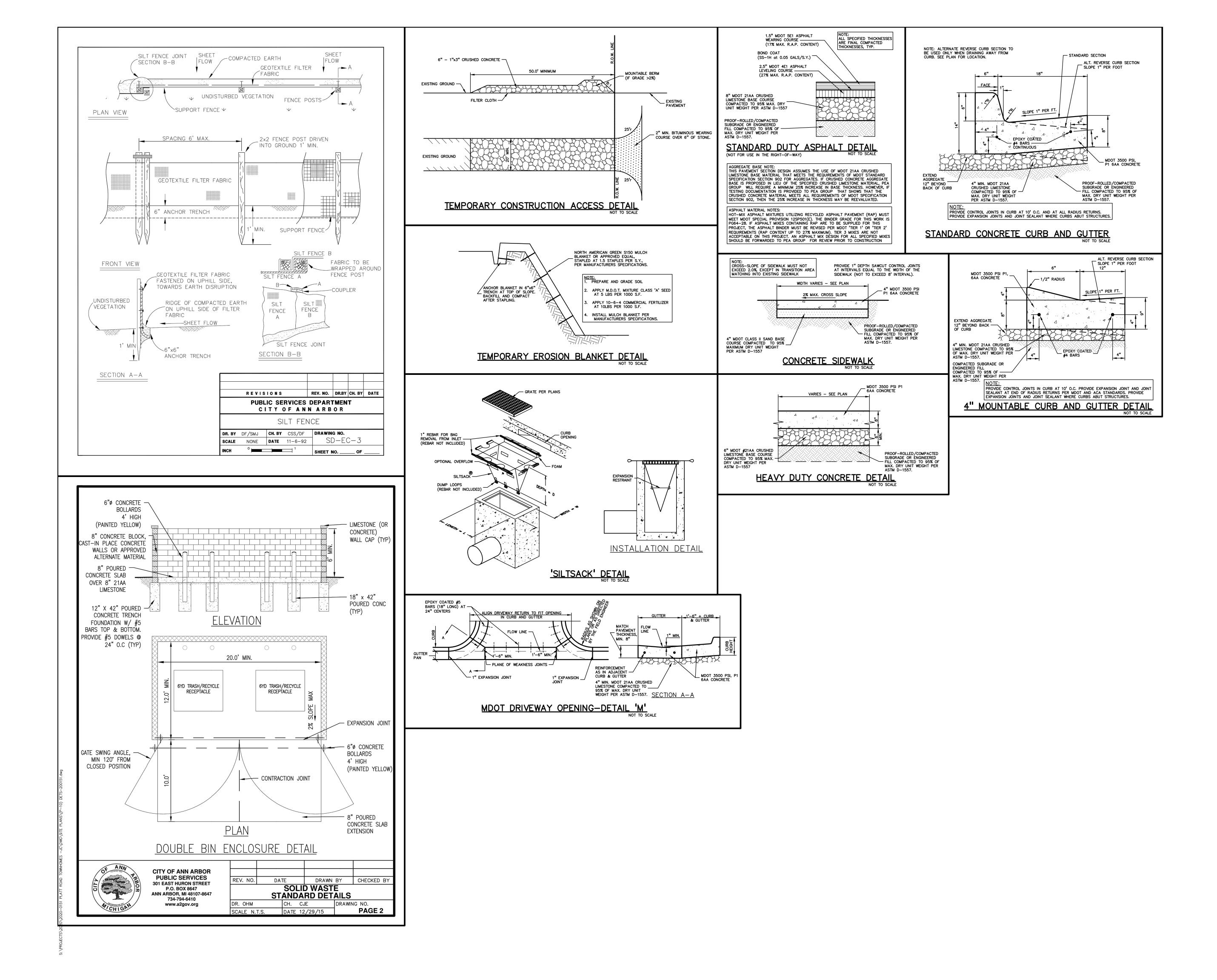
ORIGINAL ISSUE DATE:

SEPTEMBER, 2020 DRAWING TITLE

WCWRC **WORKSHEETS -SOUTH BASIN**

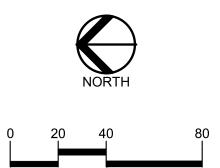
PEA JOB NO. 2020-0151 P.M. JC DN. JW DES. JW DRAWING NUMBER:

P-7.4











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CAUTION!!

SCALE: 1" = 40'



TROWBRIDGE COMPANIES 2617 BEACON HILL DRIVE AUBURN HILLS, MI 48326

PROJECT TITLE



REVISIONS	
OWNER REVIEW	9/18/2020
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SPA/WCWRC RESUBMITTAL	4/7/2022

ORIGINAL ISSUE DATE: SEPTEMBER, 2020

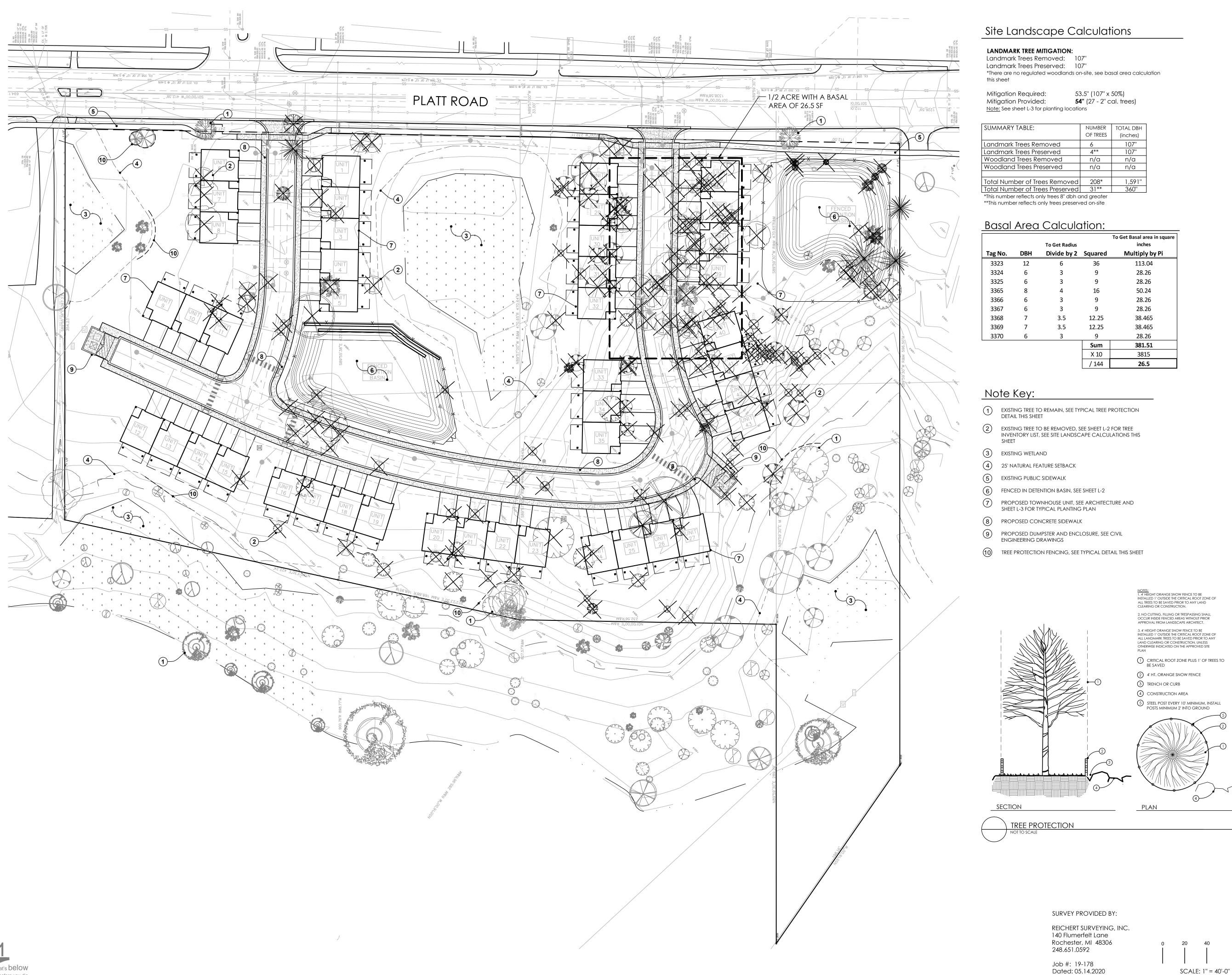
DRAWING TITLE

NOTES AND

DETAILS

PEA JOB NO. 2020-0151 P.M. DN. JW DES. JW DRAWING NUMBER:

P-8.0





			To Get Basal area in square
	To Get Radius		inches
DBH	Divide by 2	Squared	Multiply by Pi
12	6	36	113.04
6	3	9	28.26
6	3	9	28.26
8	4	16	50.24
6	3	9	28.26
6	3	9	28.26
7	3.5	12.25	38.465
7	3.5	12.25	38.465
6	3	9	28.26
		Sum	381.51
		X 10	3815
		/ 144	26.5





12.23.2020 Pre-submittal Meeting 03.05.2021 Site Plan Review 12.09.2021 Revision 04.06.2022 Revision - Site Plan Approval

Project:

Issued For:

Platt Road Townhomes Ann Arbor, Michigan

Project Sponsor:

Trowbridge Homes 2617 Beacon Hill Drive Auburn Hills, MI 48326

Sheet Name:

Tree Preservation & Removal Plan

NOT FOR CONSTRUCTION

Seal: GRA JG Drawn: JG Checked: 12.2020 Date: 1'' = 40'-0'' Scale: Project Number: 20.050 Sheet Number: L-] © 2020 Vert Verde Landscape Architecture, LLC

3101 826.73 2 3102 824.14 1 3103 820.73 17 3104 819.66 16 3105 819.19 1 3106 820.77 7" 3107 820.41 1 3108 820.76 1 3109 821.14 1 3110 822.85 1 3111 823.49 10 3112 822.82 7 3113 822.42 1 3114 819.44 20 3115 820.11 7 3116 821.09 7 3117 821.70 8 3118 821.09 1 3119 820.64 6 3120 819.18 1 3121 819.20 10" 3122 821.63 1 3123 819.90 1 3124 822.18 1 3125 821.63 1 3126 821.63 1	DESC. 10" WALNUT 24" MAPLE 14" 22" ELM 14" 22" ELM 17" BOXELDER 16" WILLOW 7" ELM 7" 13" MAPLE 6" MAPLE 6" MAPLE 6" MAPLE 6" MAPLE 6" ELM 10" WALNUT 7" WALNUT 11" MAPLE 20" WILLOW 7" CHERRY 7" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE 14" MAPLE	COND. REMOVE G X G X F	TAG #ELEV.3166829.803167828.923168824.383169825.033170826.123171825.833172826.493173825.773174827.063175826.653176825.603177824.173178828.983179828.763180822.123181822.413182822.103183822.083184821.993185822.84	9" ELM 9" ELM 16" CHERRY 8" CHERRY 7" CHERRY 15" WALNUT 6" 6" CHERRY 6" 6" CHERRY 6" 6" CHERRY 6" 7" CHERRY 6" 12" CHERRY 6" 12" CHERRY 6" APPLE 8" ELM 11" BOXELDER 6" CHERRY 6" CHERRY 7" CHERRY 7" CHERRY	COND. G G G G G G G G G G G G G	X X	TAG #ELEV.3231823.053232828.063233823.163234823.643235823.893236831.903237832.193238828.993239830.863240826.783241832.413243832.74	DESC. 9" ELM 7" WALNUT 13" BOXELDER 10" BOXELDER 6" MAPLE 18" MAPLE 9" HICKORY 11" 11" CHERRY 14" PINE 9" CHERRY 12" PINE 7" HICKORY	COND. F G F F G G G G F F F G G G G G G G G G G G G G	x x	TAG #ELEV.3296835.303297835.493298835.563299836.663300836.733301835.493302836.633303837.213304836.25	DESC. 10" ELM 7" WALNUT 7" WALNUT 11" ELM 6" 9" 9" 9" ELM 10" BOXELDER 9" 9" ELM 11" CEDAR 13" ELM	COND. F G G F G F G G G G G G G G G G G G G G G G G	X X	TAG #ELEV.3361830.813362830.713363829.243364829.493365829.723366829.983367830.133368830.102369829.23	DESC. 8" ELM 8" 12" ELM 8" ELM 9" ELM 6" ELM 6" ELM 7" ELM	COND. G G G G G G G G G G G G G G G F	REMOVE X X X X X X X X X X X X X X X X X X X
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3110 822.85 3111 823.49 10 3112 822.82 7 3113 822.42 1 3114 819.44 20 3115 820.11 7 3116 821.09 7 3117 821.09 7 3118 821.09 1 3119 820.64 6 3120 819.18 1 3121 819.20 10" 3123 819.90 1 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 1	6" ELM 10" WALNUT 7" WALNUT 11" MAPLE 20" WILLOW 7" CHERRY 7" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	G G G G P G G G G G G G G G F F	3176825.603177824.173178828.983179828.763180822.123181822.413182822.103183822.083184821.99	6" 12" CHERRY 6" APPLE 8" ELM 11" BOXELDER 6" CHERRY 6" CHERRY 7" CHERRY	G G G F G	X X X X X	3241832.413242832.35	12" PINE						1 1	3369 829.23	7" ELM	F	X
3111 823.49 10 3112 822.82 7 3113 822.42 1 3114 819.44 20 3115 820.11 7 3116 821.09 7 3117 821.70 8 3118 821.09 1 3119 820.64 6 3120 819.18 1 3121 819.20 10" 3122 821.05 1 3123 819.90 1 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3133 826.94 20 3134 826.78 1	10" WALNUT 7" WALNUT 11" MAPLE 20" WILLOW 7" CHERRY 8" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	G G G P G G G G G G G F F	3177824.173178828.983179828.763180822.123181822.413182822.103183822.083184821.99	6" APPLE 8" ELM 11" BOXELDER 6" CHERRY 6" CHERRY 7" CHERRY	G G F G	X X X	3242 832.35		G		3305 836.27	13" ELM	G	X	3370 829.11	6" ELM	G	X
3112 822.82 7 3113 822.42 1 3114 819.44 20 3115 820.11 7 3116 821.09 7 3117 821.09 7 3118 821.09 1 3119 820.64 6 3120 819.18 17 3121 819.20 10" 3123 819.90 10" 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 1	7" WALNUT 11" MAPLE 20" WILLOW 7" CHERRY 7" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	G G P G G G G G G G F F	3178828.983179828.763180822.123181822.413182822.103183822.083184821.99	8" ELM 11" BOXELDER 6" CHERRY 6" CHERRY 7" CHERRY	G F G	X X		7" HICKORY		X	3306 835.42	14" ELM	G	X	3371 829.25	7" ELM	G	X
3113 822.42 1 3114 819.44 20 3115 820.11 7 3116 821.09 7 3117 821.70 8 3118 821.09 1 3119 820.64 6 3120 819.18 17 3121 819.20 10" 3122 821.05 1 3123 819.90 1 3124 822.18 1 3125 821.63 0 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3133 826.94 20 3134 826.78 1	11" MAPLE 20" WILLOW 7" CHERRY 8" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	G P G G G G G F F	3179828.763180822.123181822.413182822.103183822.083184821.99	11" BOXELDER 6" CHERRY 6" CHERRY 7" CHERRY	F G	X		6" 6" APPLE	G F	X	3307 836.59 3308 834.96	11" 13" APPLE 6" ELM	P C	X	3372 828.70 3373 826.90	8" ELM 16" ELM	G	X X
3114 819.44 20 3115 820.11 7 3116 821.09 7 3117 821.70 8 3118 821.09 1 3119 820.64 6 3120 819.18 17 3121 819.20 10" 3123 819.90 10" 3124 822.18 11 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 1	20" WILLOW 7" CHERRY 7" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	P G G G G G P F F	3180822.123181822.413182822.103183822.083184821.99	6" CHERRY 6" CHERRY 7" CHERRY			3244 833.44	10" WALNUT	G	×	3309 834.37	11" ELM	G	x	3374 827.08	18" ELM	G	
3115 820.11 7 3116 821.09 7 3117 821.70 8 3118 821.09 1 3119 820.64 6 3120 819.18 17 3121 819.20 10" 3122 821.05 1 3123 819.90 1 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	7" CHERRY 7" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	G G G G F F F	3181822.413182822.103183822.083184821.99	6" CHERRY 7" CHERRY			3245 832.72	8" 9" APPLE	G	x	3310 834.95	6" ELM	G	x		9" 10" 14" BOXELDER	P	X
3116 821.09 7 3117 821.70 8 3118 821.09 1 3119 820.64 6 3120 819.18 17 3121 819.20 10" 3123 819.90 10" 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 1	7" CHERRY 8" CHERRY 18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	G G G G F F F	3182822.103183822.083184821.99	7" CHERRY			3246 832.56	6" 7"APPLE	F	X	3311 835.27	7" ELM	G	x	3376 827.58	15" BOXELDER	P	X
3117 821.70 8 3118 821.09 1 3119 820.64 6 3120 819.18 12 3121 819.20 10" 3122 821.05 1 3123 819.90 1 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 1	18" MAPLE 6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	G P F F	3183822.083184821.99		G		3247 832.24	6" 6" 6" 6" PINE	F	X	3312 835.63	7" ELM	G	X	3377 827.10	7" 12" BOXELDER	F	x
3119 820.64 6 3120 819.18 12 3121 819.20 10" 3122 821.05 3 3123 819.90 3 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	6" 9" APPLE 12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	P F F			G		3248 831.39	10" CHERRY	F	X	3313 835.60	7" ELM	G	x	3378 826.55	9" 11" BOXELDER	F	X
3120 819.18 12 3121 819.20 10" 3122 821.05 10" 3123 819.90 112 3124 822.18 11 3125 821.63 11 3126 821.63 11 3127 822.48 66 3128 822.52 66 3129 822.61 66 3130 827.63 11 3131 828.05 11 3132 827.12 11 3133 826.94 20 3134 826.78 9" 3135 826.78 11	12" WILLOW 0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	F F	3185 822.84	7" 7" CHERRY	G		3249 829.58	16" CHERRY	G		3314 835.80	9" 10" ELM	G	X	3379 826.55	7" BOXELDER	G	Х
3121 819.20 10" 3122 821.05 10" 3123 819.90 10" 3124 822.18 11 3125 821.63 10" 3126 821.63 11 3127 822.48 60 3128 822.52 60 3129 822.61 60 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	0" 16" WILLOW 6" APPLE 14" ELM 10" MAPLE 6" MAPLE	F F F		8" CHERRY	G		3250 828.61	13" CHERRY	Р	X	3315 834.15	9" ELM	G	X	3380 828.92	10" 11" BOXELDER	F	X
3122 821.05 3123 819.90 3124 822.18 3125 821.63 3126 821.63 3127 822.48 3128 822.52 3129 822.61 3131 828.05 3132 827.12 3133 826.94 3135 826.78	6" APPLE 14" ELM 10" MAPLE 6" MAPLE	F F	3186 822.91	8" CHERRY	G		3251 827.66	9" 9" CHERRY	F	X	3316 833.56	17" ELM	G	X	3381 827.97	6" 7" BOXELDER	G	X
3123 819.90 3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	14" ELM 10" MAPLE 6" MAPLE		3187 824.47	6" 6" 7" CHERRY	G		3252 825.77	13" BOXELDER	Р		3317 831.97	7" ELM	G	X	3382 828.24	20" ELM	G	X
3124 822.18 1 3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	10" MAPLE 6" MAPLE	· · · · · · · · · · · · · · · · · · ·	3188 826.02	6" ELM	G	X	3253 826.38	6" CHERRY	G		3318 831.25	8" ELM	G	X	3383 827.74	10" 10" BOXELDER	F	X
3125 821.63 1 3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	6" MAPLE	G	3189 823.70	7" CHERRY	G		3254 827.07	14" BOXELDER	P	<u> </u>	3319 831.66	7" ELM	G	X	3384 827.86	14" BOXELDER	F	X
3126 821.63 1 3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1		G	3190 823.58	6" 7" 7"CHERRY	G		3255 828.10	10" BOXELDER	F		3320 831.64	9" ELM	G	X	3385 827.92	15" BOXELDER	G	X
3127 822.48 6 3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1		G	3191 822.91	9" 9" APPLE	G		3256 828.58	9" BOXELDER	G	X	3321 834.30	6" 7" 11" ELM	G		3386 828.91	15" BOXELDER	G	
3128 822.52 6 3129 822.61 6 3130 827.63 1 3131 828.05 3 3132 827.12 3 3133 826.94 20 3134 826.78 9" 3135 826.78 1	6" CHERRY	G	3192 823.57 3193 823.63	6" 6" 7" 7" CHERRY 7" BOXELDER	G		3257 834.99 3258 835.40	12" BOXELDER 9" CHERRY	FG	X	3322 830.45 3323 829.69	18" WALNUT 12" ELM	G		3387 828.95 3388 830.45	10" APPLE 8" ELM	P	
3129 822.61 6 3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	6" WALNUT	G	3194 822.51	6" 6" CHERRY	G		3259 835.38	7" BOXELDER	G	X	3324 830.11	6" 6" ELM	G		3389 833.42	12" BOXELDER	G F	
3130 827.63 1 3131 828.05 1 3132 827.12 1 3133 826.94 20 3134 826.78 9" 3135 826.78 1	6" WALNUT	G	3195 822.28	9" CHERRY	G		3260 834.93	8" WALNUT	G	x	3325 830.13	6" 6" ELM	G			14" 14" 17" POPLAR	F	
3131 828.05 3132 827.12 3133 826.94 20 3134 826.78 9" 3135 826.78 1	11" 16" ELM	G X	3196 821.85	11" 11" MAPLE	G		3261 833.29	6" 6" APPLE	F		3326 835.05	7" ELM	G		3391 832.90	26" POPLAR	F	X
3132 827.12 3133 826.94 20 3134 826.78 9" 3135 826.78 1	14" ELM	F X	3197 823.41	7" MULBERRY	G		3262 832.56	6" CHERRY	G	x	3327 830.96	10" ELM	G	x	3392 826.58	10" LOCUST	G	x
3134 826.78 9" 3135 826.78 1	18" ELM	G X	3198 822.50	9" 11" CHERRY	G		3263 832.38	6" 7" CHERRY	G	Х	3328 831.07	7" ELM	G	X	3393 823.15	11" ELM	G	
3135 826.78 1	20" HICKORY	G	3199 822.23	6" CHERRY	G		3264 831.45	6" CHERRY	G	X	3329 833.01	10" ELM	G	X	3394 822.98	7" 7" CHERRY	G	
	9" 10" POPLAR	G	3200 820.33	6" CHERRY	G		3265 834.65	9" BOXELDER	G	X	3330 831.84	12" ELM	G	X	3395 822.06	7" CHERRY	G	
3136 826.75	12" POPLAR	G	3201 820.89	6" ELM	G		3266 834.67	6" BOXELDER	G	X	3331 832.97	8" 8" 9" ELM	G	X	3396 821.75	9" CHERRY	G	
	10" APPLE	F	3202 819.04	6" 7" WILLOW	G		3267 834.47	7" CHERRY	G	X	3332 831.37	9" 13" ELM	G	<u> </u>	3397 820.85	7" APPLE	G	
	10" APPLE	F		10" 12" 16" 19" WILLOW	Р		3268 834.48	8" CHERRY	G	X	3333 833.37	8" ELM	G	<u> </u>	3398 820.73	6" 6" 6" 7" CHERRY	G	
	6" 7" APPLE	G	3204 820.62	9" CHERRY	F		3269 834.53	9" CHERRY	F	X	3334 834.91	9" 9" ELM	G		3399 819.84	9" BOXELDER	G	
	5" 7" 7" 7" MAPLE	G X	3205 825.13	13" 13" APPLE	P		3270 834.14	7" CHERRY	G	X	3335 832.22	6" 6" CHERRY	G		3400 820.65	14" ELM	G	+
	7" WALNUT 7" WALNUT	G X	3206 825.66 3207 825.75	8" ELM 8" 14" ELM	G		3271 833.77	6" 11" BOXELDER 10" CHERRY	F	X	3336 829.87	12" BOXELDER			3401 822.67	13" 17" BOXELDER 10" BOXELDER	F	+
	10" 11" APPLE	G X F X	3207 825.75 3208 825.86	9" 10" 12" ELM	r c		3272 833.69 3273 829.57	7" CHERRY	G		3337 829.05 3338 829.02	10" 13" BOXELDER 7" BOXELDER	G		3402 821.17 3403 820.01	10 BOXELDER 18" BOXELDER	F	
	16" ELM	G X	3209 826.39	11" 13" ELM	G		3274 829.08	7" CHERRY	G	X	3339 828.32	14" BOXELDER	P		3404 821.52 7"	7" 7" 7" 12" BOXELDER	2 P	
	6" 8" ELM	G X	3210 828.46	13" CHERRY	G	x	3275 829.06	6" CHERRY	G	X	3340 826.72	7" APPLE	F		3405 823.04	7" MULBERRY	G	+
	18" 18" ELM	G X	3211 831.85	9" POPLAR	G	x	3276 828.76	6" CHERRY	G	X	3341 826.98	6" CHERRY	G	x	3406 832.61	10" MAPLE	G	x
	12" MAPLE	G X	3212 830.66	7" CHERRY	G	X	3277 828.13	7" CHERRY	G	x	3342 828.02	10" ELM	G	x	3407 824.89	7" ELM	G	x
	14" PINE	F X	3213 831.37	6" 9" 11" 11" CHERRY	G	X	3278 827.42	7" CHERRY	G	X	3343 825.72	7" ELM	G		3408 823.85	14" CHERRY	G	X
3149 827.56	18" OAK	G X	3214 831.21	6" 7" 7" CHERRY	G	Х	3279 826.63	6" CHERRY	G	X	3344 828.05	10" ELM	G	X	3409 824.69	7" BOXELDER	G	X
3150 829.52 13	13" HICKORY	G X	3215 831.31	7" APPLE	G	Х	3280 825.52	9" 15" BOXELDER	Р	X	3345 827.59	12" 12" BOXELDER	F		3410 821.29	6" 8" 8" CHERRY	G	
	11" ELM	G X	3216 830.03	6" CHERRY	G	X	3281 827.04	7" CHERRY	G	X	3346 827.81	7" BOXELDER	G	<u> </u>	3411 821.11	6" 7" CHERRY	G	
	16" WALNUT	G X	3217 829.49	10" HAWTHORNE	F	X	3282 827.75	7" CHERRY	G	X	3347 827.79	6" CHERRY	G	<u> </u>	3412 820.68	6" CHERRY	G	
	16" MAPLE	G X	3218 831.31	6" 6" CHERRY	G	X	3283 832.75	20" 20" BOXELDER	Р	X	3348 834.34	6" 8" 9" CHERRY	F		3413 820.47	6" 7" 7" CHERRY	G	<u> </u>
	6" WALNUT	G X	3219 829.04	6" MAPLE	G	X	3284 832.63	17" WALNUT	G		3349 835.07	12" BOXELDER	F		3414 820.84	6" CHERRY	G	<u> </u>
	9" WALNUT	G X	3220 826.95	8" HAWTHORNE	G		3285 832.43	10" MULBERRY	F		3350 835.05	12" BOXELDER	G		3415 821.15	7" APPLE	G	+
	6" WALNUT 10" WALNUT	G X G X	3221 826.05 3222 826.22	15" HAWTHORNE 8" HAWTHORNE	G		3286 826.71 3287 825.45	8" WALNUT 7" WALNUT	G		3351 834.90 3352 835.00	11" BOXELDER 6" 11" BOXELDER	P F	X	3416 821.69 3417 820.75	6" APPLE 8" 9" CHERRY	G	+
	" 6" 7" 10" ELM	F X	3222 826.22	7" APPLE	G		3287 825.45	10" WALNUT	G	X	3352 835.00	15" 19" ELM	G		3417 820.75	6" 6" CHERRY	G	+
	7" ELM	F X	3223 825.99		G		3289 836.16	10 WALNOT 11" ELM	G		3354 832.60	10" 13" ELM	F		3419 820.31	25" POPLAR	G	+
	13" ELM	G X	3225 824.51	6" 8" APPLE	F		3290 836.01	6" ELM	G		3355 831.36	10 13 ELM 11" ELM	G		3420 820.99	6" CHERRY	G	+
	6" ELM	G X	3226 826.20	8" ELM	G		3291 834.52	6" ELM	G		3356 832.75	8" 12" ELM	G		3421 821.20	10" BOXELDER	F	1
3162 829.11 9" 9" 10		F X	3227 820.87	7" CHERRY	G		3292 835.69	8" ELM	F	x	3357 831.81	11" ELM	G			6" 6" 7" 7"CHERRY	F	†
	10" 10" 11" CHERRY	G X	3228 821.05	7" CHERRY	G		3293 835.26	9" BOXELDER	F	x	3358 831.88	8" 10" ELM	G	x	3423 820.41	14" ELM	Р	
3164 829.96 8	10" 10" 11" CHERRY 6" WALNUT	G X	3229 821.20	6" CHERRY	G		3294 835.29	13" BOXELDER	F	X	3359 831.14	12" ELM	G	X	3424 820.45	22" POPLAR	F	
3165 829.59		G X	3230 821.83	9" CHERRY			3295 835.41										1	



Issued For: 12.23.2020 03.05.2021 Pre-submittal Meeting Site Plan Review 12.09.2021 Revision - Site Plan Approval

Project:

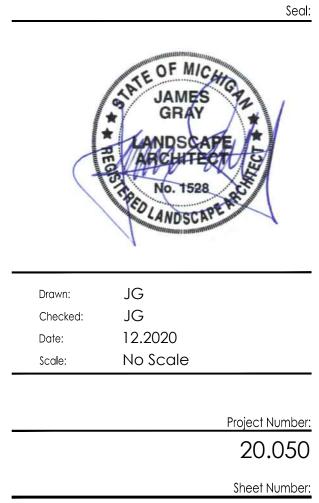
Platt Road Townhomes Ann Arbor, Michigan

Project Sponsor:

Trowbridge Homes 2617 Beacon Hill Drive Auburn Hills, MI 48326

Sheet Name:

Tree Inventory



L-2

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TAG#	ELEV.	DESC.	COND.	REMOVE
3426	820.94	14" ELM	G	
3427	819.41	14" WILLOW	F	
3428	819.29	42" WILLOW	F	
3429	820.92	25" BOXELDER	F	
3430	822.65	22" BOXELDER	Р	
3431	822.65	6" 6" 8" 9" 10" CHERRY	F	
3432	823.99	19" BOXELDER	F	X
3433	821.97	6" 7" 10" 10" CHERRY	F	
3434	821.53	7" CHERRY	G	
3435	821.30	9" BOXELDER	G	
3436	821.04	10" MAPLE	G	
3437	821.37	8" BOXELDER	G	
3438	821.26	13" ELM	G	
3439	821.28	9" BOXELDER	G	
3440	820.84	11" BOXELDER	F	
3441	820.92	8" BOXELDER	G	
3442	820.87	6" BOXELDER	G	
3443	821.48	9" BOXELDER	G	
3444	821.41	6" BOXELDER	G	
3445	821.95	7" BOXELDER	G	
3446	822.00	7" BOXELDER	G	
3447	822.41	12" ELM	G	
3448	822.96	7" BOXELDER	G	
3449	822.94	16" POPLAR	G	
3450	828.99	20" HICKORY	G	
3451	832.17	6" HICKORY	G	Х
3452	832.50	6" HICKORY	G	Х
3453	832.93	6" HICKORY	G	Х
3454	833.24	6" APPLE	G	Х
3455	828.91	13" CEDAR	G	Х
3456	829.03	13" CEDAR	F	X

NOT FOR CONSTRUCTION

FXGXGXGXGXPXPXFXGX	F		
G	G	Х	
G	G	х	
G	6	× ×	
G	0	<u>^</u>	
G	G	X	
G	G	Х	
G	Р	X	
G	Р	х	
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G	F	X	
G	G	Х	
G	F	X	
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G	G	x	
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G	<u>р</u>	× v	
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F P F	6		
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P F	F		
F	Р		
G	· ·		

General Notes

- UTILITY BOXES WILL BE SCREENED ON 3 SIDES.
- ALL DISTURBED AREAS TO BE SOD OR SEED.
- SNOW SHALL BE STORED IN BUILDING ISLANDS AND ALONG STREETS. STORAGE SHALL NOT INCLUDE DETENTION AREAS OR LANDSCAPED AREAS. • THE STREET TREE ESCROW MUST BE PAID PRIOR TO ISSUING BUILDING PERMITS. CHECKS ARE TO MADE PAYABLE TO: CITY OF ANN ARBOR AND MAILED TO SYSTEMS PLANNING UNIT, 301 E. HURON ST., PO BOX 8647, ANN ARBOR, MI 48107-8647 -- ATTN: TIFFANY GIACOBAZZI. PLEASE INCLUDE THE PROJECT NAME AND PROJECT NUMBER ON THE
- CHECK. • TREES SHALL BE PLANTED A MINIMUM OF 5'-8' FROM ALL UTILITY LEADS.

Additional Notes

<u>Continuing Care</u> Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse. All landscape materials shall be maintained by a regular program or mowing, watering, weeding, feeding and pruning. Pruning shall be minimal at the time of installation, only to remove dead or diseased branches. Subsequent pruning shall assure proper maturation of plants to achieve their approved purpose.

Replenishment All dead or diseased plant material shall be removed and replaced within six (6) months after it dies or in the next planting season, whichever occurs first.

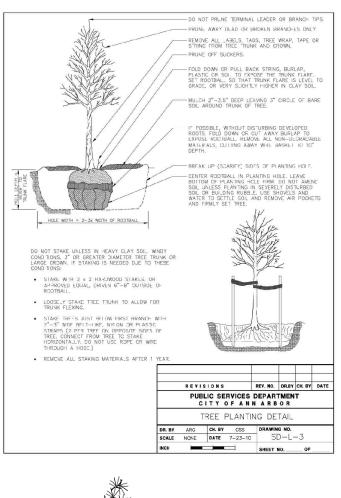
Watering This shall be accomplished by installation of hose bibs on each building. Hose bibs shall be located a minimum of 150'

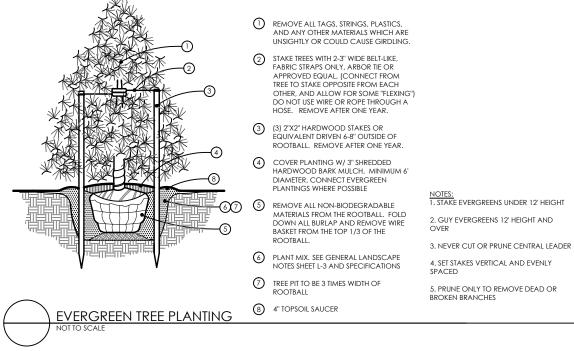
from any landscaped area.

Clay Soils Construct Earth Bed to Required Grade and Trim. Prior to Placement of Topsoil or Compost, Harrow all Earth Beds to a Minimum of 12" Depth.

<u>Fertilizer</u> Beyond Initial fertilization, all future fertilizer applications shall not contain phosphorus. No chemicals are allowed in stormwater features or buffer zones with the following exception: invasive species may be treated with chemicals by a certified applicator

Substitutions All vegetation species deviations or substitutions must be approved in writing by the City of Ann Arbor prior to planting





Detention Basin Seed Mixes:

<u>Ermrgent Wetland Seed Mix</u> Botanical Name	Common Name	PLS Ounces/Acre
Permanent Grasses/Sedges/Rusl	hes:	
Carex comosa	Bristly Sedge	2.5
Carex lacustris	Common Lake Sedge	0.2
Carex lurida	Bottlebrush Sedge	4.0
Carex vulpinoidea	Browm Fox Sedge	6.0
Eleocharis ovata	Blunt Spike Rush	1.0
Juncus effusus	Common Rush	1.0
Leersia orzyoides	Rice Cut Grass	3.0
Scirpus acutus	Hard-Stemmed Bulrush	2.5
Scirpus pungens	Chairmaker's Rush	4.0
Scripus validus	Great Bulrush	6.0
	Tota	I 30.2
Temporary Cover:		
Avena saliva	Common Oat	360.0
Lolium multiflorum	Annual Rye	104.0
	Tota	I 464.0
Forbs:		
Asclepias incarnata	Swamp Milkweed	1.5
Alisma spp.	Water Plantain	2.0
Cephalanthus occidentalis	Button Bush	1.0
Decodon verticillatus	Swamp Loosestrife	1.2
Eupatorium maculatum	Spotted Joe-Pye Weed	0.5
lris virqinica	Blue Flag Iris	6.0
Lobelia cardinalis	Cardinal Flower	0.2
Lobelia siphilitica	Great Blue Lobelia	1.5
Ludwigia alternifolia	Seedbox	0.2
Mimulus ringens	Monkey Flower	1.0
Peltandra virginica	Arrow Arum	16.0
Pontederia cordata	Pickerel Weed	10.0
	Broad-Leaf Arrowhead	2.0
Sagittaria latifolia		
	American Bur Reed	2.0
Sagittaria latifolia		
Sagittaria latifolia Sparganium americanum	American Bur Reed	4.0
Sagittaria latifolia Sparganium americanum Sparganium eurycarpum	American Bur Reed Common Bur Reed	2.0 4.0 1.0 8.0

	PLS		Seeds/SQ FT
Common Name	OUNCESACIE	See da OZ	Seedwisig Fi
jes/Rushes:			
Crested Oval Sedge	1.00	59000	1.35
	2.00	12000	0.55
Brown Fax Sedge	6.00	125000	17.22
Virginia Wild Rye	12.00	4375	1.21
Fowl Manna Grass	1.25	125000	3,59
Common Rush	1.00	281000	6.45
Torrey's Rush	0.25	11340.00	6.51
Rice Cut Grass	1.00	94500	2.17
Switch Grass	8.00	28356	5.21
Dark Green Rush	1.00	187500	4.30
Wool Grass	0.50	562500	6.46
River Bulrush	0.25	27 500	0.16
Great Bulrush	6.00	37813	5.21
Total	40.25		60.38
-			
Common Oat	360.00	8125	67.15
Annual Rye	100.00	14 188	32.57
Total	460.00		99.72
Water Plantain (Various Mix)	4.25	70175	6 85
	1.50	4540	0.16
Bidens (Various Mix)	2.00	14175	0.65
Sneezeweed	2.00	141750	6.51
Common Water Horehound	0.25	235000	1.35
Mankey Flower	1.00	283500	6.51
	0.50	36063	0.41
Pinkweed	4.00	4063	0.37
Common Arrowhead	2.00	113400	5.21
Wild Serna	1.00	1400	0.03
Purple Meadow Rue	2.00	13500	0.62
Total	20.50		28.66
	Cestad Ovel Sadge Batlehruch Sedge Brown Fox Sadge Yrgnia Wild Rye Fox Marna Gess Cammon Rush Tarey's Rush Faxe Out Gess Switch Grass David Grass David Grass David Grass Mark Gene Rush Grass Bulnach Grast Bulnach Grast Bulnach Grast Bulnach Grast Bulnach Grast Bulnach Grast Bulnach Grast Bulnach Grast Bulnach Grast Bulnach Common Oat Armual Rye Tobi Water Plantain (Various Mix) Streaz eweed Bidens (Various Mix)	PRushe:	PRushe :

Increased.

Low-Profile Prairie Seed Mix						
Botanical Name	Common Name	PLS Ounces/ Acre				
Perma nent Grasses:						
Booteloua curtipendula	Side Oats Grama	10.00				
Carex spp.	Prairie Sedge Mix	1.00				
Elymus canadensis	Canada Wild Rye	16.00				
Koeleria pyramidata	Jure Grass	2.00				
Panicum virgatum	Switch Grass	1.00				
Schizachyrium scoparium	Little Bluestem	28.00				
Sporobolus heterolepis	Prairie Dropseed	3.00				
	Total	61.00				
femporary Cover:						
Avena sativa	Common Oat	360.00				
Lolium multiflorum	Annual Rye	120.00				
	Total	480.00				
Forbs:						
Amorpha canescens	Lead Plant	1.00				
Anemone cylindrica	Thimbleweed	0.50				
Aquilegia canadensis	Wild Columbire	0.50				
Asclepias tuberosa	Butterfly Milkweed	2.00				
Aster ericoides	Heath Aster	0.25				
Aster laevis	Smooth Blue Aster	0.75				
Aster noaae-angliae	New Encl and Aster	0.25				
Baptisia lactea	White Wild Indigo	1.00				
Chamaecrista fasciculata	Partridge Pea	9.00				
Coreopsis lanceolata	Sand Coreopsis	1.50				
Coreopsis palmata	Prairie Coreopsis	1.00				
Dalea candidum	White Prairie Clover	1.50				
Dalea purpurea	Purple Prairie Clover	1.50				
Eryngium yuccifolium	Rattlesnake Master	2.50				
Kuhunia eupatoides	False Bone-Set	0.50				
Lespedeza capitata	Round-Head Bush Clover	2.00				
Liatris aspera	Rough Blazing Star	0.50				
upinus perennis	Wild Lupine	2.00				
Monarda fistulosa	Wild Bergamot	0.50				
Penstemon digitalis	Foxglove Beard Tongue	0.50				
Physostegia virginiana	False Dragonhead	0.25				
Pycnanthemum virginianum	Common Mountain Mint	1.00				
Ratibida pinnata	Yellow Coreflower	3.00				
Rudbeckia hirta	Black-Eyed Susan	2.00				
Silphium integrifolium	Rosin Weed	0.50				
Silphium terebinthinaceum	Prairie Dock	2.00				
Solidago nemoralis	Old-Field Goldenrod	0.25				
Solidago rigida	Stiff Goldenrod	1.00				
radescantia ohiensis	Common Spiderwort	0.75				
/ernonia spp.	Ironweed	1.75				
/eronicastrum virginianum	Culvers Root	0.25				
	Total	42.00				

NOT Contain Rudbeckia subtomentosa.

SEED MIX NOTES

The seed mixes shall be applied at the specified rate of for each mix. Must be installed to manufacturer specification and requirements. Seed to be covered with North American Green S150 or equivalent



LOW PROFILE PRAIRIE MIX EMERGENT WETLAND MIX

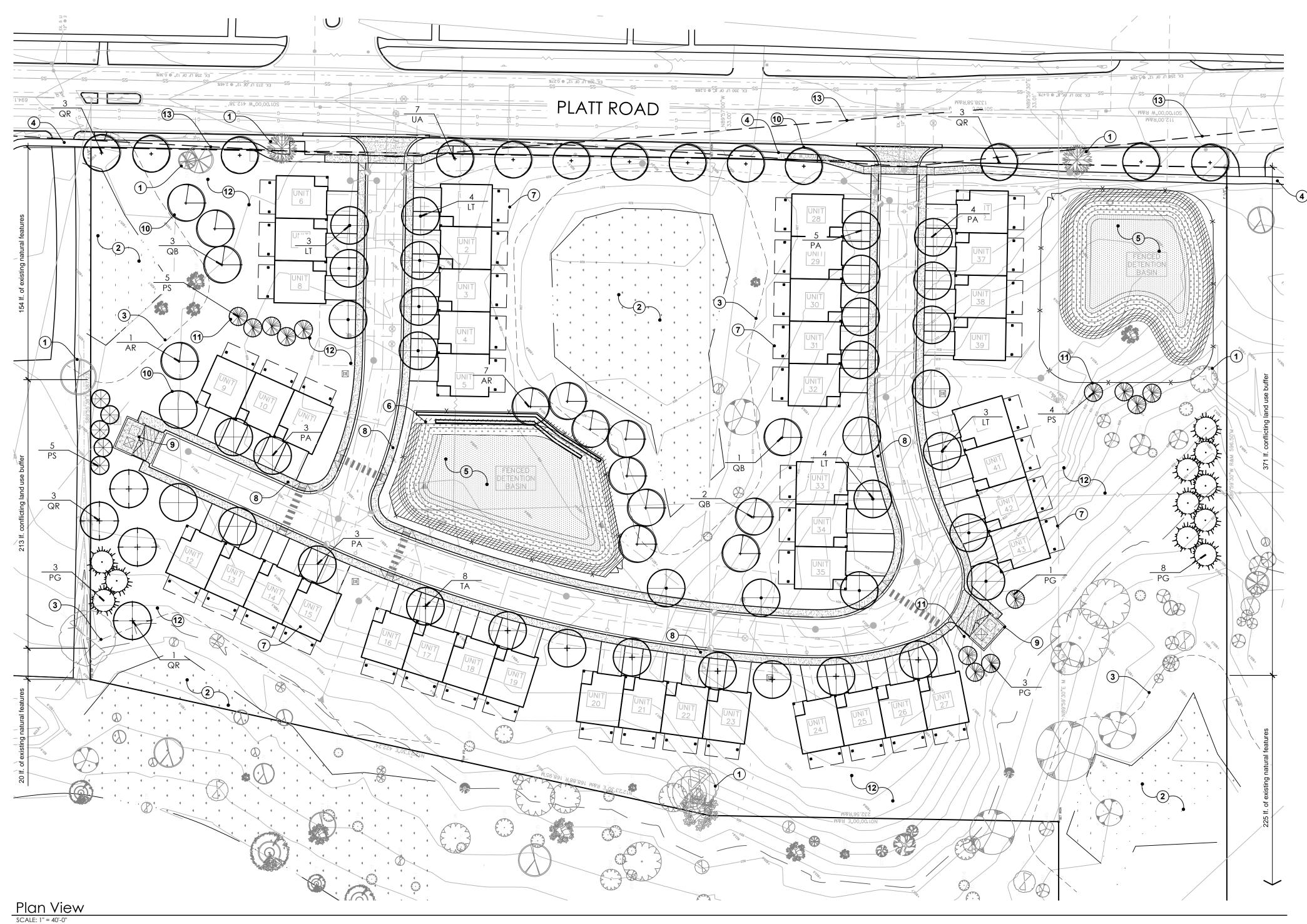
> STORMWATER MIX

NATIVE SEEDING MAINTENANCE During the first growing season, native areas should be mowed a minimum of four times to height of about 4"-6" when the growth reaches 10"-12". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations. If a mower cannot be

set high enough, a string trimmer may be used. During the second growing season, native areas should be mowed a minimum of two times to height of about 8" when the growth reaches 10"-18". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations.

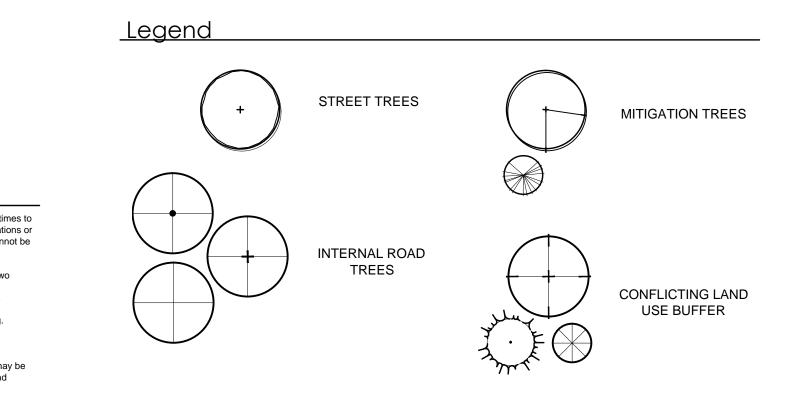
By the second growing season it should be apparent if some areas need reseeding. Reseed or overseed as needed to provide for full coverage.

Long term management my include prescribed burning, mowing, hand pulling, and selective herbicide applications. if burning is not allowed or feasible, the planting may be mowed to a short height and the clippings removed in the early spring before ground nesting birds begin nesting.



Plant Schedule TREES QTY SYM AR Acer 14 LT Liriod 15 PA Platai 15 PG Picea PS Pinus 6 QB Quer 10 QR Quer 8 TA Tilia a 7 UA Ulmu

BOTANICAL NAME	COMMON NAME	SIZE	SPACING	ROOT	COMMENTS
er rubrum 'October Glory'	October Glory Red Maple	2.0" cal.	as shown	B&B	Single straight trunk
odendron tulipfera	Tulip Tree	2.5" cal.	as shown	B&B	Single straight trunk
tanus x. acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5" cal.	as shown	B&B	Single straight trunk
ea glauca	White Spruce	7'-8' ht.	as shown	B&B	Unsheared, branched to ground
us strobus	Eastern White Pine	7'-8' ht.	as shown	B&B	Unsheared, branched to ground
ercus bicolor	Swamp White Oak	2.0" cal.	as shown	B&B	Single straight trunk
ercus rubra	Red Oak	2.5" cal.	as shown	B&B	Single straight trunk
a americana 'Redmond'	Redmond American Basswood	2.5" cal.	as shown	B&B	Single straight trunk
nus americana 'Valley Forge'	American Elm 'Valley Forge'	2.5" cal.	as shown	B&B	Single straight trunk



Note Key:

1	EXISTING TREE TO REMAIN, SEE TYPICAL TREE PROTECTION DETAIL SHEET L-1
2	EXISTING WETLAND TO REMAIN
3	25' NATURAL FEATURE SETBACK
4	EXISTING PUBLIC SIDEWALK
5	FENCED IN DETENTION BASIN, SEE SEED MIX THIS SHEET
6	PROPOSED RETAINING WALL, SEE CIVIL ENGINEERING DRAWINGS
7	PROPOSED TOWNHOUSE UNIT, SEE ARCHITECTURE
8	PROPOSED CONCRETE SIDEWALK
9	PROPOSED DUMPSTER AND ENCLOSURE, SEE CIVIL ENGINEERING DRAWINGS
(10)	DECIDUOUS CANOPY TREE, SEE TYPICAL DETAIL
(11)	EVERGREEN TREE PLANTING, SEE TYPICAL DETAIL
(12)	SEEDED LAWN OVER MINIMUM 3" DEPTH TOPSOIL, ALL DISTURBED AREAS
(13)	CLEAR VISION SITE LINES, SEE SHEET P-3.2



Pre-submittal Meeting	12.23.2020
Site Plan Review	03.05.2021
Revisior	12.09.2021
Revisior	01.18.2022
Revision - Site Plan Approva	04.06.2022

Project:

Platt Road Townhomes Ann Arbor, Michigan

Project Sponsor:

Trowbridge Homes 2617 Beacon Hill Drive Auburn Hills, MI 48326

Sheet Name:

Landscape Plan

NOT FOR CONSTRUCTION

Site Landscape Calculations

STREET TREE REQUIREMENT:

1 Deciduous shade tree / 45 lf of R.O.W length is required Row of Way Length: 756 If

Street Trees Required: 17 (756 lf / 45) Street Trees Provided: **17** (4 are existing to remain)

Street Tree Escrow Required: \$982.80 (756 x \$1.30)

PRIVATE STREETS (internal roads):

1 Deciduous shade tree / 30 If of road length planted on both sides Internal Road Length: 1,105 lf

Street Trees Required: 37 (1,105 lf / 30) Street Trees Provided: 37

CONFLICTING LAND USE BUFFER:

Minimum of 1 deciduous or evergreen tree / 15 lf. of buffer Conflicting Land Use Buffer North Property Line: 213 lf. (387-174)** Conflicting Land Use Buffer South Property Line: 371 If. (596-225)**

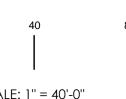
North Property Line

Total Trees Required: 15 = (213 / 15)Total Trees Provided: **15** (12 New trees and 3 Existing trees)

<u>South Property Line</u> Total Trees Required: 25 = (371 / 15)

Total Trees Provided: 25 (8 New trees and 17 Existing trees)

** Applicant requests a deviation to omit 174 lf. on the north property line and 225 lf. on the south property line of the conflicting land use buffer due to existing wetlands and vegetation that will not be disturbed.





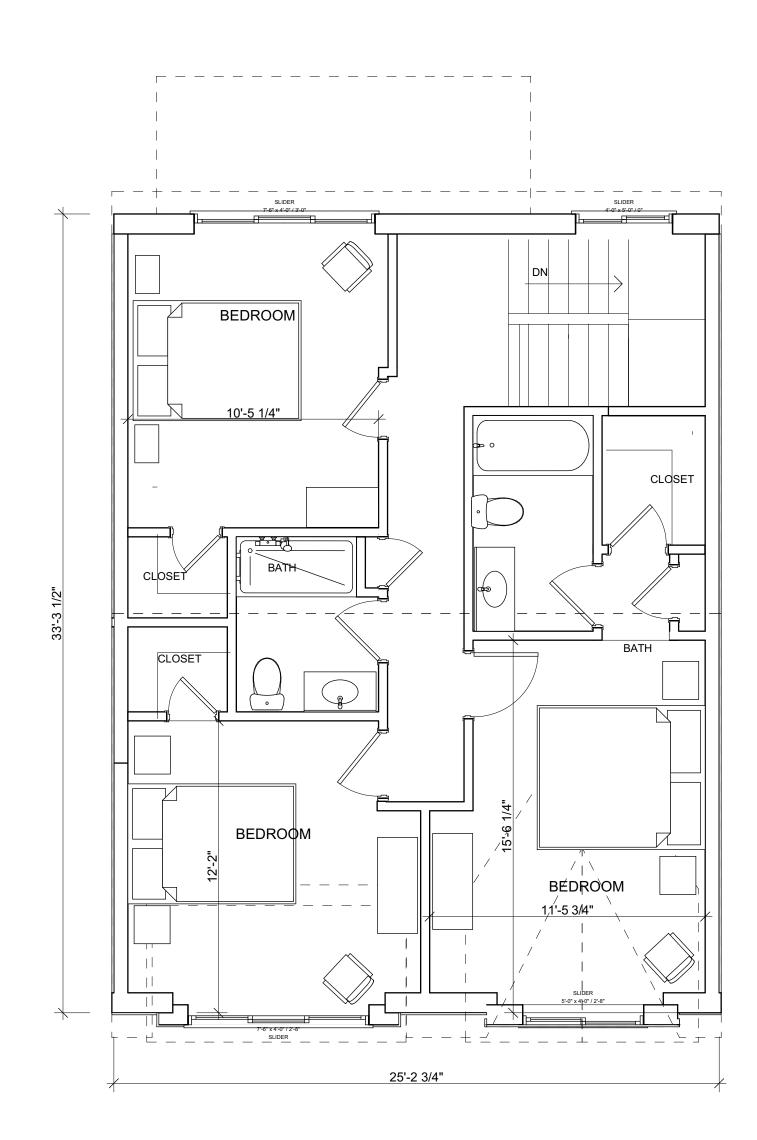


Drawn:	JG	
Checked:	JG	
Date:	12.2020	
Scale:	1'' = 40'-0''	

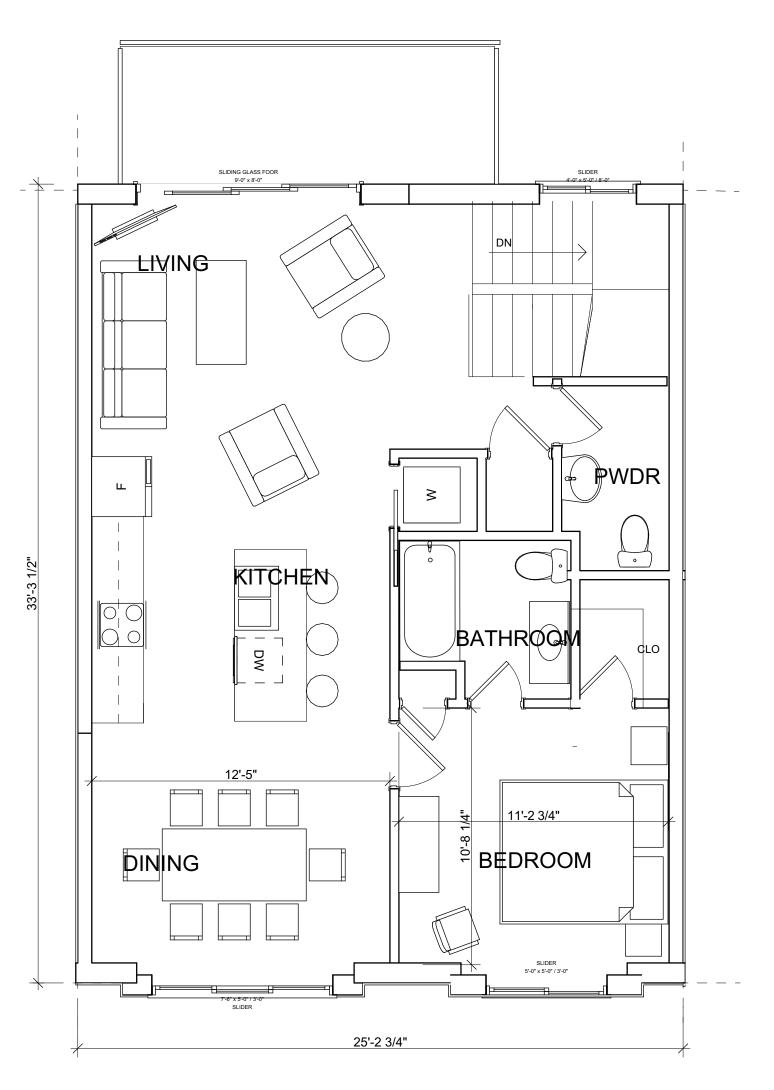
Project Number:

	20.050
	Sheet Number:
	L-3
© 2020	Vert Verde Landscape Architecture LLC

SCALE: 1" = 40'-0"



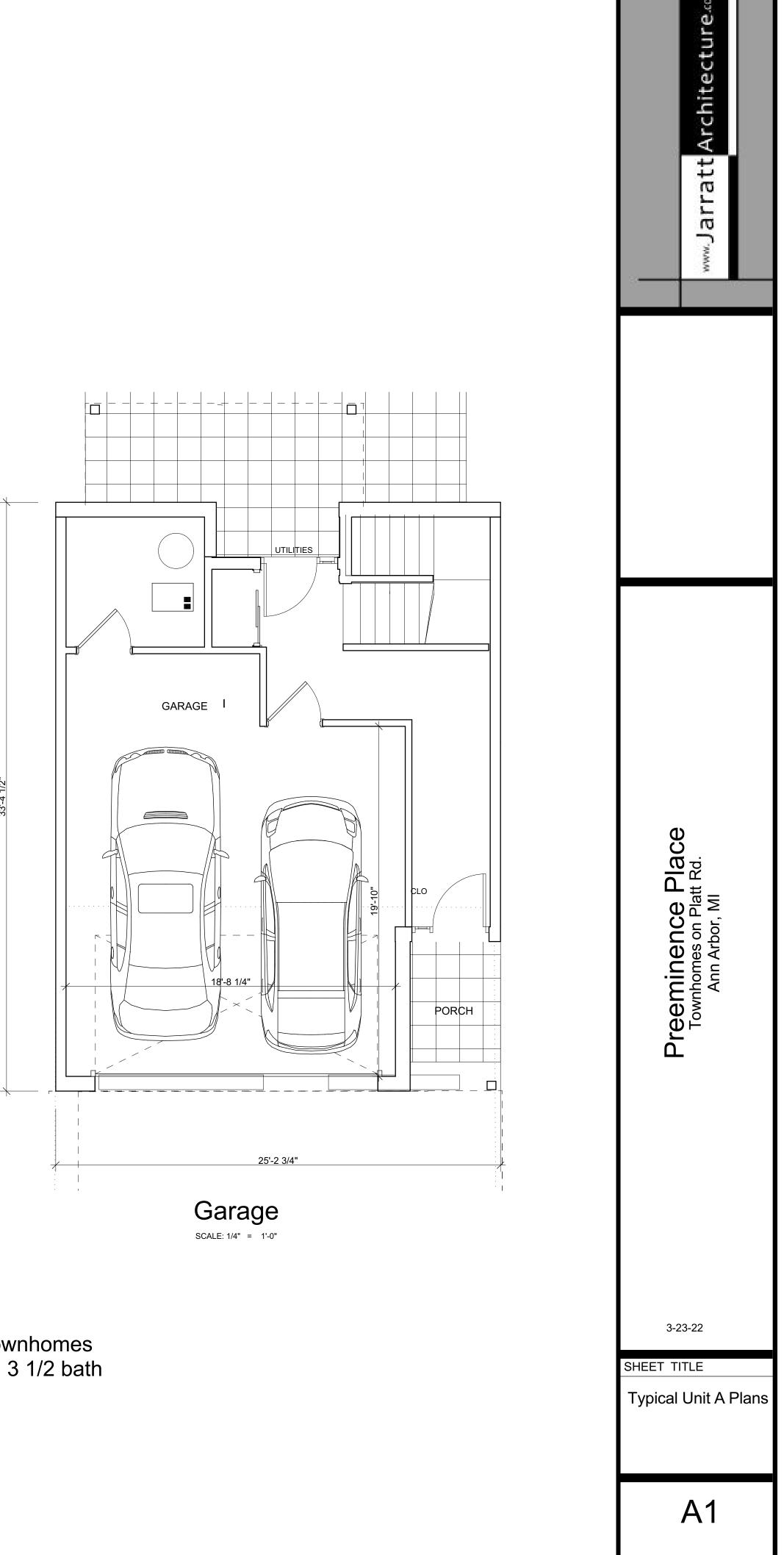
Scale: 1/4" = 1'-0"



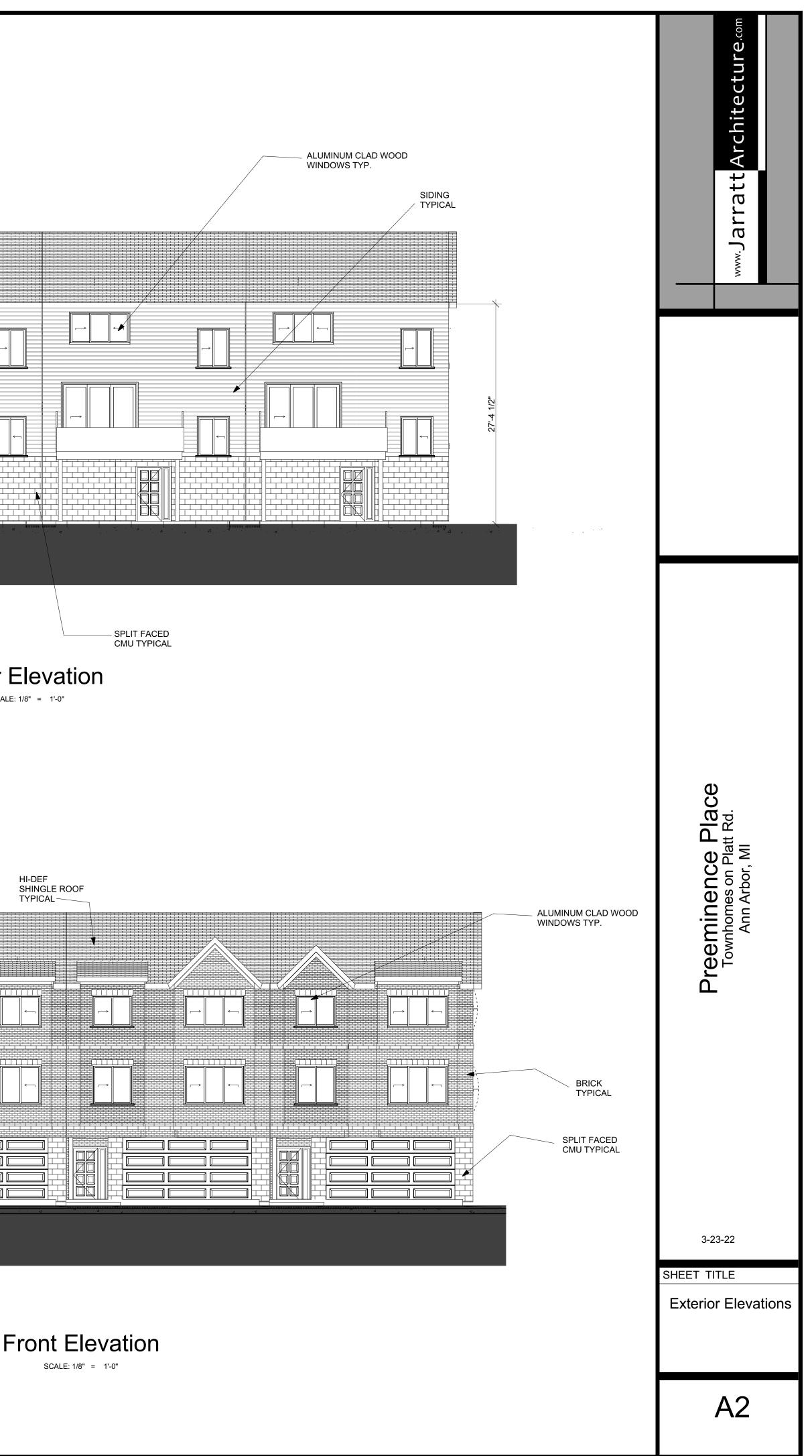
DECK

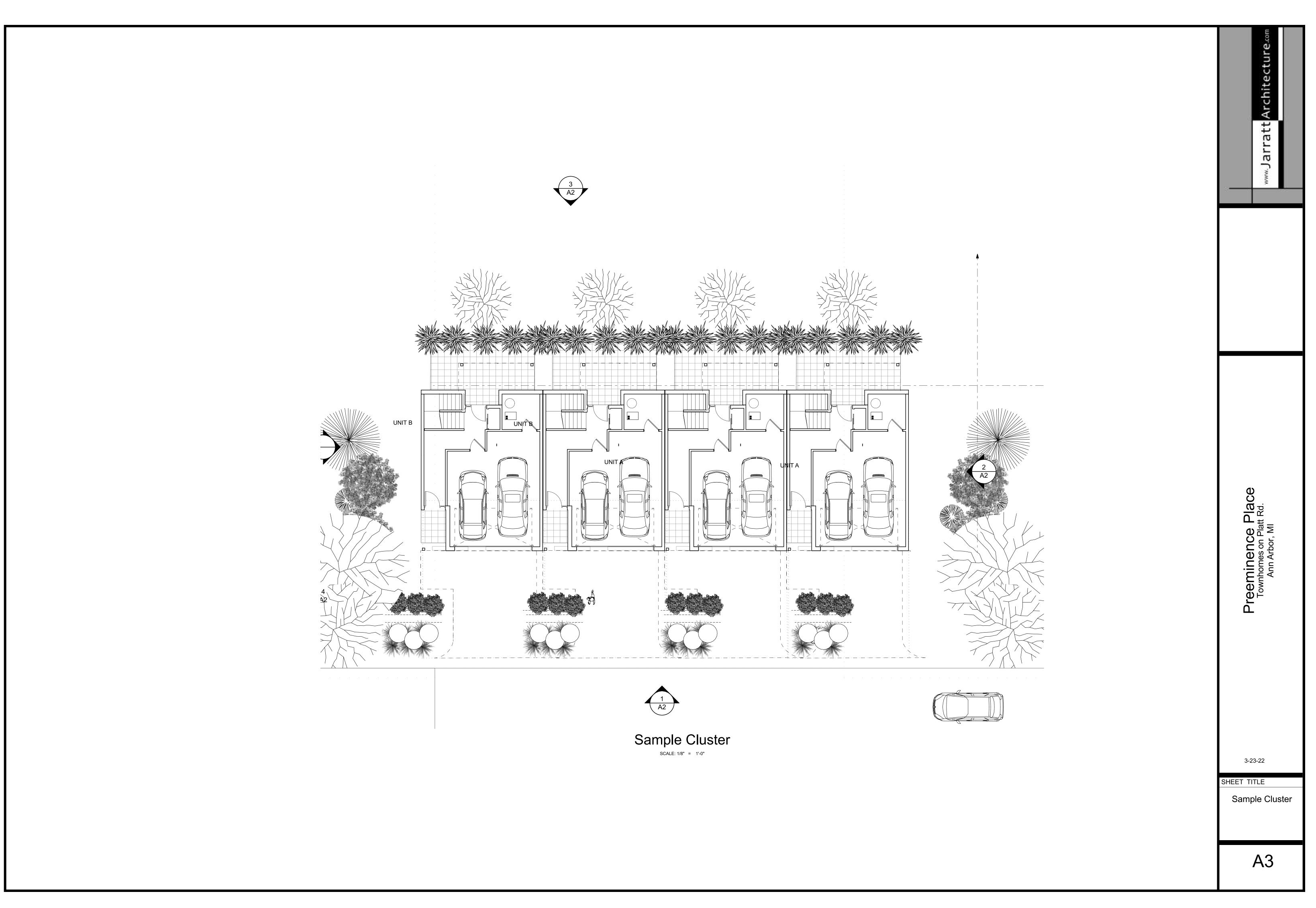
Main Floor SCALE: 1/4" = 1'-0"

> 1500 SF townhomes 4 Bedroom 3 1/2 bath











DSX0 LED Forward optics 30K 3000 K T1S Type I short (Automotive) T5S Type V short 3

DMG 0-10¹/ dimming extend out back of housing for external control FAO Field adjustable output ²¹ (control ordered separate) ¹³

T2S Type II short

T3S Type III short

T3M Type III medium

TSVS Type V very short³

TFTM Forward throw medium

PIR

PIRH

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PER7 Seven-pin-receptacle only (leads exit fixture) (control ordered PIRH1FG3V High/low, motion/ambient sensor, 15-30' mounting R90 Right rotated optics ²

T2M Type II medium

40K 4000 K

50K 5000 K

P2 P6

Rotated optics

P10² P12²

NLTAIR2 nLight AIR generation 2 enabled 10.10

COMMERCIAL OUTDOOR

PIRHN Network, high/low motion/ambient sensor[®]

PER NEMA twist-lock receptacle only (control ordered separate) 16

PERS Five-pin receptacle only (control ordered separate) 16.

Shipped installed



The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

Other options

Shipped installed

High/low, motion/ambient sensor, 15-30' mounting SF Single fuse (120, 277, 347V) (DNAXD Natural aluminum

HS House-side shield²²

L90 Left rotated optics¹

DDL Diffused drop lens²⁰

Shipped separately

EGS External glare shield

BS Bird spikes²⁰

HA 50°C ambient operations

Shipped included

Shipped separately

DF Double fuse (208, 240, 480V)⁶ DWHXD White

BAA Buy America(n) Act Compliant DWHGXD Textured white

RPA

WBA

SPUMBA

Square pole mounting

Wall bracket³

KMA8 DDBXD U Mast arm mounting bracket adapto

(specify finish) ¹²

Round pole mounting 11

Square pole universal mounting adapto RPUMBA Round pole universal mounting adaptor ¹¹

DDBXD Dark bronze

DOBTXD Textured dark bronze

DBLBXD Textured black

DNATXD Textured natural

aluminum

DSX0-LED Rev. 07/19/21 Page 1 of 8

DBLXD Black

MVOLT (120V-277V) 36

T5M Type V medium 3 XVOLT (277V-480V) 28.9 SPA

T5W Type V wide 3

T4M Type IV medium RCCO Right corner cutoff 4 277 6

BLC Backlight control 4 208

LCCO Left corner cutoff⁴ 240⁶

High/low, motion/ambient sensor, 8–15' mounting height, ambient sensor enabled at 5fc ¹⁹³⁰

PIRTFC3V High/low, motion/ambient sensor, 8–15' mounting height, ambient sensor enabled at Tic ^{max}

One Lithonia Way • Convers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

height, ambient sensor enabled at 1fc1



9"

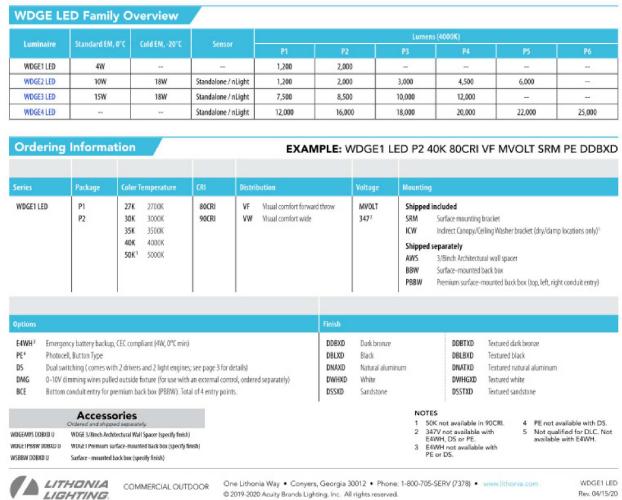
Depth (D1):

Weight: (without options) 9 lbs

Height:

Width:





Statistics						
Description	Symbol	Avg	Max	Min	Avg/Min	Max/Min
Grade @ 0'	+	0.3 fc	6.0 fc	0.0 fc	N/A	N/A
Property Line @ 0'	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
Roadway	Ж	0.7 fc	4.2 fc	0.0 fc	N/A	N/A

Schedule										
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage	Mounting Height
	Α	5	Lithonia Lighting	DSX0 LED P4 30K T4M MVOLT	DSX0 LED P4 30K T4M MVOLT	LED	9593	0.9	92	15'
	В	86	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VF	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT FORWARD OPTIC	LED	1161	0.7	10.0002	8'

General Note

1. SEE DRAWING FOR LUMINAIRE MOUNTING HEIGHT.

2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"

3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.



Introduction The WDGE LED family is designed to meet

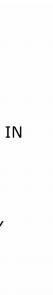
Catalog Number

specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

				(4000K)		
ж	P1	P2	P3	P4	P5	P6
	1,200	2,000	-			
/ nLight	1,200	2,000	3,000	4,500	6,000	-
/ nLight	7,500	8,500	10,000	12,000	-	-
/ nLight	12,000	16,000	18,000	20,000	22,000	25,000

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD





+0.0 $+0.0$ $+0.0$ $+0.0$ $+0.0$ $+0.0$ $+0.0$ $+0.0$ $+0.0$	0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0
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