

RECONNAISSANCE & SAMPLING PLAN

CUY/SUM - 271- 0.00/14.87
PID 80418

June 24, 2020

Prepared by The Ohio Department of
Transportation

Summary

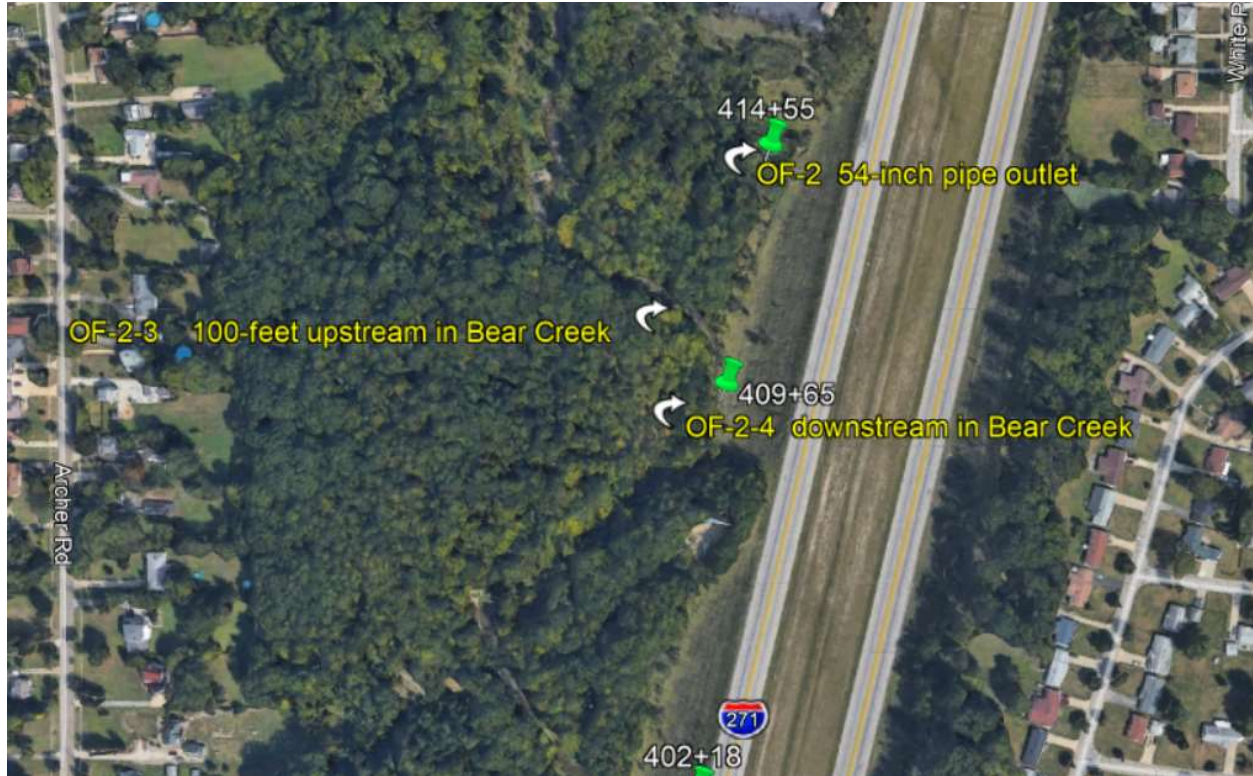
In November 2018, Ohio Environmental Protection Agency (Ohio EPA) inspected and verified a milky white discharge with a sulfurous odor consistent with slag leachate coming from the underdrain of the IR-271 and discharging to waters of the state. IR-271 is currently under construction to improve the facility.

On May 14, 2019, the Ohio EPA issued a Director's Final Finding and Orders for the CUY/SUM-271-0.00/14.87 construction project. The Orders required The Ohio Department of Transportation (ODOT) to develop a Reconnaissance and Sampling Plan for discharges within the project area. Two types of discharges have been identified in the project area. Outfalls (OFs) are locations previously verified discharging milky white substance consistent with slag leachate and/or a sulfurous odor and require monthly sampling. Potential Impact Points (PIPs) are locations not previously verified discharging a milky white substance consistent with slag leachate and/or a sulfurous odor and require quarterly inspections with a potential sample collection depending on inspection observations. The Reconnaissance and Sampling Plan includes the following two Tasks.

Task 1: ODOT shall perform monthly sampling at verified OFs listed in the table below.

Site ID	Location Description	Station
OF-2	at the outlet of the pipe.	414+55 Figure 2
OF-2-3	In Bear Creek, 100-feet upstream of merge with OF-2 outfall drainage.	411+65 Figure 2
OF-2-4	3x stream width downstream of where OF-2 drainage enters Bear Creek.	409+85 Figure 2
OF-3	At outlet of pipe.	289+92 Figure 3
OF-3-2	Approximately 50-feet downstream from OF-3, located after the 60-inch outlet pipe.	289+92 Figure 3
OF-4	At outlet of pipe.	325+78 Figure 4
OF-4-2	3x stream width downstream of where OF-4 enters stream	Approx. 326+08 Figure 4

Figure 2



OF-2: at the 54-inch pipe outlet

OF-2-3: 100-feet upstream of where the OF-2 drainage outlet merges with Bear Creek

OF-2-4: Location downstream of where the OF-2 drainage outlet merges with Bear Creek. This will be measured at 3 times the width of the stream downstream from the merge point.

Figure 3



OF-3: at the outlet of 48-inch pipe.

OF-3-2: downstream of the mixing point of where the 60-inch pipe enters the stream.

Figure 4



OF-4: at the outlet of the pipe.

OF-4-2: 3x the stream width downstream of discharge point

The sampling shall be performed within or as soon as possible after the first significant precipitation event of each month while there is a measurable discharge from the outfall. The monthly sample collection shall be analyzed for pH, Total Dissolved Solids (TDS), sulfates, and Dissolved Oxygen (DO). The precipitation event initiating sampling will be documented in the monthly Sampling Report to Ohio EPA. The monthly Sampling Report will be submitted to Ohio EPA by the 20th day of the month following the month the samples are taken. Sampling may cease upon sampling results demonstrating no numeric water quality exceedance for four consecutive quarters for analyzed parameters.

Task 2: ODOT shall inspect all Potential Impact Points (PIPs) within the CUY/SUM-271-0.00/14.87 project limits for a milky discharge and/or a sulfuric odor consistent with slag leachate. Quarterly PIP inspections shall be conducted within or as soon as possible after a significant precipitation event while there is a measurable discharge.

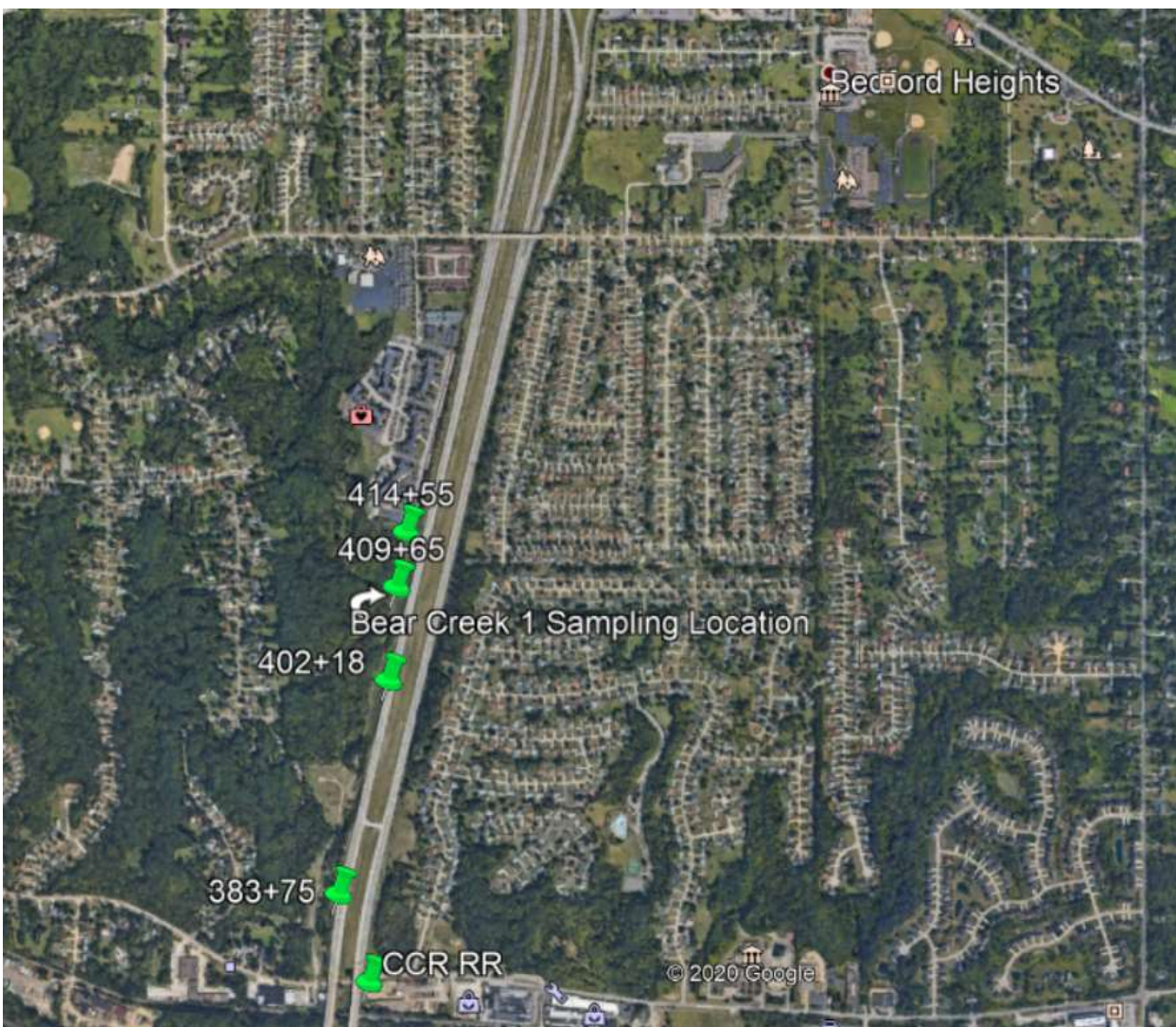
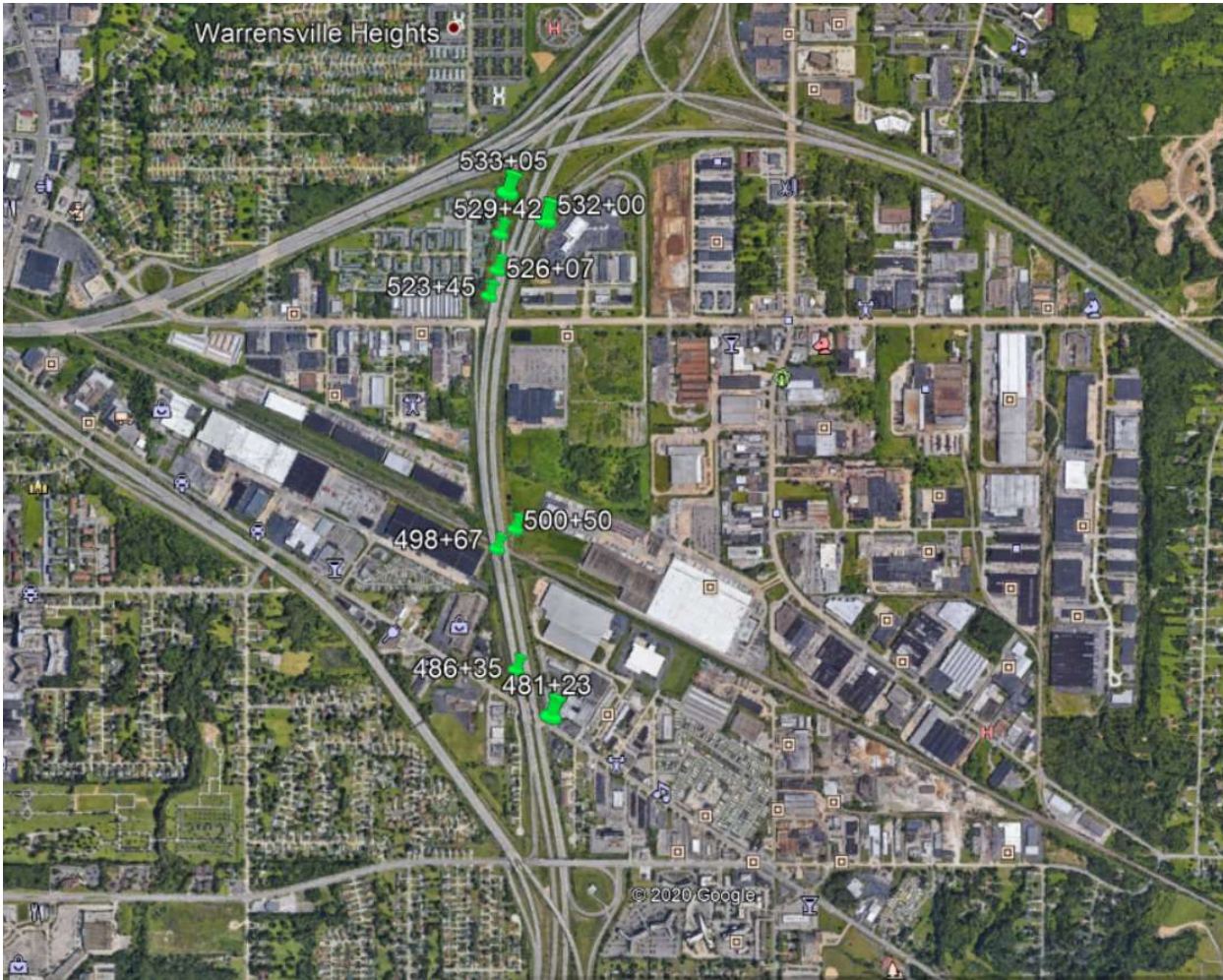
Twenty-four (24) PIPs have been identified within the current construction limits. A PIP is where a drainage channel exits the ODOT property within the IR-271 project limits. The attached plan sheets highlight the PIP. ODOT will collect and report the following data during the inspection of each PIP.

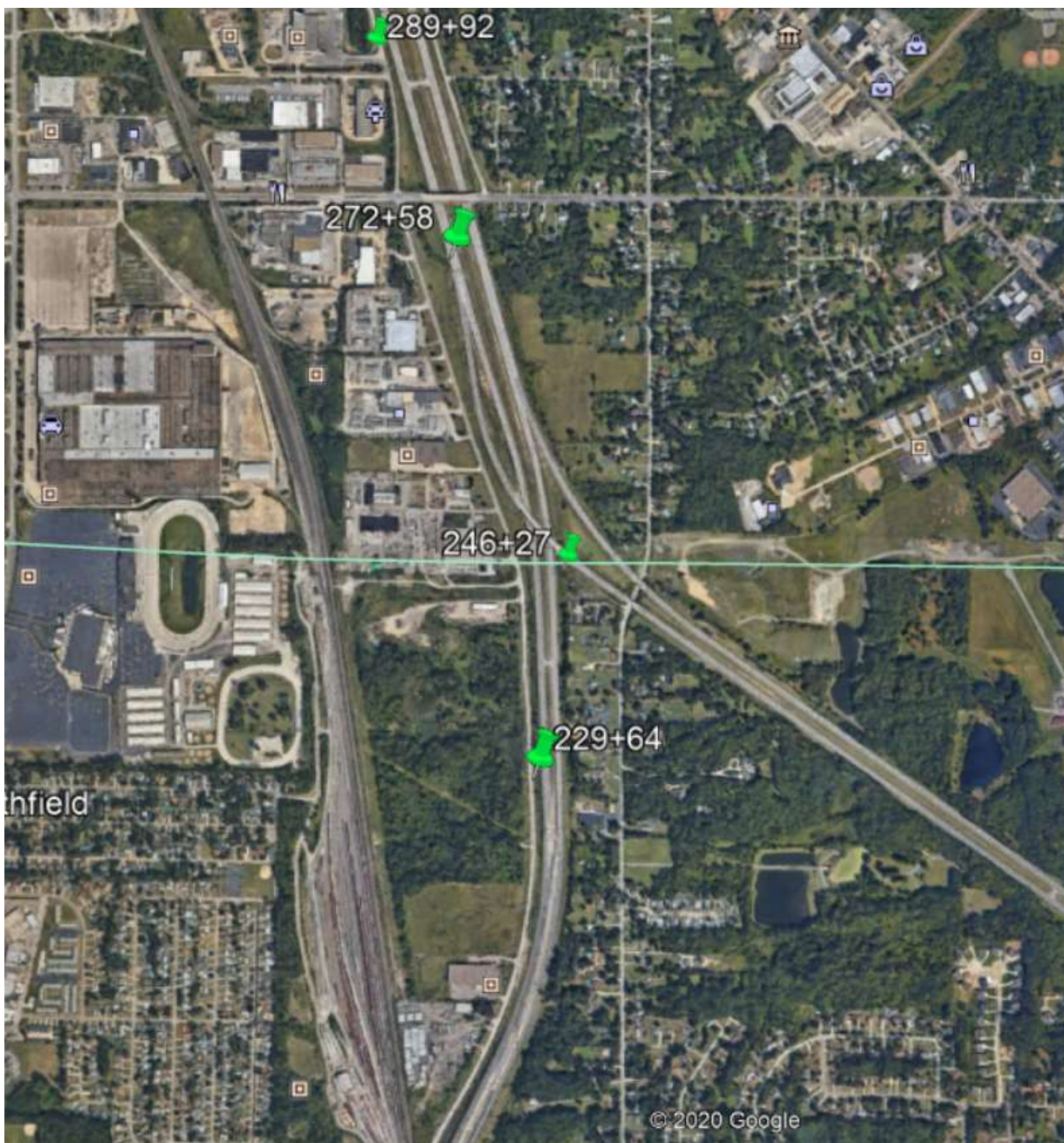
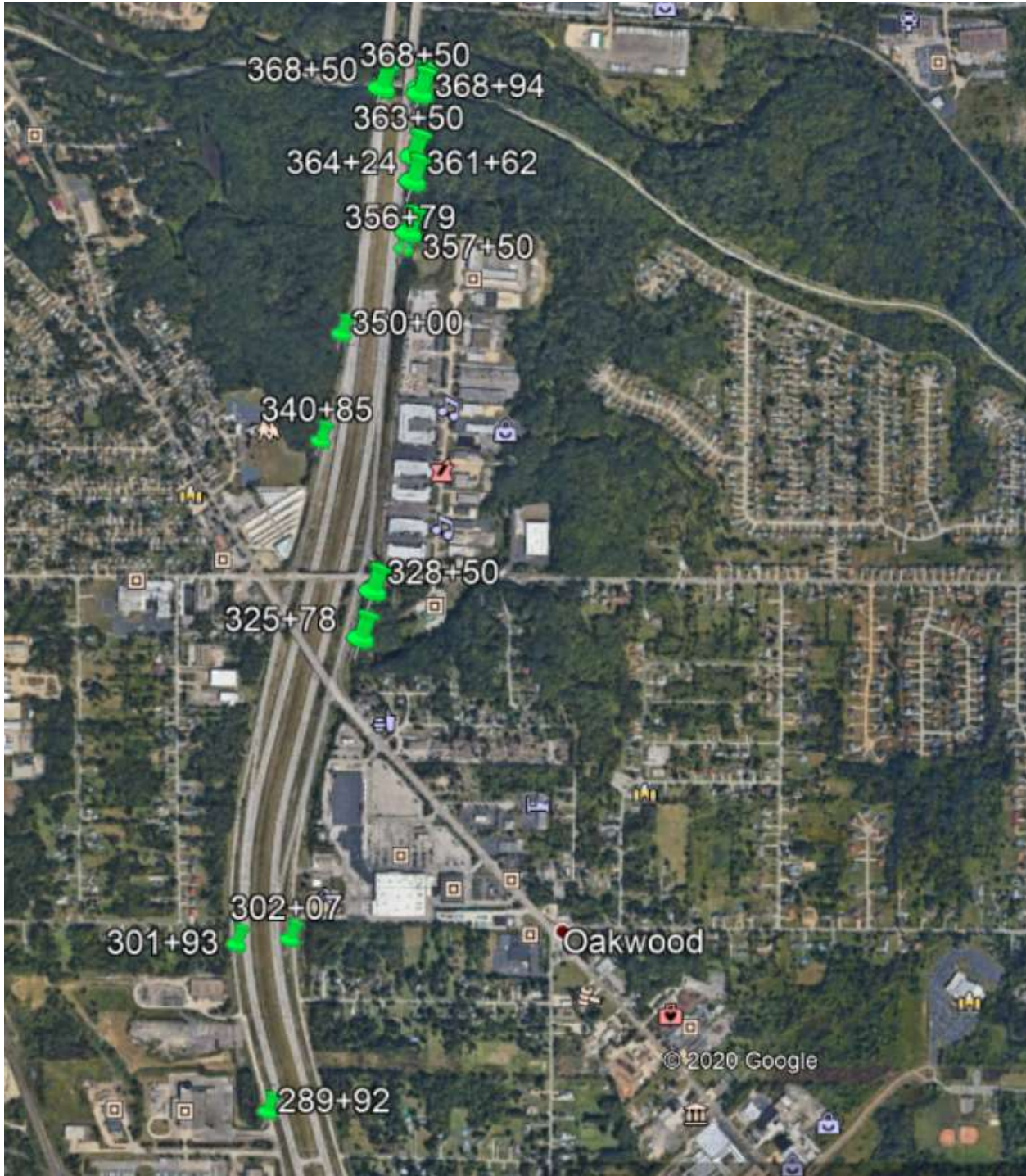
1. Inspector, Company or Organization
 2. Date of Inspection
 3. Location ID#
 4. Photographs
 5. Observation of water color
 6. Observation of water odor
 7. Weather conditions
-
- i. If a milky white discharge or a sulfuric odor consistent with slag leachate is observed at any PIP during the quarterly inspection, a water sample shall be taken at the discharge point and at a point 3 times the stream width downstream of the discharge point. The downstream sample shall not be collected if another discharge to the stream enters above the downstream sample location. These situations shall be documented with specifics justifying no collection. Sampling will include analyzing the water for pH, Total Dissolved Solids (TDS), sulfates, and Dissolved Oxygen (DO). The precipitation event and site conditions initiating sampling will be documented in the Quarterly Inspection and Sampling Report to the Ohio EPA. The Quarterly Inspection and Sampling Report will be submitted to Ohio EPA by the 20th day of the month following the month of inspection and sampling.
 - ii. If sample results collected from a PIP discharge exceeds water quality standards, then the PIP and its corresponding downstream sample location

be sampled monthly. Monthly sample collections may cease upon demonstrating no numeric water quality exceedances occur for four consecutive quarters. If the initial sample results triggering the PIP sample collection do not exceed water quality standards, then the PIP and its corresponding downstream sample location will be collected quarterly. The quarterly sampling may cease upon four consecutive quarters showing no exceedances of water quality standards.

CUY/SUM-271-0.00 (PID 80418)

Aerial Mapping of Potential Impact Points





LEGEND

- STORM SEWER PIPE
- INLET
- CATCH BASIN
- MANHOLE

PROJECT DATA

Total Area (Right-Of-Way) -----	348.41 Ac	Runoff Coefficient for Pre-Construction Site -----	0.69
Project Earth Disturbed Area -----	244.39 Ac	Runoff Coefficient for Post Construction Site -----	0.71
Estimated Contractor Earth Disturbed Area -----	2.49 Ac	Soil and Water Conservation Map -----	42*
Notice of Intent Earth Disturbed Area -----	246.88 Ac	Immediate Receiving Waters -----	Tinkers Creek
Impervious (Paved) Area for Pre-Construction Site -----	100.65 Ac		
Impervious (Paved) Area for Post Construction Site -----	125.15 Ac		

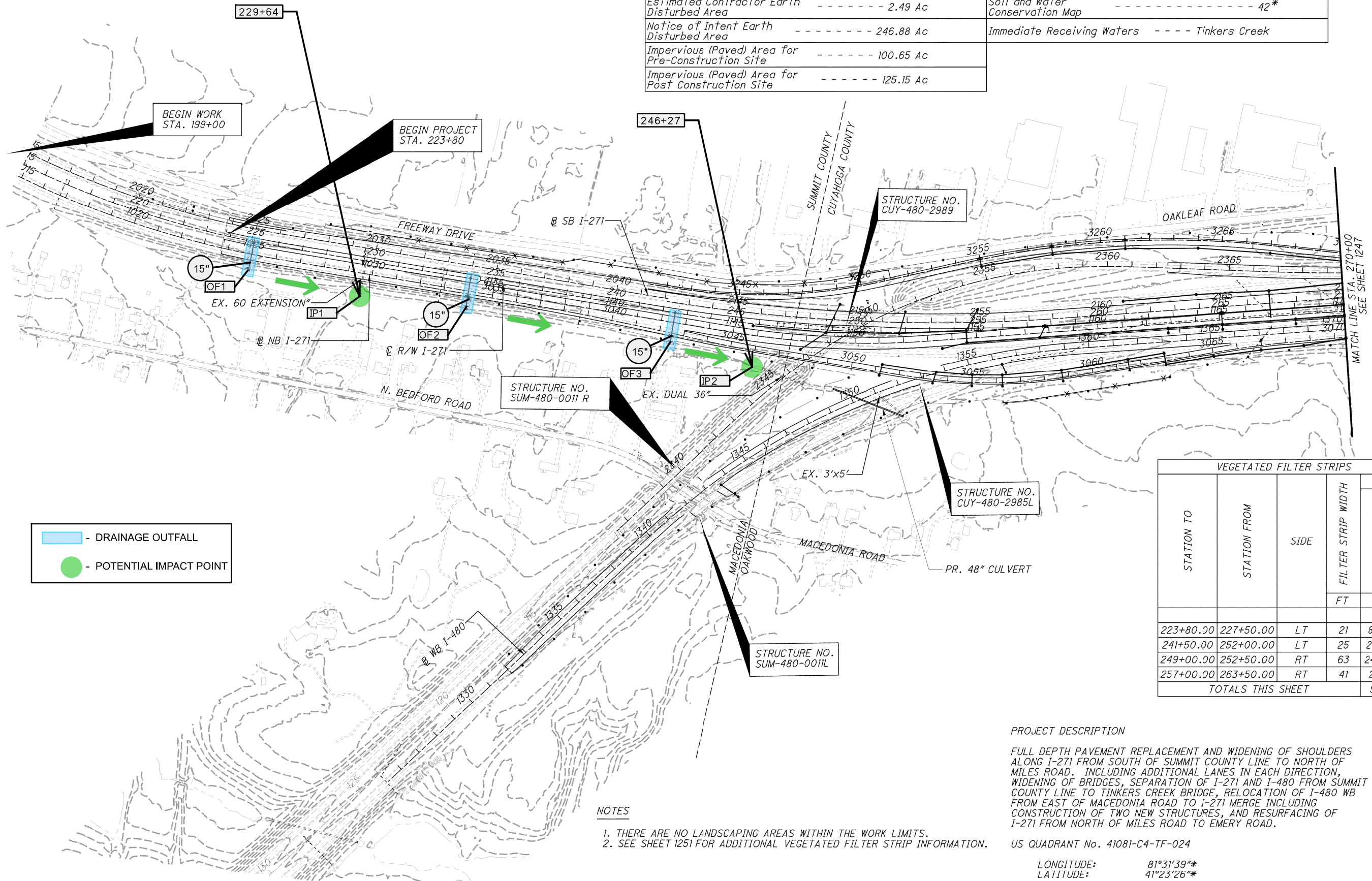
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HORIZONTAL SCALE IN FEET

PROJECT SITE PLAN
BEGIN TO I-271 STA. 270+00

CUY / SUM-271-00.00 / 14.87
CUY / SUM-480-29.58 / 00.00

1246
2013



- DRAINAGE OUTFALL
- POTENTIAL IMPACT POINT

VEGETATED FILTER STRIPS					
STATION TO	STATION FROM	SIDE	FILTER STRIP WIDTH	SLOPE EROSION PROTECTION	
			FT		SY
223+80.00	227+50.00	LT	21	863.33	
241+50.00	252+00.00	LT	25	2916.67	
249+00.00	252+50.00	RT	63	2450.00	
257+00.00	263+50.00	RT	41	2961.11	
TOTALS THIS SHEET					9191.11

PROJECT DESCRIPTION
 FULL DEPTH PAVEMENT REPLACEMENT AND WIDENING OF SHOULDERS ALONG I-271 FROM SOUTH OF SUMMIT COUNTY LINE TO NORTH OF MILES ROAD. INCLUDING ADDITIONAL LANES IN EACH DIRECTION, WIDENING OF BRIDGES, SEPARATION OF I-271 AND I-480 FROM SUMMIT COUNTY LINE TO TINKERS CREEK BRIDGE, RELOCATION OF I-480 WB FROM EAST OF MACEDONIA ROAD TO I-271 MERGE INCLUDING CONSTRUCTION OF TWO NEW STRUCTURES, AND RESURFACING OF I-271 FROM NORTH OF MILES ROAD TO EMERY ROAD.

US QUADRANT No. 41081-C4-TF-024

LONGITUDE: 81°31'39"*
 LATITUDE: 41°23'26"*

*LONGITUDE AND LATITUDE TO APPROX. CENTER OF PROJECT

- NOTES**
1. THERE ARE NO LANDSCAPING AREAS WITHIN THE WORK LIMITS.
 2. SEE SHEET 1251 FOR ADDITIONAL VEGETATED FILTER STRIP INFORMATION.

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— - DRAINAGE OUTFALL
● - POTENTIAL IMPACT POINT

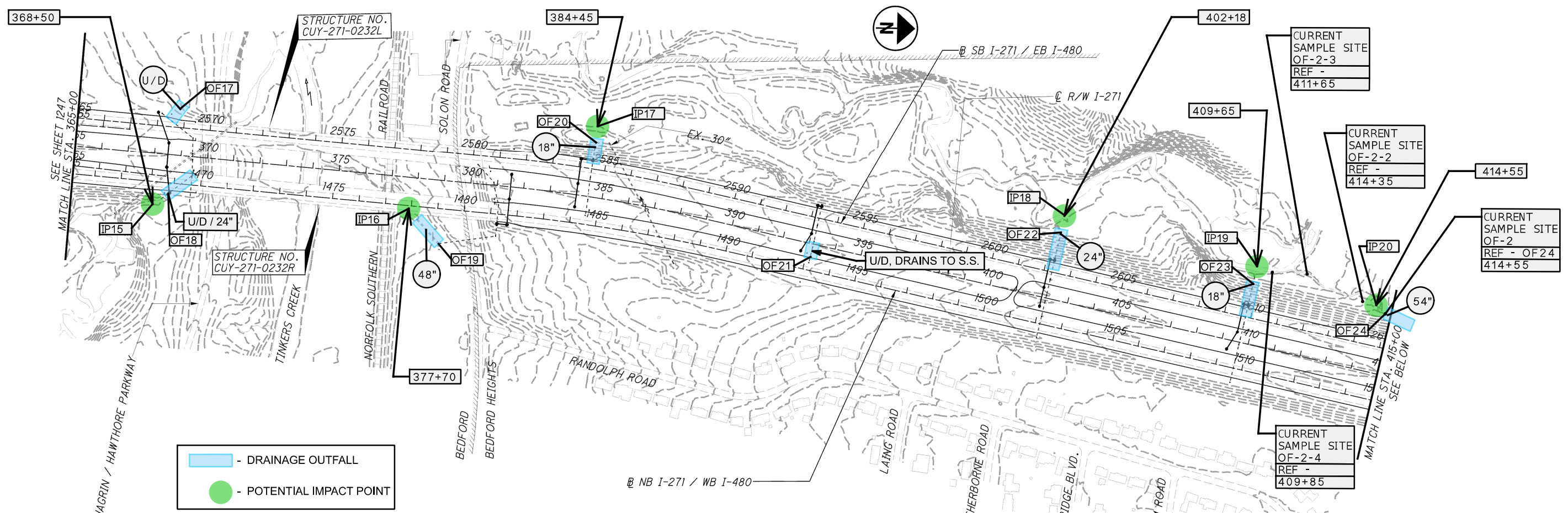
NOTES

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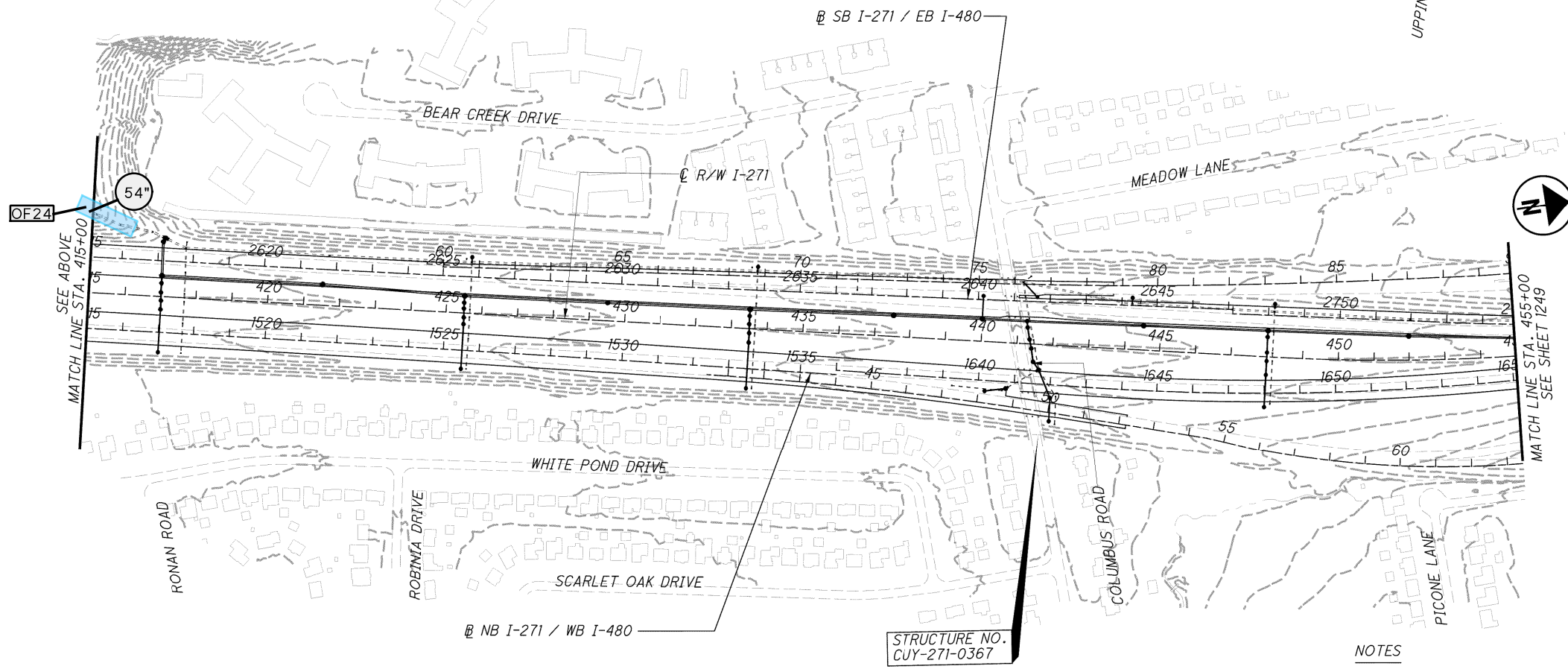
VEGETATED FILTER STRIPS				
STATION TO	STATION FROM	SIDE	FILTER STRIP WIDTH	670
				SLOPE EROSION PROTECTION
			FT	SY
279+00.00	295+00.00	LT	42	7466.67
293+50.00	318+00.00	RT	19	5172.22
295+00.00	314+50.00	LT	22	4766.67
321+00.00	327+00.00	LT	20	1333.33
328+00.00	331+00.00	LT	16	533.33
332+50.00	335+50.00	RT	17	566.67
332+50.00	349+50.00	LT	17	3211.11
338+00.00	341+00.00	RT	16	533.33
349+50.00	357+50.00	CL	22	1955.56
363+00.00	364+50.00	RT	80	1333.33
TOTALS THIS SHEET				26872.22

- LEGEND**
- STORM SEWER PIPE
 - INLET
 - CATCH BASIN
 - MANHOLE

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— - DRAINAGE OUTFALL
● - POTENTIAL IMPACT POINT



VEGETATED FILTER STRIPS				
STATION TO	STATION FROM	SIDE	FILTER STRIP WIDTH	670
			FT	SY
391+50.00	394+50.00	RT	30	1000.00
428+00.00	432+00.00	RT	21	933.33
443+00.00	447+00.00	RT	17	755.56
452+00.00	459+50.00	LT	29	2416.67
TOTALS THIS SHEET				5105.56

LEGEND
 — STORM SEWER PIPE
 ■ INLET
 ● CATCH BASIN
 ● MANHOLE

NOTES
 1. THERE ARE NO LANDSCAPING AREAS WITHIN THE WORK LIMITS.
 2. SEE SHEET 1251 FOR ADDITIONAL VEGETATED FILTER STRIP INFORMATION.

PROJECT SITE PLAN
I-271 STA. 365+00 TO STA. 455+00

CUY / SUM-271-00.00 / 14.87
 CUY / SUM-480-29.58 / 00.00

CALCULATED: COA
 CHECKED: AK

SCALE: HORIZONTAL
 SCALE: IN FEET

1248
 2013

LEGEND

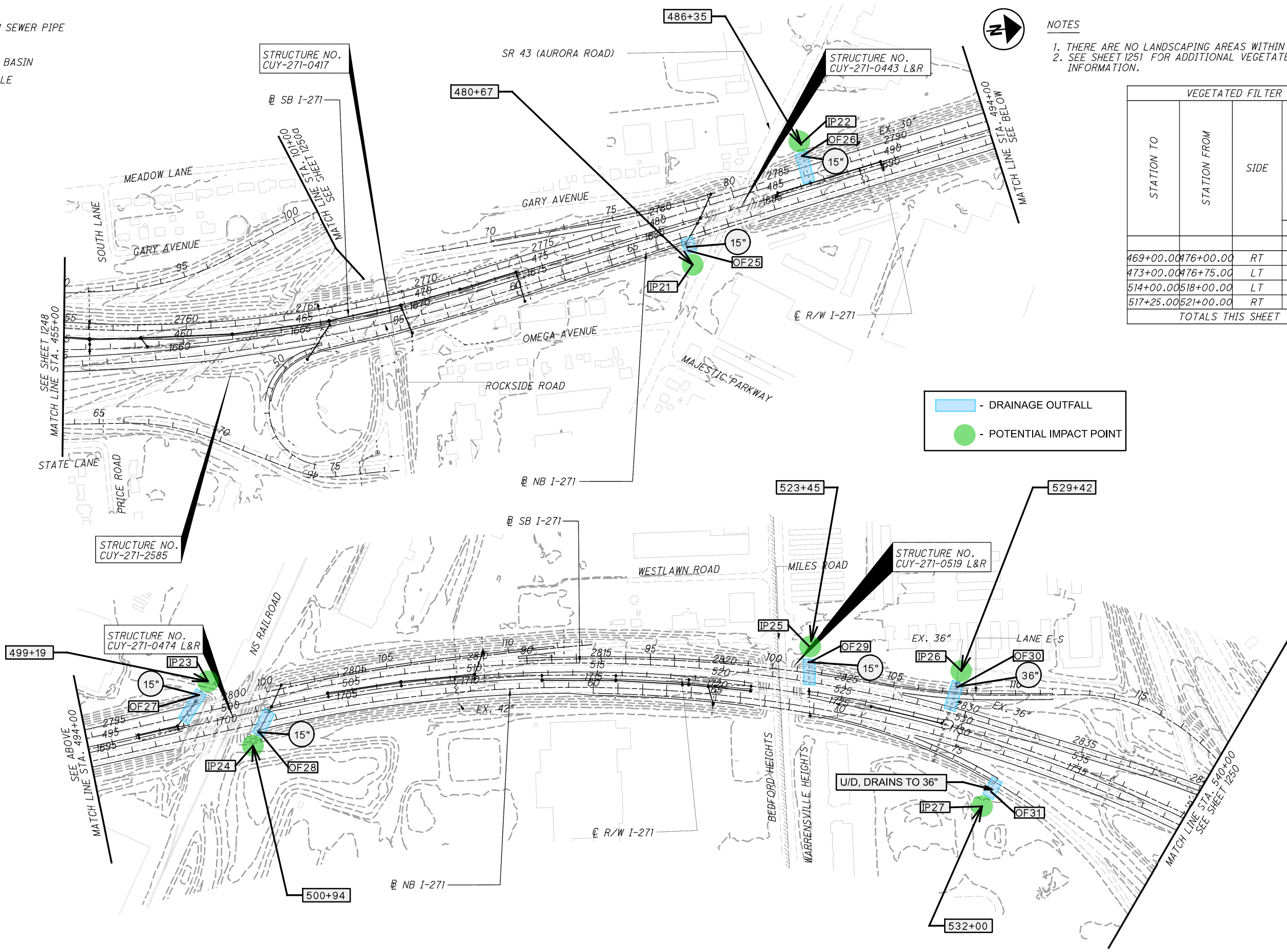
- STORM SEWER PIPE
- INLET
- CATCH BASIN
- MANHOLE

NOTES

1. THERE ARE NO LANDSCAPING AREAS WITHIN THE WORK LIMITS.
2. SEE SHEET I251 FOR ADDITIONAL VEGETATED FILTER STRIP INFORMATION.

VEGETATED FILTER STRIPS				
STATION TO	STATION FROM	SIDE	FILTER STRIP WIDTH	670
			FT	SY
469+00.00	476+00.00	RT	17	1322.22
473+00.00	476+75.00	LT	22	916.67
514+00.00	518+00.00	LT	37	1644.44
517+25.00	521+00.00	RT	15	625.00
TOTALS THIS SHEET				4508.33

- DRAINAGE OUTFALL
 - POTENTIAL IMPACT POINT



PROJECT SITE PLAN
I-271 STA. 455+00 TO STA. 540+00
 CUY / SUM-271-00.00 / 14.87
 CUY / SUM-480-29.58 / 00.00
 1249
 2013

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CUY-271-0.00 (PID 80418)

Quarterly Potential Impact Point Inspection Form

1st Quarter 2020	2nd Quarter 2020	3rd Quarter 2020	4th Quarter 2020
Date: Inspector:	Date: Inspector:	Date: Inspector:	Date: Inspector:
Conditions:	Conditions:	Conditions:	Conditions:

ID #	Potential Impact Point (Station #)	Latitude	Longitude	Water Color	Water Odor	Sample Taken (Y/N)	Water Color	Water Odor	Sample Taken (Y/N)	Water Color	Water Odor	Sample Taken (Y/N)	Water Color	Water Odor	Sample Taken (Y/N)
IP1	229+64	41.345342	-81.510525												
IP2	246+27	41.349934	-81.510642												
IP3	272+58	41.356710	-81.514418												
IP5	301+93	41.364625	-81.517410												
IP6	302+07	41.364764	-81.515676												
IP8	328+50	41.371554	-81.513428												
IP9	341+56	41.375471	-81.514949												
IP10	350+00	41.377696	-81.514402												
IP11	357+50	41.379620	-81.512492												
IP12	361+00	41.380547	-81.512023												
IP13	363+50	41.381236	-81.511976												
IP14	364+24	41.381434	-81.512173												
IP15	368+50	41.382604	-81.512159												
IP16	377+70	41.385055	-81.511952												
IP17	384+45	41.387142	-81.513131												
IP18	402+18	41.391962	-81.511852												
IP19	409+65	41.393958	-81.511162												
IP21	480+67	41.412965	-81.506717												
IP22	486+35	41.414334	-81.508257												
IP23	499+19	41.417800	-81.509084												
IP24	500+94	41.418430	-81.508099												
IP25	523+45	41.424598	-81.509259												
IP26	529+42	41.426288	-81.508915												
IP27	532+00	41.426539	-81.506963												

** IP4, IP7, & IP20 have been removed because they are being sampled monthly as OF-2, OF-3, and OF-4

