



CITY COUNCIL AGENDA October 18, 2021

Members

Nikayah Walker, Mayor
Sena Magill, Vice Mayor
Heather D. Hill
Michael K. Payne
J. Lloyd Snook, III
Kyna Thomas, Clerk

4:00 PM WORK SESSION

Register at www.charlottesville.gov/zoom. Virtual/electronic meeting in accordance with a local ordinance amended and re-enacted October 4, 2021, to ensure continuity of government and prevent the spread of disease during a declared State of Emergency. Individuals with disabilities who require assistance or special arrangements to participate in the public meeting may call (434) 970-3182 or submit a request via email to ada@charlottesville.gov. The City of Charlottesville requests that you provide a 48 hour notice so that proper arrangements may be made.

CALL TO ORDER

ROLL CALL

REPORTS

1. Report: Sidewalks on Stribling Avenue
2. Discussion: Budget Development

PUBLIC COMMENT

Stribling Avenue Cost Estimate Analysis

Jack Dawson, PE

City of Charlottesville Public Works Engineering

Typical Planning/ Design/Estimate Process:

Identification

->Prioritization

->Planning Study

->Cost Estimate #1 w/Heavy Contingencies

->30% Design with Alternates

->60% Design & New Cost Estimates

->90% Design and New Cost Estimates

-> Construction/Bid Phase Cost Established

This Exercise Is an Expedited “Over/Under” more so than an Estimate.

- This is not an existing priority project so background info is minimal
- Includes 20% Contingency
- Has not gone through community engagement/stakeholder meetings
- Projects of this type are not insignificant undertakings nor are they “cookie-cutter” in design typology or execution.
- The revised layout is preliminary, the estimate should not be considered final.**

Considerations for Designing Streetscapes in Developed Corridors

1- ROW takes

2-Driveway tie in costs/temporary easements

3-Drainage requirements

4-SWM impacts

5-Utility Relocation

6-Roadway improvements

Other non-priced impacts:

7-Existing Parking Reductions

8-Tree canopy removal

Steps Taken:

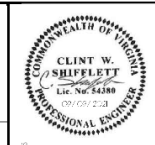
1. Analyze existing corridor for physical constraints (width, retaining walls, challenging driveway tie ins, etc) as well as safe crossing zones to revise layout to sidewalk on one side
2. Review estimate in comparison with revised concept layout for areas where costs are likely to escalate and qualify non-cost related impacts.
3. Revise estimate for likely escalations found above

Provided Concept:

Existing Corridor Analysis

- Physical Constraints
 - utility poles
 - grading challenges
 - trees
 - driveway/parking conflicts

Revised Sidewalk Layout



THE DRAWING PREPARED AT THE OFFICE OF CLINT W. SHIFFLETT, PROFESSIONAL ENGINEER, 608 POND AVENUE, SUITE 201 CHARLOTTEVILLE, VA 22903 TEL: 434.766.5874 FAX: 434.285.8311 WWW.SHIFFLETT.COM

REVISION DESCRIPTION	DATE
YOUR DESIGN AGREED THROUGH CARE.	09/09/2021

DESIGNED BY
K. ROESSER

CHECKED BY
C. SHIFFLETT

SCALE
1"=25'

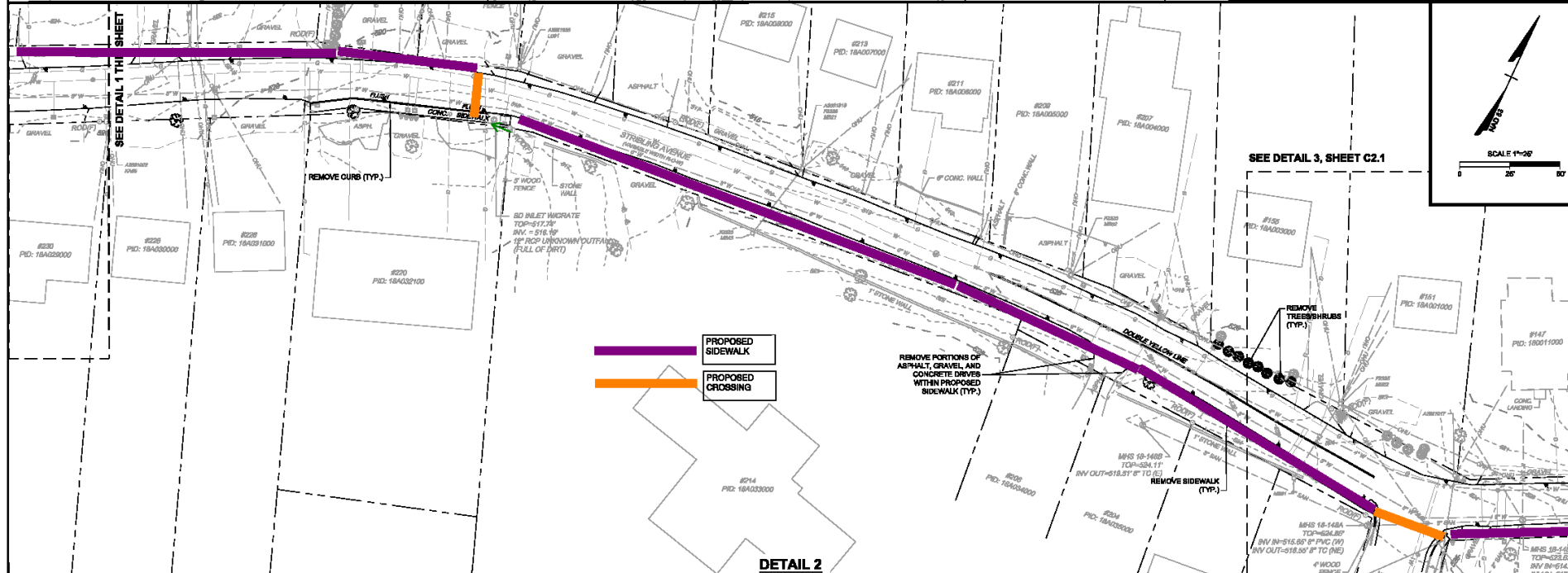
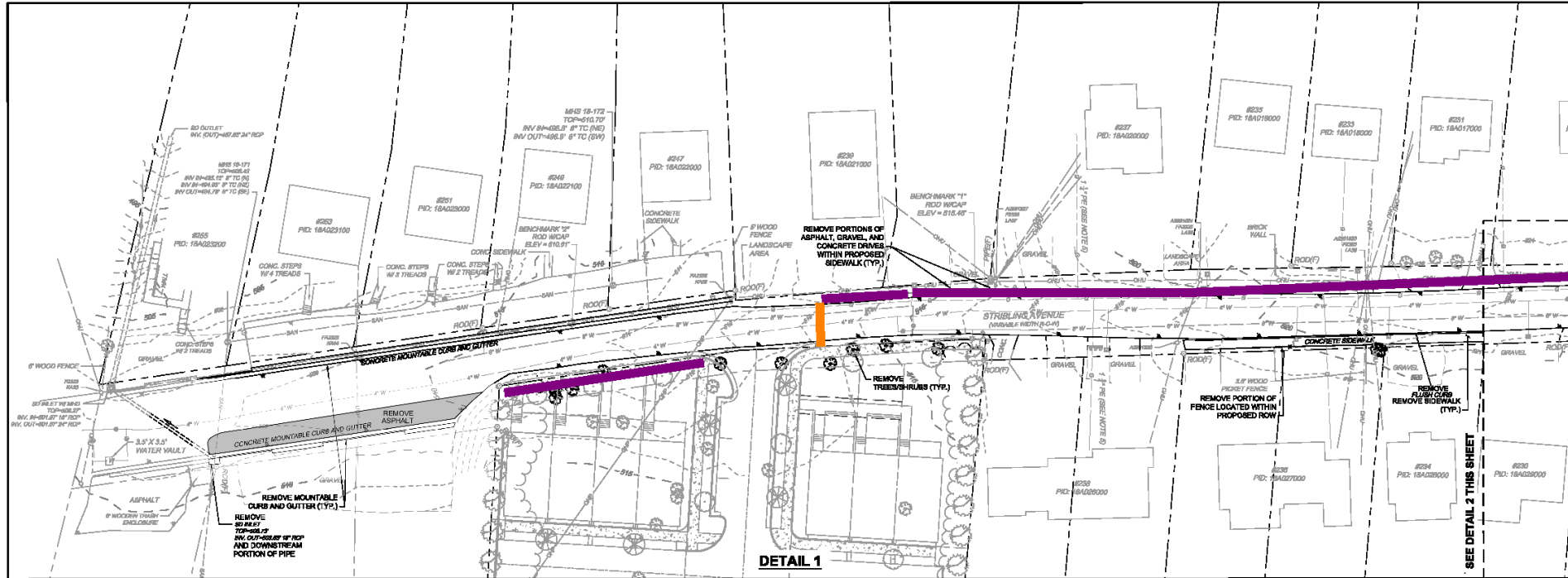
TIMMONS GROUP

STRIBLING AVE. ROADWAY IMPROVEMENTS
CITY OF CHARLOTTEVILLE - VIRGINIA

EXISTING CONDITIONS & DEMOLITION PLAN

TOR NO.
45193

SHEET NO.
C2.0



Cost Escalations

1- ROW takes

2-Driveway tie in costs/temporary easements

3-Drainage requirements

4-SWM impacts

5-Utility Relocation

6-Roadway improvements

Other non-priced impacts: Existing Parking and Tree removal

RIGHT-OF-WAY DEDICATION SUMMARY	
PARCEL ID	ROW DEDICATION (SF)
18A021000	3.90
18A028000	0.22
18A029000	6.17
18A030000	2.38
18A012000	50.50
18A011000	154.79
18A032100	63.59
18A010000	183.52
18A009000	177.32
18A008000	126.23
18A007000	124.77
18A006000	103.68
18A005000	17.17
18A033000	263.77
180011000	182.90
180010000	41.58
180009000	34.15
180008000	35.26
180007000	64.97
180015000	63.59
180015100	160.61
180015200	138.17
180015300	114.78
180015400	114.97
180017000	93.21
180017300	49.35
180006000	30.73
180005100	95.54
180005200	167.64
180005000	217.43
180005300	204.38
180005400	218.98
180004000	216.91
180003100	255.87
180003000	255.17
180002200	307.64
180002100	297.43
180002000	389.72
180018100	125.30
180018000	22.58
180020000	128.26
180021000	36.04
180022000	249.06

1-ROW TAKES

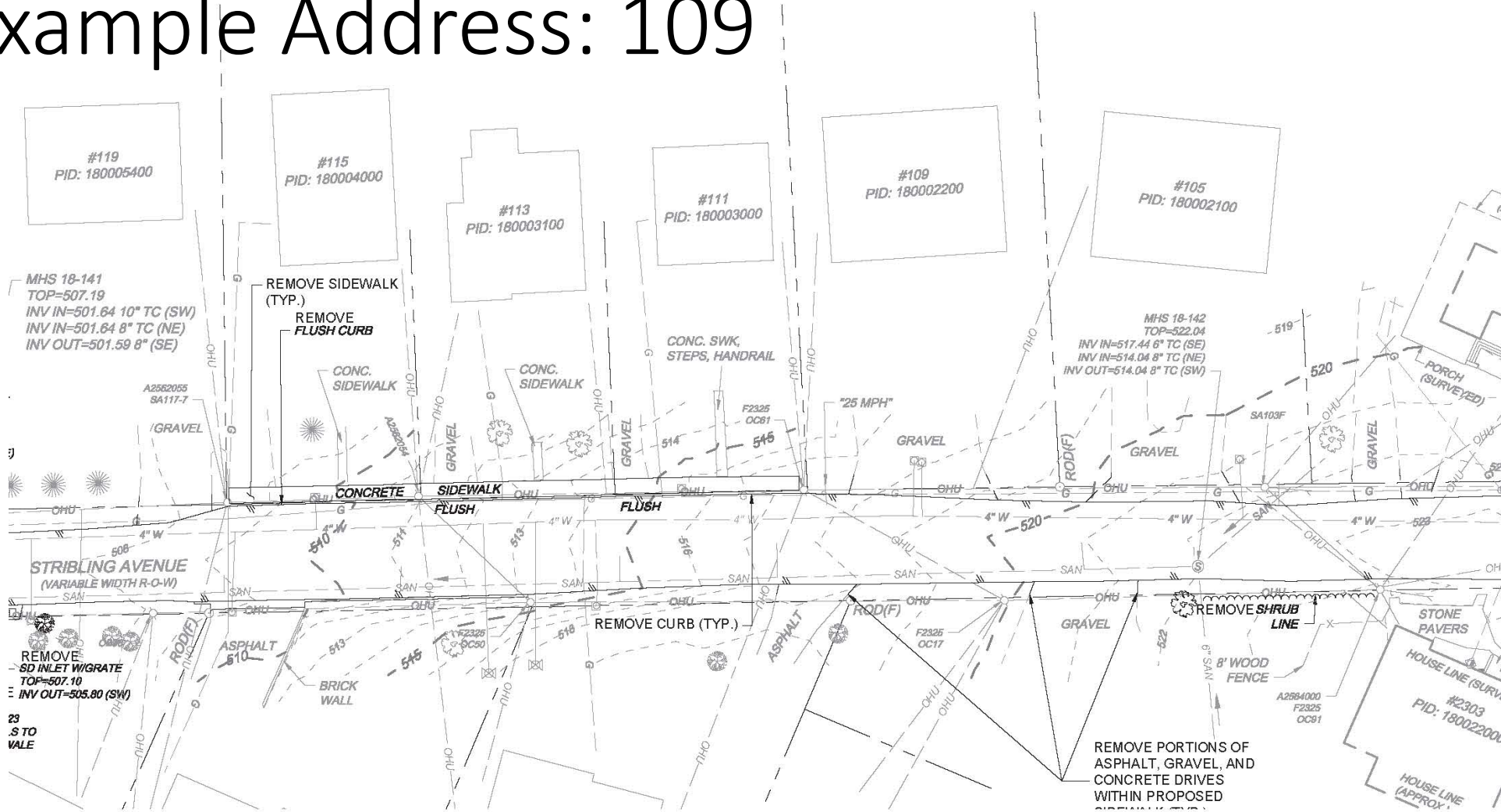
Represents permanent ROW takes necessary for 33' ROW.

Approximate cost= \$42,000

Cost Escalations

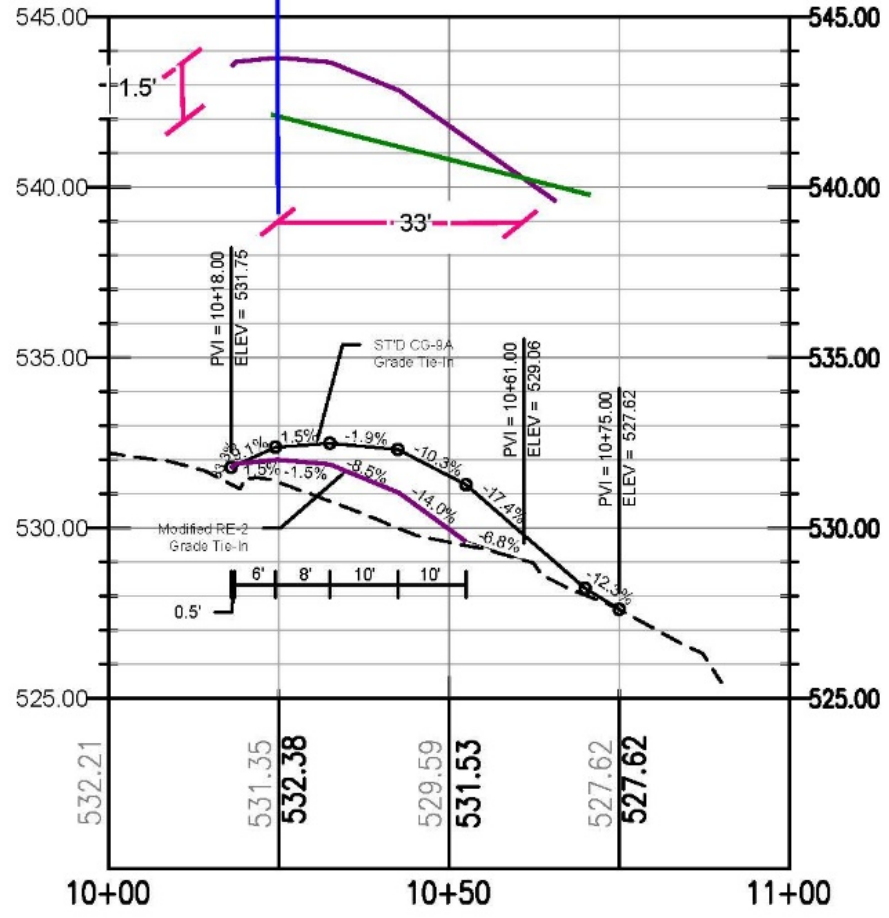
- Driveway tie in costs/temporary easements

Example Address: 109

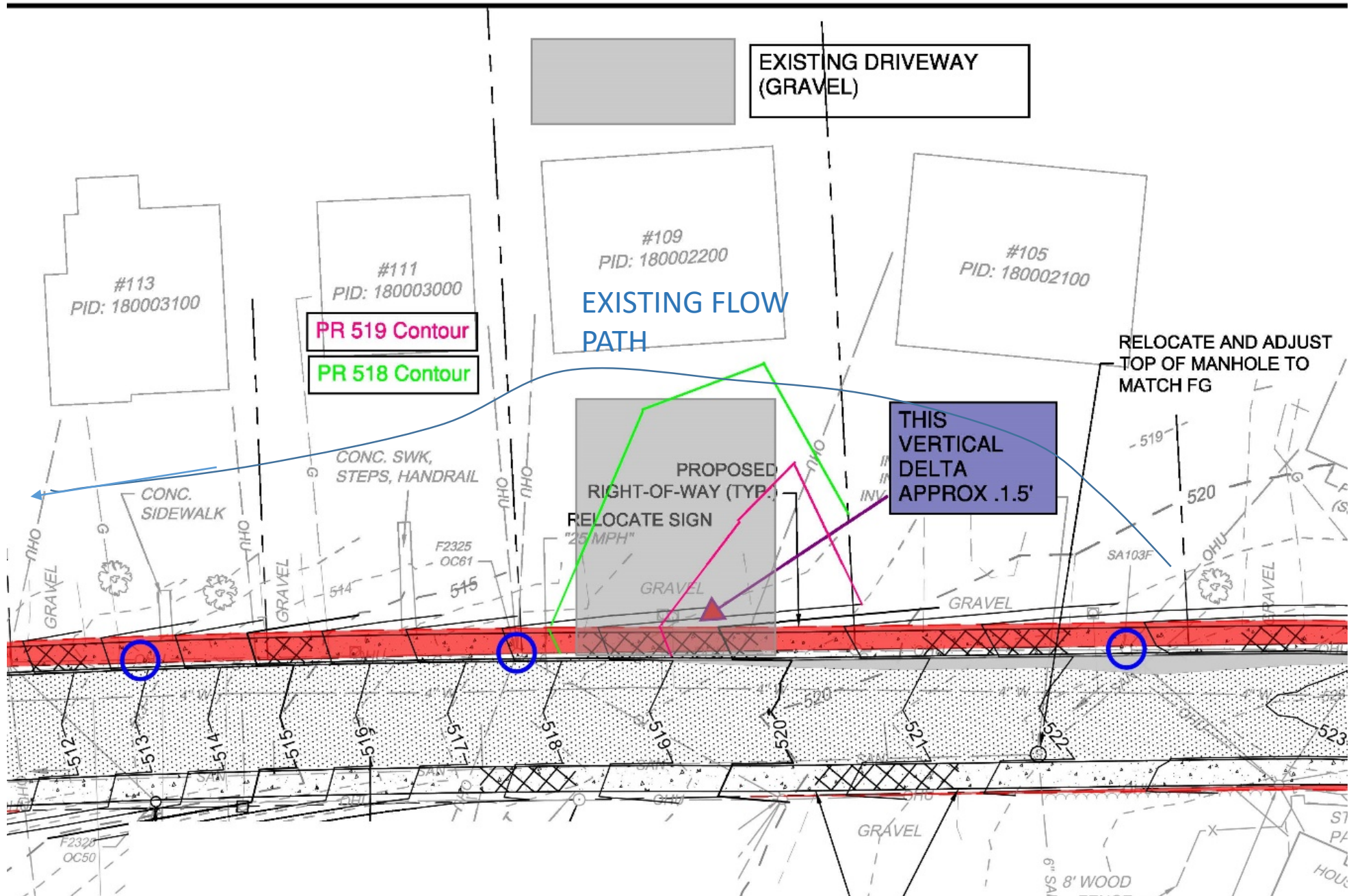


RE-2

BACK OF
SIDEWALK/
ROW



121+33 LT





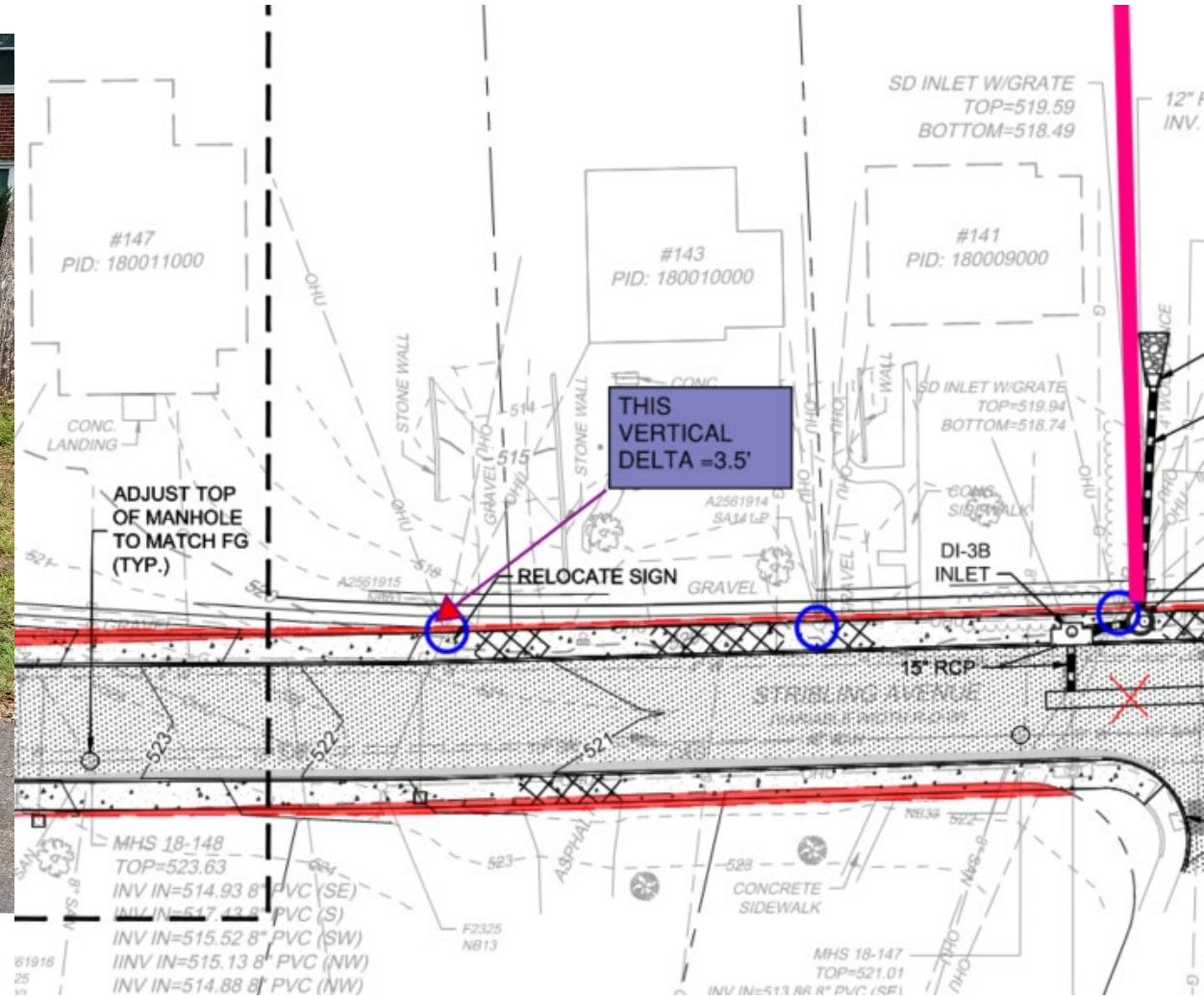








Other Driveway Examples:

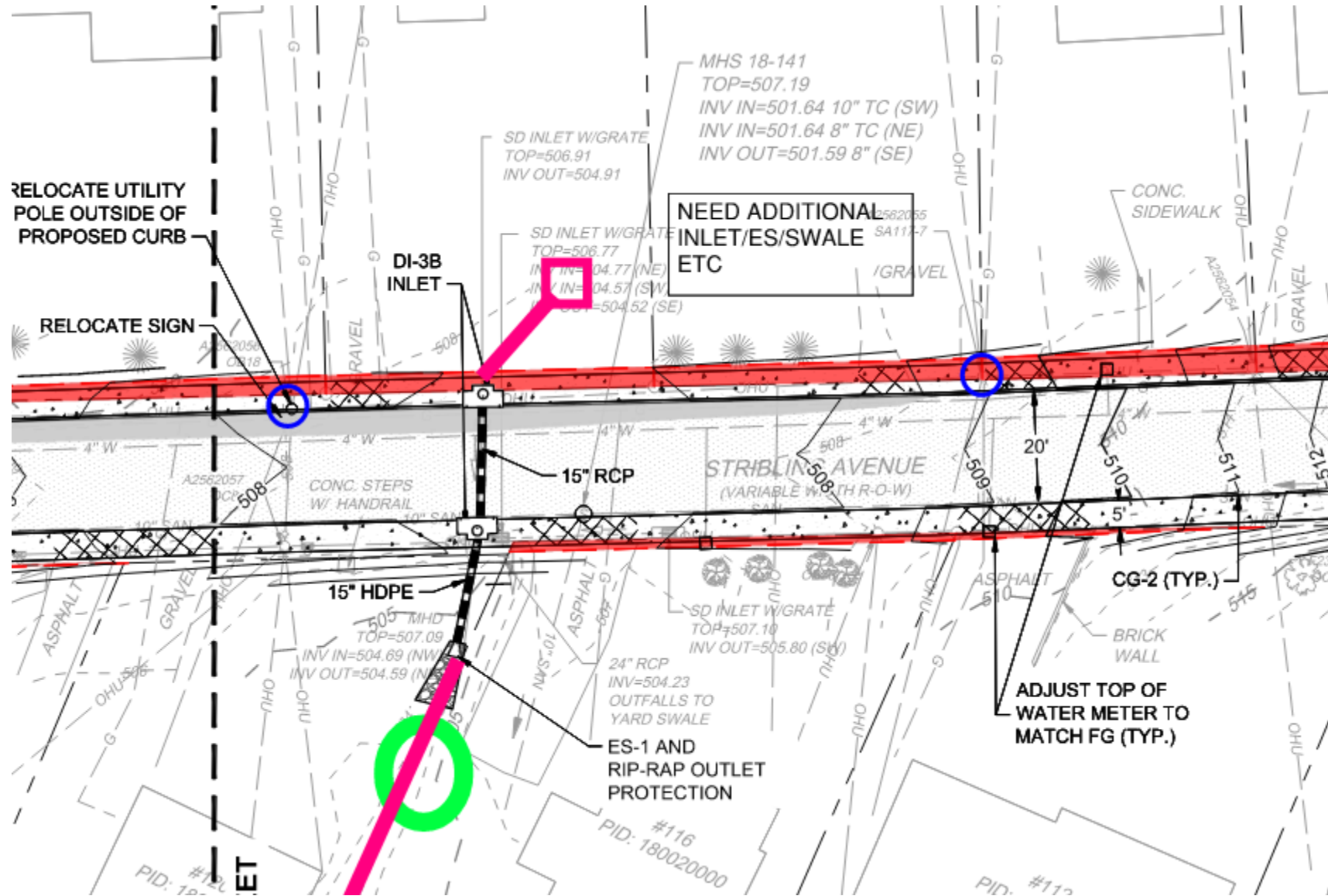


Cost Escalations

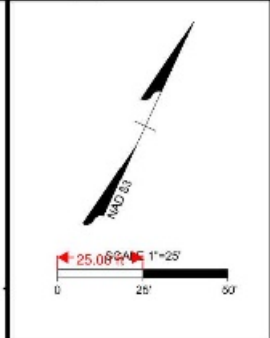
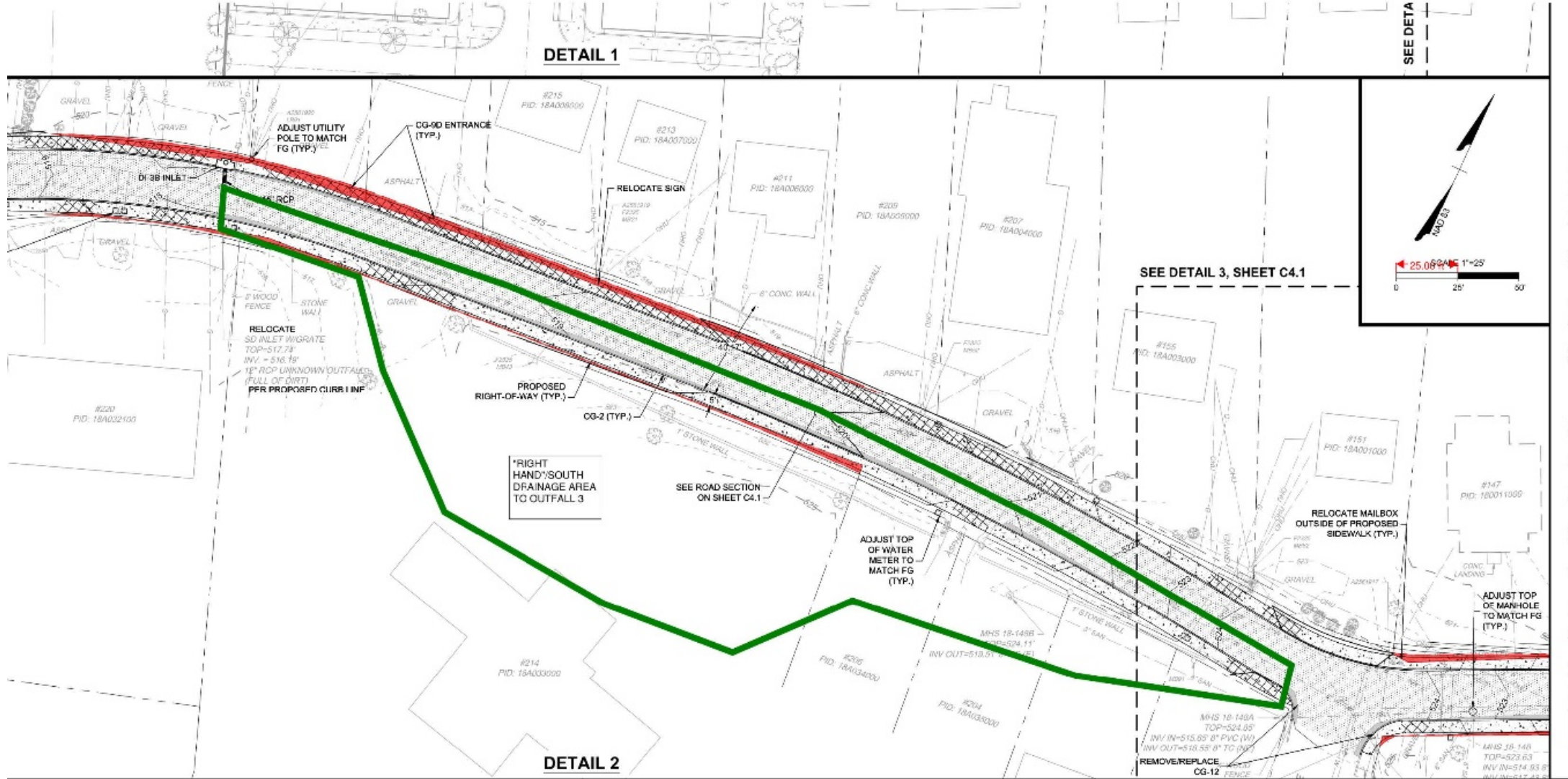
3-Basic Drainage Requirements

Drainage impacts as a result of grading:
(121 Stribling, Sag/ Outfall #1, Upstream inlet)





On Road Drainage as a Result Spread Requirements:



User: JAD Date: 10/7/2021
 Project: Stribling Units: English
 SubTitle: Areal Units: Acres
 State: Virginia
 County: Albemarle ZONE-2 NOAA-D
 Filename: C:\Users\dawsonj\OneDrive - City of Charlottesville, Virginia\Desktop\Par

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
SUB OUT 3		Outlet	0.53	76	0.100

Total area: .53 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.7	4.7	5.6	6.84	7.94	9.15	3.0

Sub-Area Peak Flow by Rainfall Return Period

Sub-Area or Reach Identifier	2-Yr (cfs)	10-Yr (cfs)	1-Yr (cfs)
SUBAREAS			
SUB OUT 3	0.96	1.93	0.63

Worksheet : Curb Inlet On Grade - 1

Calculations Messages

Solve For: Efficiency

Curb Gutter

Discharge:	0.96	cfs	Intercepted Flow:	0.70	cfs
Slope:	0.008	ft/ft	Bypass Flow:	0.26	cfs
Gutter Width:	0.00	ft	Spread:	6.9	ft
Gutter Cross Slope:	0.000	ft/ft	Depth:	1.7	in
Road Cross Slope:	0.020	ft/ft	Flow Area:	0.5	ft ²
Roughness Coefficient:	0.013	...	Gutter Depression:	0.0	in
			Total Depression:	0.0	in
			Velocity:	2.03	ft/s
			Equivalent Cross Slope:	0.020	ft/ft
			Length Factor:	0.514	
			Total Interception Length:	19.5	ft

Calculation Successful.

Worksheet : Curb Inlet On Grade - 1

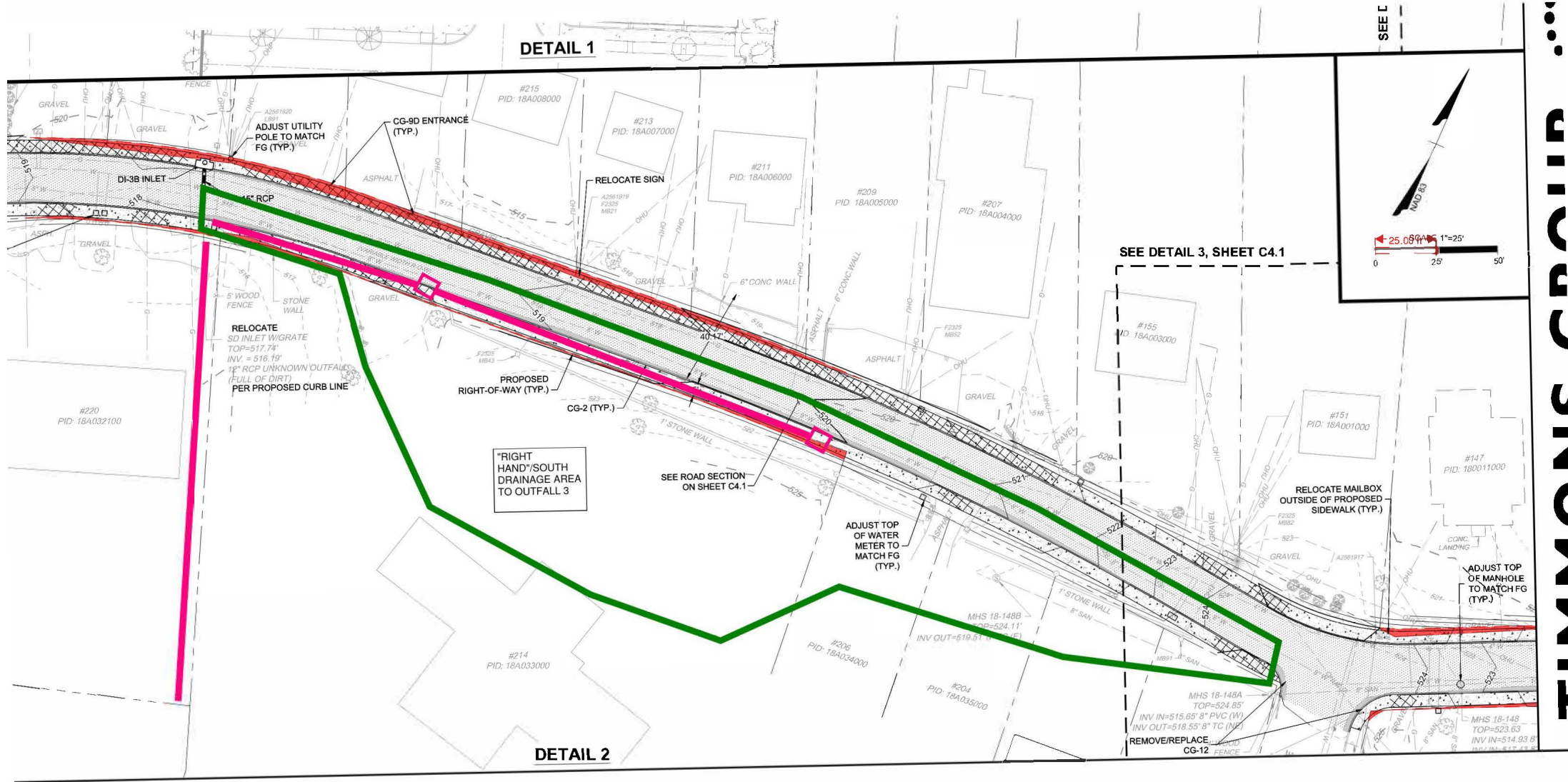
Calculations Messages

Solve For: Efficiency

Curb Gutter

Discharge:	0.40	cfs	Intercepted Flow:	0.37	cfs
Slope:	0.008	ft/ft	Bypass Flow:	0.03	cfs
Gutter Width:	0.00	ft	Spread:	5.0	ft
Gutter Cross Slope:	0.000	ft/ft	Depth:	1.2	in
Road Cross Slope:	0.020	ft/ft	Flow Area:	0.2	ft ²
Roughness Coefficient:	0.013		Gutter Depression:	0.0	in
			Total Depression:	0.0	in
			Velocity:	1.63	ft/s
			Equivalent Cross Slope:	0.020	ft/ft
			Length Factor:	0.742	
			Total Interception Length:	13.5	ft

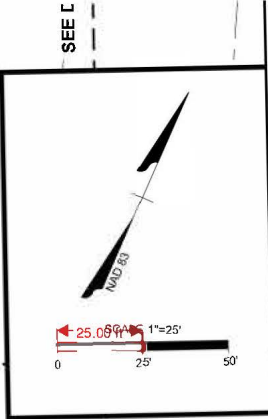
Calculation Successful.



DETAIL 1

DETAIL 2

SEE DETAIL 3, SHEET C4.1



SEE C

FINAL DESIGN

Cost Escalations

- SWM impacts: Quality/Quantity/permanent Easements

Quality:

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) →

Maximum reduction required:	10%
The site's net increase in impervious cover (acres) is:	0.35
Post-Development TP Load Reduction for Site (lb/yr):	0.63

Total Runoff Volume Reduction (ft ³)	0
Total TP Load Reduction Achieved (lb/yr)	0.00
Total TN Load Reduction Achieved (lb/yr)	0.00
Remaining Post Development TP Load (lb/yr)	0.93
Remaining TP Load Reduction Required	0.63

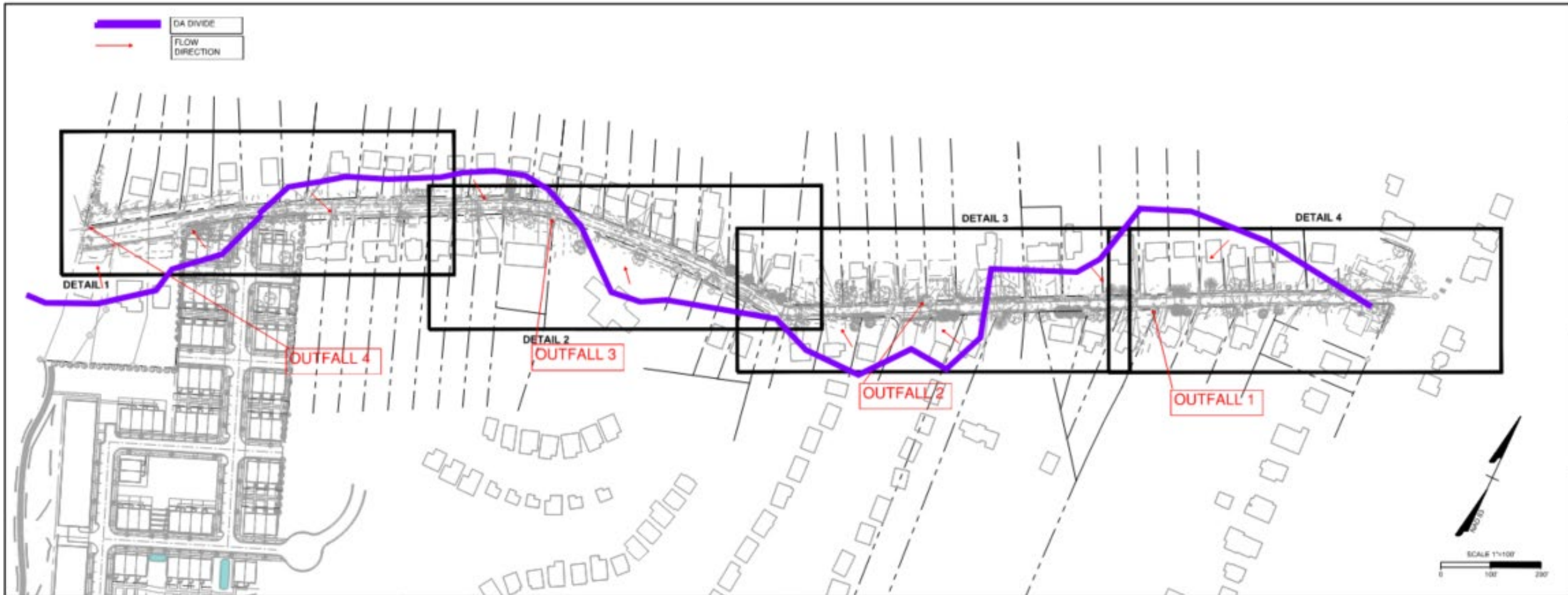
Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.42				0.42
Impervious Cover (acres)	0.07				0.07
					0.49

Post-Development Land Cover (acres)

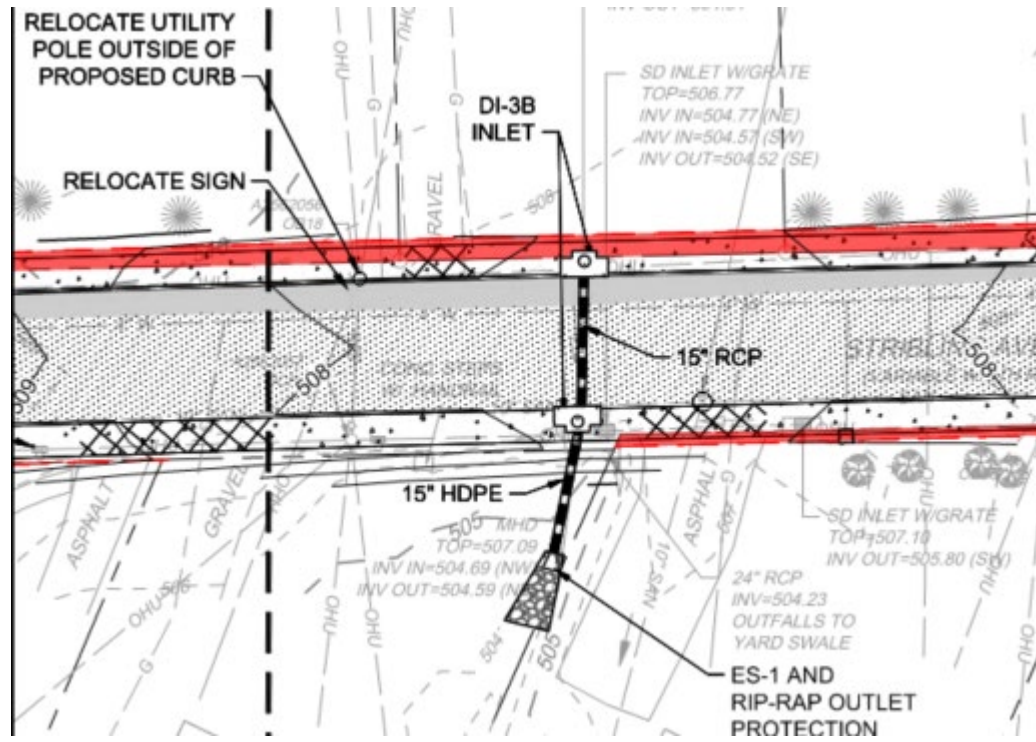
	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.07				0.07
Impervious Cover (acres)	0.42				0.42
Area Check	OK.	OK.	OK.	OK.	0.49

Quantity:

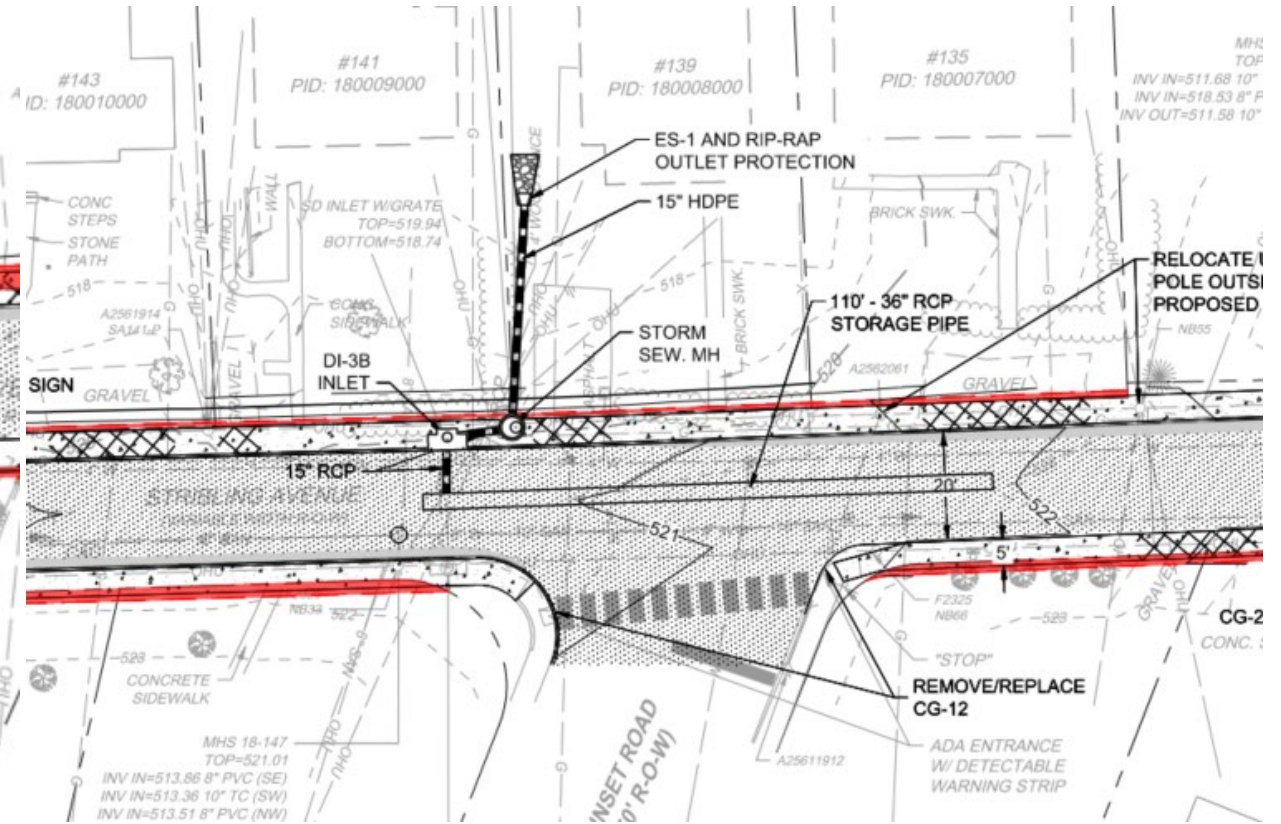


Proposed SWM Quality

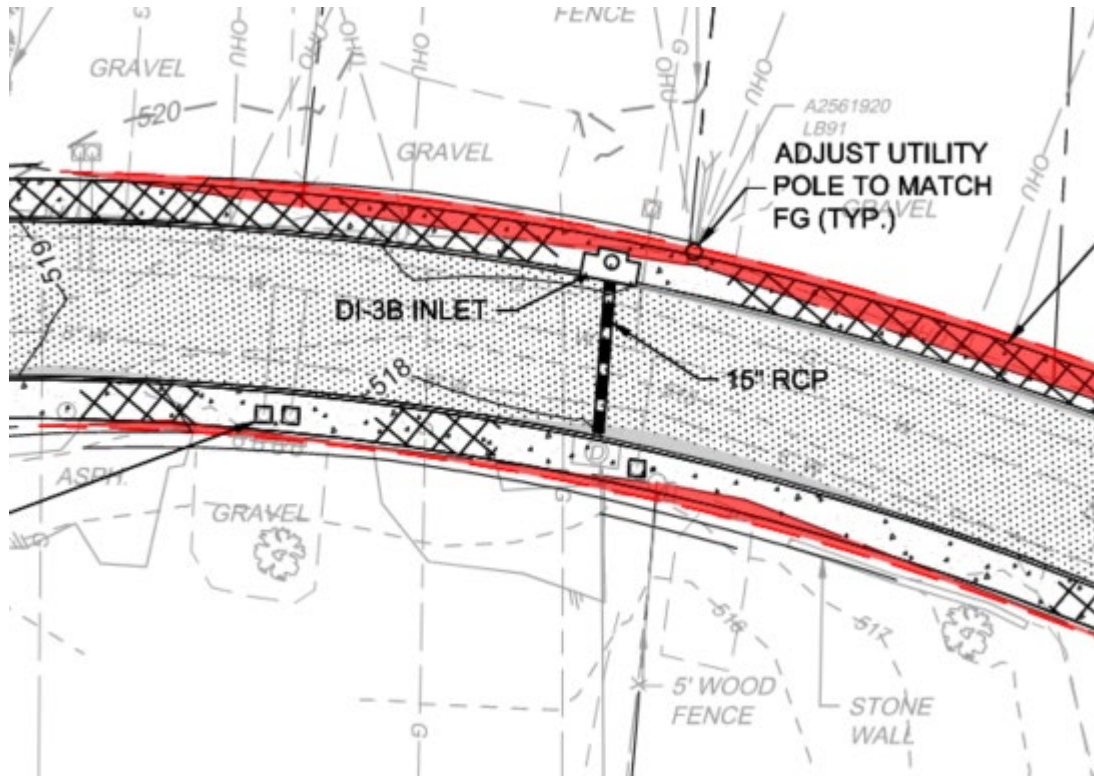
Outfall 1:



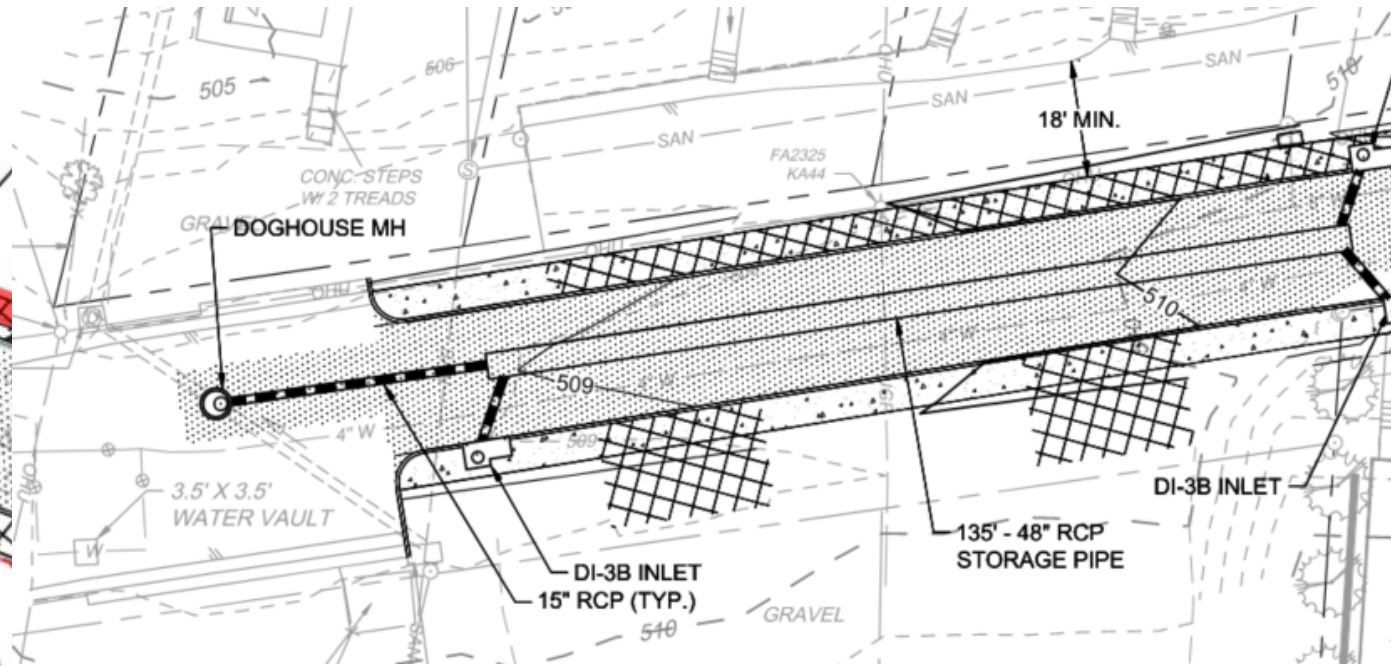
Outfall 2:

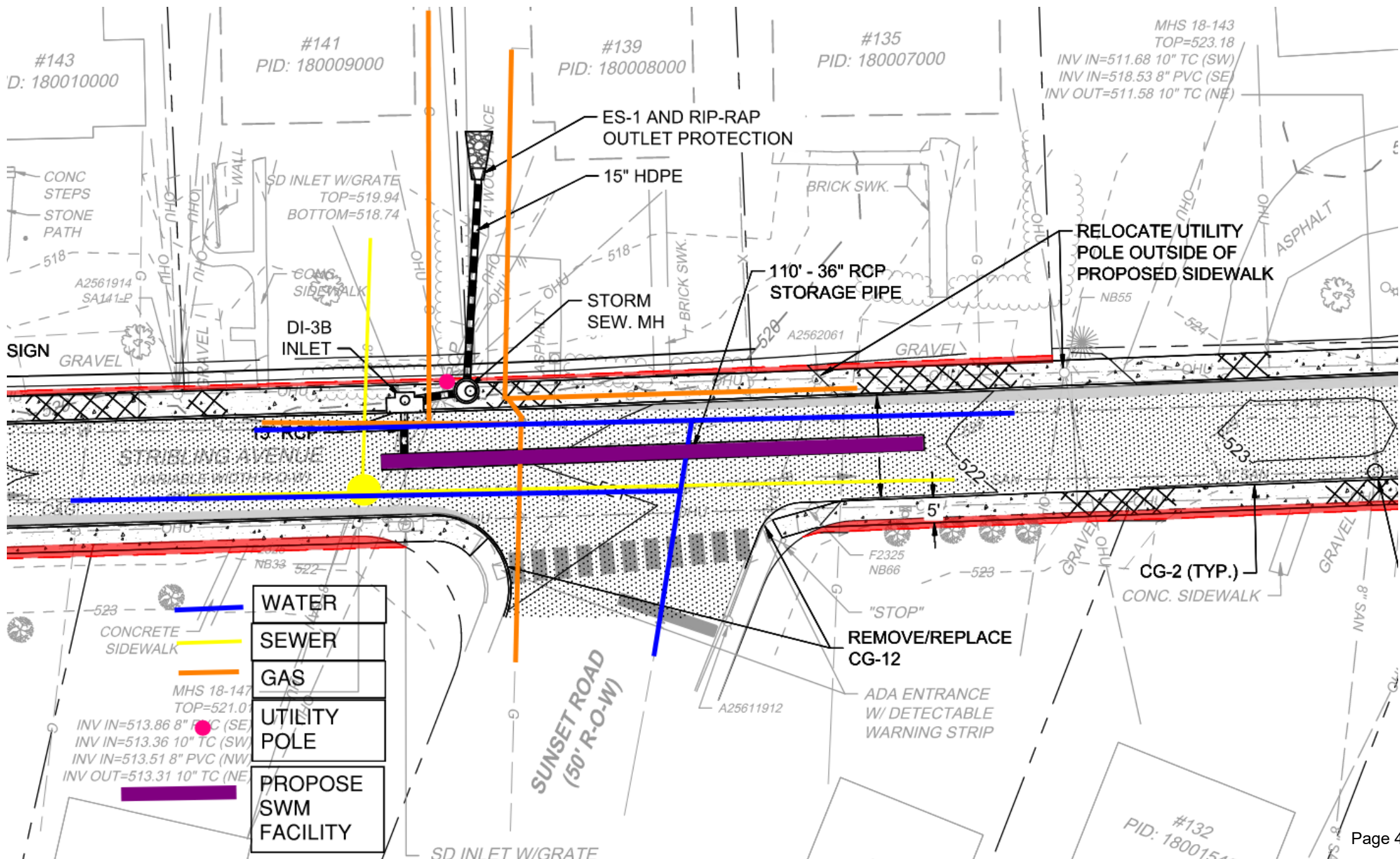







Outfall 3:



Outfall 4:



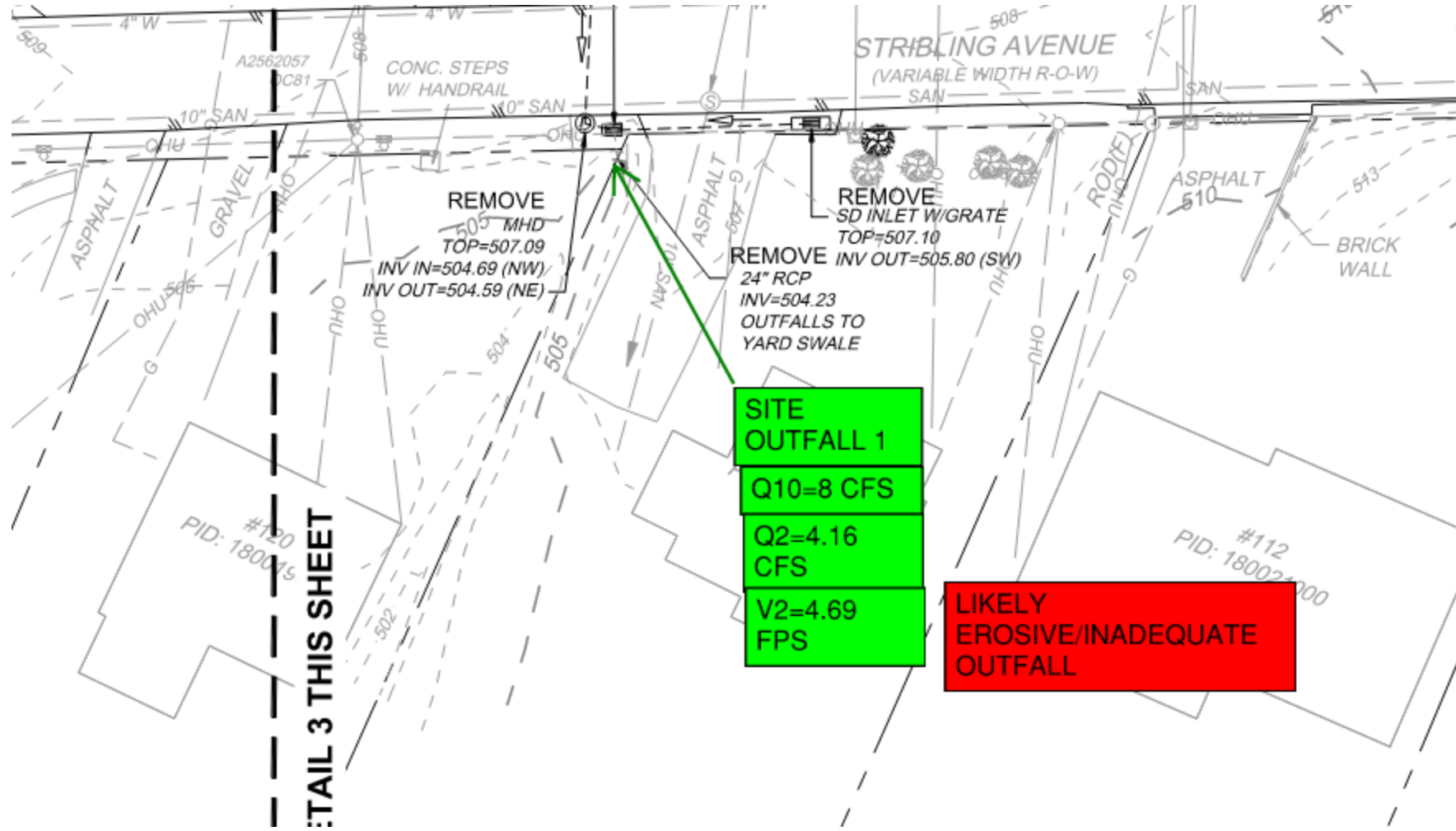


	WATER
	SEWER
	GAS
	UTILITY POLE
	PROPOSE SWM FACILITY

MHS 18-147
 TOP=521.0
 INV IN=513.86 8" PVC (SE)
 INV IN=513.36 10" TC (SW)
 INV IN=513.51 8" PVC (NW)
 INV OUT=513.31 10" TC (NE)

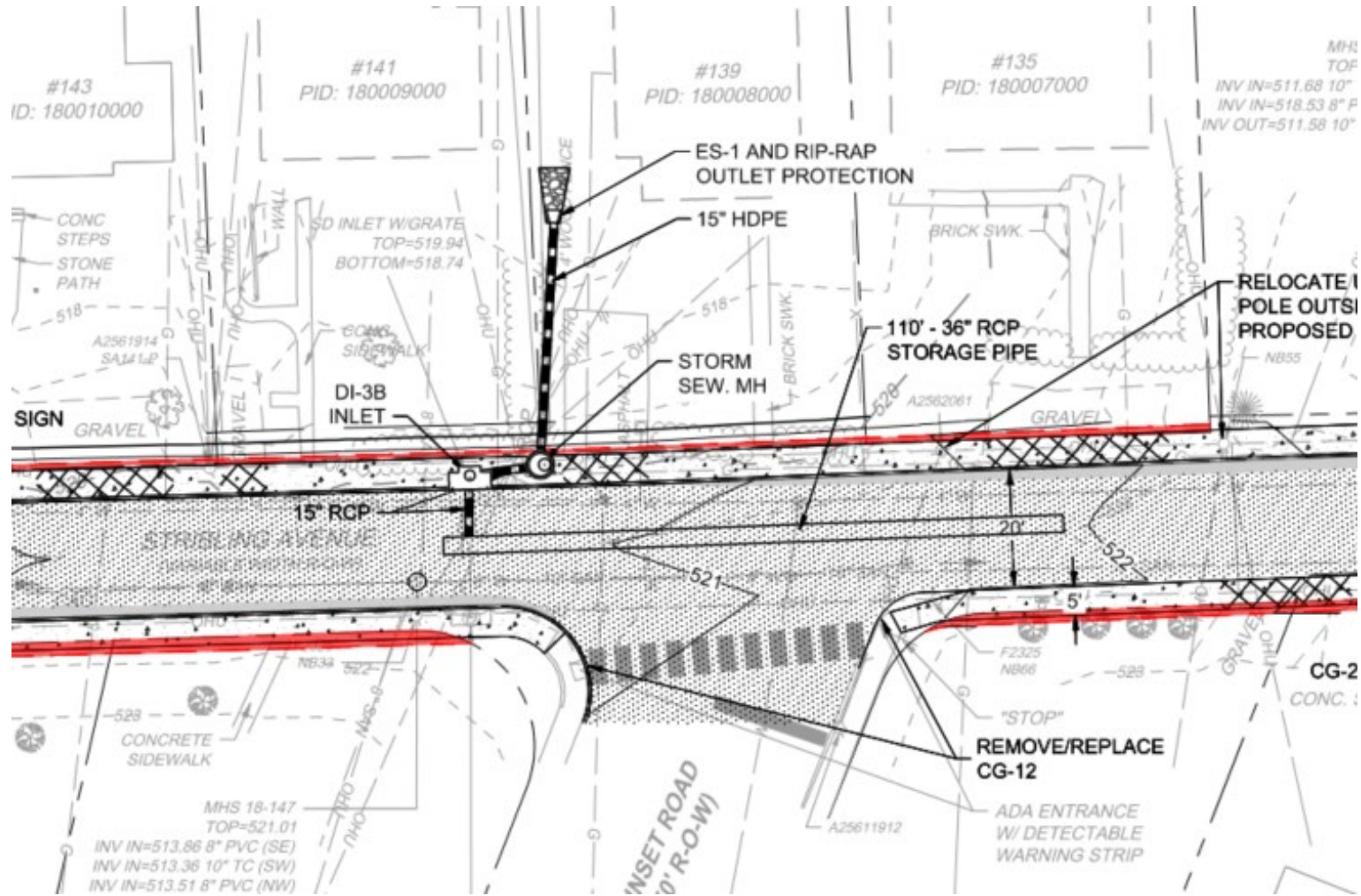
Revised Conceptual Outfalls:

Outfall #1





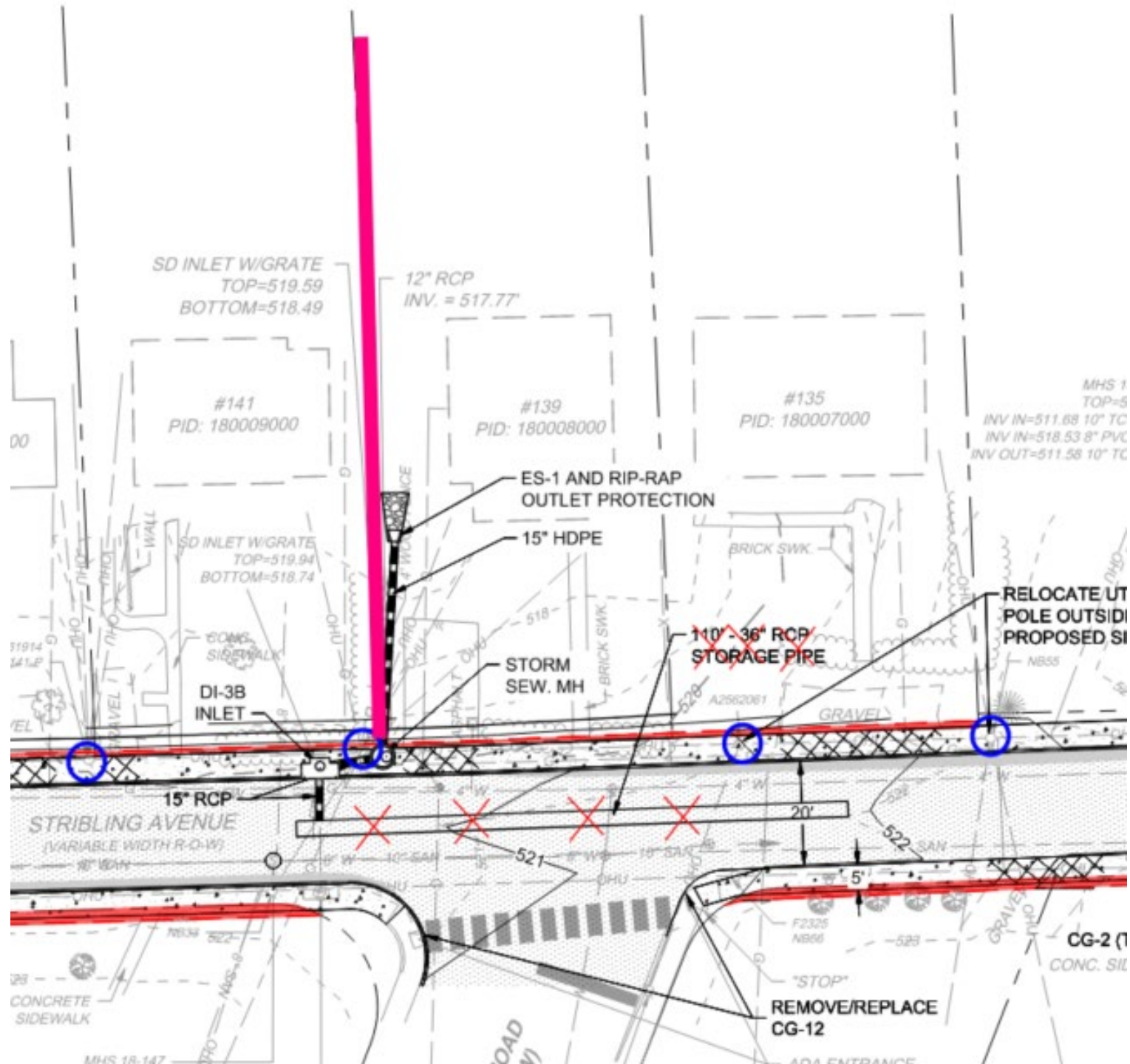
Outfall #2



Outfall #2



Outfall #2



Outfall #2



Outfall #3



Outfall #3

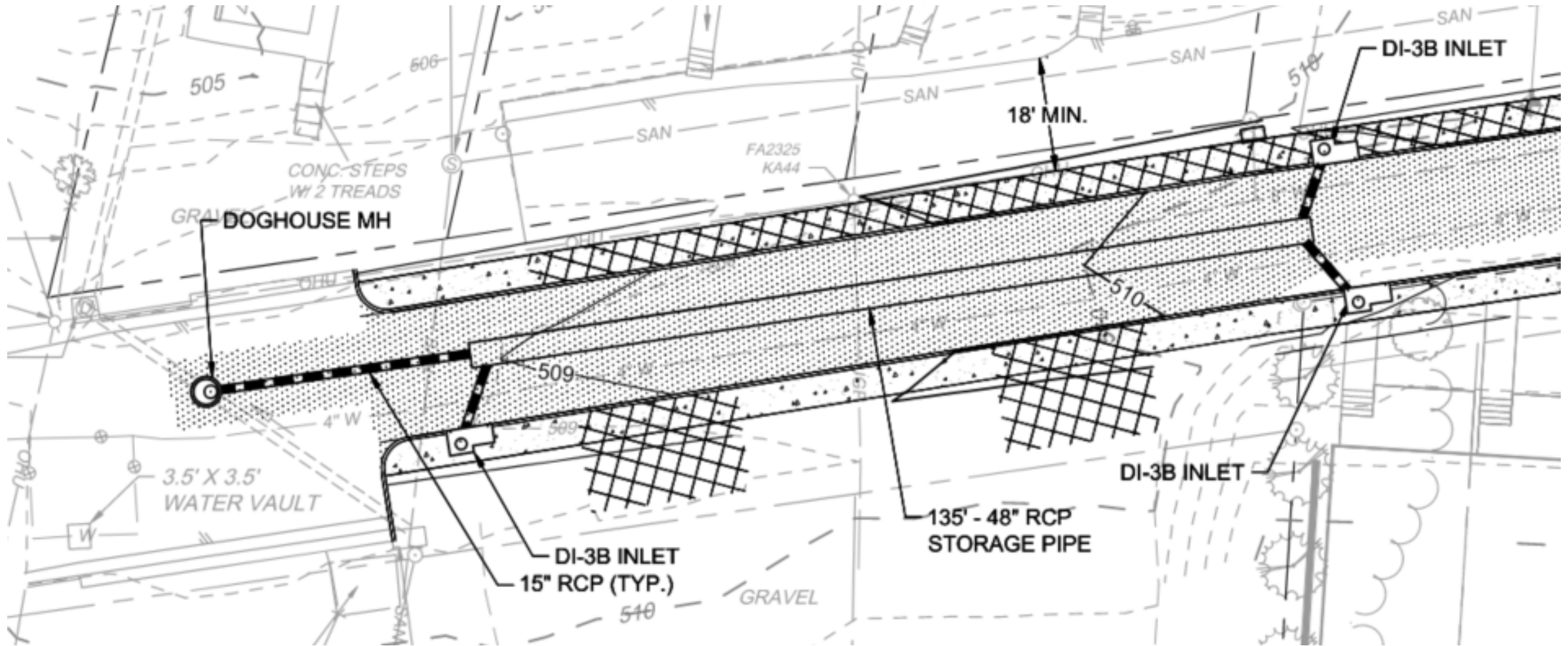


**This is the
only pipe
'daylight' I
could find.**

Outfall #3

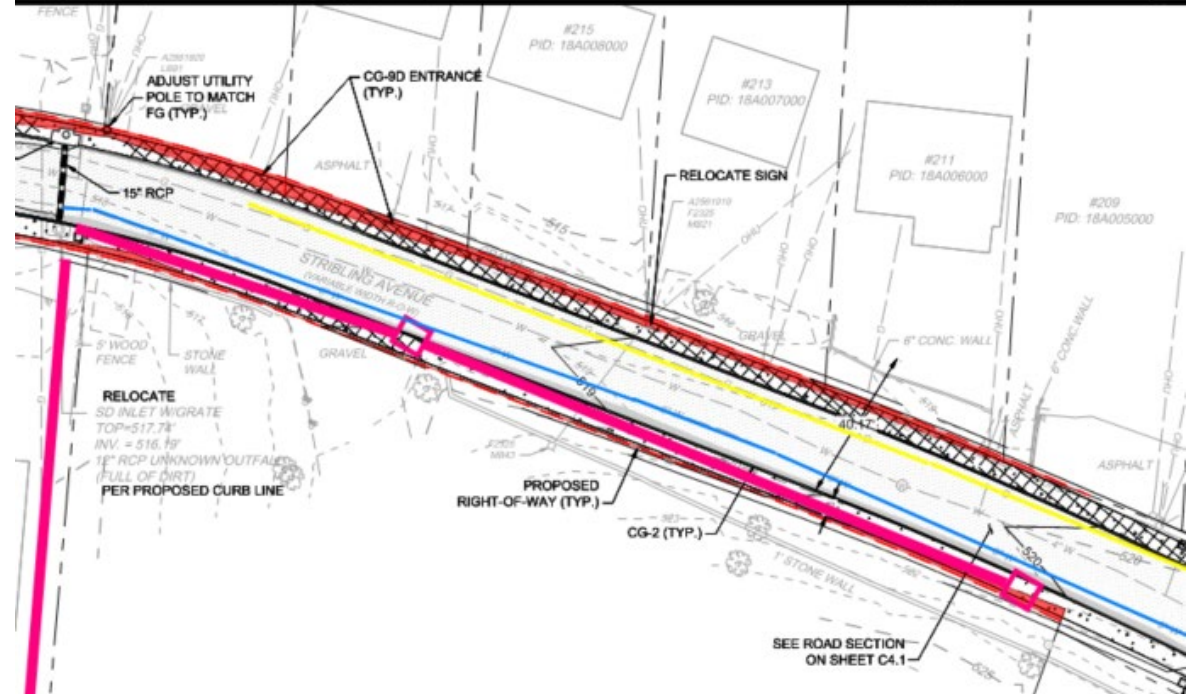
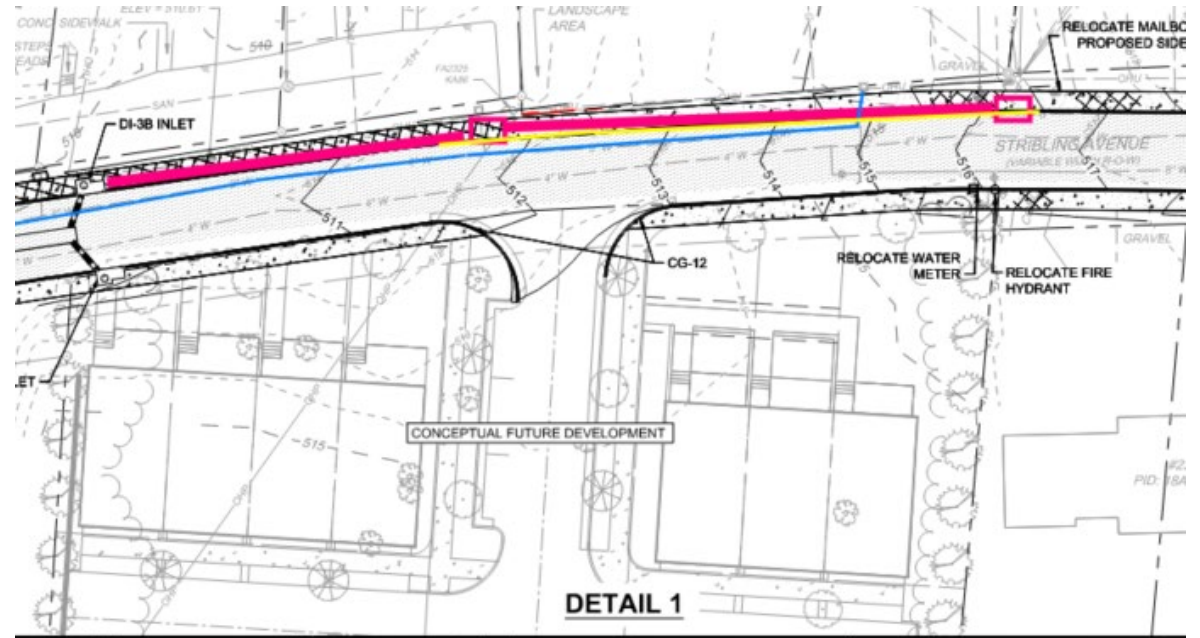


Outfall #4

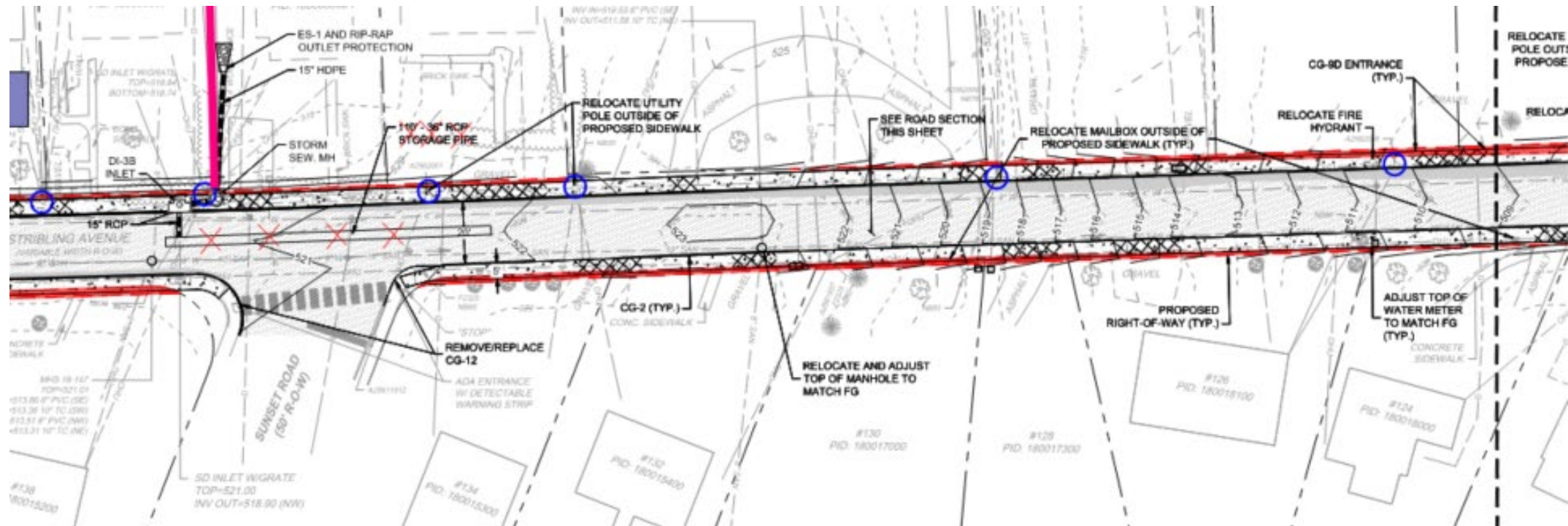




Utility Relocation



Utility Relocation



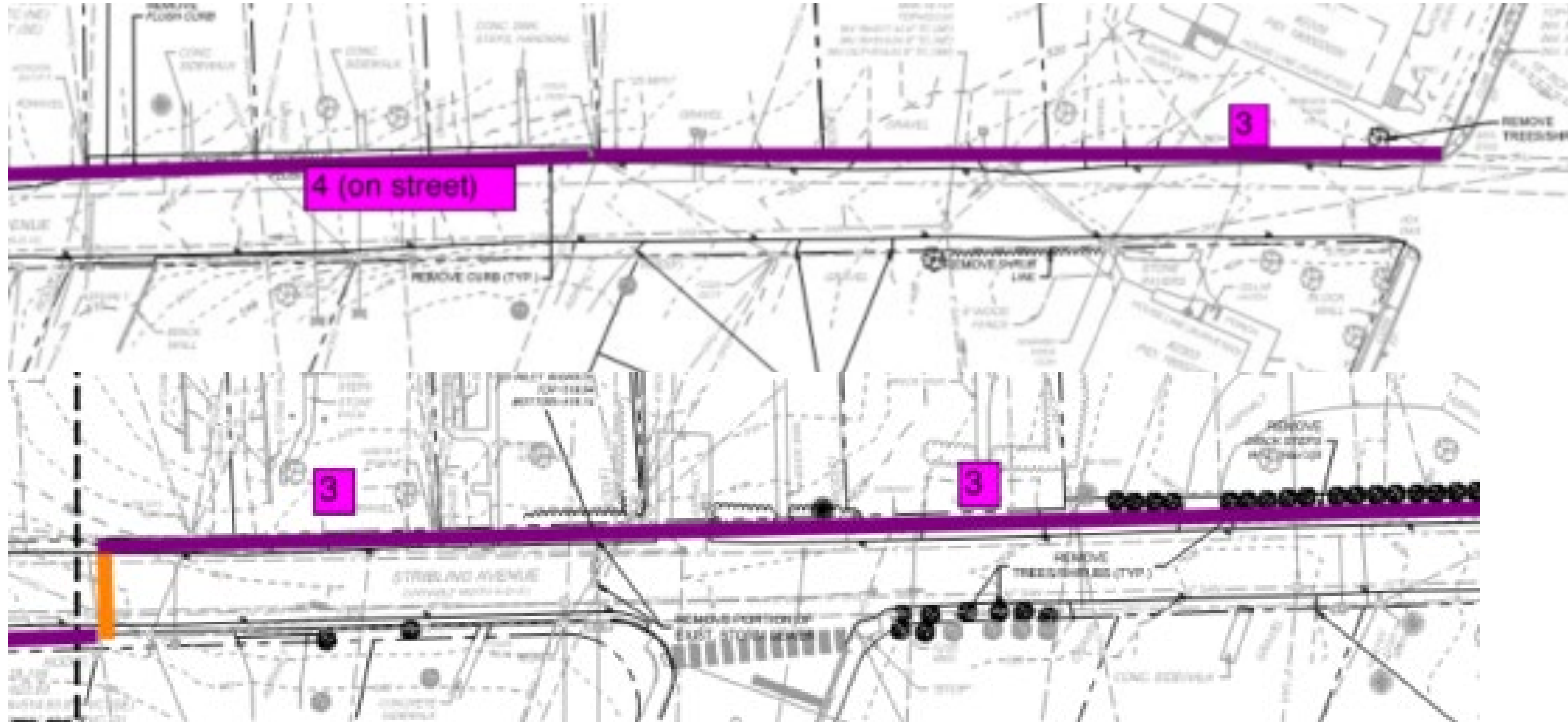
Roadway Improvement Costs

- Reduced for S/W on one side

Other Considerations

Existing Parking Removed

- Minimally, 21 Spaces (4 on-street, 17 Private)-Eliminated:



Tree Removal

- 19 Trees Removed



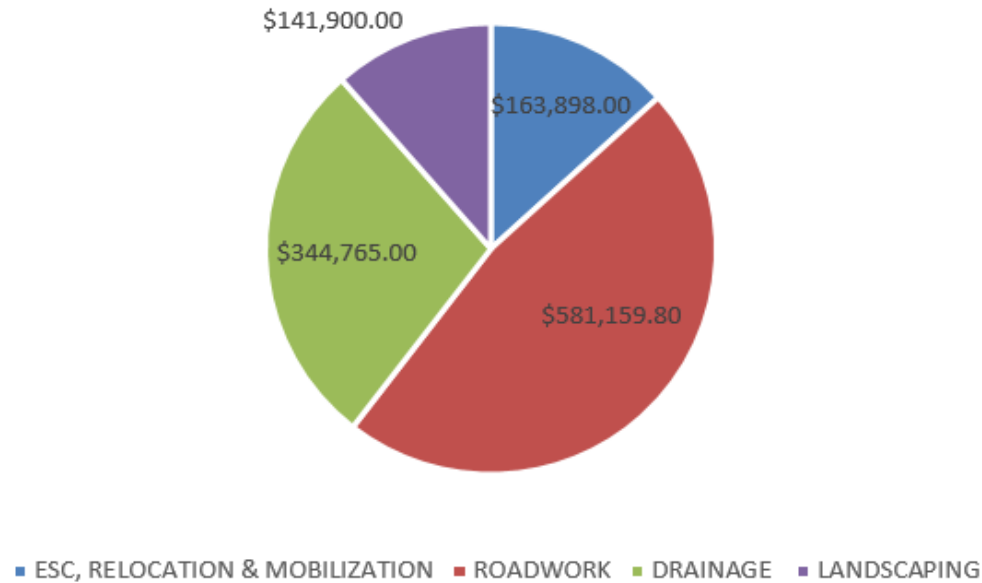






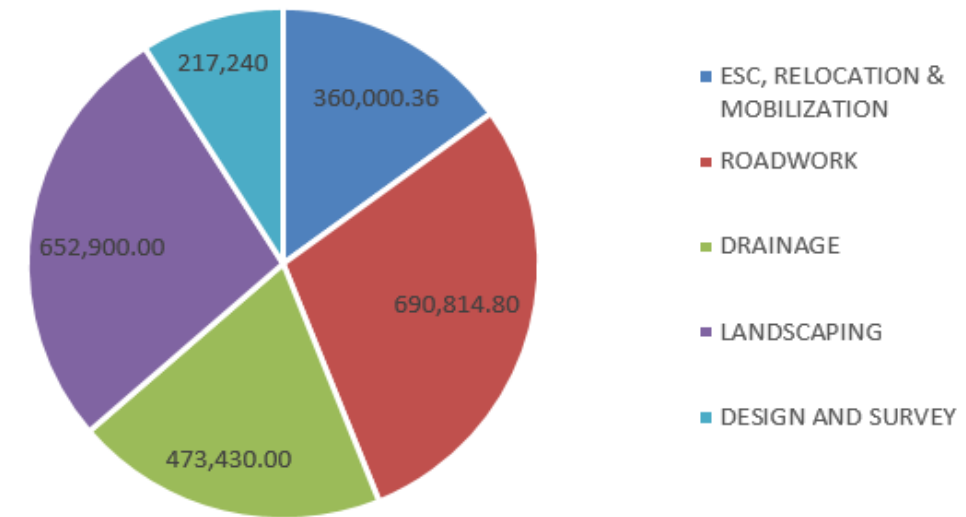
Cost Summary:

Original:



Total= \$1,231,722+(25% Contingency)=\$1,539,653

Revised Per Analysis:



Total= \$2,394,385+(20% Contingency)=\$2,873,262

Questions ?