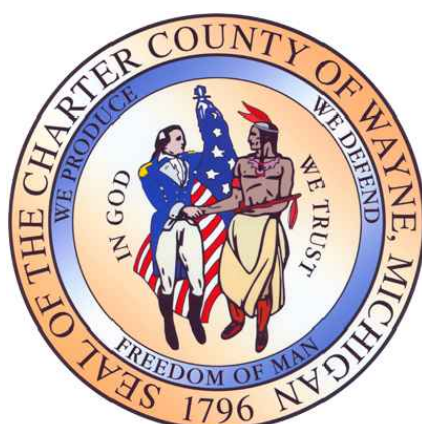


LOLA VALLEY PARK HABITAT RESTORATION PROJECT

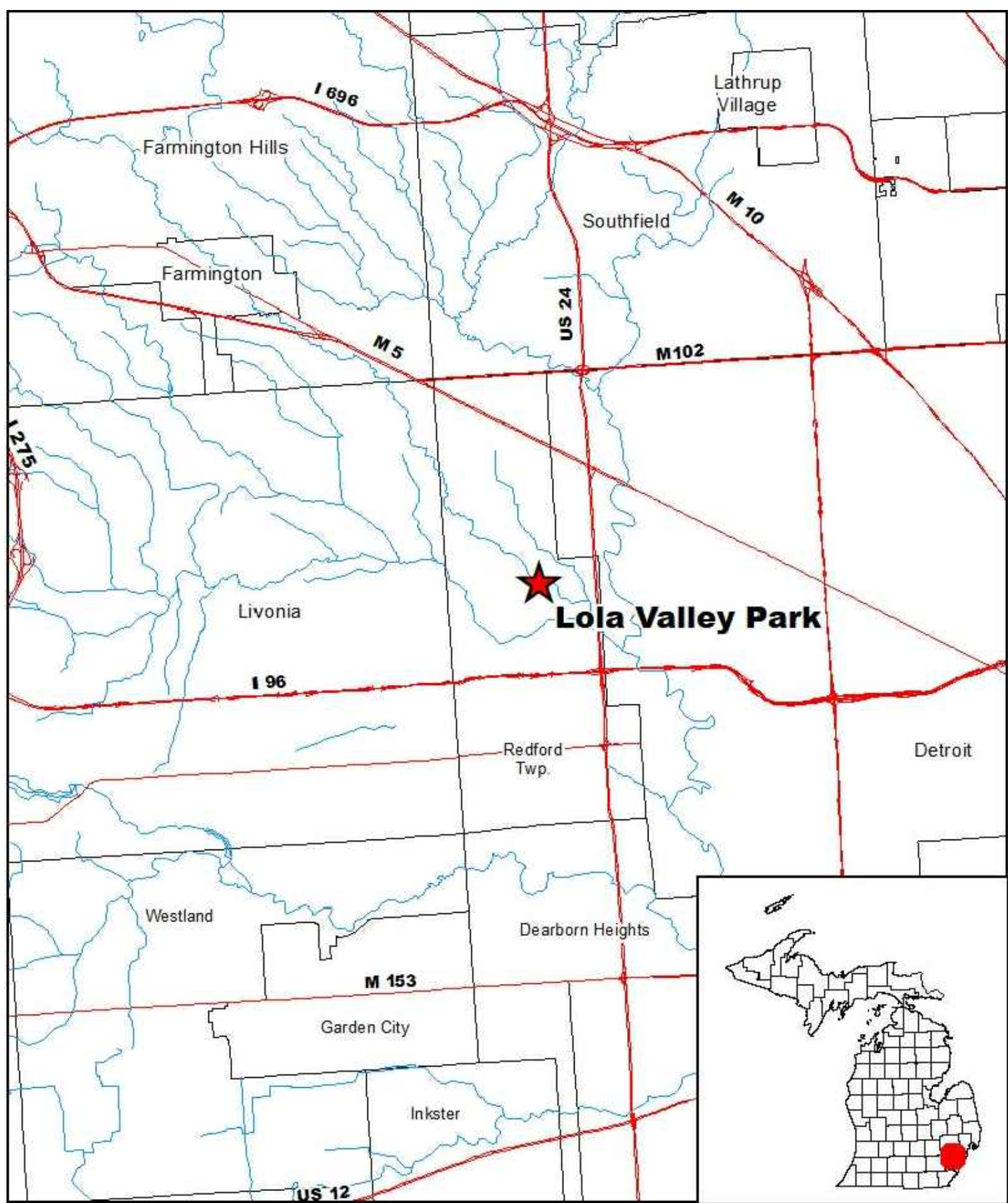
FOR BIDDING - JANUARY 2022



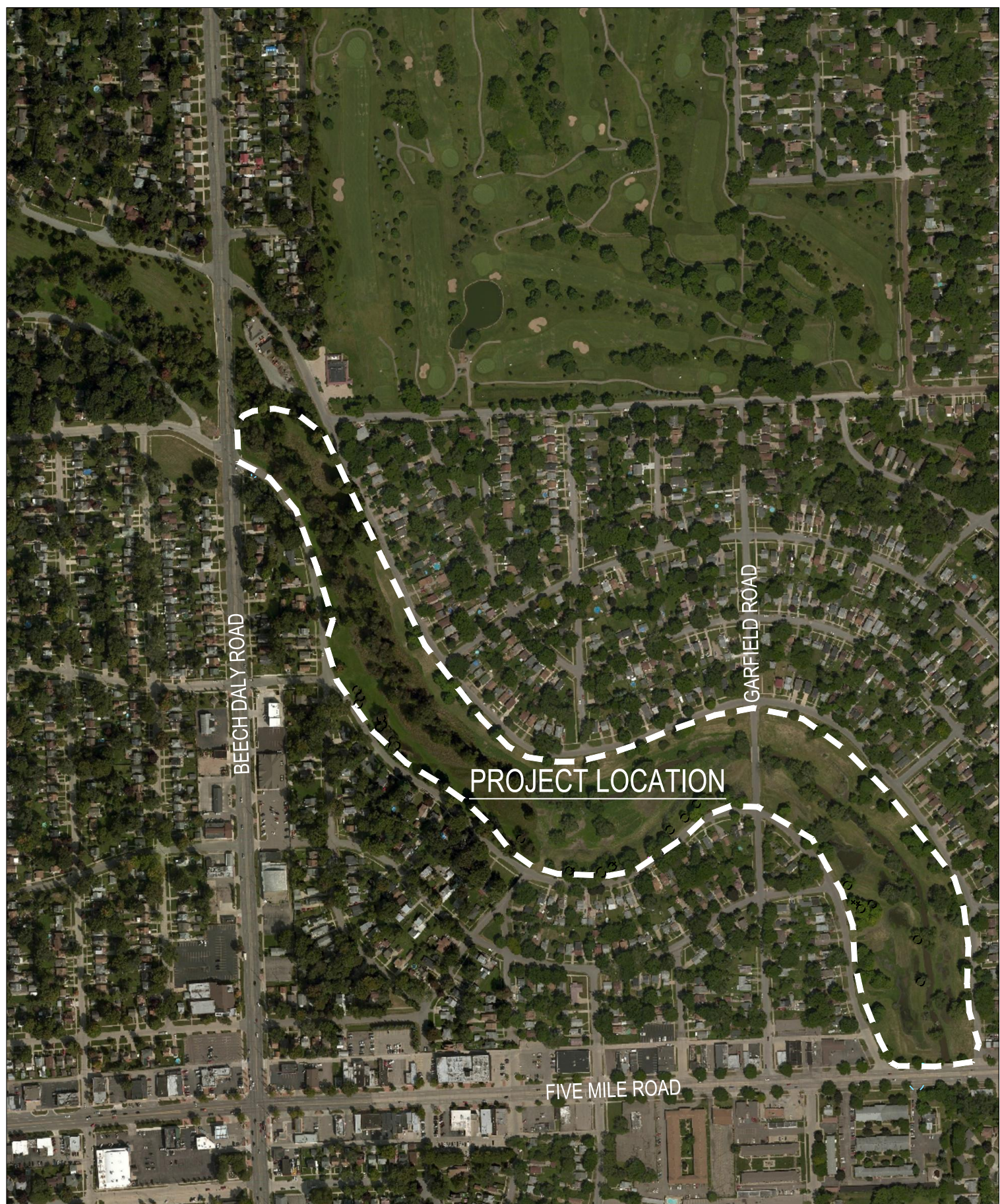
PREPARED BY:

ECT Environmental Consulting & Technology, Inc.
2200 Commonwealth Blvd, Suite 300
Ann Arbor, Michigan 48105
734.769.3004
734.769.3164 fax
www.ectinc.com

WITH:



PROJECT LOCATION MAP
NOT TO SCALE

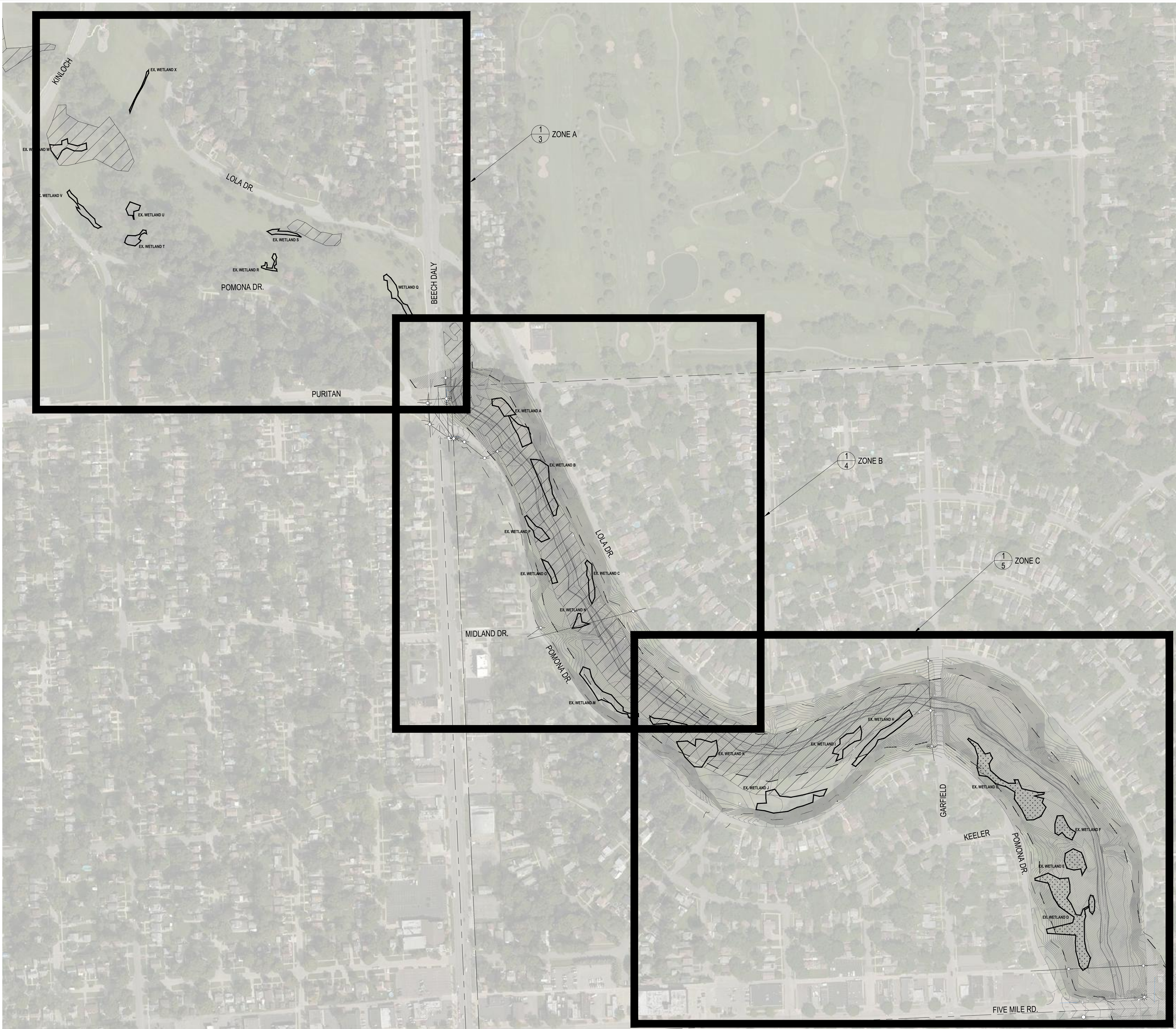


PROJECT VICINITY MAP
NOT TO SCALE



DRAWING INDEX

1. COVER SHEET
2. EXISTING CONDITIONS - OVERALL
3. EXISTING CONDITIONS - ZONE A
4. EXISTING CONDITIONS - ZONE B
5. EXISTING CONDITIONS - ZONE C
6. EXISTING TREE LIST
7. SITE PREPARATION PLAN
8. PROPOSED CONDITIONS - OVERALL
9. PROPOSED CONDITIONS - ZONE A
10. PROPOSED CONDITIONS - ZONE B
11. PROPOSED CONDITIONS - ZONE C
12. REVEGETATION NOTES
13. DETAILS
14. DETAILS
15. CROSS SECTIONS



BASE SURVEY CONDUCTED BY MIDWESTERN CONSULTING, INC. IN MAY 2020.

8.38

8.36.2

U.P.

OH

*

g

w

h

r

s

b

red

scb

*

●

☁

⊙

⊙ F

⊙ FIR

△

—

▨

▭

▨

EXIST. CONTOUR

EXIST. SPOT ELEVATION

EXIST. UTILITY POLE

GUY WIRE

EXIST. OVERHEAD UTILITY LINE

EXIST. LIGHT POLE

EXIST. GAS LINE

EXIST. WATER MAIN

EXIST. HYDRANT

EXIST. GATE VALVE IN BOX

EXIST. GATE VALVE IN WELL

EXIST. STORM SEWER

EXIST. CATCH BASIN OR INLET

END SECTION

CULVERT

EXIST. SANITARY SEWER

SIGN

PEDESTRIAN CROSSING SIGNAL

TRAFFIC SIGNAL CONTROL BOX

POST

FENCE

GUARDRAIL

SINGLE TREE

TREE OR BRUSH LIMIT

EXIST. BOULDER

SECTION CORNER

FOUND IRON PIPE

FOUND IRON ROD

CONTROL PT.

LIMIT OF FLOOD ZONE AE

REGULATORY FLOODWAY AREA

EXISTING WETLAND

EXISTING GROW ZONES

BENCHMARKS

BENCHMARK #1
TOP OF SPIKE IN THE SOUTH FACE OF A UTILITY POLE LOCATED +/- 7 FEET
SOUTHWEST OF THE SOUTHWEST EDGE OF LOLA DRIVE; +/- 58 FEET NORTH
EAST OF THE CENTERLINE OF LOLA DRIVE AND MIDLAND AVENUE; +/- 77
FEET SOUTHEAST OF A 24" SUGAR MAPLE (TREE TAG #155);

ELEVATION = 625.05 (NAVD88 DATUM)

BENCHMARK #2
TOP OF A FOUND DISC LOCATED IN THE NORTHWEST CORNER OF THE
BRIDGE DECK OF GARFIELD STREET OVER THE UPPER ROUGE RIVER; +/- 175
FEET SOUTH OF LOLA DRIVE; +/- FEET NORTH OF POMONA DRIVE; +/- 36 FEET
EAST OF A 38" BLACK WILLOW (TREE TAG #150)

ELEVATION = 613.51 (NAVD88 DATUM)

BENCHMARK #3
TOP OF A SPIKE IN THE NORTH FACE OF A UTILITY POLE LOCATED AT THE
SOUTHEAST CORNER OF BEECH DALY RD. AND POMONA DRIVE; +/- 82 FEET
SOUTHEAS OF CONTROL POINT #1; +/- 135 FEET SOUTHWEST OF THE
CENTERLINE OF THE UPPER ROUGE RIVER;

ELEVATION = 621.24 (NAVD88 DATUM)

BENCHMARK #4
TOP OF A SPIKE IN THE NORTH FACE OF A UTILITY POLE LOCATED ALONG
THE WEST SIDE OF LOLA DRIVE; +/- 150 FEET NORTH OF FIVE MILE RD.; +/- 13
FEET WEST OF THE WEST EDGE FO LOLA DRIVE.;

ELEVATION = 612.28 (NAVD88 DATUM)

ECT Environmental Consulting & Technology, Inc.

Great Lakes RESTORATION

Alliance of Rouge Communities

Wayne County parks

OURS TO PROTECT

Working together, restoring the river

ROUGE RIVER WATERSHED

AOC-WAYNE COUNTY

HABITAT RESTORATION

LOLA VALLEY HABITAT RESTORATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	01/2022
FOR PERMITTING	07/15/21
SITE CONCEPT	12-15-20
200115-0200	
ECT PROJECT NUMBER	
AAB DESIGNED BY	AAB CHECKED BY
SRO DRAWN BY	JMO APPROVED BY

SHEET TITLE

EXISTING CONDITIONS OVERALL

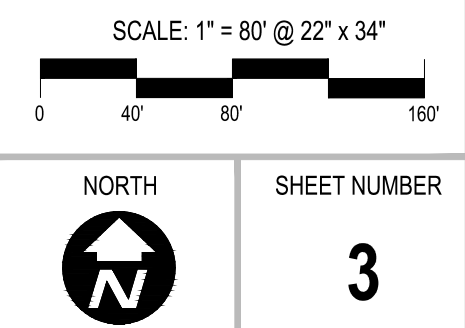
SCALE: 1" = 200' @ 22" x 34"

NORTH

↑

SHEET NUMBER

2





BENCHMARKS

BENCHMARK #1
TOP OF SPIKE IN THE SOUTH FACE OF A UTILITY POLE LOCATED +/- 7 FEET
SOUTHWEST OF THE SOUTHWEST EDGE OF LOLA DRIVE; +/- 58 FEET NORTH
EAST OF THE CENTERLINE OF LOLA DRIVE AND MIDLAND AVENUE; +/- 77
FEET SOUTHEAST OF A 24" SUGAR MAPLE (TREE TAG #155);

ELEVATION = 625.05 (NAVD88 DATUM)

BENCHMARK #3
TOP OF A SPIKE IN THE NORTH FACE OF A UTILITY POLE LOCATED AT THE
SOUTHEAST CORNER OF BEECH DALY RD. AND POMONA DRIVE; +/- 82 FEET
SOUTHEAST OF CONTROL POINT #1; +/- 135 FEET SOUTHWEST OF THE
CENTERLINE OF THE UPPER ROUGE RIVER;

ELEVATION = 621.24 (NAVD88 DATUM)

**ALLIANCE OF ROUGE
COMMUNITIES**

**WAYNE COUNTY,
MICHIGAN**

200115-0200
ECT PROJECT NUMBER

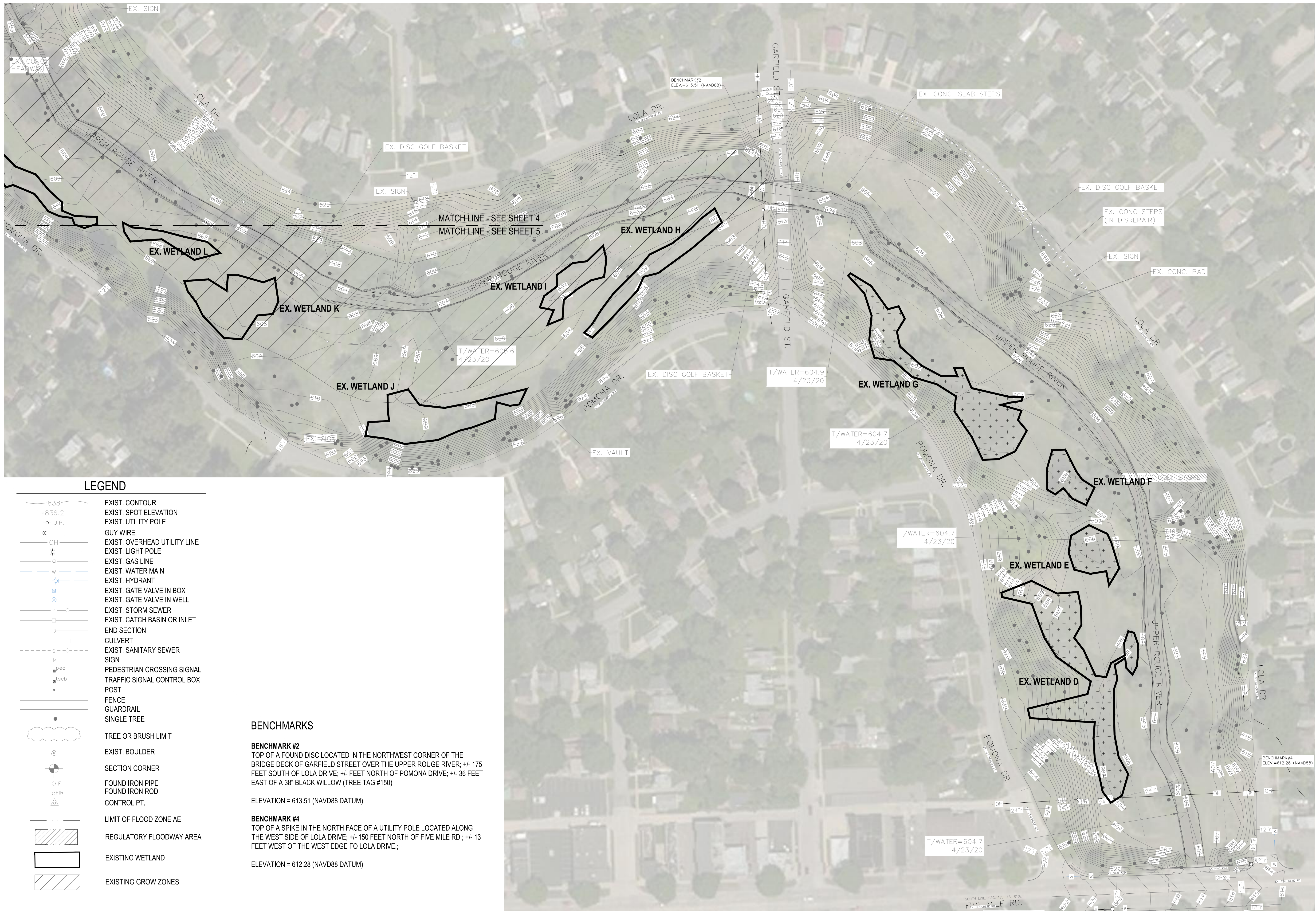
AAB DESIGNED BY	AAB CHECKED BY
SRD DRAWN BY	JMO APPROVED BY

SHEET TITLE

**EXISTING
CONDITIONS -
ZONE B**

SCALE: 1" = 80' @ 22" x 34"

NORTH	SHEET NUMBER
	4



LEGEND

	EXIST. CONTOUR
	EXIST. SPOT ELEVATION
	EXIST. UTILITY POLE
	GUY WIRE
	EXIST. OVERHEAD UTILITY LINE
	EXIST. LIGHT POLE
	EXIST. GAS LINE
	EXIST. WATER MAIN
	EXIST. HYDRANT
	EXIST. GATE VALVE IN BOX
	EXIST. GATE VALVE IN WELL
	EXIST. STORM SEWER
	EXIST. CATCH BASIN OR INLET
	END SECTION
	CULVERT
	EXIST. SANITARY SEWER
	SIGN
	PEDESTRIAN CROSSING SIGNAL
	TRAFFIC SIGNAL CONTROL BOX
	POST
	FENCE
	GUARDRAIL
	SINGLE TREE
	TREE OR BRUSH LIMIT
	EXIST. BOULDER
	SECTION CORNER
	FOUND IRON PIPE
	FOUND IRON ROD
	CONTROL PT.
	LIMIT OF FLOOD ZONE AE
	REGULATORY FLOODWAY AREA
	EXISTING WETLAND
	EXISTING GROW ZONES

BENCHMARKS

BENCHMARK #2
TOP OF A FOUND DISC LOCATED IN THE NORTHWEST CORNER OF THE BRIDGE DECK OF GARFIELD STREET OVER THE UPPER ROUGE RIVER; +/- 175 FEET SOUTH OF LOLA DRIVE; +/- FEET NORTH OF POMONA DRIVE; +/- 36 FEET EAST OF A 38" BLACK WILLOW (TREE TAG #150)
ELEVATION = 613.51 (NAVD88 DATUM)

BENCHMARK #4
TOP OF A SPIKE IN THE NORTH FACE OF A UTILITY POLE LOCATED ALONG THE WEST SIDE OF LOLA DRIVE; +/- 150 FEET NORTH OF FIVE MILE RD.; +/- 13 FEET WEST OF THE WEST EDGE FO LOLA DRIVE.;
ELEVATION = 612.28 (NAVD88 DATUM)

1
5 EXISTING CONDITIONS - ZONE C
SCALE: 1"=80'

BASE SURVEY CONDUCTED BY MIDWESTERN CONSULTING, INC. IN MAY 2020.

Environmental Consulting & Technology, Inc.

GREAT LAKES RESTORATION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

Wayne County parks
EXPLORE EVEN MORE

ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION

LOLA VALLEY
HABITAT
RESTORATION
PROJECT

ALLIANCE OF ROUGE
COMMUNITIES

WAYNE COUNTY,
MICHIGAN

FOR BIDDING 01/2022
FOR PERMITTING 07/15/21
PRELIMINARY 10-26-20

200115-0200
ECT PROJECT NUMBER
AAB DESIGNED BY AAB CHECKED BY
SRO DRAWN BY JMO APPROVED BY

SHEET TITLE

EXISTING
CONDITIONS -
ZONE C

SCALE: 1" = 80' @ 22" x 34"
0 40 80 160

NORTH
SHEET NUMBER
5

TREE LIST

INV = INVASIVE

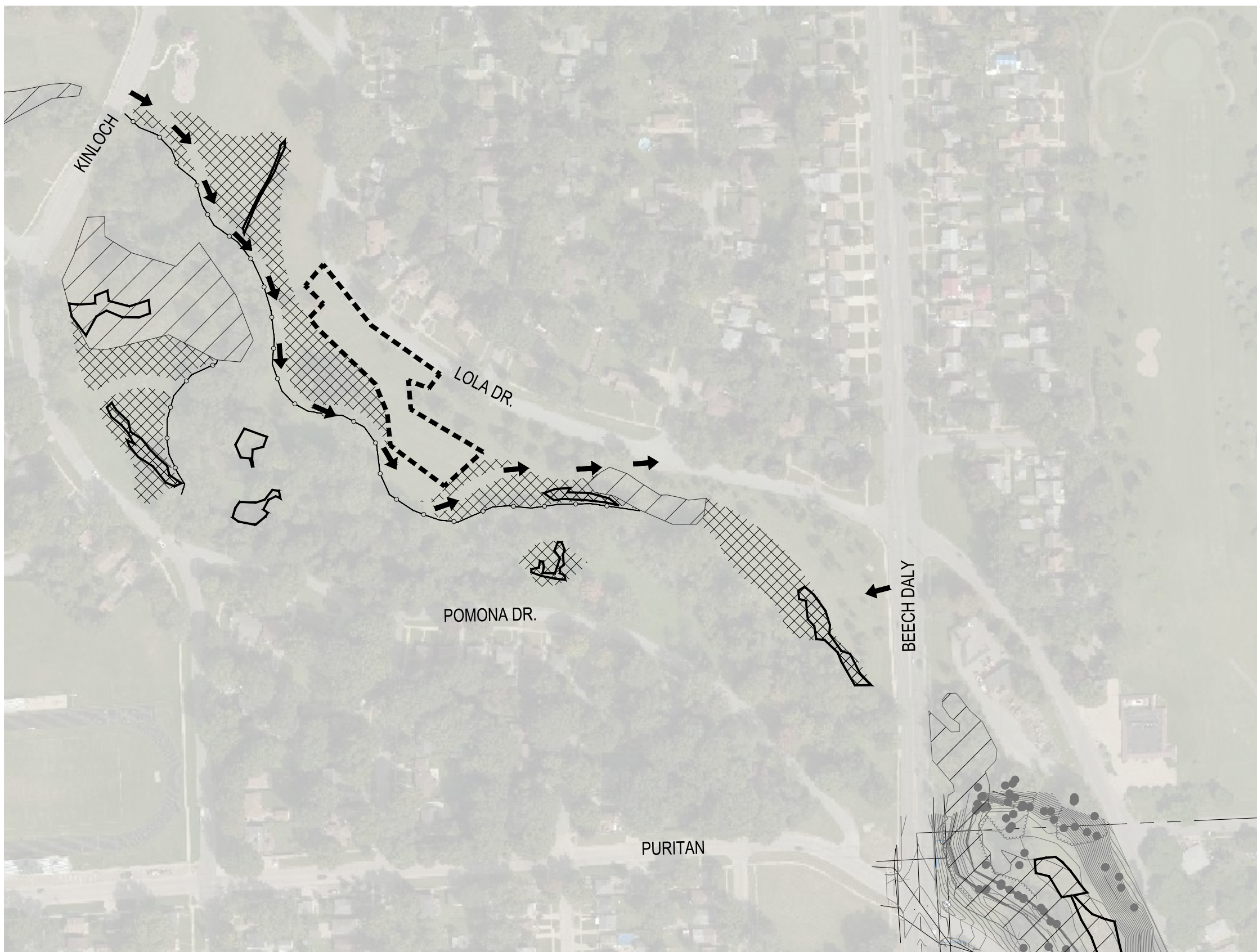
TAG#	DBH	COMMON NAME	STEMS	INV
1	27"	White Mulberry		X
2	17"	Black Locust		X
3	18"	Black Locust		X
4	14"	Black Locust		X
5	8"	Blue Spruce		
6	19"	Red Oak		
7	20"	Black Pine		
8	19"	Black Pine		
9	8"	White Mulberry		X
10	9"	White Mulberry		X
11	7"	Hawthorn	triple	
12	16"	Bradford Pear		
13	10"	N. Pin Oak		
14	12"	Black Locust		
15	9"	Box Elder	twin	
16	16"	Box Elder		
17	10"	White Mulberry		X
18	8"	White Mulberry		X
19	10"	White Mulberry		X
20	8"	Box Elder		
21	7"	American Elm	twin	
22	17"	Black Walnut		
23	11"	American Elm		
24	8"	Box Elder		
25	8"	Black Cherry		
26	9"	White Mulberry		X
27	10"	Black Locust		X
28	8"	Bitternut Hickory		
29	15"	Box Elder		
30	11"	Cottonwood		
31	11"	Cottonwood		
32	8"	American Elm		
33	16"	Linden		
34	10"	Linden		
35	9"	Black Maple		
36	11"	White Mulberry	twin	X
37	8"	Black Maple	twin	
38	12"	Sugar Maple		
39	23"	Sugar Maple		
40	14"	Box Elder		
41	10"	Box Elder		
42	11"	American Elm		
43	8"	Black Maple		
44	12"	Sugar Maple		
45	12"	Sugar Maple		
46	12"	Black Maple		
47	11"	Black Maple		
48	14"	Red Elm		
49	8"	Box Elder		
50	19"	Cottonwood		
51	13"	Box Elder		
52	9"	White Mulberry		X
53	11"	Red Elm		
54	10"	Linden		
55	12"	London Plane Tree		
56	9"	London Plane Tree		
57	9"	London Plane Tree		
58	15"	White Mulberry		X
59	25"	Bitternut Hickory		
60	22"	Red Oak		
61	7"	Box Elder	4	
62	8"	Box Elder		
63	30"	Sycamore		
64	29"	Sycamore		
65	39"	Black Willow	twin	
66	38"	Black Willow		
67	26"	Black Willow		
68	25"	Black Willow		
69	9"	American Elm		
70	11"	Silver Maple		
71	10"	Silver Maple		
72	16"	White Mulberry		X
73	15"	White Mulberry		X
74	8"	American Elm		
75	10"	Silver Maple		
76	24"	Sycamore		
77	24"	Sugar Maple		
78	27"	Sugar Maple		
79	21"	Sugar Maple		
80	30"	Sugar Maple		
81	9"	Hawthorn		
82	26"	Sugar Maple		
83	20"	Sugar Maple		
84	21"	Sugar Maple		
85	19"	Sugar Maple		

TAG#	DBH	COMMON NAME	STEMS	INV
86	24"	Sugar Maple		
87	21"	Sugar Maple		
88	28"	Sugar Maple		
89	20"	Sugar Maple		
90	27"	Sycamore		
91	11"	American Elm		
92	9"	Siberian Elm		
93	21"	Box Elder		
94	8"	American Elm		
95	32"	Sycamore		
96	12"	American Elm		
97	21"	American Elm		
98	36"	Sycamore		
99	7"	White Ash	triple	
100	10"	Hawthorn		
101	30"	Sugar Maple		
102	17"	Sugar Maple		
103	22"	Sugar Maple		
104	12"	Sugar Maple		
105	38"	Sycamore		
106	13"	Box Elder	twin	
107	39"	Black Willow		
108	42"	Black Willow		
109	37"	Black Willow		
110	14"	American Elm		
111	25"	Sugar Maple		
112	14"	Sugar Maple		
113	18"	Sugar Maple		
114	20"	Sugar Maple		
115	24"	Sugar Maple		
116	12"	Hawthorn	twin	
118	14"	White Mulberry		X
119	15"	White Mulberry	twin	X
117	30"	Sugar Maple		
120	21"	Sugar Maple		
121	28"	Sugar Maple		
122	29"	Sugar Maple		
123	24"	Sugar Maple		
124	10"	Hawthorn	twin	
125	30"	Black Willow		
126	47"	Cottonwood		
127	33"	Black Willow		
128	26"	Sugar Maple		
129	30"	Sugar Maple		
130	26"	Sugar Maple		
131	26"	Sugar Maple		
132	32"	Black Willow	triple	
133	11"	Box Elder	twin	
134	8"	American Elm		
135	44"	Black Willow		
136	9"	Box Elder		
137	36"	Sycamore		
138	10"	Box Elder	triple	
139	35"	Sycamore		
140	25"	Sycamore		
141	36"	Sycamore		
142	23"	Sugar Maple		
143	29"	Sugar Maple		
144	10"	Hawthorn	triple	
145	15"	Weeping Willow	twin	
146	22"	Sugar Maple		
147	31"	Sugar Maple		
148	19"	Sugar Maple		
149	7"	Hawthorn	quad	
150	38"	Black Willow	triple	
151	51"	Black Willow		
152	11"	Weeping Willow	twin	
153	11"	Weeping Willow	triple	
154	24"	Black Walnut		
155	22"	Northern Hackberry		
156	26"	Sycamore		
157	12"	Silver Maple	twin	
158	21"	Silver Maple		
159	13"	American Elm		
160	12"	Hawthorn	twin	
161	39"	Sycamore		
162	32"	Sycamore		
163	29"	Sycamore		
164	11"	Box Elder		
165	11"	Box Elder		
166	20"	Sycamore		
167	15"	White Mulberry		X
168	15"	Black Willow		
169	10"	American Elm		
170	22"	Sycamore		

TAG#	DBH	COMMON NAME	STEMS	INV
171	31"	Sycamore		
172	21"	Sycamore		
173	25"	Sycamore		
174	33"	Sycamore		
175	17"	White Mulberry		X
176	12"	Box Elder		
177	10"	American Elm		
178	25"	Sycamore		
179	29"	Sycamore		
180	12"	Silver Maple		
181	12"	Silver Maple		
182	33"	Sycamore		
183	29"	Cottonwood		
184	30"	Sycamore		
185	15"	Box Elder		
186	9"	American Elm		
187	13"	Silver Maple		
188	12"	Box Elder		
189	31"	Black Willow		
190	10"	American Elm		
191	32"	Sycamore		
192	12"	Box Elder	twin	
193	37"	Black Willow	twin	
194	39"	Black Willow	twin	
195	41"	Black Willow	twin	
196	11"	White Mulberry		X
197	26"	White Mulberry		X
198	18"	Sweetgum		
199	25"	Sycamore		
200	48"	Black Willow	twin	
201	8"	Box Elder	triple	
202	18"	White Mulberry		X
203	10"	White Mulberry		X
204	29"	Sycamore		
205	9"	Box Elder	twin	
206	16"	Box Elder		
207	12"	American Elm		
208	12"	White Mulberry		X
209	12"	American Elm		
210	8"	White Mulberry		X
211	14"	Box Elder		
212	53"	Black Willow		
213	11"	Box Elder		
214	38"	Black Willow		
215	43"	Black Willow		
216	17"	Box Elder		
217	17"	Silver Maple		
218	14"	Box Elder	twin	
219	13"	Box Elder		
220	15"	Box Elder		
221	11"	Weeping Willow	triple	
222	11"	Box Elder		
223	44"	Black Willow		
224	30"	Sycamore		
225	9"	Box Elder		
226	23"	American Elm		
227	13"	American Elm		
228	36"	Cottonwood	twin	
229	51"	Black Willow		
230	9"	American Elm		
231	52"	Black Willow		
232	30"	Sugar Maple		
233	21"	Sugar Maple		
234	18"	Sugar Maple		
235	18"	Sugar Maple		
236	20"	Sugar Maple		
237	9"	Hawthorn	triple	
238	26"	Sugar Maple		
239	8"	Hawthorn	twin	
240	22"	Sugar Maple		
241	32"	Sugar Maple		
242	15"	Hawthorn		
243	19"	Sugar Maple		
244	26"	Sugar Maple		
245	25"	Sugar Maple		
246	14"	Box Elder		
247	12"	Box Elder		
248	10"	Hawthorn		
249	10"	Box Elder		
250	10"	Box Elder		
251	16"	Box Elder		
252	16"	Box Elder		
253	27"	American Elm		
254	12"	Box Elder		
255	17"	Box Elder		

TAG#	DBH	COMMON NAME	STEMS	INV
256	13"	Box Elder		
257	26"	Box Elder		
258	18"	White Mulberry		X
259	18"	American Elm		
260	9"	Box Elder		
261	10"	Hop-Hornbeam		
262	22"	Sugar Maple		
263	13"	Box Elder	twin	
264	27"	White Mulberry		X
265	15"	Box Elder		
266	12"	Box Elder		
267	14"	Hop-Hornbeam	twin	
268	14"	American Elm		
269	14"	Box Elder		
270	12"	Box Elder		
271	16"	Sugar Maple		
272	10"	Red Elm		X
273	8"	Siberian Elm		X
274	14"	Box Elder		
275	9"	Sugar Maple		
276	24"	Black Walnut		
277	8"	Black Maple		
278	12"	American Elm		
279	11"	Sugar Maple		
280	16"	Sugar Maple		
281	10"	Sugar Maple		
282	8"	Hop-Hornbeam	twin	
283	10"	American Elm		
284	18"	American Elm		
285	43"	Black Willow		
286	39"	Black Willow		
287	15"	Norway Maple		
288	10"	Black Cherry		
289	16"	Black Cherry		
290	11"	Box Elder	quad	
291	10"	Hawthorn		
292	10"	Hawthorn		
293	17"	Silver Maple		
294	11"	Silver Maple		
295	9"	American Elm		
296	20"	Sugar Maple		
297	20"	Sugar Maple		
298	27"	Sugar Maple		
299	38"	Sugar Maple		
300	28"	Sugar Maple		
301	26"	Sugar Maple		
302	21"	Hawthorn		
303	22"	Sugar Maple		
304	13"	Hawthorn	twin	
305	11"	Silver Maple	twin	
306	10"	Silver Maple		
307	9"	Silver Maple		
308	10"	Cottonwood		
309	36"	Black Willow		
310	8"	Silver Maple	twin	
311	8"	Silver Maple		
312	53"	Black Willow		
313	9"	Hawthorn	twin	
314	6"	Hawthorn	quad	
315	7"	Hawthorn	twin	
316	22"	Sugar Maple		
317	9"	Hawthorn	twin	
318	23"	Sugar Maple		
319	21"	Sugar Maple		
320	21"	Sugar Maple		
321	23"	Sugar Maple		
322	12"	Sugar Maple		
323	8"	Hawthorn	twin	
324	23"	Sugar Maple		
325	19"	Sugar Maple		
326	20"	Sugar Maple		
327	17"	Sugar Maple		
328	51"	Black Willow		
329	13"	Box Elder	twin	
330	32"	Black Willow	triple	
331	8"	Hawthorn		
332	7"	White Mulberry	triple	X
333	11"	Box Elder		
334	9"	American Elm		
335	12"	Silver Maple		
336	34"	Black Willow	twin	
337	14"	Silver Maple		
338	12"	Silver Maple	quad	
339	41"	Black Willow		
340	31"	Sycamore		

TAG#	DBH	COMMON NAME	STEMS	INV
341	19"	Sugar Maple		
342	20"	Sugar Maple		
343	21"	Sugar Maple		
344	31"	Sycamore		
345	24"	Sugar Maple		
346	23"	Sugar Maple		
347	14"	Sugar Maple		
348	23"	Sweetgum		
349	28"	Sugar Maple		
350	25"	American Elm		
351	23"	Sugar Maple		
352	16"	Sugar Maple		
353	29"	Sugar Maple		
354	16"	Sugar Maple		
355	18"	Sugar Maple		



TEMPORARY CONSTRUCTION SIGN

TEMPORARY CONSTRUCTION SIGN

WHITE BACKGROUND

Lola Valley – Habitat Restoration
Rouge River AOC Habitat Design
Alliance of Rouge Communities

This project is funded by the U.S. Environmental Protection Agency Great Lakes National Program Office. Part of a \$770,000 Great Lakes Restoration Initiative Grant (GLRI EPA AWARD NO. GL-00E02432) funded project design; a portion of a \$4,222,090 Great Lakes Restoration Initiative Grant (GLRI EPA AWARD NO. GL-00E02896) funds project implementation.

Both grants were received by Alliance of Rouge Communities.

Engineer: **ECT** Environmental Consulting & Technology, Inc. Contractor: (Insert Logo Here)

SIGN DIMENSIONS: 1200 mm x 2400 mm x 19 mm (approx. 4' x 8' x 3/4")
PLYWOOD PANEL (APA RATED A-B GRADE-EXTERIOR)

NOTE: CONTRACTOR TO INSTALL PROJECT SIGN AS SHOWN. LOCATION OF PROJECT SIGN SHALL BE APPROVED BY OWNER/ ENGINEER.

LEGEND

- EXIST. CONTOUR
- EXISTING WETLAND
- EXISTING GROW ZONES
- PROPOSED TURF REMOVAL
- PROPOSED SITE ACCESS
- SILT FENCE
- STAGING AREA
- TREE PROTECTION
- TREE REMOVAL

POTENTIAL TREE REMOVALS		
TREE ID	SIZE	SPECIES
261	10"	HOP HORNBEAM
278	12"	AMERICAN ELM
324	23"	SUGAR MAPLE
325	19"	SUGAR MAPLE

NOTE: CONTRACTOR TO VERIFY POTENTIAL TREE REMOVALS WITH OWNER AND AVOID REMOVAL TO THE EXTENT POSSIBLE. ALL REMOVALS WILL BE REPLACED ACCORDING TO LOCAL ORDINANCE AT FIELD LOCATIONS TO BE DETERMINED BY OWNER IN THE FIELD. REFER TO PLANT LIST ON SHEET 12 FOR SUGGESTED TREE REPLACEMENT SPECIES

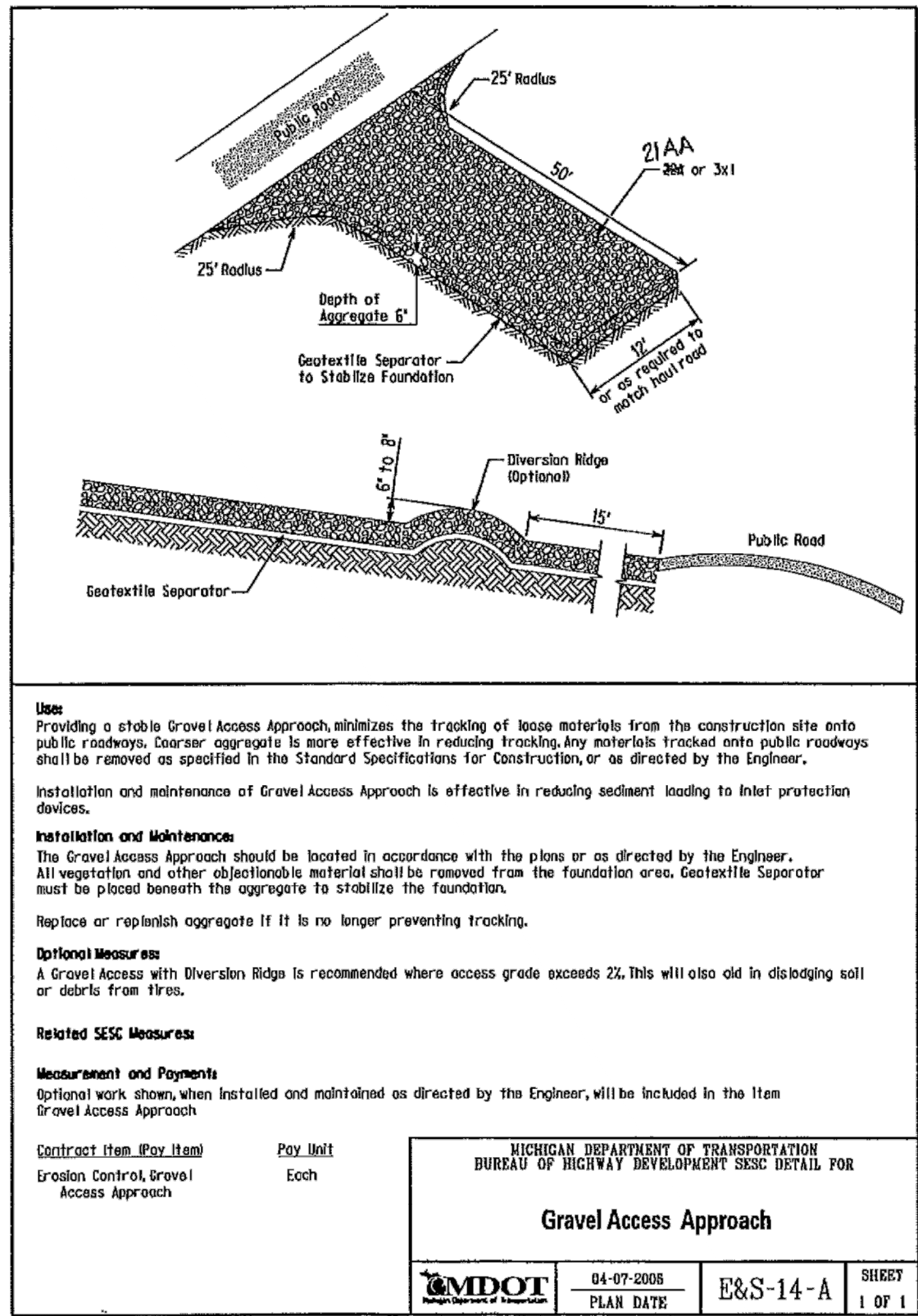
STAGING/ ACCESS NOTES:

1. CONTRACTOR TO UNDERSTAND AND ADHERE TO ALL WEIGHT RESTRICTIONS, HEIGHT RESTRICTIONS AT BRIDGES, AND ALL OTHER REQUIREMENTS AND RESTRICTIONS ALONG ANY ACCESS ROUTES USED TO ACCESS THE PROJECT SITE.
2. EQUIPMENT ACCESS AND STAGING AND MATERIALS STORAGE CAN OCCUR WITHIN THE LIMITS OF DISTURBANCE IN ADDITION TO DESIGNATED STAGING AREAS. NO ADDITIONAL VEGETATION CLEARING FOR ACCESS OR STAGING IS PERMITTED WITHOUT APPROVAL OF THE ENGINEER AND OWNER.
3. CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION OVER EXISTING ASPHALT AT ACCESS POINTS TO PREVENT PHYSICAL DAMAGE OR CHEMICAL DAMAGE FROM LEAKING PETROLEUM PRODUCTS. REPAIR OF DAMAGED ROAD SHALL BE AT CONTRACTOR'S EXPENSE UNLESS SPECIFICALLY ACCOUNTED FOR UNDER CONTRACTOR'S SITE RESTORATION LINE ITEM. CONTRACTOR IS RESPONSIBLE FOR RESTORING GRAVEL PARKING LOT TO ORIGINAL CONDITION.

SOIL EROSION CONTROL NOTES:

IN ACCORDANCE WITH RULE 1709 PROMULGATED UNDER THE AUTHORITY OF PART 91, SOIL EROSION AND SEDIMENT CONTROL, OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED, AND IN ADDITION TO THE INFORMATION IN THE PROJECT PLANS AND SPECIFICATIONS, THE FOLLOWING GENERAL CONDITIONS APPLY TO THE EARTH CHANGE AUTHORIZED BY THIS DOCUMENT.

1. CONSTRUCT AND COMPLETE THE EARTH CHANGE IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL PERMIT AND IN A MANNER THAT LIMITS THE EXPOSED AREA OF DISTURBED LAND FOR THE SHORTEST PERIOD OF TIME.
2. TEMPORARY OR PERMANENT CONTROL MEASURES SHALL BE INSTALLED TO CONVEY WATER AROUND, THROUGH OR FROM THE EARTH CHANGE AT A NON-EROSIVE VELOCITY.
3. REMOVE SEDIMENT CAUSED BY ACCELERATED SOIL EROSION FROM RUNOFF WATER BEFORE IT LEAVES THE SITE OF THE EARTH CHANGE.
4. INSTALL TEMPORARY SOIL EROSION AND SEDIMENTATION MEASURES BEFORE OR UPON COMMENCEMENT OF THE EARTH CHANGE ACTIVITY AND MAINTAIN THE MEASURES ON A DAILY BASIS. REMOVE TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED. ("STABILIZED" MEANS THE ESTABLISHMENT OF VEGETATION OR THE PROPER PLACEMENT, GRADING OR COVERING OF SOIL TO ENSURE ITS RESISTANCE TO SOIL EROSION, SLIDING, OR OTHER EARTH MOVEMENT.)
5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SITE DRAINAGE.
6. CONTRACTOR IS RESPONSIBLE TO PROTECT ADJACENT WATER COURSES FROM THE DISCHARGE OF SEDIMENT DURING CONSTRUCTION.
7. INSTALL PERMANENT EROSION CONTROL MEASURES WITHIN 5 DAYS OF COMPLETING FINAL GRADING OR MAINTAIN TEMPORARY MEASURES UNTIL PERMANENT MEASURES ARE INSTALLED.
8. SILT FENCE TO BE INSTALLED AROUND OFF-SITE STOCKPILE AREAS.
9. APPLY TEMPORARY EROSION CONTROL ON OVER EXPOSED SOILS DURING WET WEATHER AND WHEN SITE IS INACTIVE FOR MORE THAN 24 HOURS.
10. DO NOT CONSTRUCT DURING HIGH FLOW OR WET WEATHER.
11. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING LANDSCAPING FOR TWO YEARS DURING THE MAINTENANCE PERIOD AND ONE ADDITIONAL YEAR DURING THE REMAINING WARRANTY PERIOD.
12. PROTECT ALL DRAIN INLETS WITH SEDIMENT FILTERS.
13. EXISTING LOW AREAS TO BE USED FOR STORMWATER DETENTION AND SETTLING DURING CONSTRUCTION.
14. INSTALL TEMPORARY INLET FILTERS AT ALL ADJACENT AND DOWN-GRADIENT STORM WATER INLETS, CATCH BASINS AND MANHOLES THAT MAY BE IMPACTED. CATCH BASIN INLET FILTERS SHALL BE MAINTAINED CLEAN AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD. IF A FILTER HAS HOLES OR IS INUNDATED WITH SEDIMENT, THE FILTER WILL REQUIRE REPLACEMENT.
15. SILT FENCE SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD. IF REPAIR OR REPLACEMENT IS NECESSARY, IT SHALL BE PERFORMED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. MAINTENANCE INCLUDES THE REMOVING OF BUILT-UP SEDIMENT. CONTRACTOR SHALL REMOVE, REPLACE IF IT FAILS. ADDITIONALLY, THE CONTRACTOR SHALL REINSTALL ANY PORTION OF THE FENCING/ BARRIER DAMAGED BY CONSTRUCTION MACHINERY.
16. PLACE STOCKPILES AND OTHER SPOIL PILES AWAY FROM THE DRAINAGE SYSTEM TO MINIMIZE SEDIMENT TRANSPORT. IF THE STOCKPILE AND/OR SPOIL PILE MUST REMAIN ON-SITE OVERNIGHT, OR IF THE WEATHER CONDITIONS INDICATE THE CHANCE FOR PRECIPITATION, A.) COVER THE PILE WITH WATER REPELLENT MATERIAL TO PREVENT EROSION AND/OR B.) INSTALL SILT FENCING AROUND THE BASE OF THE PILE TO PREVENT TRANSPORT OF SEDIMENT TO THE STORM WATER SYSTEM, OR APPLY OTHER CONTROL METHODS APPROPRIATE TO THE SITE. CONTROL MEASURES TO GUARD AGAINST WIND EROSION MUST ALSO BE EMPLOYED, SUCH AS WETTING OR COVERING THE STOCKPILES. KEEP AS FEW STOCKPILES AS POSSIBLE DURING THE COURSE OF THE PROJECT.
17. THROUGHOUT THE CONSTRUCTION PERIOD, ALL MUD/SILT TRACKED ONTO EXISTING ROADS FROM THE SITE DUE TO CONSTRUCTION SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR.
18. SEEDING OR OTHER STABILIZATION SHALL BE REQUIRED IMMEDIATELY TO AREAS WHICH HAVE BEEN DAMAGED BY RUNOFF.
19. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL ON THE SITE THROUGHOUT THE DURATION OF THE CONSTRUCTION PROCESS.
20. SOIL EROSION CONTROL MEASURES MAY BE TEMPORARILY REMOVED DURING SEEDING AND VEGETATION INSTALLATION. EROSION CONTROL BLANKETS OR STRAW MULCH WITH TACKIFIER MUST BE PLACED IMMEDIATELY OVER EXPOSED SOIL.
21. EROSION CONTROL BLANKET NOTES:
 - NORTH AMERICAN GREEN SC-150BN TO BE USED ON ANY SLOPES STEEPER THAN 1V:6H
 - S75BN ON SLOPES FLATTER THAN 1V:6H WITHIN EXISTING AND PROPOSED WETLAND BASIN AREAS
 - HYDRAULIC MULCH OR CERTIFIED WEED FREE STRAW MULCH WITH TACKIFIER OR CRIMPING TO BE USED ON ANY SLOPES OUTSIDE OF WETLANDS FLATTER THAN 1V:6H
 - ALL EROSION CONTROL BLANKET/MULCH TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.



- NOTES:
1. CONTRACTOR TO INSTALL AND MAINTAIN GRAVEL ACCESS APPROACHES IN LOCATIONS WHERE ACCESS IS TO BE ESTABLISHED FROM ADJACENT ROADS. ACCESS TO BE REMOVED AT PROJECT COMPLETION. NOTE, ACCESS MAY NOT BE INSTALLED IN AN EXISTING WETLAND.
 2. CONTRACTOR TO INSTALL ROAD CLOSURE SIGNAGE AT LEVAN RD AND PATH CLOSURE SIGNAGE AS DIRECTED BY OWNER.

PROJECT FUNDED BY THE NATIONAL ENVIRONMENTAL PROTECTION AGENCY THROUGH A GREAT LAKE RESTORATION INITIATIVE GRANT. GLRI EPA AWARD NO. GL-00E02830-0

ECT Environmental Consulting & Technology, Inc.

Great Lakes RESTORATION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

Wayne County parks
EXPLORE EVEN MORE

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

LOLA VALLEY HABITAT RESTORATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING 01/2022
FOR PERMITTING 07/15/21
SITE CONCEPT 12-15-20

200115-0200
ECT PROJECT NUMBER
AAB DESIGNED BY AAB CHECKED BY
SRD DRAWN BY JMO APPROVED BY

SHEET TITLE

SITE PREPARATION

SCALE: 1" = 200' @ 22" x 34"


0 100' 200' 400'


NORTH


SHEET NUMBER
7




LEGEND

EXISTING CONTOUR

PROPOSED TURF CONVERSION

PROPOSED WET MEADOW RESTORATION

PROPOSED ACCESS ROUTE

	Grant Metric (ac)	Proposed (ac)
Turf conversion	11.0	7.0
Wet meadow creation	2.0	2.0
Total Habitat	13.0	9.0

- NOTES:
1. PROPOSED TURF CONVERSION AREAS CONSIST OF: TURF REMOVAL, SEEDING AND/OR PLUG INSTALLATION, GRADING(REFER TO SHEETS 9-11), AND EROSION CONTROL BLANKET INSTALLATION.
 2. PROPOSED WET MEADOW RESTORATION AREAS CONSIST OF: TURF REMOVAL, SEEDING, GRADING(REFER TO SHEETS 9-11), CULVERT INSTALLATION, AND EROSION CONTROL BLANKET INSTALLATION.
 3. PROPOSED ACCESS ROUTE AREAS CONSIST OF: GRADING, EXCAVATION AND INSTALLATION OF ACCESS ROUTE MATERIALS, AND EDGE, CULVERT AND WALL INSTALLATION.
 4. SEE SHEETS 9-11 FOR GRADING PLAN
 5. SEE SHEETS 9-12 FOR REVEGETATION PLANS
 6. TOPSOIL IS TO BE STOCKPILED AND REAPPLIED AS NEEDED.
 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT LAYOUT AND STAKING AS NEEDED TO CONDUCT WORK. DIGITAL AUTOCAD FILES SHALL BE PROVIDED TO CONTRACTOR TO FACILITATE LAYOUT OF PROPOSED WORK.



Environmental Consulting & Technology, Inc.









ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION

LOLA VALLEY
HABITAT
RESTORATION
PROJECT

ALLIANCE OF ROUGE
COMMUNITIES

WAYNE COUNTY,
MICHIGAN

FOR BIDDING	01/2022
FOR PERMITTING	07/15/21
SITE CONCEPT	12-15-20
200115-0200 ECT PROJECT NUMBER	
AAB DESIGNED BY	AAB CHECKED BY
SRO DRAWN BY	JMO APPROVED BY

SHEET TITLE

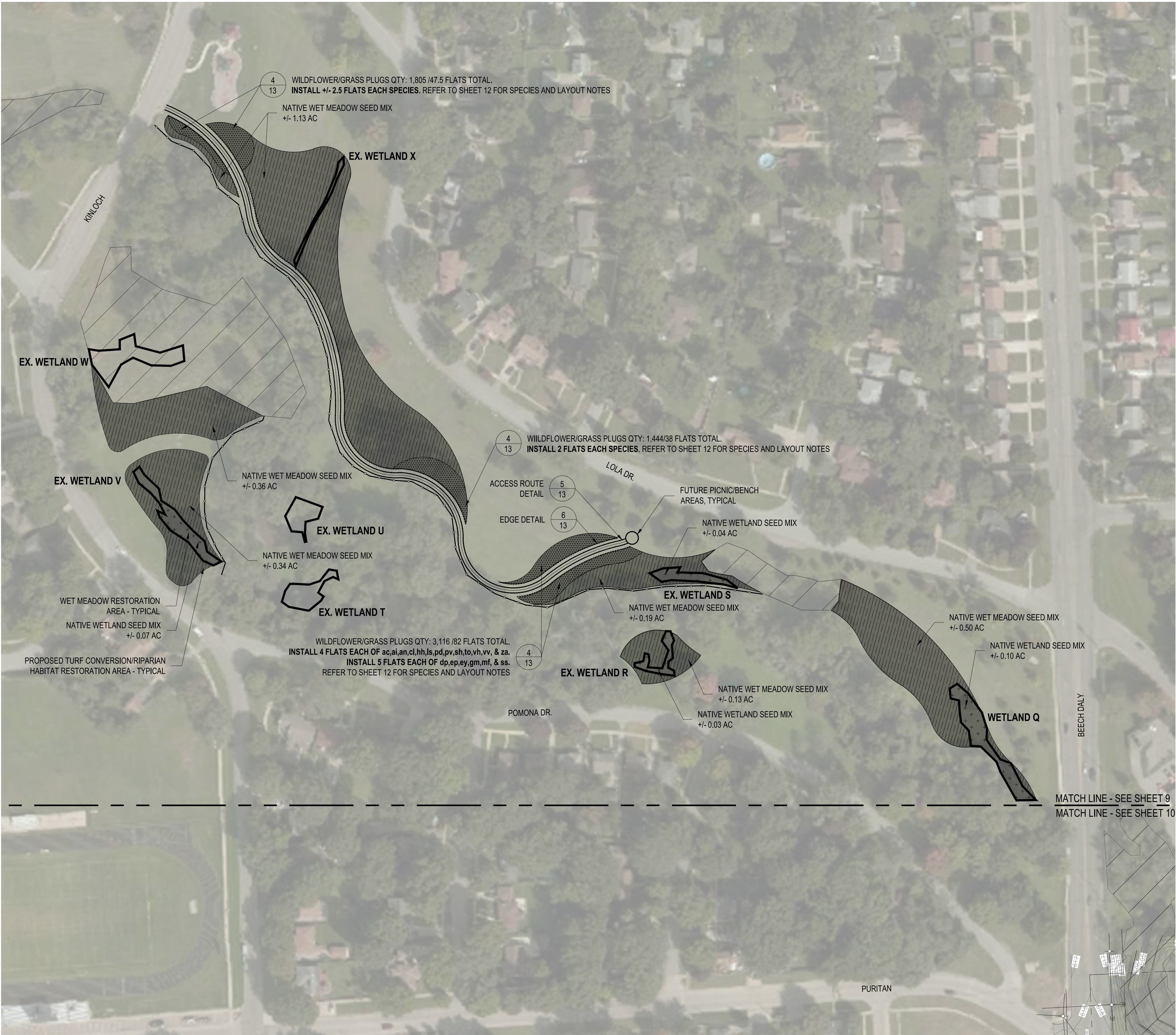
PROPOSED
CONDITIONS -
OVERALL

SCALE: 1" = 200' @ 22" x 34"

NORTH

SHEET NUMBER

8



LEGEND

EXIST. CONTOUR

EXISTING WETLAND

EXISTING GROW ZONES

SILT FENCE

PROPOSED ACCESS ROUTE

PROPOSED NATIVE WILDFLOWER/GRASS PLUGS

PROPOSED NATIVE WETLAND SEED MIX

PROPOSED NATIVE WET MEADOW SEED MIX

PROPOSED NATIVE PRAIRE SEED MIX

ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION

LOLA VALLEY
HABITAT
RESTORATION
PROJECT

ALLIANCE OF ROUGE
COMMUNITIES

WAYNE COUNTY,
MICHIGAN

FOR BIDDING	01/2022
FOR PERMITTING	07/15/21
PRELIMINARY	10-26-20
200115-0200	
ECT PROJECT NUMBER	
AAB DESIGNED BY	AAB CHECKED BY
SRO DRAWN BY	JMO APPROVED BY

SHEET TITLE

PROPOSED
CONDITIONS -
ZONE A

SCALE: 1" = 80' @ 22" x 34"

NORTH

SHEET NUMBER

9



LEGEND	
	EXIST. CONTOUR
	EXIST. SPOT ELEVATION
	EXIST. UTILITY POLE
	GUY WIRE
	EXIST. OVERHEAD UTILITY LINE
	EXIST. LIGHT POLE
	EXIST. GAS LINE
	EXIST. WATER MAIN
	EXIST. HYDRANT
	EXIST. GATE VALVE IN BOX
	EXIST. GATE VALVE IN WELL
	EXIST. STORM SEWER
	EXIST. CATCH BASIN OR INLET
	END SECTION
	CULVERT
	EXIST. SANITARY SEWER SIGN
	PEDESTRIAN CROSSING SIGNAL
	TRAFFIC SIGNAL CONTROL BOX
	POST
	FENCE
	GUARDRAIL
	SINGLE TREE
	TREE OR BRUSH LIMIT
	EXIST. BOULDER
	SECTION CORNER
	FOUND IRON PIPE
	FOUND IRON ROD
	CONTROL PT.
	LIMIT OF FLOOD ZONE AE
	EXISTING WETLAND
	EXISTING GROW ZONES
	PROPOSED CONTOUR
	PROPOSED ACCESS ROUTE
	SILT FENCE
	TREE PROTECTION
	PROPOSED NATIVE WILDFLOWER/GRASS PLUGS
	PROPOSED NATIVE WETLAND SEED MIX
	PROPOSED NATIVE WET MEADOW SEED MIX



ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION

LOLA VALLEY
HABITAT
RESTORATION
PROJECT

ALLIANCE OF ROUGE
COMMUNITIES

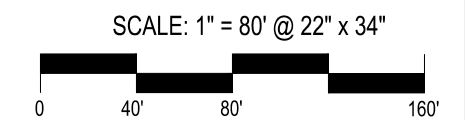
WAYNE COUNTY,
MICHIGAN

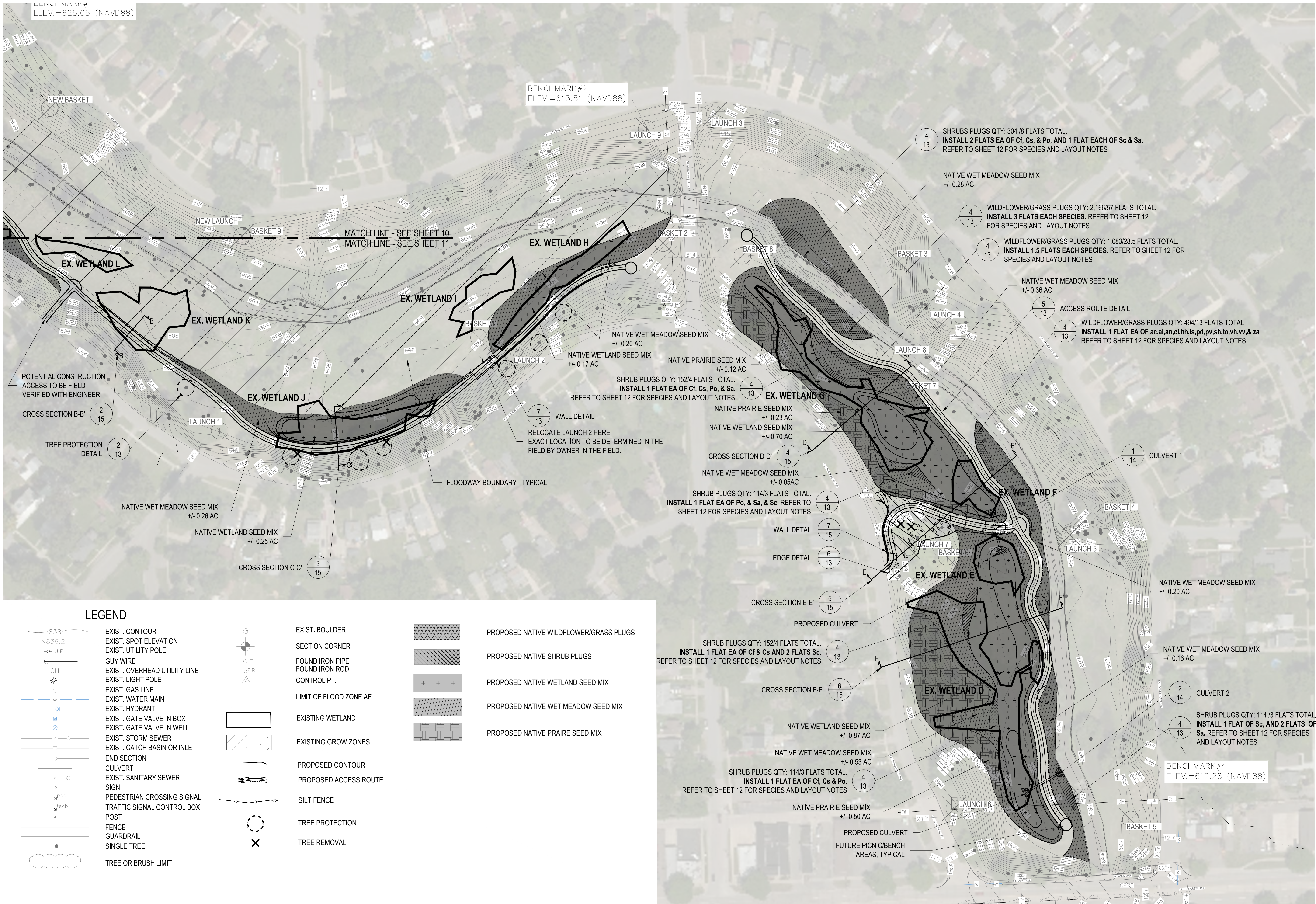
FOR BIDDING	01/2022
FOR PERMITTING	07/15/21
PRELIMINARY	10-26-20

200115-0200 ECT PROJECT NUMBER	
AAB DESIGNED BY	AAB CHECKED BY
SRO DRAWN BY	JMO APPROVED BY

SHEET TITLE

PROPOSED
CONDITIONS -
ZONE B





LEGEND			
	EXIST. CONTOUR		EXIST. BOULDER
	EXIST. SPOT ELEVATION		SECTION CORNER
	EXIST. UTILITY POLE		FOUND IRON PIPE
	GUY WIRE		FOUND IRON ROD
	EXIST. OVERHEAD UTILITY LINE		CONTROL PT.
	EXIST. LIGHT POLE		LIMIT OF FLOOD ZONE AE
	EXIST. GAS LINE		EXISTING WETLAND
	EXIST. WATER MAIN		EXISTING GROW ZONES
	EXIST. HYDRANT		PROPOSED CONTOUR
	EXIST. GATE VALVE IN BOX		PROPOSED ACCESS ROUTE
	EXIST. GATE VALVE IN WELL		SILT FENCE
	EXIST. STORM SEWER		TREE PROTECTION
	EXIST. CATCH BASIN OR INLET		TREE REMOVAL
	END SECTION		
	CULVERT		
	EXIST. SANITARY SEWER SIGN		
	PEDESTRIAN CROSSING SIGNAL		
	TRAFFIC SIGNAL CONTROL BOX		
	POST		
	FENCE		
	GUARDRAIL		
	SINGLE TREE		
	TREE OR BRUSH LIMIT		

1
11 PROPOSED CONDITIONS - ZONE C

SCALE: 1"=80'
BASE SURVEY CONDUCTED BY MIDWESTERN CONSULTING DATED MAY 2020



**ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION**

**LOLA VALLEY
HABITAT
RESTORATION
PROJECT**

ALLIANCE OF ROUGE
COMMUNITIES

WAYNE COUNTY,
MICHIGAN

FOR BIDDING 01/2022
FOR PERMITTING 07/15/21
PRELIMINARY 10-26-20

200115-0200
ECT PROJECT NUMBER
AAB DESIGNED BY AAB CHECKED BY
SRO DRAWN BY JMO APPROVED BY

SHEET TITLE
**PROPOSED
CONDITIONS -
ZONE C**

SCALE: 1" = 80' @ 22" x 34"
0 40 80 160

NORTH

SHEET NUMBER
11

REVEGETATION NOTES:

MAINTENANCE AND WARRANTY PERIOD:

1. MAINTENANCE PERIOD: ENSURE THAT ALL SHRUBS, SEEDING, AND HERBACEOUS PLANTS INSTALLED UNDER THIS CONTRACT WILL BE HEALTHY AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR TWO (2) FULL GROWING SEASONS (MAY THROUGH OCTOBER) FROM DATE OF PLANTING INSTALLATION ACCEPTANCE. THE CONTRACTOR SHALL RESPOND WITHIN TWO (2) WEEKS OF WRITTEN REQUESTS BY THE OWNER FOR REPLACEMENT OR REPAIR. IF THE CONTRACTOR FAILS TO RESPOND WITHIN THIS TIME, THE OWNER MAY PROCEED WITH REPLACEMENT WORK AND BILL THE CONTRACTOR.
2. WARRANTY PERIOD: ENSURE THAT ALL SHRUBS, SEEDING, AND HERBACEOUS PLANTS INSTALLED UNDER THIS CONTRACT WILL BE HEALTHY AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR ONE (1) FULL GROWING SEASON (MAY THROUGH OCTOBER) FROM DATE OF MAINTENANCE PERIOD ACCEPTANCE. THE CONTRACTOR SHALL RESPOND WITHIN TWO (2) WEEKS OF WRITTEN REQUESTS BY THE OWNER FOR REPLACEMENT OR REPAIR. IF THE CONTRACTOR FAILS TO RESPOND WITHIN THIS TIME, THE OWNER MAY PROCEED WITH REPLACEMENT WORK AND BILL THE CONTRACTOR.
3. ALL DELAYS IN COMPLETION OF PLANTING OPERATIONS WHICH EXTEND THE PLANTING INTO MORE THAN ONE PLANTING SEASON SHALL EXTEND THE WARRANTY PERIOD CORRESPONDINGLY.
4. REPLACEMENTS: AS SOON AS WEATHER CONDITIONS PERMIT, REPLACE, WITHOUT COST TO OWNER, ALL DEAD PLANTS AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE ENGINEER DURING AND AT THE END OF THE MAINTENANCE AND WARRANTY PERIODS.
5. PATCHY OR BARE AREAS (IN EXCESS OF 4 SQUARE FEET) WHERE SEED MIX FAILED TO CREATE SUFFICIENT DENSITY OF COVER SHALL BE RESEEDED BY HAND AT THE RECOMMENDED APPLICATION RATE AT NO ADDITIONAL COST TO OWNER.
6. INCORRECT MATERIALS: DURING WARRANTY PERIOD, REPLACE AT NO COST TO OWNER ALL PLANTS REVEALED AS BEING UNTRUE TO NAME. PROVIDE REPLACEMENTS OF A SIZE AND QUALITY TO MATCH THE PLANTED MATERIALS AT THE TIME THE MISTAKE IS DISCOVERED.
7. ALL PLANT STOCK SHALL BE WATERED BY THE CONTRACTOR TO ENSURE THE HEALTH AND VIGOR OF THE PLANTED MATERIALS. THE CONTRACTOR SHALL WATER AS NEEDED BASED ON NATURAL RAINFALL DURING THE MAINTENANCE AND WARRANTY PERIODS. WATERING SHALL CONTINUE SO SEEDLINGS DO NOT DRY OUT ONCE WATERING HAS BEGUN. THE WATERING SHALL BE DONE FROM SURFACE METHODS AT A PRESSURE NOT TO EXCEED THE INFILTRATION RATE OF THE SOIL, LIMITING RUNOFF DURING THE WATERING PERIOD. EACH AREA WILL BE WATERED WITH SUFFICIENT WATER TO COMPLETELY SATURATE THE ROOT ZONE. THE CONTRACTOR SHALL INSPECT ALL PLANTS FOR INSECT INFESTATION AND DAMAGE.
8. EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
9. PROTECTION FROM TRAFFIC AND EROSION IN NEWLY SEEDED AREAS AND THE MITIGATION AREAS IS THE RESPONSIBILITY OF THE CONTRACTOR. SAFETY FENCES AND/OR OTHER BARRIER METHODS WITH APPROPRIATE SIGNAGE MAY BE USED FOR ONE YEAR FROM COMPLETION OF CONSTRUCTION ACTIVITIES. ALL COSTS ASSOCIATED WITH THIS IS INCLUSIVE OF CONTRACTOR'S PRICING.
10. NOTIFY THE OWNER PRIOR TO AND FOLLOWING ANY MAINTENANCE ACTIVITY.
11. FINAL ACCEPTANCE OF WORK WILL BE SUBJECT TO ACCEPTANCE BY PROJECT MANAGER AND OWNER AT THE END OF WARRANTY PERIOD.

GENERAL NOTE:

1. DO NOT UNDERTAKE SEEDING AND PLANTING ACTIVITIES PRIOR TO OR DURING WET WEATHER WHEN EXCESSIVE PRECIPITATION MAY RESULT IN WASHING OF SEED AWAY FROM LOCATION INTENDED.
2. THE CONTRACTOR UNDERSTANDS AND ACKNOWLEDGES THAT THE PERFORMANCE OF THE WORK IS REQUIRED WITHIN THE ROUGE RIVER SYSTEM AND FLOODPLAIN AND THAT THE ROUGE RIVER WATER LEVEL FLUCTUATES. ROUGE RIVER HAS A VERY SHORT RESPONSE TIME TO STORM RUNOFF.
3. THE CONTRACTOR UNDERSTANDS AND ACKNOWLEDGES THAT THEY HAVE TAKEN INTO ACCOUNT THE POTENTIAL FOR ANY WATER LEVEL CHANGES THAT MIGHT OCCUR IN COSTING, SCHEDULING, AND FEASIBILITY OF PERFORMING THE CONTRACT WORK UNDER THE PREVAILING ENVIRONMENTAL CONDITIONS. THEREFORE THE CONTRACTOR ACKNOWLEDGES THAT ANY FLUCTUATION IN WATER LEVELS, FLOODING, OR INUNDATION DURING/OVER THE COURSE OF THE PROJECT IS LIKELY AND DOES NOT CONSTITUTE A CHANGE IN CONDITIONS OR AN UNFORESEEN SITE CONDITION.
4. THE CONTRACTOR SHALL BE FULLY AWARE OF THE ROUGE RIVER HYDROLOGY AND CURRENT WEATHER CONDITIONS SO THAT WORK CAN BE SECURED AND PROTECTED AT ALL TIMES, SO THAT SAFE JOB SITE WORKING CONDITIONS ARE MAINTAINED, AND SO THAT SOIL EROSION IS CONTROLLED IN ACCORDANCE WITH ALL APPLICABLE PERMITS AND ENVIRONMENTAL LAWS.

NATIVE PLANTINGS:

1. ALL PLANTS SHALL BE OF NATIVE PLANT MATERIAL OF GENOTYPES FROM THE NORTH CENTRAL STATES ONLY (IL, IN, IA, MI, OH), AND FROM A RECOGNIZED NURSERY OF THIS REGION. MICHIGAN SOURCES FOR SHRUBS, AND PLUGS SHALL BE LOCATED BEFORE BRANCHING OUT TO OTHER NORTH CENTRAL STATES. NATIVE PLANTINGS INCLUDE ALL SHRUBS AND PLUGS INSTALLED AS PART PF THIS PROJECT.
2. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES AND MUST MEET APPLICABLE REQUIREMENTS OF ICBN AND ICNCP. PLANTS SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS, OR LARVAE. PLANTS SHALL BE FREE OF KINKED, CIRCLING OR GIRDLING TRUNK SURFACE AND CENTER ROOTS, AND SHALL NOT BE ROOT-BOUND. RESPECT MAXIMUM STORAGE TIMES FOR PLANT STOCK.
3. NATIVE PLANTING AREAS SHALL BE INSTALLED AFTER MAY 15 (WHEN SOIL IS FREE OF FROST AND IN WORKABLE CONDITION), BUT BEFORE JUNE 30 OR AFTER SEPT. 1 BUT BEFORE OCTOBER 30 OR AS APPROVED BY THE LANDSCAPE ARCHITECT.
4. FURNISH PLANT SPECIES AND SIZES AS INDICATED ON THE PLANS. PLANT STOCK SHALL BE TRUE TO THEIR NAME (GENUS AND SPECIES), AS SPECIFIED. CULTIVARS AND SPECIMENS SHALL NOT BE USED WITHOUT PRIOR APPROVAL BY LANDSCAPE ARCHITECT.
5. NATIVE PLANTINGS TO BE INSTALLED PER DETAILS.
6. REMOVE ALL CONTAINERS, TAGS AND PACKAGING MATERIAL AND DISPOSE OF LEGALLY OFF-SITE.
7. WATER PLANT STOCK IMMEDIATELY AFTER PLANTING SUCH THAT ROOT ZONE IS THOROUGHLY SOAKED. CONTRACTOR SHALL BE RESPONSIBLE TO KEEP PLUGS ADEQUATELY WATERED, IF NECESSARY, TO ENSURE THEIR SURVIVAL.
8. IF EROSION CONTROL BLANKET IS NEEDED IN AREAS WHERE PLUGS ARE PRESENT, INSTALL EROSION CONTROL BLANKET AFTER SEEDING, BUT PRIOR TO PLANTING. EROSION CONTROL BLANKET SHALL BE INSTALLED WHERE THE CONTRACTOR FEELS IT NECESSARY TO STABILIZE THE SITE AT NO ADDITIONAL COST TO THE OWNER.
9. MULCH FOR TREES AND SHRUBS SHALL BE NATURAL DOUBLE SHREDDED HARDWOOD.
10. LANDSCAPE PLAN SUBMITTALS: CONTRACTOR TO PROVIDE ENGINEER ONE MONTH PRIOR TO INITIATION OF LANDSCAPE WORK AND SHALL INCLUDE:

- ALL RELEVANT PERMITS, LICENSES, AND AUTHORIZATIONS.
- WRITTEN DETAIL FOR ALL PLANTING METHODS, SCHEDULE AND CERTIFICATES.
- PLANT STOCK CERTIFICATES FROM WOODY PLANT STOCK SUPPLIERS WHICH SHALL INCLUDE:
 - Botanical name, including cultivar, and common name.
 - Quantity.
 - Size.
 - Type (B&B, Container, Bare Root...etc.)
 - Origin (Location grown).
 - Name, address, and phone number of supplier.

SEED CERTIFICATES FROM SEED SUPPLIERS WHICH SHALL INCLUDE:

- Botanical names and common names.
- Net weight.
- Percentage of seeds by weights.
- Purity of seed.
- Amount of undesirable plant seeds present in mixture.
- Germination percentage.
- Date of production.
- Date of packaging.
- Location of packaging.
- Name, address, and phone number of supplier.

- EROSION CONTROL BLANKET MANUFACTURER AND SPECIFICATIONS.
- NAME AND ADDRESS OF MULCH SUPPLIER(S) AND A SMALL PHYSICAL SAMPLE OF THE MATERIAL TO BE USED.

SEEDING:

1. SEED SHALL BE FRESH, CLEAN, NEW SEED OF NATIVE PLANT MATERIAL OF GENOTYPES FROM THE NORTH CENTRAL STATES ONLY (IL, IN, IA, MI, OH), AND FROM A RECOGNIZED NURSERY OF THIS REGION - REFER TO SPECIFICATION 02930.
2. NATIVE SEED AREAS SHALL BE SEEDED AFTER MAY 1, (WHEN SOIL IS FREE OF FROST AND IN WORKABLE CONDITION), BUT BEFORE JUNE 30 OR AFTER OCTOBER 1, BUT BEFORE NOVEMBER 30 (OR PRIOR TO FREEZE-UP) OR AS APPROVED BY THE LANDSCAPE ARCHITECT.
3. SEEDBED PREPARATION:
- PROTECT STRUCTURES; UTILITIES; SIDEWALKS; PAVEMENTS; AND OTHER FACILITIES, TREES, SHRUBS, AND PLANTINGS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.
 - VERIFY LIMITS OF SEEDING WITH THE LANDSCAPE ARCHITECT IN THE FIELD BEFORE STARTING SEEDING WORK.
 - LIMIT PREPARATION TO AREAS WHICH WILL BE IMMEDIATELY SEEDED.
 - CUT ANY EXISTING VEGETATION TO 4 (FOUR) INCH HEIGHT AND APPLY HERBICIDE AS NECESSARY, REFER TO SPECIFICATION 02930.
 - IF TOPSOIL IS REQUIRED, SPREAD TOPSOIL TO A DEPTH OF 4" MINIMUM TO MEET FINISH GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD IF TOPSOIL OR SUBGRADE IS FROZEN, MUDDY OR EXCESSIVELY WET. IF TOPSOIL IS ADDED, CONTRACTOR SHALL ENSURE ALL TOPSOIL IS INCORPORATED INTO THE EXISTING SOIL, AND ALL FINAL GRADES ARE MET.
 - FINE GRADE TO A SMOOTH EVEN SURFACE WITH NO "BIRD BATHS", HAVING LOOSE, UNIFORMLY FINE TEXTURE. REMOVE ANY MATERIALS AS NOT IN THAT MAY INTERFERE WITH PLANTING OR MAINTENANCE OPERATIONS.
 - FINE GRADE WITHIN PLUS OR MINUS ONE-HALF INCH OF FINISH ELEVATION. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINE GRADING TO AREAS THAT CAN BE SEEDED IN THE IMMEDIATE FUTURE.
 - RESTORE PREPARED AREAS TO SPECIFIED CONDITION IF ERODED, SETTLED OR OTHERWISE DISTURBED AFTER FINE GRADING AND PRIOR TO SEEDING. SEED BED SHALL BE FIRM, BUT NOT COMPACT.
 - MOISTEN PREPARED AREA BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.
 - CONTRACTOR TO ENSURE GOOD SOIL TO SEED CONTACT.
 - DO NOT FERTILIZE
4. DO NOT SOW SEED WHERE STANDING WATER IS PRESENT.
5. DO NOT UNDERTAKE SEEDING AND PLANTING ACTIVITIES PRIOR TO OR DURING WET WEATHER WHEN EXCESSIVE PRECIPITATION MAY RESULT IN WASHING OF SEED AWAY FROM LOCATION INTENDED.
6. SOW NATIVE SEED AT A SPECIES RATE OF POUNDS PER ACRE INDICATED ON THE DRAWING AND PER SUPPLIERS RECOMMENDATIONS. LIGHTLY RAKE TO INCORPORATE SEED INTO SOIL. DO NOT COVER SEED MORE THAN 1/4 INCH WITH SOIL.
7. CONTRACTOR SHALL REPAIR DAMAGED VEGETATION AND AERATE SOIL OVER ROOT ZONE OF NEGATIVELY IMPACTED VEGETATION. RE-SEED ALL DISTURBED AREAS TO PRE-EXISTING CONDITIONS.

PROPOSED SEED MIXES

NATIVE WETLAND SEED MIXED SHALL BE PROVIDED BY: (OR APPROVED EQUAL)

NATIVE CONNECTIONS
MICHIGAN WILDFLOWER FARM
www.michiganwildflowerfarm.com
PHONE: 517-647-6010
EMAIL: michiganwildflowerfarm@gmail.com

NATIVE WETLAND SEED MIX - 2.42 AC TOTAL
Seeding Rate per Suppliers Recommendations

Native Wetland Seed Mix		
40% Forbs and 60% Grass/Sedge/Rush		
Seeding Rate: 3 oz./1000 s.f. or 6 lbs./acre		
Scientific name	Common name	% by weight
FORBS		
<i>Anemone canadensis</i>	Canada anemone	0.03
<i>Asclepias incarnata</i>	Swamp milkweed	0.04
<i>Eupatorium maculatum</i>	Joe pye weed	0.05
<i>Eupatorium perfoliatum</i>	Boneset	0.02
<i>Helenium autumnale</i>	Sneezeweed	0.02
<i>Iris virginica</i>	Iris	0.06
<i>Liatris spicata</i>	Marsh blazing star	0.04
<i>Lobelia siphilitica</i>	Blue lobelia	0.01
<i>Mimulus ringens</i>	Monkey flower	0.05
<i>Rudbeckia fulgida</i>	Sweet Blackeyed Susan	0.01
<i>Solidago graminifolia</i>	Grassleaved goldenrod	0.01
<i>Thalictrum dioicum</i>	Early meadowrue	0.01
<i>Tradescantia ohimensis</i>	Spiderwort	0.05
Total Forbs		0.40
GRASSES		
<i>Carex comosa</i>	Bristly sedge	0.10
<i>Elymus virginicus</i>	Virginia wild rye	0.40
<i>Scirpus atrovirens</i>	Bulrush	0.10
Total Grasses		0.60

NATIVE WET MEADOW SEED MIX SHALL BE PROVIDED BY: (OR APPROVED EQUAL)

NATIVE CONNECTIONS
www.nativeconnections.net
PHONE: 269-459-6900
EMAIL: info@nativeconnections.net

NATIVE WET MEADOW SEED MIX - 5.0 AC TOTAL
Total Seeding Rate: 32.25 lbs per acre

Native Wet Meadow Seed Mix		
Total Seeding Rate: 32.25 lbs per acre		
4.75 lbs grasses + 2.5 lbs forbs + .25 lbs nurse crop		
66 native seeds per sq ft		
Grasses		
Andropogon gerardii	Big Bluestem	20.00 4.59
Carex bebbii	Bebb's oval sedge	0.50 0.39
Carex vulpinoidea	Fox Sedge	0.50 1.15
Elymus virginicus	Virginia Wild Rye	24.00 2.31
Panicum virgatum	Switchgrass	9.90 3.18
Scirpus cyperinus	Wool Grass	0.10 3.90
Sorghastrum nutans	Indian Grass	20.00 5.51
Spartina pectinata	Prairie Cordgrass	1.00 0.15
Total Grasses		76.00 21.19
Forbs		
Actinomeris altemifolia (Verbesina a.)	Wingsstem	0.60 0.12
Allium cernuum	Nodding Wild Onion	1.00 0.17
Angelica atropurpurea	Angelica	1.00 0.12
Asclepias incarnata	Swamp Milkweed	0.50 0.06
Aster novae-angliae	New England Aster	0.50 0.76
Cassia hebecarpa	Wild Senna	5.50 0.18
Coreopsis tripteris	Tall Coreopsis	1.00 0.32
Desmodium canadense	Showy Tick Trefoil	0.50 0.06
Eupatorium purpureum	Sweet Joe Pye Weed	0.50 0.48
Helenium autumnale	Sneezeweed	0.50 1.49
Helopsis helianthoides	False sunflower	8.00 1.16
Hieracium maximum (H. lanatum)	Cow Parsnip	1.20 0.07
Hypericum pyramidatum	Great St John's Wort	1.50 6.54
Liatris spicata	Marsh Blazingstar	0.50 0.13
Lobelia siphilitica	Great Blue Lobelia	0.50 5.74
Monarda fistulosa	Wild Bergamot	1.50 2.41
Penstemon digitalis	Foxglove Beardtongue	2.50 7.46
Physostegia virginiana	Obedient Plant	0.50 0.13
Pycnanthemum virginianum	Mountain mint	0.20 1.01
Ratibida pinnata	Yellow Coneflower	1.50 1.03
Rudbeckia hirta	Black-eyed Susan	3.50 7.39
Rudbeckia triloba	Brown-eyed Susan	2.50 1.95
Sorghastrum lanceolatum	Early Fignort	0.50 2.12
Silphium teranthinaceum	Prairie Dock	1.50 0.03
Solidago rigidellii	Riddell's Goldenrod	0.50 1.07
Verbena hastata	Blue Vervain	1.00 2.13
Zizia aurea	Golden Alexander	1.00 0.25
Total Forbs		40.00 44.40
Temporary Grass Cover		
Lolium multiflorum	Annual Ryegrass	80.00 24.79
Avena sativa	Seed Oats	320.00 7.35
Total Temp Grasses		400.00 32.14

PROPOSED PLANT LIST

Symbol	Quantity	Scientific Name	Common Name	Size	Container	Spacing
NATIVE WILDFLOWERS/GRASSES						
ac	14 flats	Allium cernuum	Nodding Wild Onion	Plug	38 cell flat	18" o.c.
ai	14 flats	Asclepias incarnata	Swamp Milkweed	Plug	38 cell flat	18" o.c.
an	14 flats	Aster novae-angliae	New England Aster	Plug	38 cell flat	18" o.c.
cl	14 flats	Coreopsis lanceolata	Lanceleaf Coreopsis	Plug	38 cell flat	18" o.c.
dp	14 flats	Dalea purpurea	Prairie Clover	Plug	38 cell flat	18" o.c.
ep	14 flats	Echinacea purpurea	Purple Coneflower	Plug	38 cell flat	18" o.c.
ey	14 flats	Eryngium yuccifolium	Rattlesnake Master	Plug	38 cell flat	18" o.c.
gm	14 flats	Geranium maculatum	Wild Geranium	Plug	38 cell flat	18" o.c.
nh	14 flats	Helopsis helianthoides	False Sunflower	Plug	38 cell flat	18" o.c.
ls	14 flats	Liatris spicata	Marsh Blazing Star	Plug	38 cell flat	18" o.c.
mf	14 flats	Monarda fistulosa	Beebalm	Plug	38 cell flat	18" o.c.
pd	14 flats	Penstemon digitalis	Foxglove Beardtongue	Plug	38 cell flat	18" o.c.
pv	14 flats	Pycnanthemum virginianum	Common Mountain Mint	Plug	38 cell flat	18" o.c.
sh	14 flats	Sporobolus heterolepis	Prairie Dropseed	Plug	38 cell flat	18" o.c.
ss	14 flats	Schyzachyrium scoparium	Little Bluestem	Plug	38 cell flat	18" o.c.
to	14 flats	Tradescantia ohiensis	Common Spiderwort	Plug	38 cell flat	18" o.c.
vh	14 flats	Verbena hastata	Blue Vervain	Plug	38 cell flat	18" o.c.
vv	14 flats	Veronicastrum virginicum	Cluver's Root	Plug	38 cell flat	18" o.c.
za	14 flats	Zizia aurea	Golden Alexanders	Plug	38 cell flat	18" o.c.
NATIVE SHRUBS						
Cf	5 flats	Cornus foemina	Gray Dogwood	Plug	38 cell flat	3' o.c.
Cs	5 flats	Cornus sericea	Red-osier Dogwood	Plug	38 cell flat	3' o.c.
Po	5 flats	Physocarpus opulifolius	Common Ninebark	Plug	38 cell flat	3' o.c.
Sc	5 flats	Sambucus canadensis	Common Elderberry	Plug	38 cell flat	3' o.c.
Sa	5 flats	Spiraea alba	Meadowsweet	Plug	38 cell flat	3' o.c.
NATIVE TREES*						
LT	TBD	Liriodendron tulipifera	Tulip Tree	3" Cal	B&B	TBD
NS	TBD	Nyssa sylvatica	Black Gum	3" Cal	B&B	TBD
PO	TBD	Platanus occidentalis	Sycamore	3" Cal	B&B	TBD
TA	21	Tilia americana	American Basswood	3" Cal	B&B	TBD

NOTE:

1. ALL PLUG QUANTITIES ARE LISTED AS TOTAL 38 CELL FLATS PER SPECIES.
2. PLANT PLUGS IN SAME SPECIES GROUPS OF 5-15, AND EQUALLY REPRESENT ALL SPECIES THROUGHOUT PLANTING AREAS AS INDICATED ON THE PLANS, OR AS DIRECTED BY LANDSCAPE ECOLOGIST/OWNER.
3. TREE SPECIES AND QUANTITIES TO BE DETERMINED BASED ON FIELD VERIFICATION OF TREE REMOVALS. ALL REPLACEMENT TREES REQUIRED SHALL BE PLANTED IN LOCATIONS TO BE DETERMINED BY THE OWNER IN THE FIELD.



ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION

LOLA VALLEY
HABITAT
RESTORATION
PROJECT

ALLIANCE OF ROUGE
COMMUNITIES

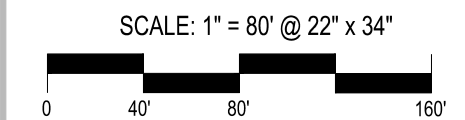
WAYNE COUNTY,
MICHIGAN

FOR BIDDING 01/2022
FOR PERMITTING 07/15/21
PRELIMINARY 10-26-20

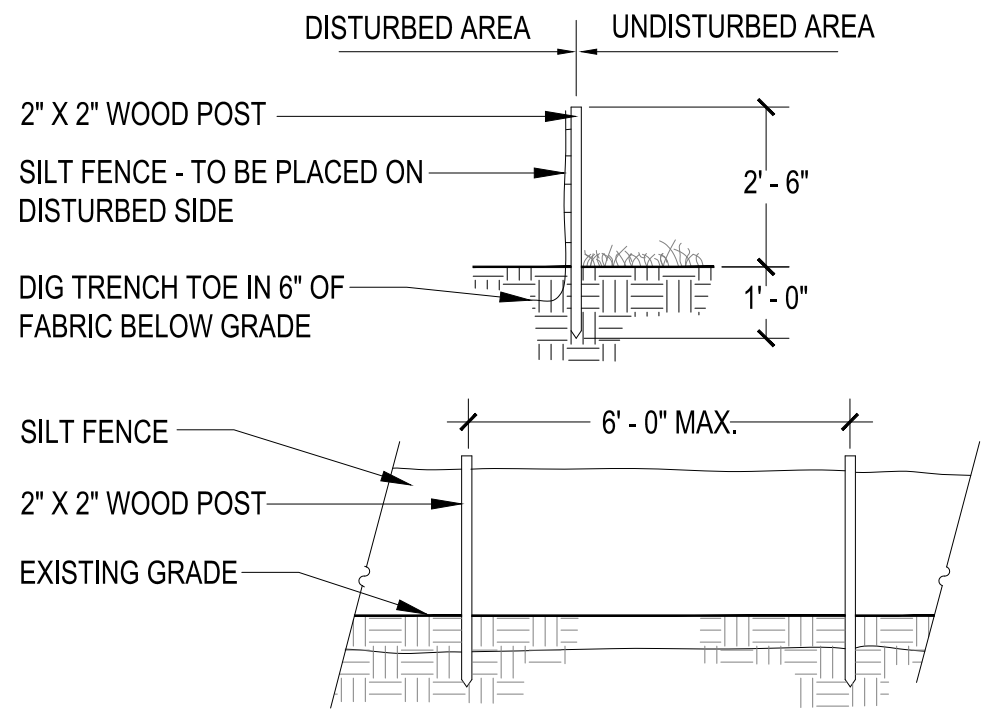
200115-0200
ECT PROJECT NUMBER
AAB DESIGNED BY AAB CHECKED BY
SRO DRAWN BY JMO APPROVED BY

SHEET TITLE

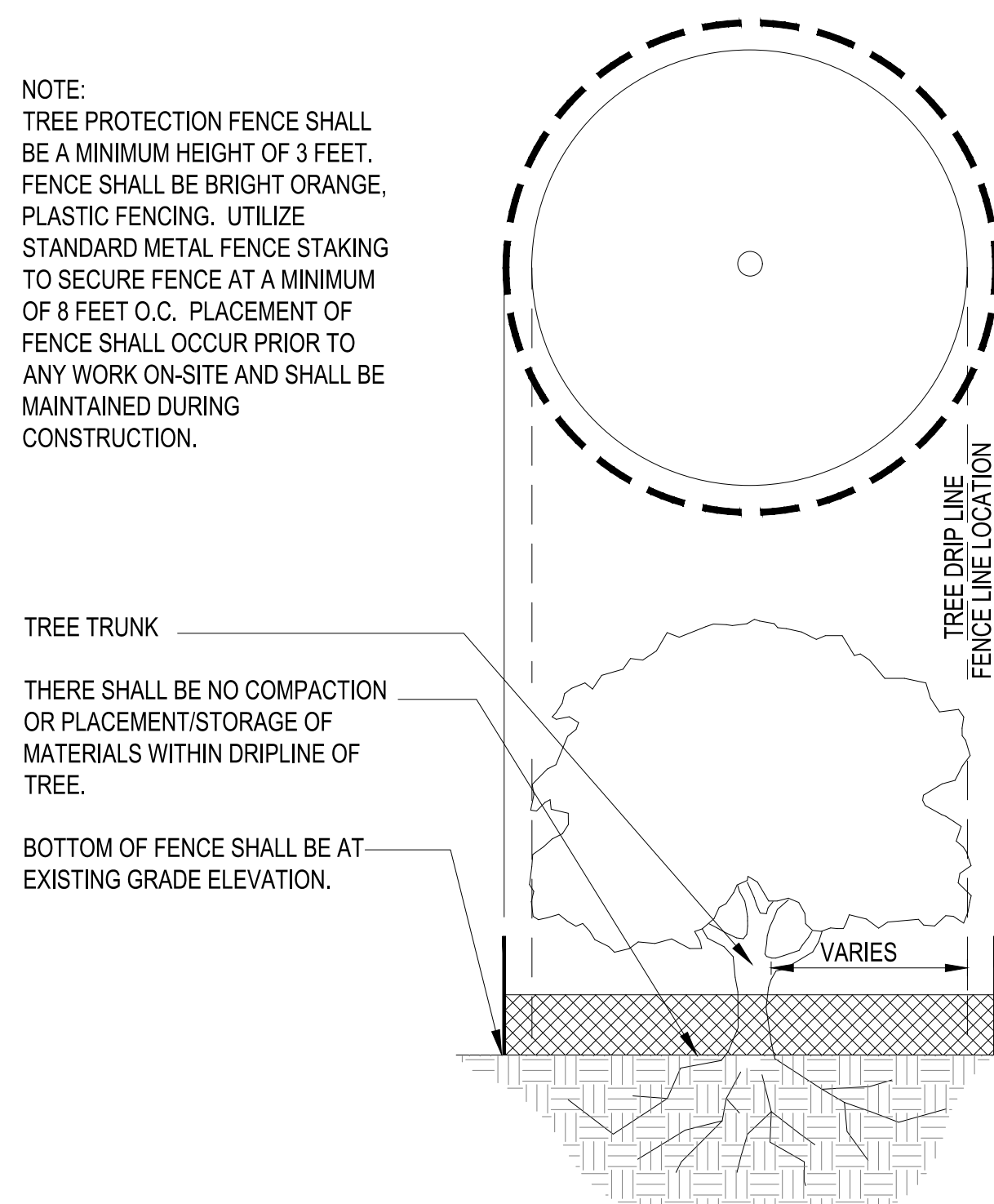
REVEGETATION
NOTES



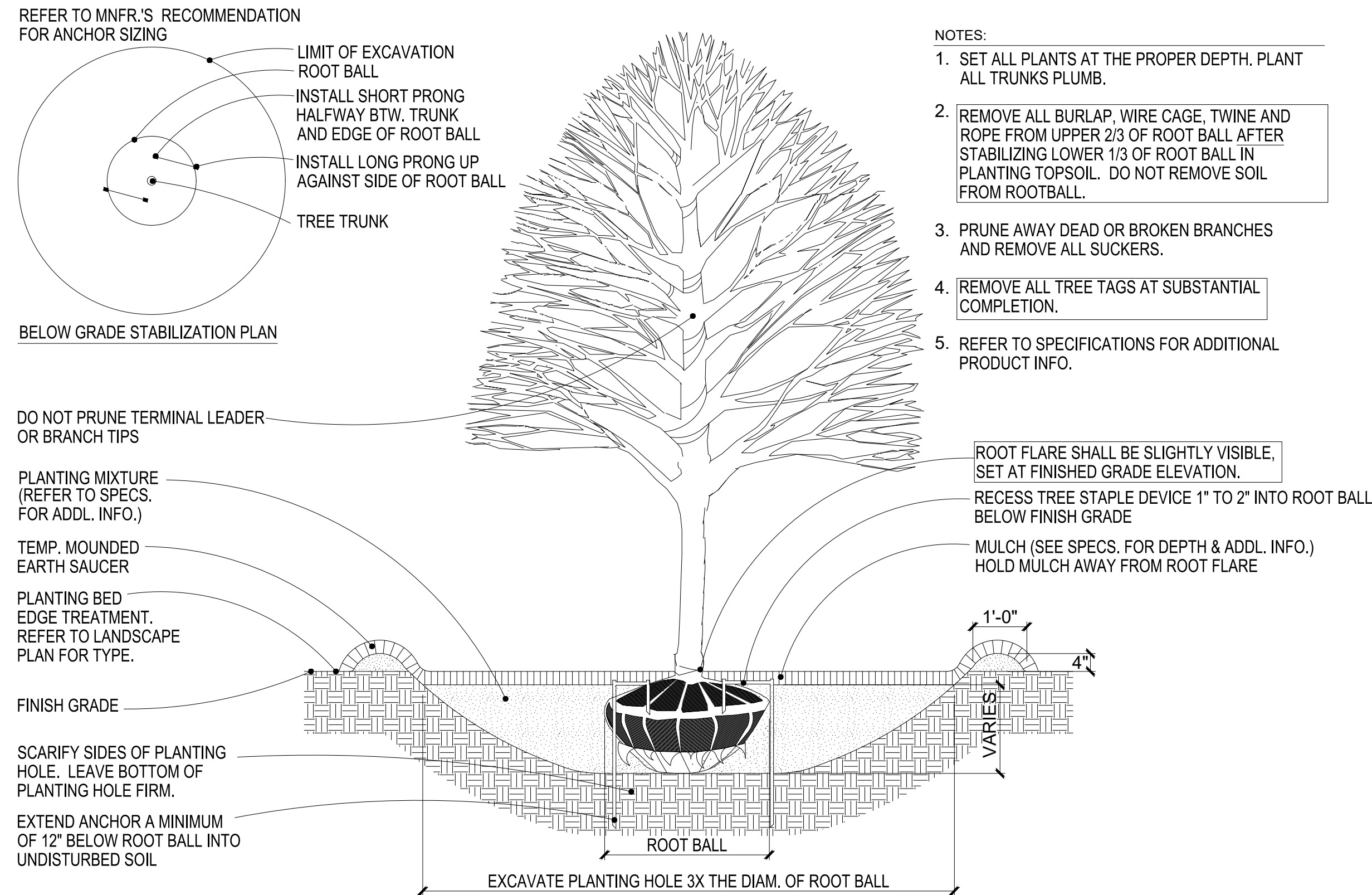
NORTH
SHEET NUMBER
12



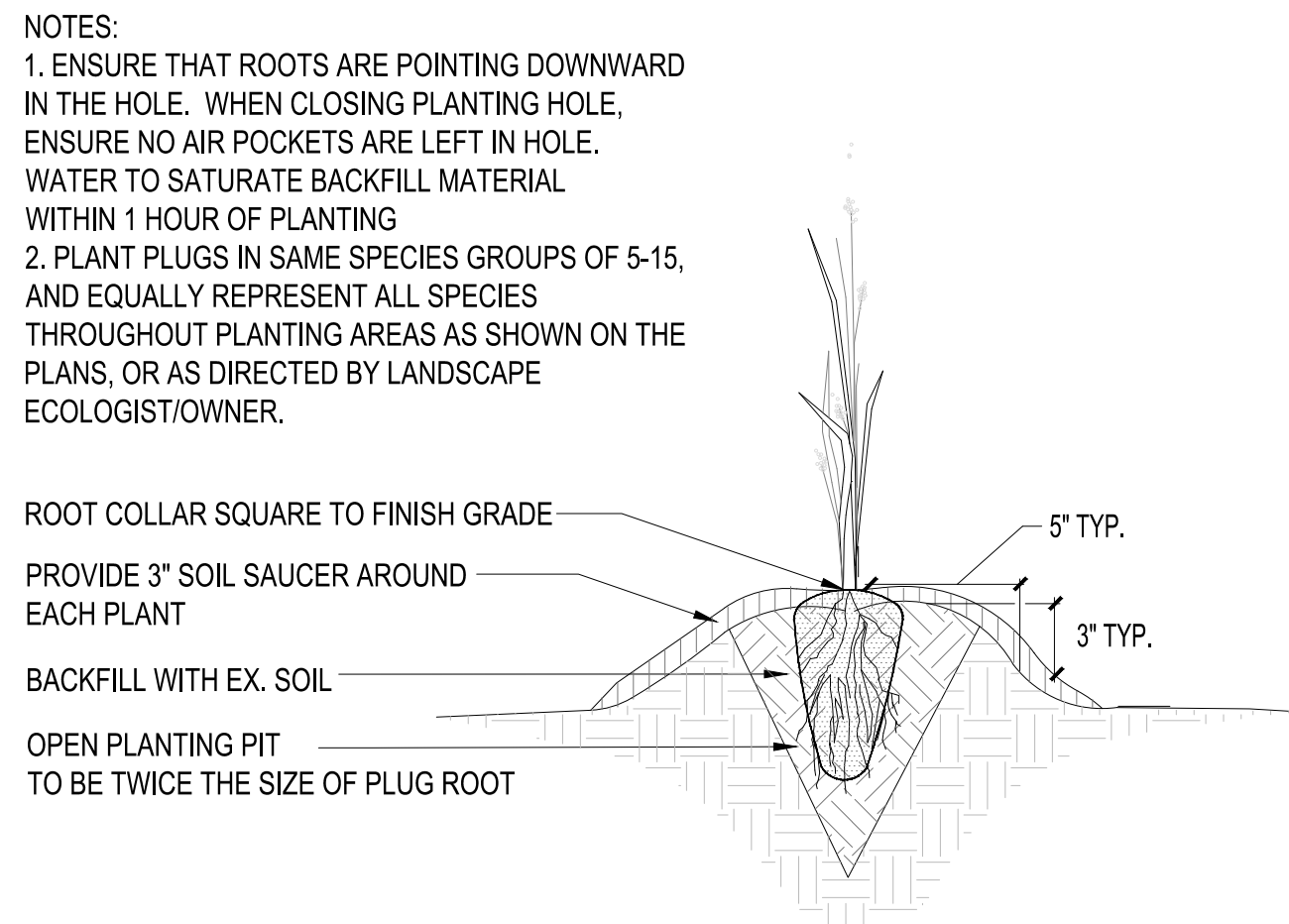
1
13
SILT FENCE
NOT TO SCALE



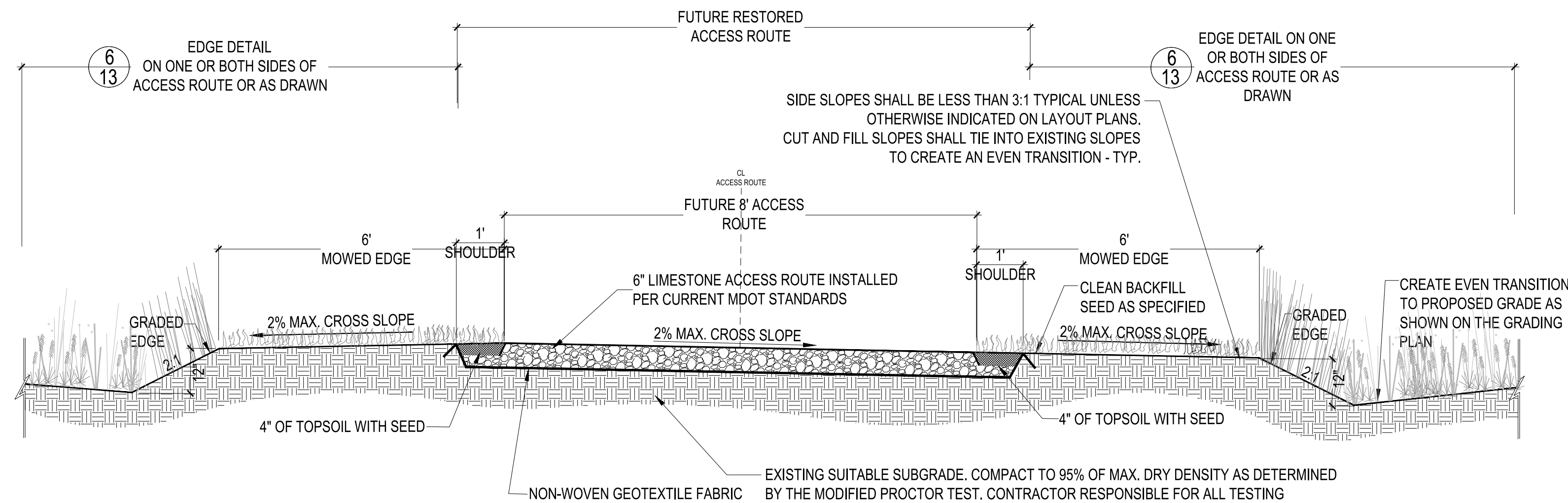
2
13
TREE PROTECTION FENCE
NOT TO SCALE



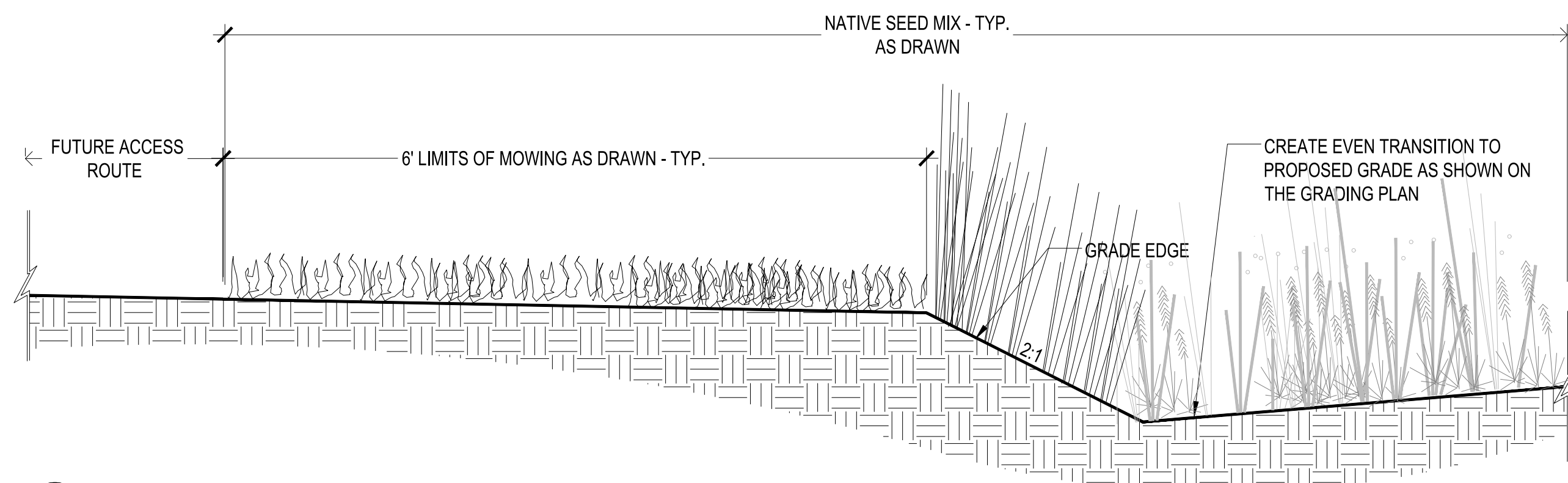
3
13
WAYNE COUNTY DECIDUOUS TREE PLANTING WITH BELOW GRADE STABILIZATION - GREATER THAN 2.5" CAL.
NOT TO SCALE



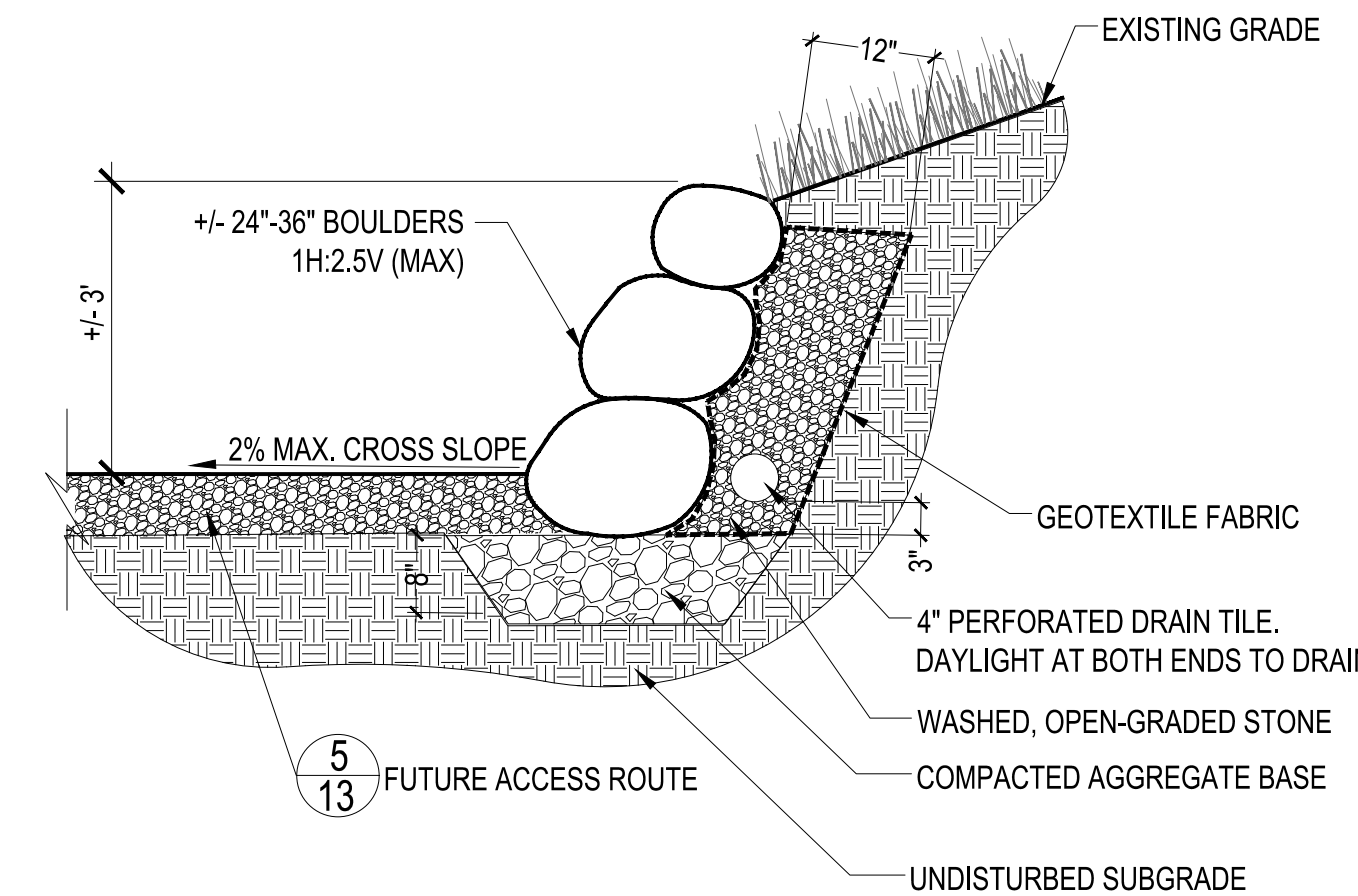
4
13
PLUG PLANTING
NOT TO SCALE



5
13
ACCESS ROUTE DETAIL
NOT TO SCALE



6
13
EDGE DETAIL
NOT TO SCALE



7
13
WALL DETAIL
NOT TO SCALE

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

LOLA VALLEY HABITAT RESTORATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

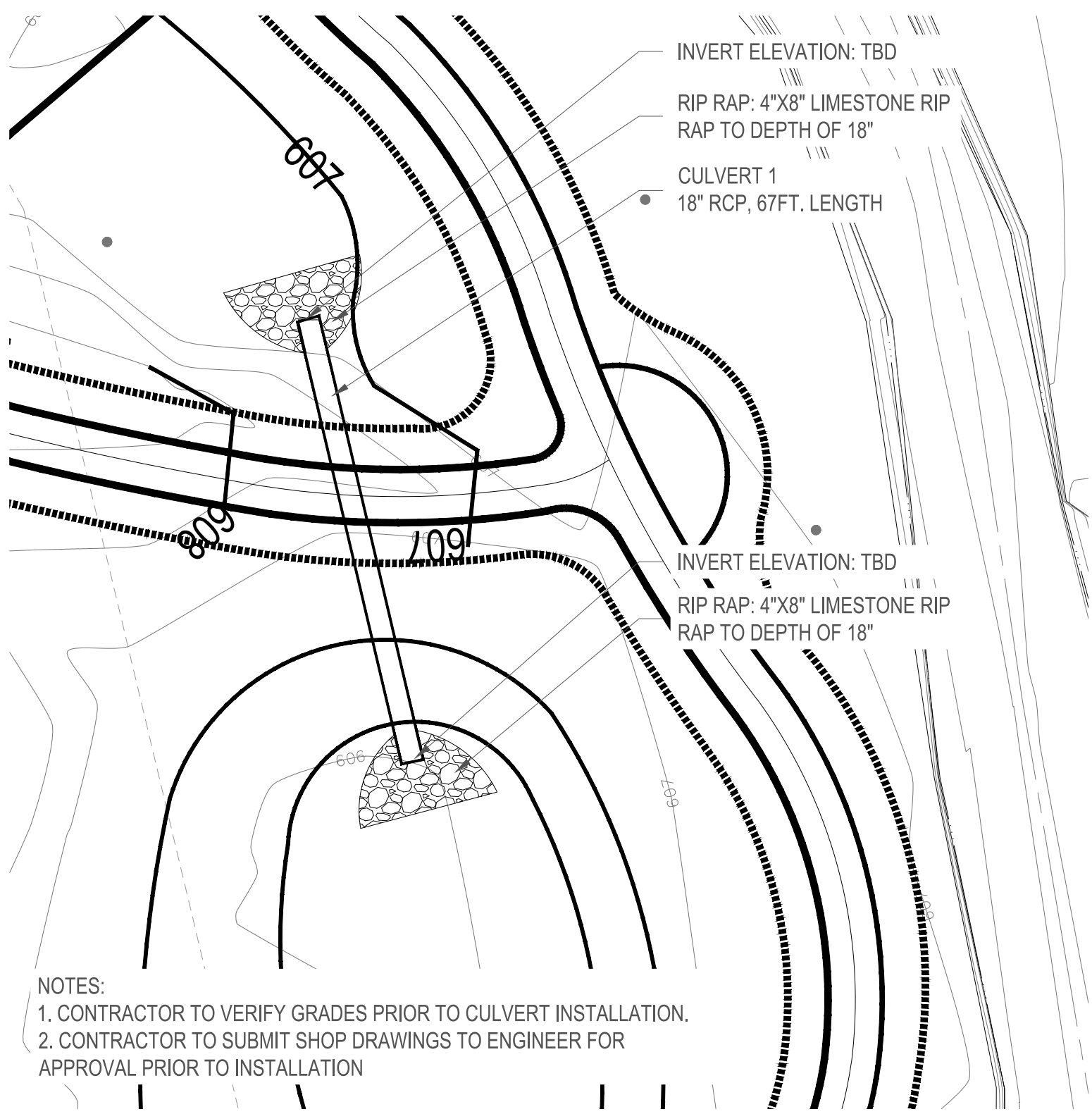
FOR BIDDING 01/2022
FOR PERMITTING 07/15/21
PRELIMINARY 10-26-20

200115-0200
ECT PROJECT NUMBER
AAB DESIGNED BY AAB CHECKED BY
SRD DRAWN BY JMO APPROVED BY

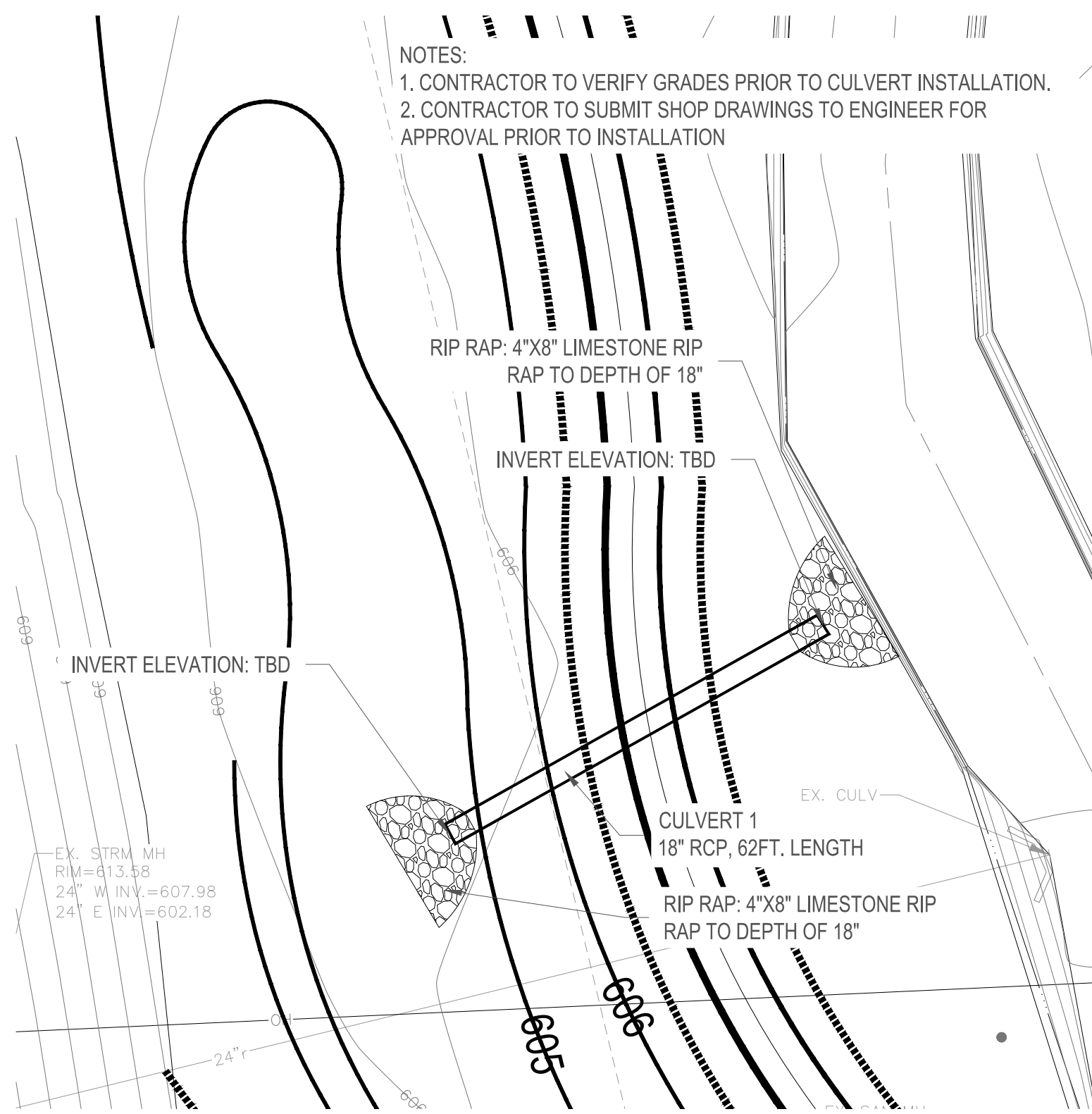
SHEET TITLE
DETAILS

SCALE: 1" = 80' @ 22" x 34"
0 40' 80' 160'

NORTH
13
SHEET NUMBER



1 CULVERT 1 DETAIL
14 NOT TO SCALE



2 CULVERT 2 DETAIL
14 NOT TO SCALE

ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION

LOLA VALLEY
HABITAT
RESTORATION
PROJECT

ALLIANCE OF ROUGE
COMMUNITIES

WAYNE COUNTY,
MICHIGAN

FOR BIDDING 01/2022
FOR PERMITTING 07/15/21
PRELIMINARY 10-26-20

200115-0200
ECT PROJECT NUMBER
AAB DESIGNED BY AAB CHECKED BY
SRO DRAWN BY JMO APPROVED BY

SHEET TITLE

DETAILS

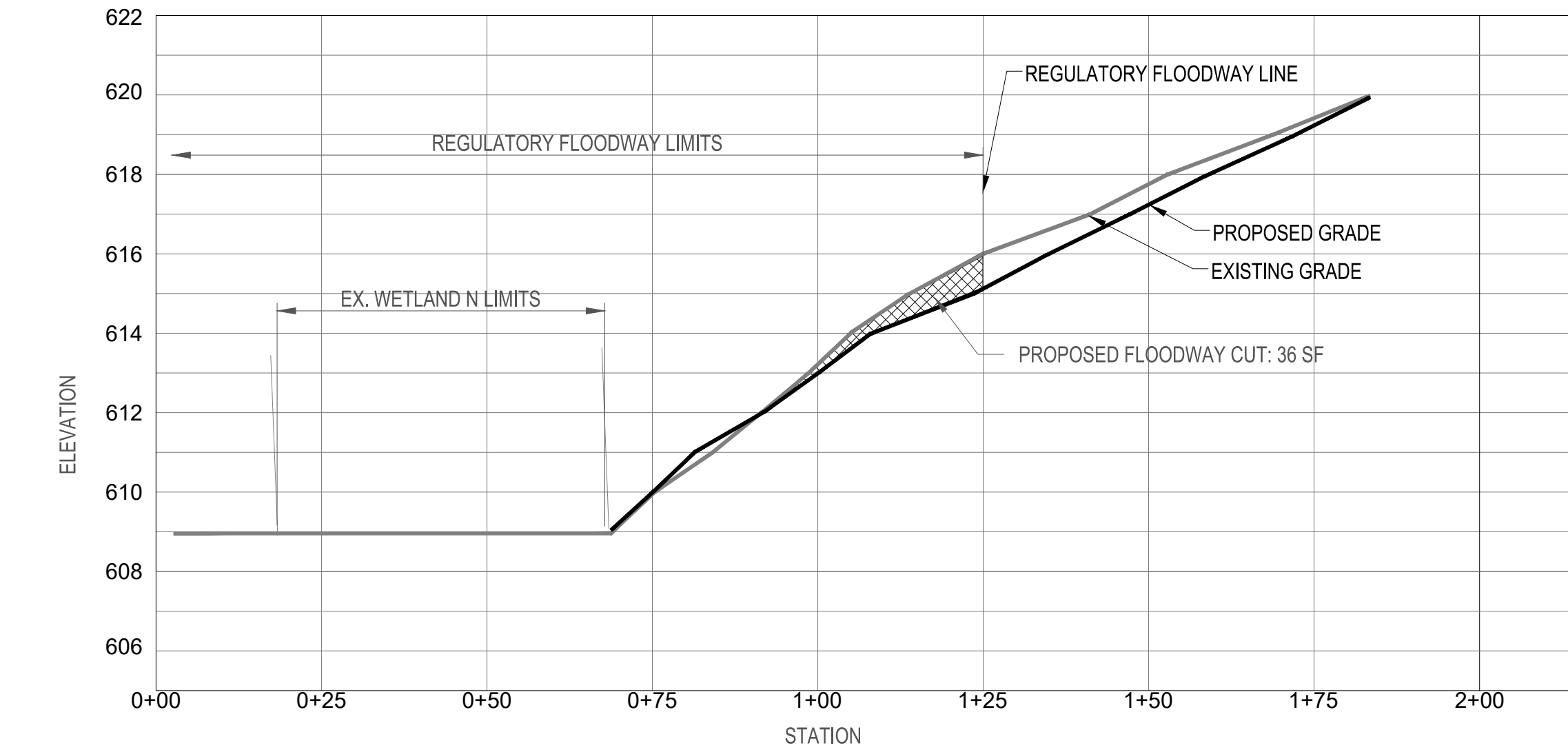
SCALE: 1" = 80' @ 22" x 34"
0 40' 80' 160'

NORTH

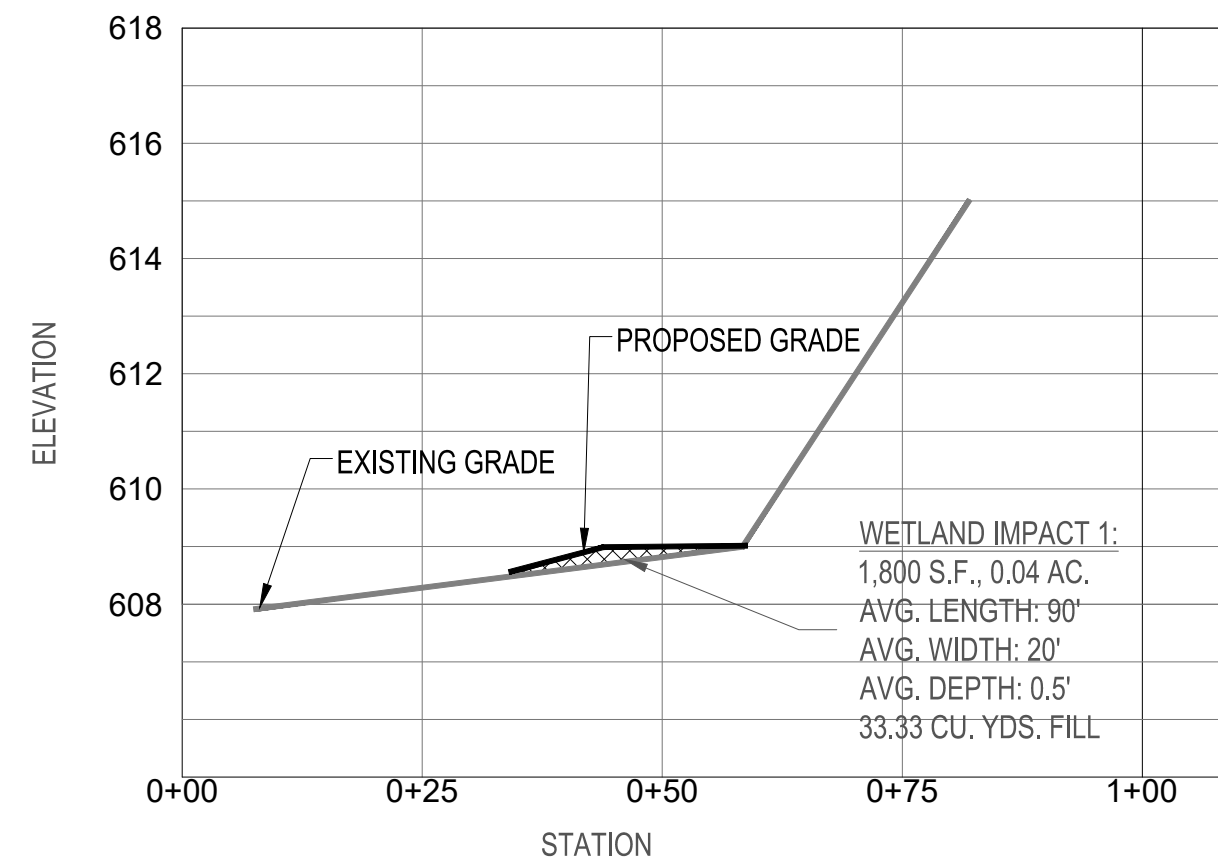


SHEET NUMBER

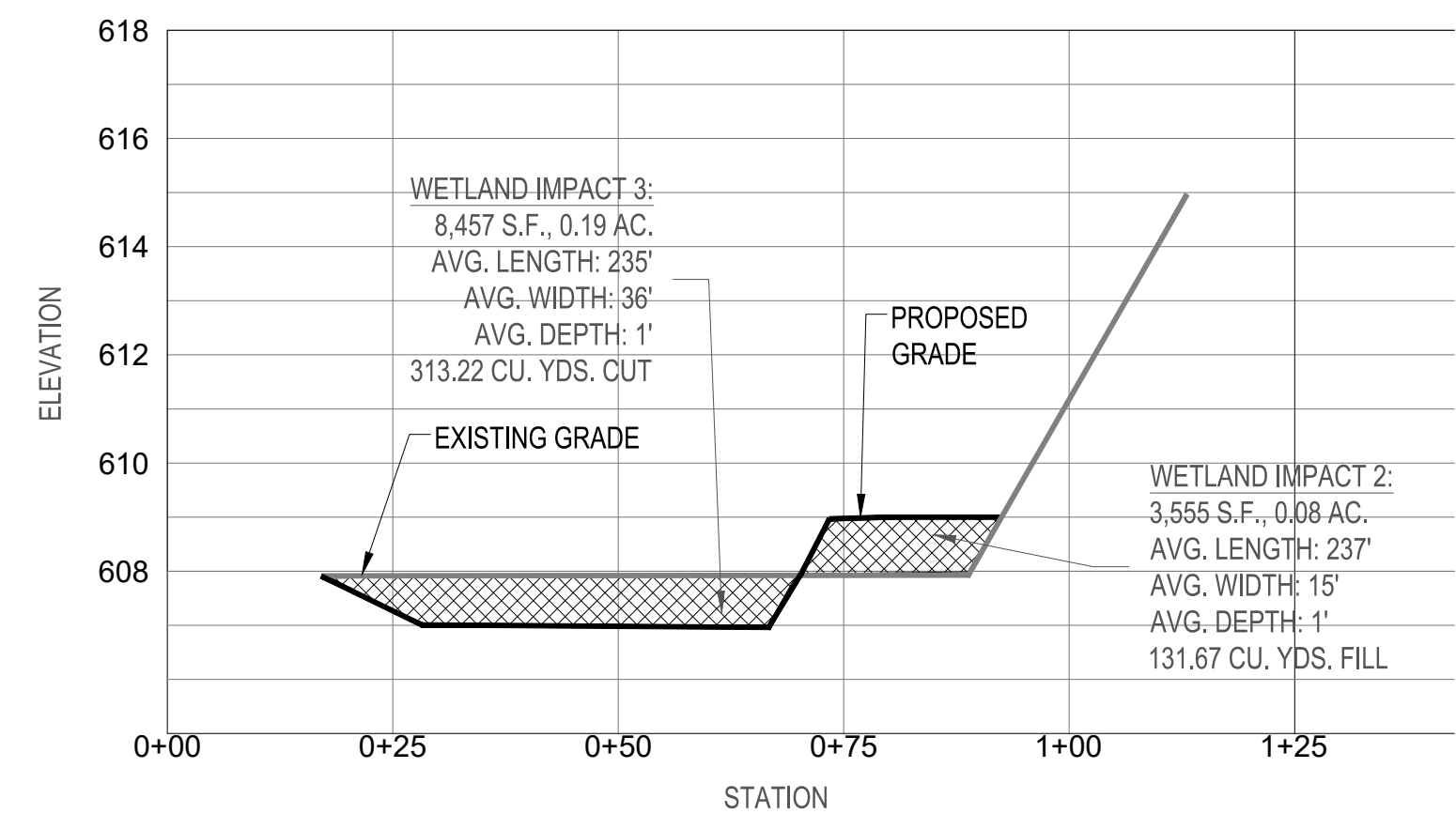
14



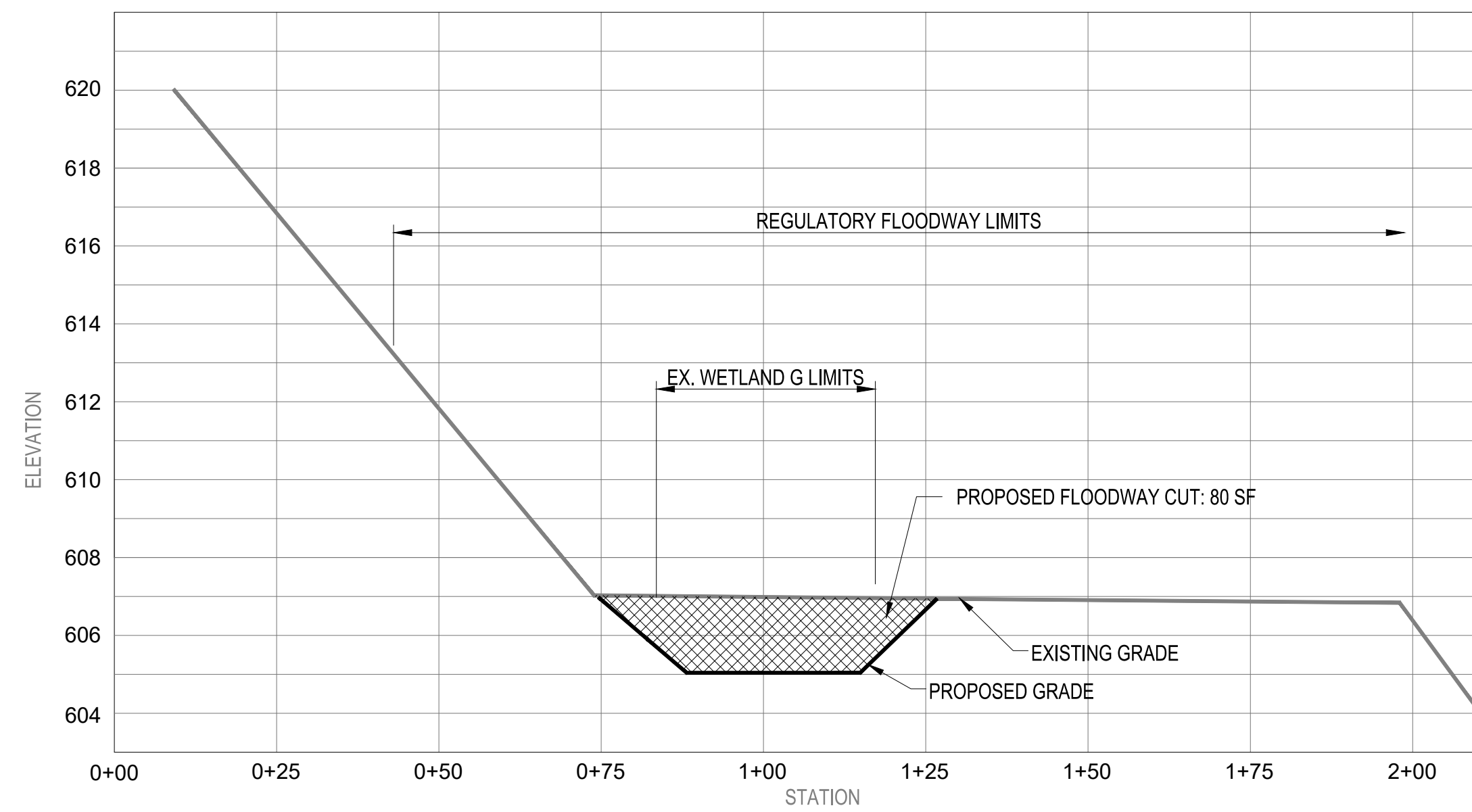
1 CROSS SECTION A-A'
15 NOT TO SCALE



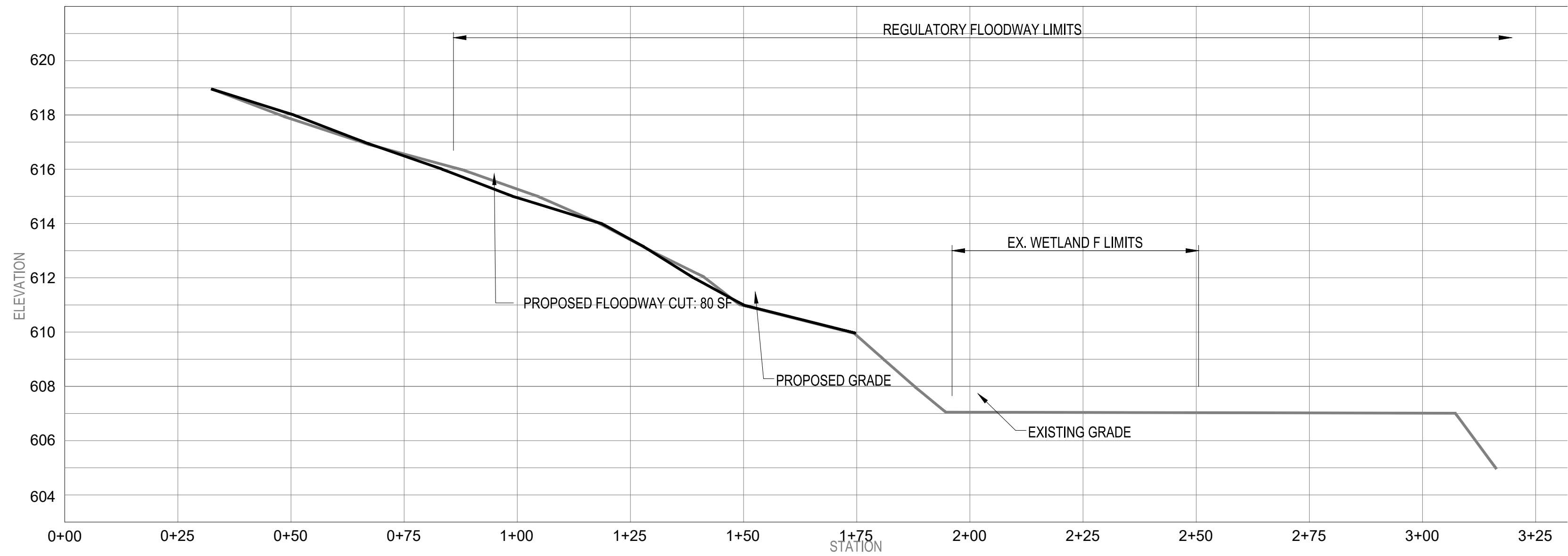
2 WETLAND IMPACT CROSS SECTION B-B'
15 NOT TO SCALE



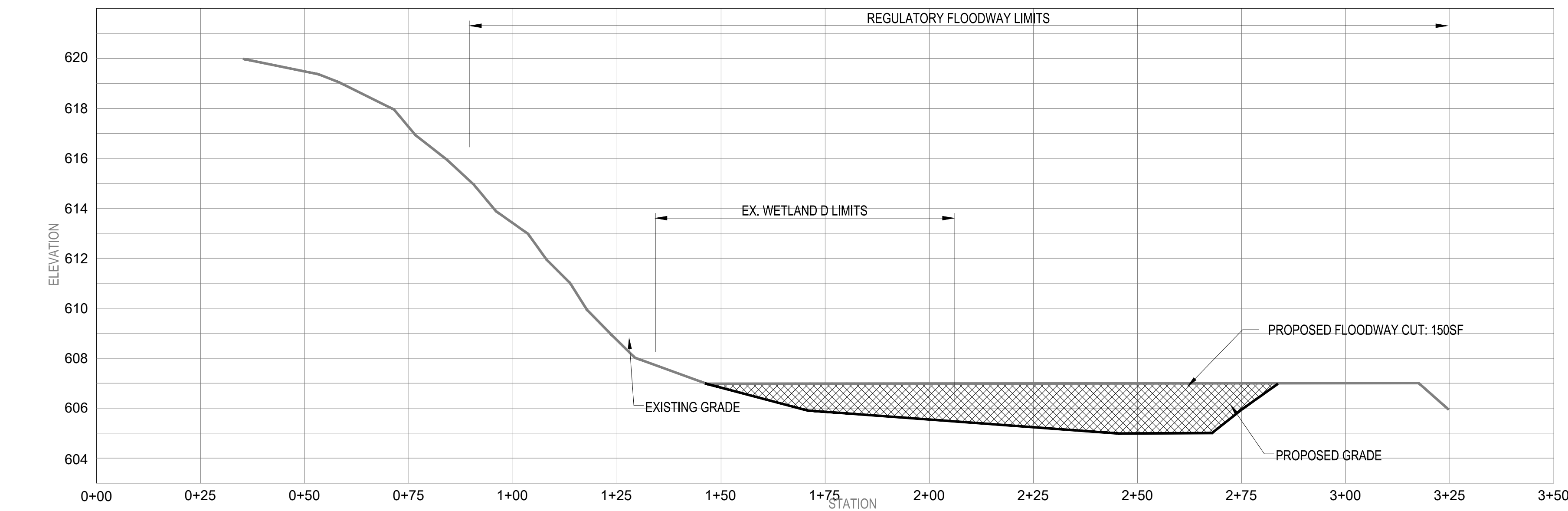
3 WETLAND IMPACT CROSS SECTION C-C'
15 NOT TO SCALE



4 CROSS SECTION D-D'
15 NOT TO SCALE



5 CROSS SECTION E-E'
15 NOT TO SCALE



6 CROSS SECTION F-F'
15 NOT TO SCALE



**ROUGE RIVER
WATERSHED
AOC-
WAYNE COUNTY
HABITAT
RESTORATION**

**LOLA VALLEY
HABITAT
RESTORATION
PROJECT**

ALLIANCE OF ROUGE
COMMUNITIES

WAYNE COUNTY,
MICHIGAN

FOR BIDDING 01/2022
FOR PERMITTING 07/15/21
PRELIMINARY 10-26-20

200115-0200
ECT PROJECT NUMBER
AAB DESIGNED BY AAB CHECKED BY
SRO DRAWN BY JMO APPROVED BY

SHEET TITLE
CROSS SECTIONS

SCALE: 1" = 80' @ 22" x 34"
0 40 80 160

NORTH
SHEET NUMBER
15