Project 1: Phillippi Creek Barrier Removal Feasibility Study

(Task 4 – Final Report)

For

Sarasota County
Sediment Management

Owner:
Sarasota County
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Sarasota, FL 34240

Work Assignment: WA666
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Executive Summary

Approximately 3.6 miles upstream of the mouth of Phillippi Creek lies a historic barrier that was once used as a salinity gate for agricultural purposes. As the agricultural land was converted to residential, the barrier became obsolete and the stop logs were removed, allowing water to flow freely through the area. However, approximately 100 feet of the barrier wall extending from the NW side of Phillippi Creek and six standalone piles that supported the stop logs remain. The remaining concrete structure is causing suspended sediment from upstream sources to deposit both upstream and downstream of the structure. The County has implemented BMPs upstream in an attempt to decrease the amount of suspended sediment entering the bays, most notably instream sediment sumps RB3 and RB5. Both sumps are located at the confluence of two streams in order to maximize the amount of area served. As outlined in the Task 3 Analysis Report, the flows near RB5 (sampling stations RBW-BEN and RBW-F) had a much lower concentration of TSS compared to near the barrier (RBW-SALIN). A portion of the watershed approximately 2,000 acres in size contributes runoff to Phillippi Creek at the location of the barrier without passing through either upstream sediment sump location. Erosion within this area is likely the cause of the elevated TSS counts.

Sarasota County (County), with cooperative funding from Southwest Florida Water Management District (District) has opted to investigate the feasibility of removing the barrier structure. An analysis (Task 3) was completed, which examined the current state of the water quality, environmental conditions, hydrology, and other considerations, and the impact of the barrier on each. A bathymetric survey was completed and the Phillippi Creek Watershed Model (ECM) was updated to accurately depict the barrier and surrounding site conditions to establish a Revised Phillippi Creek Watershed Model (RECM).

This phase of the report (Task 4) analyzed the alternatives for removing the barrier to determine the post construction impacts in the same areas examined during the Task 3 analysis, along with alternatives to facilitate construction of the barrier removal and available funding options.

The three recommended alternatives proposed for construction include: (1) removing the barrier completely along with removing the sediment that has accumulated upstream and downstream of the barrier to restore flow back to the natural conditions, (2) completing all the activities described in alternative 1 with the addition of the construction of a sediment sump to isolate the accumulated sediment into one location that can be easily maintained by the County, and (3) alternative 2, except the potential sediment sump area would be used as a planted littoral zone to restore the natural habitat of this area. Constructability and cost estimates are included within this report, for review.

Effects on Water Quality and Environmental Conditions

During the Task 3 analysis, the existing water quality of Phillippi Creek was established using data collected from existing water quality stations upstream and downstream of the barrier. It was determined that the barrier may contribute to the degradation of upstream water quality, thus the removal of the barrier should benefit Phillippi Creek. The water quality characteristics analyzed were dissolved oxygen, total nitrogen, total phosphorus, chlorophyll a, and total suspended solids. The data was compared for samples taken on the same day, minimizing the number of variables affecting the results. Over the time period analyzed, each water quality indicator was found to have deteriorated from the upstream sampling points to the sampling point downstream of the barrier. Analyzing the available data, the water quality characteristics of the major influent flows into Phillippi Creek between the upstream and downstream, it was determined that the deterioration of water quality within the observed region of Phillippi Creek was not caused by effluent flows. The data analysis performed shows no direct causation between the decrease in water quality and the presence of the barrier, but it does show that there is a decrease in water quality not due to a polluted influent flow.

Several relevant indicators of environmental conditions and health were analyzed during Task 3 including: bottom hardness, invasive species, and oyster bed habitats. The areas upstream and downstream of the barrier have a uniquely high bottom hardness compared to the surrounding areas of the creek. Since the only unique factor in this area of Phillippi Creek is the barrier, it can be inferred that the barrier is likely causing this phenomenon and its removal should have a positive impact on the bottom hardness, restoring it to a level similar to the surrounding areas.

There are several invasive species, both aquatic and terrestrial in the creek and along the creek banks. Removing the barrier will expand the surface area of free-flowing water and free-flowing conditions aid in the spread of many of these species, thus invasive species removal prior to barrier removal is essential. Removal of such species and restoration of the creek embankment will provide a natural habitat for the creek's ecosystem.

After review of the existing water quality conditions it was determined that the removal of the barrier should have no impact on the oyster populations in the creek. Optimal salinity for oysters is 17-29 ppt, and the salinity at the barrier is about 2 ppt; identifying that the salinity gradient in the creek under existing conditions is not ideal for oyster habitat growth. The farthest upstream oyster habitat is located 1.86 miles south of the existing barrier, hydrology calculations herein show that the flow rates dissipates with the proposed construction alternatives approximately 1.3 miles downstream of the barrier, supporting the claim that the proposed construction will have no effect on the oyster habitat in the creek. See Table 4 herein for additional information.

Hydrology and Flood Protection (ICPR)

There are three recommended alternatives for removing the barrier suggested within this report, including: (1) Removal of the barrier and the upstream and downstream sediment that has accumulated due to the restriction in flow caused by the barrier; (2) Alternative 1 plus the construction of a sediment sump on an adjacent vacant marsh parcel; and (3) Alternative 1 plus the construction of a planted littoral zone in the location of the Alternative 2 sediment sump. Additional detail is provided herein regarding the importance of sediment removal and construction of a sediment sump to improve the creek's ecosystem. For this section, these alternatives were used in the ICPR modeling to determine the feasibility of each option. The ICPR models were named "PCM" for "Post Construction Model" with the addition of a number coinciding with the construction alternative they represent.

Revised Pre-Development and Post-Development

As part of Task 3, the RECM was created to accurately model the conditions between Tuttle Ave. and Webber St. Survey data were used to input cross sections that account for sediment buildup within this region of the creek. Figures 1, 2, and 3 represent the updated channel cross sections utilized in the post-construction design models (PCM 1, PCM 2, and PCM 3, respectively). Figures 4-6 represent the node-link layouts for the ICPR models (ECM, RECM, and PCM models).

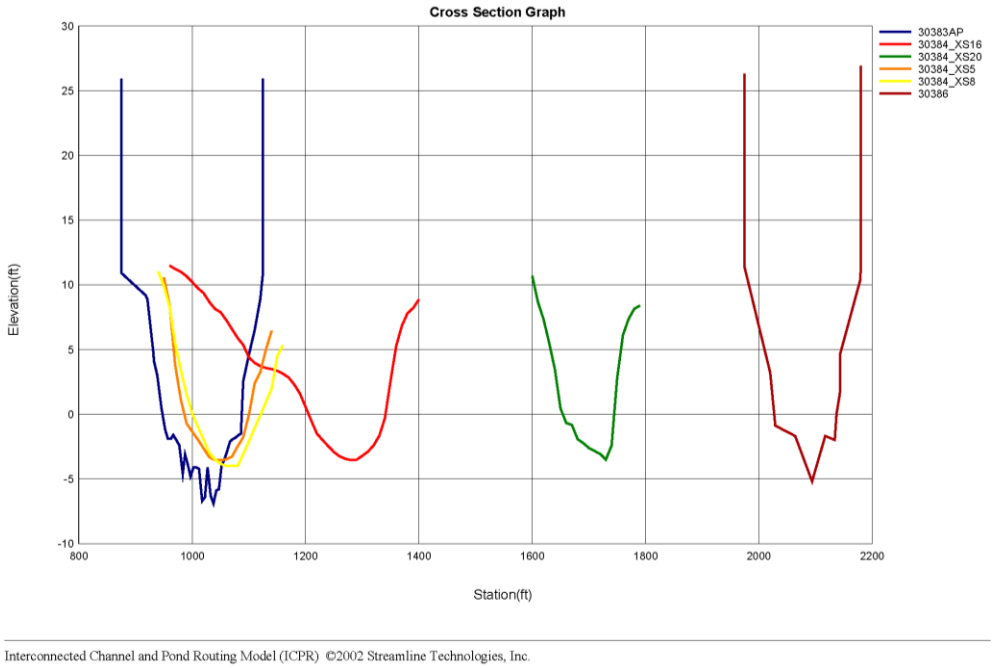

Figure 1: ICPR PCM 1 Cross Section Graph

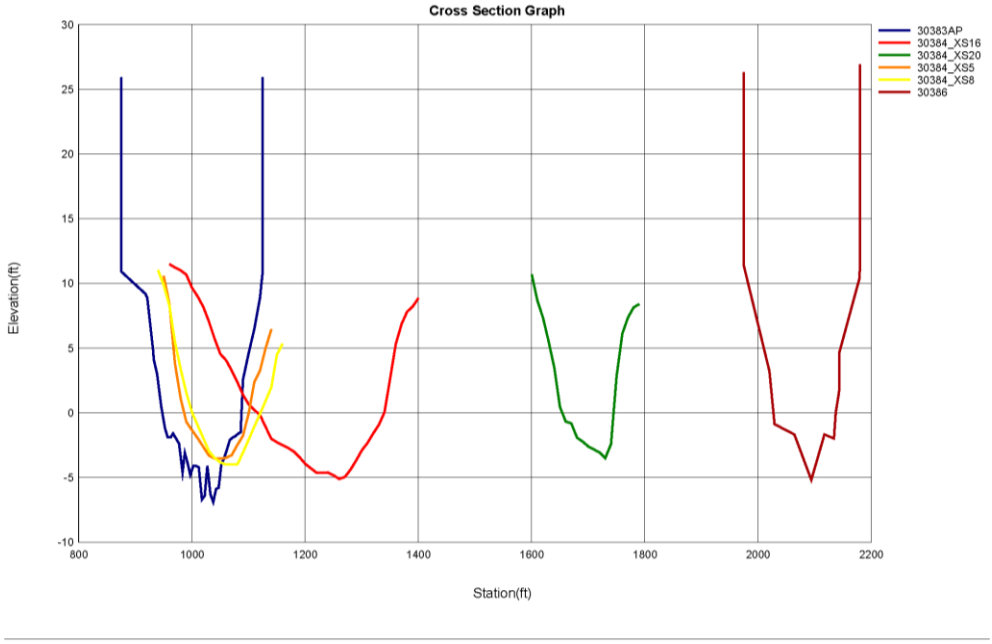

Figure 2: ICPR PCM 2 Cross Section Graph

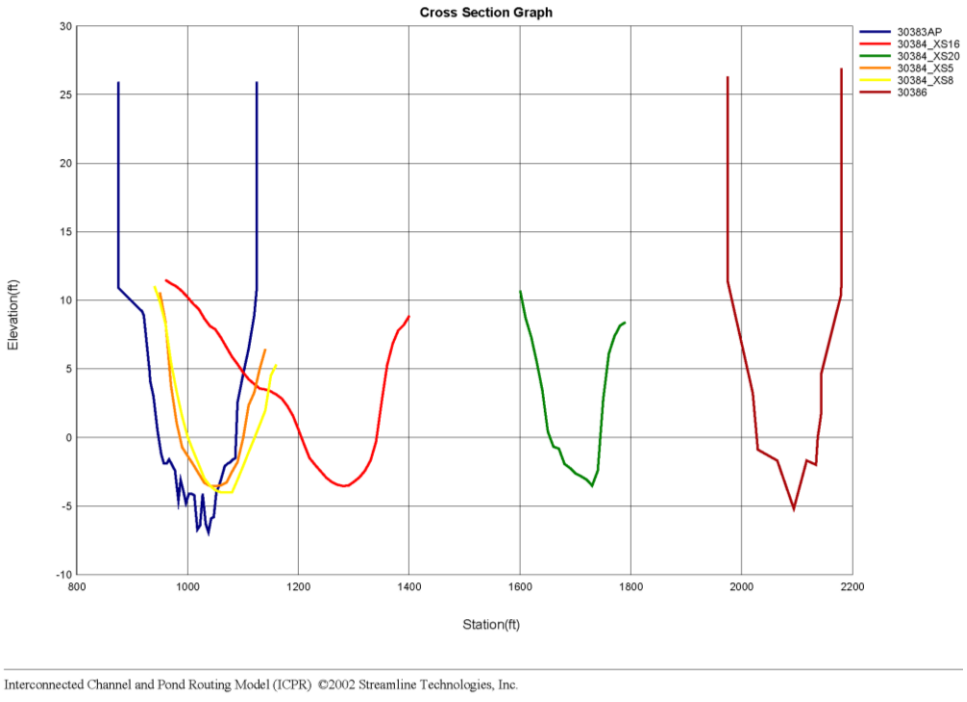

Figure 3: ICPR PCM 3 Cross Section Graph

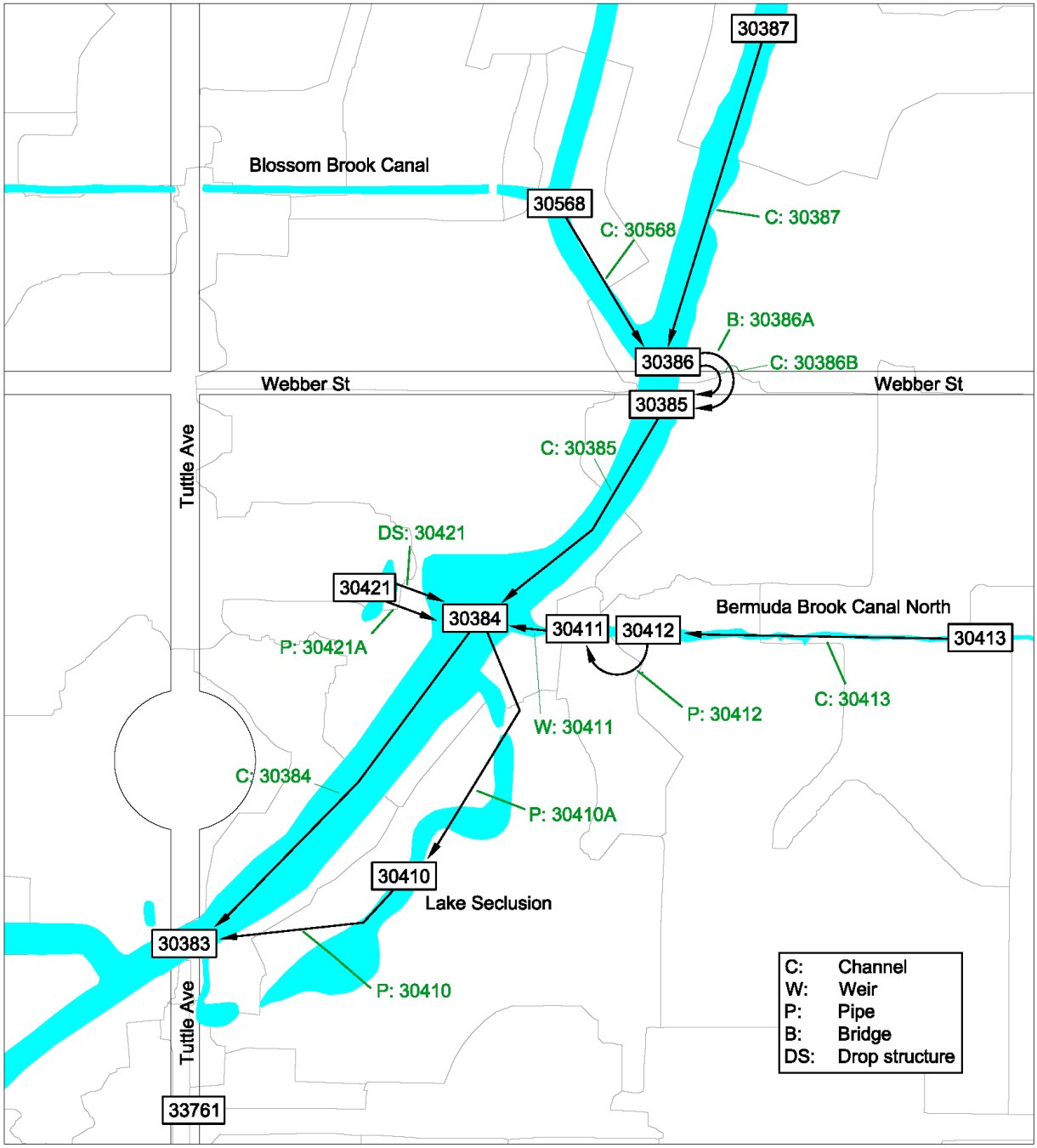

Figure 4: ECM Node-Link Schematic

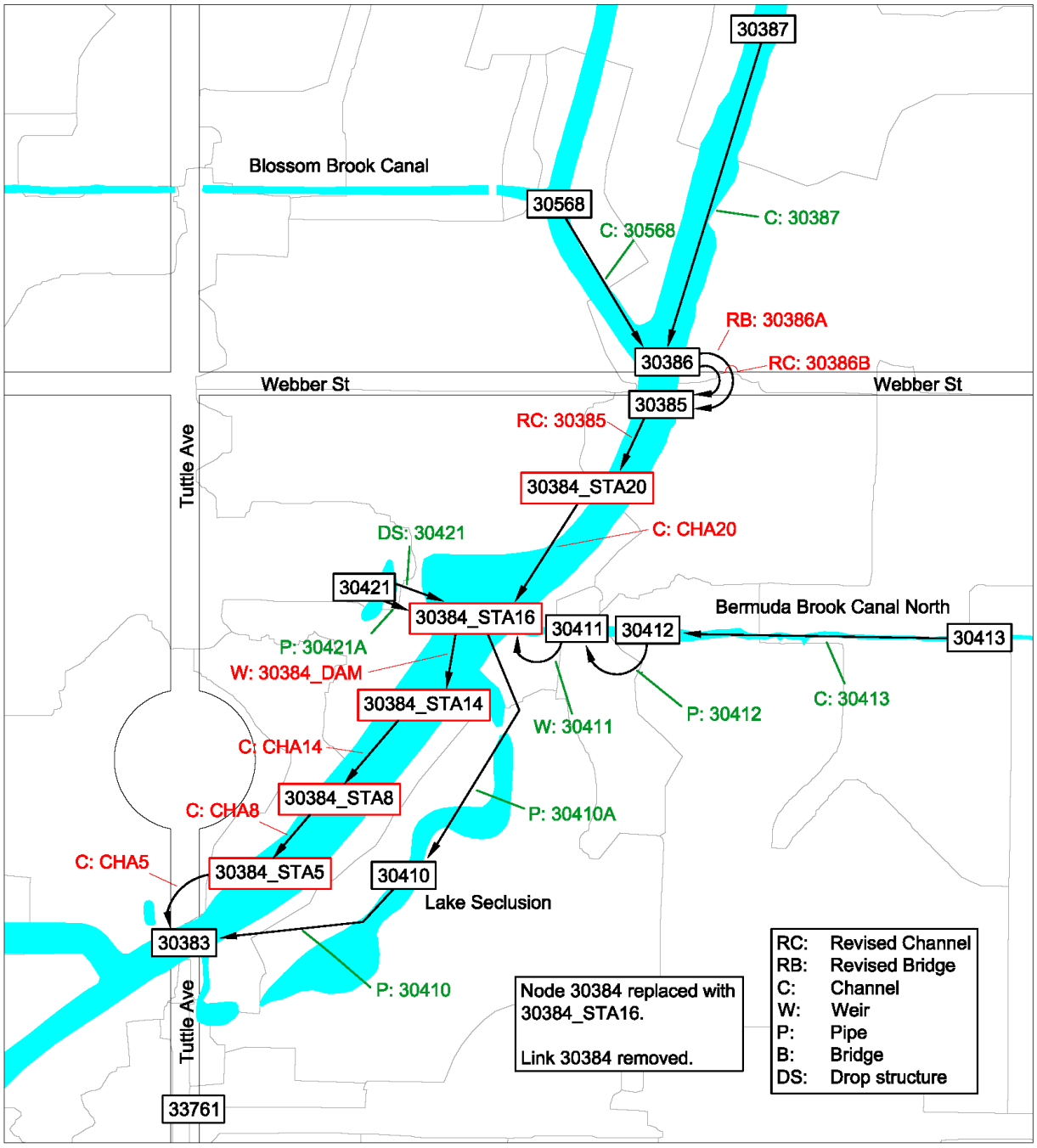

Figure 5: RECM Node-Link Schematic

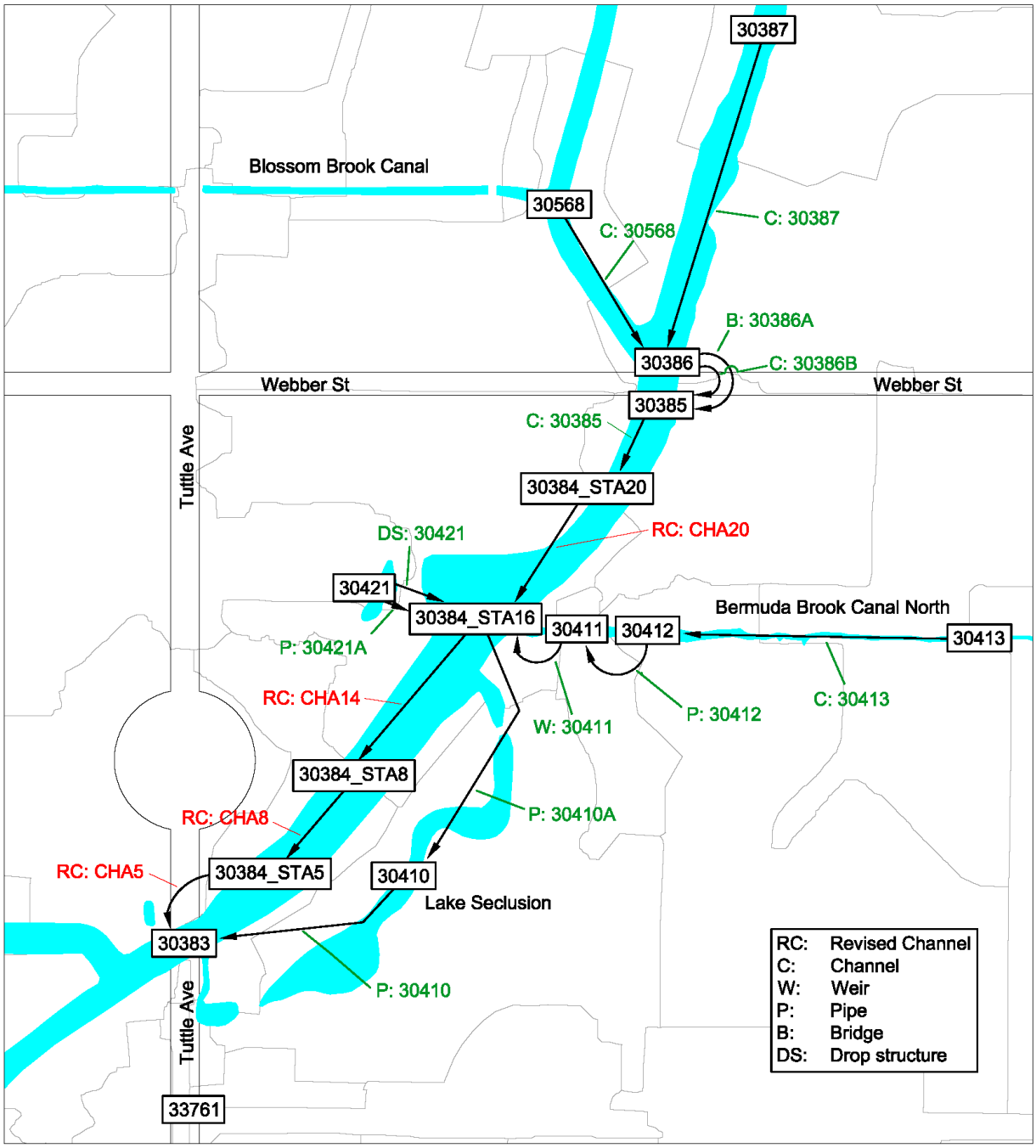

Figure 6: PCM 1-3 Node-Link Schematic

Post Construction – ICPR Results

The three PCM models were run for the 100 year-24 hour storm event and compared to the RECM and ECM output for the same event. There are two important outputs that the model provides that were reviewed for this study, the maximum stage (ft) and the maximum flow rate (cfs). Maximum stage is used to assure that any construction impacts do not result in flooding, where maximum flow rate is utilized to ensure such construction does not alter the ecological and natural properties of the creek. The results from each model (PCM 1-3) are in Appendix E along with the results from the RECM and ECM. Tables 1-3 show the Link

maximum results for the PCM 1-3 models, respectively. Values for 30384_CHA20, DAM, CHA14, CHA8, and CHA5 in the ECM result columns are represented by the channel 30384 results.

Sarasota County Sediment Management								
Project 1- Phillippi Creek Barrier Removal Feasibility Study								
Link Name	**100yr-24hr**							
	Max Stage (NAVD)				Max Flow (cfs)			
	ECM	RECM	PCM 1	Difference (PCM 1-RECM)	ECM	RECM	PCM 1	Difference (PCM 1-RECM)
30568	10.92	11.66	11.44	-0.22	1246.19	1188.76	1452.85	264.09
30387	11.06	11.79	11.57	-0.22	4619.30	4573.19	5201.25	628.06
30386B	10.88	11.65	11.42	-0.23	5665.25	5479.00	7847.34	2368.34
30385	10.87	11.61	11.37	-0.24	5671.20	6192.01	8853.42	2661.41
30384_CHA20	10.82	11.53	11.27	-0.26	5758.67	41935.13	24518.33	-17416.80
30384_DAM	10.82	11.23	-	-	5758.67	5259.01	-	-
30384_CHA14	10.82	10.62	10.75	0.13	5758.67	5126.23	6825.88	1699.65
30384_CHA8	10.82	10.51	10.61	0.10	5758.67	5111.54	5589.68	478.14
30384_CHA5	10.82	10.41	10.49	0.08	5758.67	5108.91	5517.47	408.56
30411	11.02	11.35	11.00	-0.35	921.80	921.80	921.80	0.00
30410	10.80	11.16	10.71	-0.45	371.80	780.07	467.28	-312.79
30383	10.62	10.39	10.48	0.09	6131.55	5887.77	5940.45	52.68

Table 1: ICPR Link Maximum Conditions Results (ECM, RECM, PCM 1)

Sarasota County Sediment Management								
Project 1- Phillippi Creek Barrier Removal Feasibility Study								
Link Name	**100yr-24hr**							
	Max Stage (NAVD)				Max Flow (cfs)			
	ECM	RECM	PCM 2	Difference (PCM 2-RECM)	ECM	RECM	PCM 2	Difference (PCM 2-RECM)
30568	10.92	11.66	11.50	-0.16	1246.19	1188.76	1155.62	-33.14
30387	11.06	11.79	11.63	-0.16	4619.30	4573.19	4561.38	-11.81
30386B	10.88	11.65	11.48	-0.17	5665.25	5479.00	5387.35	-91.65
30385	10.87	11.61	11.43	-0.18	5671.20	6192.01	5390.36	-801.65
30384_CHA20	10.82	11.53	11.34	-0.19	5758.67	41935.13	5454.01	-36481.12
30384_DAM	10.82	11.23	-	-	5758.67	5259.01	-	-
30384_CHA14	10.82	10.62	10.71	0.09	5758.67	5126.23	5497.33	371.10
30384_CHA8	10.82	10.51	10.57	0.06	5758.67	5111.54	5497.13	385.59
30384_CHA5	10.82	10.41	10.46	0.05	5758.67	5108.91	5496.21	387.30
30411	11.02	11.35	10.93	-0.42	921.80	921.80	921.80	0.00
30410	10.80	11.16	10.68	-0.48	371.80	780.07	437.69	-342.38
30383	10.62	10.39	10.44	0.05	6131.55	5887.77	5933.20	45.43

Table 2: ICPR Link Maximum Conditions Results (ECM, RECM, PCM 2)

Sarasota County Sediment Management								
Project 1- Phillippi Creek Barrier Removal Feasibility Study								
Link Name	**100yr-24hr**							
	Max Stage (NAVD)				Max Flow (cfs)			
	ECM	RECM	PCM 3	Difference (PCM 3-RECM)	ECM	RECM	PCM 3	Difference (PCM 3-RECM)
30568	10.92	11.66	11.43	-0.23	1246.19	1188.76	1458.61	269.85
30387	11.06	11.79	11.56	-0.23	4619.30	4573.19	5235.12	661.93
30386B	10.88	11.65	11.41	-0.24	5665.25	5479.00	7896.55	2417.55
30385	10.87	11.61	11.36	-0.25	5671.20	6192.01	8922.94	2730.93
30384_CHA20	10.82	11.53	11.26	-0.27	5758.67	41935.13	24515.24	-17419.89
30384_DAM	10.82	11.23	-	-	5758.67	5259.01	-	-
30384_CHA14	10.82	10.62	10.79	0.17	5758.67	5126.23	6873.32	1747.09
30384_CHA8	10.82	10.51	10.65	0.14	5758.67	5111.54	5622.88	511.34
30384_CHA5	10.82	10.41	10.54	0.13	5758.67	5108.91	5542.93	434.02
30411	11.02	11.35	11.03	-0.32	921.80	921.80	921.80	0.00
30410	10.80	11.16	10.75	-0.45	371.80	780.07	467.27	-312.80
30383	10.62	10.39	10.53	0.14	6131.55	5887.77	5966.88	79.11

Table 3: ICPR Link Maximum Conditions Results (ECM, RECM, PCM 3)

The removal of the barrier from the model and the input of revised cross sections based on the proposed sediment removal created both increases and decreases in the stage within the watershed. Stage decreases primarily exist downstream of the barrier location and stage increases primarily exist upstream of the barrier location, according to the PCM models. The greatest stage increase was 0.10 feet at node 30384_STA8 for PCM 1. For the PCM 2 model, the greatest stage increase was 0.06 feet at node 30384_STA8. For the PCM 3 model, the greatest stage increase was 0.14 feet at node 30384_STA8. See Appendix E for the 100-year floodplain maps, which illustrate the changes in peak stage. Based on the floodplain maps it appears that properties within the 100-year floodplain may be removed with the proposed construction, however, this should be further investigated by the County during the design phase. The full maximum stage results for all five models analyzed in Task 3 and Task 4 can be found in Appendix E.

The flow fluctuated most notably in link 30384_CHA20 between the RECM and the PCM models. In the RECM, the flow through this link was 41935.13 cfs. In the PCM 2, the flow was 5454.01 cfs, and in PCM 1 and PCM 3 the flows were in between the two. High flow rates can cause scouring along the channel banks. Though the peak flows reported are instantaneous flow rates that occur for less than 15 minutes, it can be concluded that removing the barrier reduces the likelihood of scouring through link 30384_CHA20 in all three PCM models.

In Task 3 it was reported that the nearest living oyster habitat in Phillippi Creek exists approximately 1.86 miles downstream of the existing barrier. As part of Task 4, the flow rates for the PCM models were analyzed to see how the oyster habitat might be affected. The average flow rates from hours 0-48 of the ICPR models were calculated for several links between the existing barrier and the nearest oyster habitat. The results show an increase in flow rate just downstream of the barrier after removal that completely dissipates just downstream of Tuttle Ave. in link 30382. These results show that removal of the barrier will likely cause no shift in the salinity gradient of Phillippi Creek or change in velocity at the nearest oyster habitat. See Table 4 for the results.

Link	Distance Downstream of Existing Barrier (miles)	Average Flow Rate (cfs)			
		RECM	PCM 1	PCM 2	PCM 3
30384_CHA8	0.1	3136.6	3384.2	3370.5	3382.4
30382	0.4	2783.9	2782.8	2772.1	2782.1
30110	1.3	4018.5	4017.8	4005.0	4018.0
30106	1.7	4032.1	4031.3	4018.5	4031.5

Table 4: Average Flow Rate of Downstream Channels

While no change in salinity or velocity is expected in the location of the oyster habitats, the observed increase in flow rate immediately downstream of the existing barrier could affect the oyster habitats. According to the ICPR output, the flow rate increases downstream of the existing barrier in each of the Post Construction models. Even though the flow rates return to normal levels in a relatively short distance, the increase in flow rate in the region downstream of the barrier could resuspend the deposited sediment of the sediment island. Any resuspended sediment is at risk of travelling downstream and depositing on or near the oyster habitats. This supports the case for removing all built up sediment near the barrier if the barrier is to be removed.

Sediment Analysis/Removal

The project area between the Tuttle Ave. and Webber St. bridges has experienced a large amount of sedimentation within the creek. Sediment has accumulated behind the upstream side of the barrier wall and is now covered in dense vegetation. A sediment island exists a couple hundred feet downstream of the barrier where the creek widens and the water flow decreases. The creek bottom is noticeably high throughout this area downstream of the barrier to Tuttle Ave. See Appendix A for the bathymetric survey of Phillippi Creek between Tuttle Ave. and Webber St. Sedimentation on both sides of the barrier is caused by the restricted flow through the area; as a result, suspended sediment levels are high compared to upstream levels over the time period analyzed. High levels of suspended solids block sunlight from reaching the channel bottom and decrease oxygen levels through absorbing heat, thus raising the water temperature. If the increased levels of sedimentation continue to accumulate, the channel morphology will change. Upon analyzing the bathymetric survey, it appears the primary channel flow is currently navigating to one side of the sediment island. Based on stations 12+00, 13+00, and 14+00 of the survey, the SE side of the creek has a higher bottom than the NW side. If the process causing this continues then the bank along the NW side of the creek is in danger of receding, while the properties along the SE side will become farther from the creek through sediment deposition. Figure 7 illustrates the path of the stated flow. Note that the portion of flow perpendicular to the banks is the deepest portion of the creek (See station 15+00 of the bathymetric survey, Appendix A).

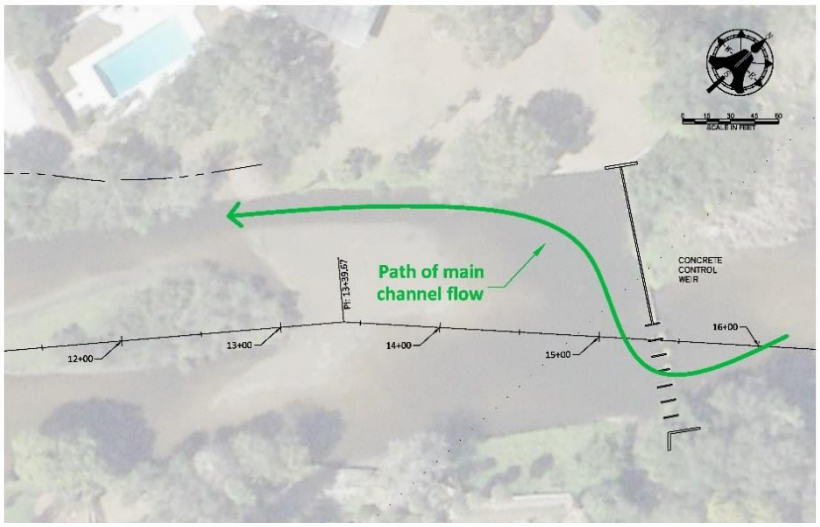

Figure 7: Path of Main Channel Flow Downstream of Barrier

Removal of the sediment buildup is proposed upstream and downstream of the barrier along with the restoration of the creek banks to prevent future erosion. It is recommended that the sediment island downstream of the barrier be removed along with the barrier structure so that the creek can return to its natural path. The sediment buildup behind the barrier wall should also be removed, to avoid further accumulation downstream upon removal of the barrier wall. Analysis and construction cost estimates have been completed for the sediment removal in Phillippi Creek from Sta 6+00 to Sta 18+00 of the survey and are contained herein. This area spans upstream of the proposed sump area to downstream of the sediment island.

The potential natural resource benefit created by the sediment deposits must also be accounted for when determining whether to remove the deposits or not. The sediment island is approximately 0.4 acres above the Annual Lowest Tide of -0.8 ft (NAVD 88, Sarasota Bay tidal station data 2018) and 0.0 acres above the Mean High Water Line of 1.6 (NAVD 88). The effect of the sediment deposits that could be considered a benefit is the creation of terrestrial habitat, although the terrestrial habitat gain is directly linked to aquatic habitat loss. This area is smaller than the area above the Annual Lowest Tide to be restored as part of Design Alternative 3, so both aquatic and terrestrial habitat will be restored as part of Design 3. Design 1 offers no terrestrial habitat restoration and Design 2 offer minimal restoration at this elevation. Figure 8 is a picture taken during a site visit on November 7, 2017. Several White Ibis can be seen on the sediment island in the picture. While the sediment deposits do sometimes create a natural resource benefit, the benefits from removing the sediment likely outweigh the benefit of leaving them.

Figure 8: Sediment Deposit Island with White Ibis Presence

Mean High Water Line (MHWL)

A vertical baseline is required when comparing existing and proposed cross-sectional areas of the creek. The MHWL was estimated using linear interpolation between two points with known MHWL, one upstream of this section of Phillippi Creek and one downstream. These locations are illustrated in Figure 9.

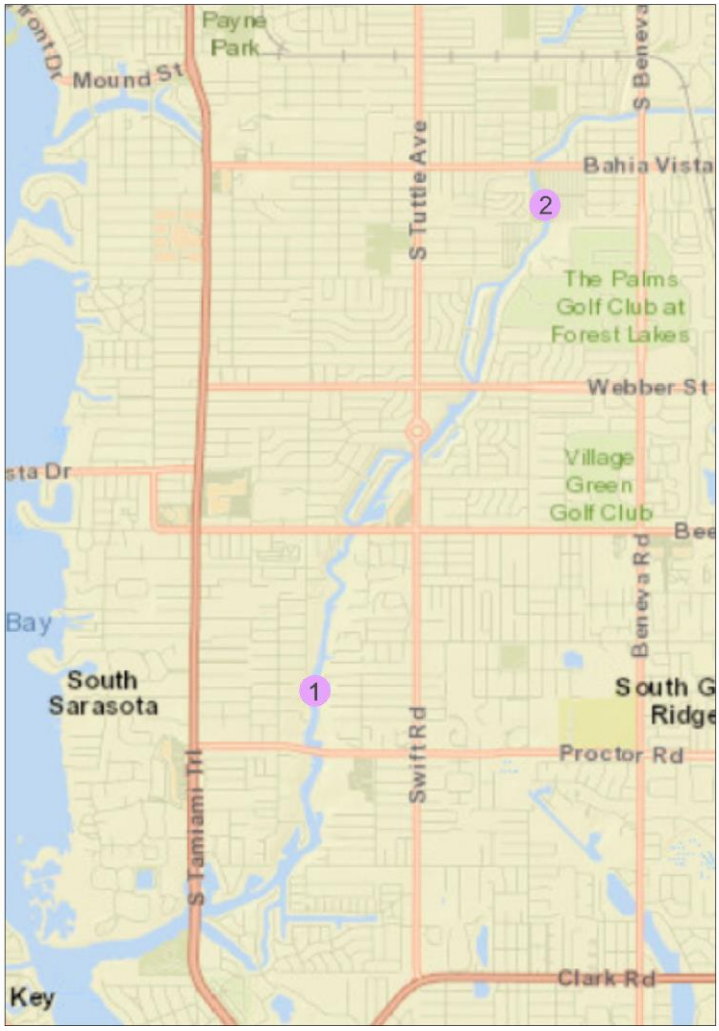

Figure 9: Stations Map

Station 1 - ERP 41304: Phillippi Cove Dredging
Station 2 - Pinecraft Park

The water level for Pinecraft Park came from the Pinecraft Park Habitat Restoration Project (ERP 41178) (2014) and the other location from the Phillippi Cove Dredging Project (ERP 41304) (2012). Linear interpolation between these two points produced a MHWL at Sta 5+00 from the survey of 1.565 ft and a MHWL at Sta 24+00 from the survey of 1.626 ft. The MHWL values for all other stations fall between these two values.

Existing vs Proposed Cross Sections

Proposed cross sections were drawn in Autocad and overlaid to compare the existing versus the proposed conditions. The chosen sediment removal constraints were a -4 ft NAVD creek bottom and 1:10 side slopes. The side slopes were taken to an elevation of +2 ft NAVD on each side (except where seawalls exist), which is just over the calculated MHWL at all locations. A bottom of -4 ft NAVD was used to be consistent with the elevation of the creek bottom in the 2008 "Phillippi Creek - Tuttle to Hyde Park Feasibility Study" and is the natural creek bottom based on the bathymetry data. The recommended side slope for bodies of active water lined with fine sand is 5° or 1:11.4 (Yell, 1995). This shallow slope keeps the creek bed stable, preventing erosion. A 1:10 side slope was used based on this data and other projects with similar profiles. All creek cross sections are in Appendix C, and along with each cross section is the area beneath the MHWL for existing conditions and post-sediment removal conditions.

Quantifying Sediment Removal

If the County elects to remove the sediment in the creek upstream of the barrier, whether a sump or littoral zone will be constructed or not, it is recommended that the existing pond area be surveyed because the sediment removal will extend into this area. The bathymetric survey presented in Appendix A does not include this area, therefore Lidar data were used to complete the cross sectional profile 16+00, 17+00, and 18+00, and the estimated sediment removal in this area was assumed based on these data. Table 5 quantifies the amount of sediment to be removed between the stations.

Creek Section	Station	Sediment Removal (ft^2)	Fill (ft^2)	Volume of Sediment Removed (cyd) (Scenario 1)*	Volume of Sediment Removed (cyd) (Scenario 2)**
6-7	6+00	152.34	83.32	555	177
	7+00	147.51	120.72		
7-8	7+00	147.51	120.72	577	104
	8+00	164.10	134.77		
8-9	8+00	164.10	134.77	596	194
	9+00	157.57	82.12		
9-10	9+00	157.57	82.12	581	277
	10+00	156.12	81.94		
10-11	10+00	156.12	81.94	690	376
	11+00	216.52	87.84		
11-12	11+00	216.52	87.84	947	440
	12+00	295.04	186.36		
12-13	12+00	295.04	186.36	1260	780
	13+00	385.16	72.88		
13-14	13+00	385.16	72.88	1162	805
	14+00	242.24	119.97		
14-15	14+00	242.24	119.97	474	18
	15+00	13.91	126.45		
15-Barrier	15+00	13.91	126.45	443	326
	Barrier	465.00	0.00		

Creek Section	Station	Sediment Removal (ft^2)	Fill (ft^2)	Volume of Sediment Removed (cyd) (Scenario 1)*	Volume of Sediment Removed (cyd) (Scenario 2)**
Barrier-16	Barrier	465.00	0.00	895	865
	16+00	501.24	31.94		
16-17	16+00	501.24	31.94	1319	1148
	17+00	211.07	60.70		
17-18	17+00	211.07	60.70	915	658
	18+00	282.86	77.95		
			Total	10414	6167

*Scenario 1: Existing creek sediment is found NOT suitable for use in restructuring the creek bottom

**Scenario 2: Existing creek sediment is found suitable for use in restructuring the creek bottom

Table 5: Sediment Removal

The creek was divided into 100 ft segments between the surveyed stations. To quantify the volume of the sediment removed for each segment, the areas of the sediment material for the cross sections bordering each segment were averaged and multiplied by the 100 ft length of the segment. The barrier is between Sta 15+00 and Sta 16+00, therefore a segment length of 50 ft was used for the "15-Barrier" and "Barrier-16" segments.

Sediment Drying/Dewatering Zone

The sediment removal activities will require an area designated for sediment dewatering/drying. This area was chosen to be the open space just west of the barrier at latitude 27.306455, longitude -82.512033. Figure 18 in Appendix C illustrates this area. The figure shows an area of approximately 6200 ft^2 of space as the drying zone, and more adjacent land is available if needed. The property, located at 3145 Southgate Circle and site of the Southgate Community Center, is owned by the South Gate Community Association. The Community Association members will need to grant permission for the use of their property prior to construction through a temporary construction easement. The members might be amenable to the easement as the removal of the barrier and sediment should increase the ease of recreational use of the creek.

Alternative 2 – Proposed Sediment Sump

A portion of a parcel upstream of the barrier along the NW creek bank is vacant and acts as a floodplain for the creek. This area has been identified as a potential location for an instream sediment sump along with a small portion of the Southgate Community Center parcel. The role of an in-stream sediment sump is to slow the velocity of a flowing water body, and thus allow suspended sediments to settle in a controlled location. The proposed sump location is sufficiently large for a sump; this means lowering the creek bottom only a couple feet would significantly increase the size of the channel's cross section, which will lead to effective, controlled sedimentation. Figure 10 is a picture of this location taken during a site visit on November 7, 2017.

Figure 10: Proposed Sediment Sump Location

The preliminary sediment sump design has the sump bottom set at -6.5 ft. This is 2.5 ft lower than proposed creek bottom. In the preliminary design, the side of the proposed sump along the NW side of the creek has a 1:4 vertical to horizontal slope. Due to the geometry of this area and how it connects to the creek, a 1:4 slope should be stable and not experience scouring. The remaining portion of the proposed sump exists in the center of the creek body and will have a 1:10 side slope, following the proposed sediment removal guidelines. Figure 11 shows the existing conditions at the proposed sediment sump area, including elevation contours. Figure 12 represents a plan view of the preliminary sediment sump design (note the parcel boundaries). Also proposed is the planting of native emergent plants on the 1:4 sloped banks of the sediment sump to prevent erosion and promote nutrient uptake. The plants are proposed in the transitional zone from +1 ft NAVD to +4 ft NAVD.

Figure 11: Existing Conditions - Sediment Sump Area

Under ideal conditions, the space below -4 ft is where sediment will collect and should be cleaned out once the volume of space reaches 50% capacity with sediment. If allowed to fill more than 50%, sediment collected in the sump is at risk of becoming resuspended and distributed downstream.

The effectiveness of the proposed sediment sump design must be demonstrated for the option to be considered viable. The physical process of sedimentation happens when the flow velocity is low enough to allow the sediment particles to settle within the water column. Sediment sumps work because they increase the cross-sectional area of the water body. According to the volumetric flow rate equation ($Q = A*V$), increasing the cross-sectional area decreases the velocity for a constant flow rate.

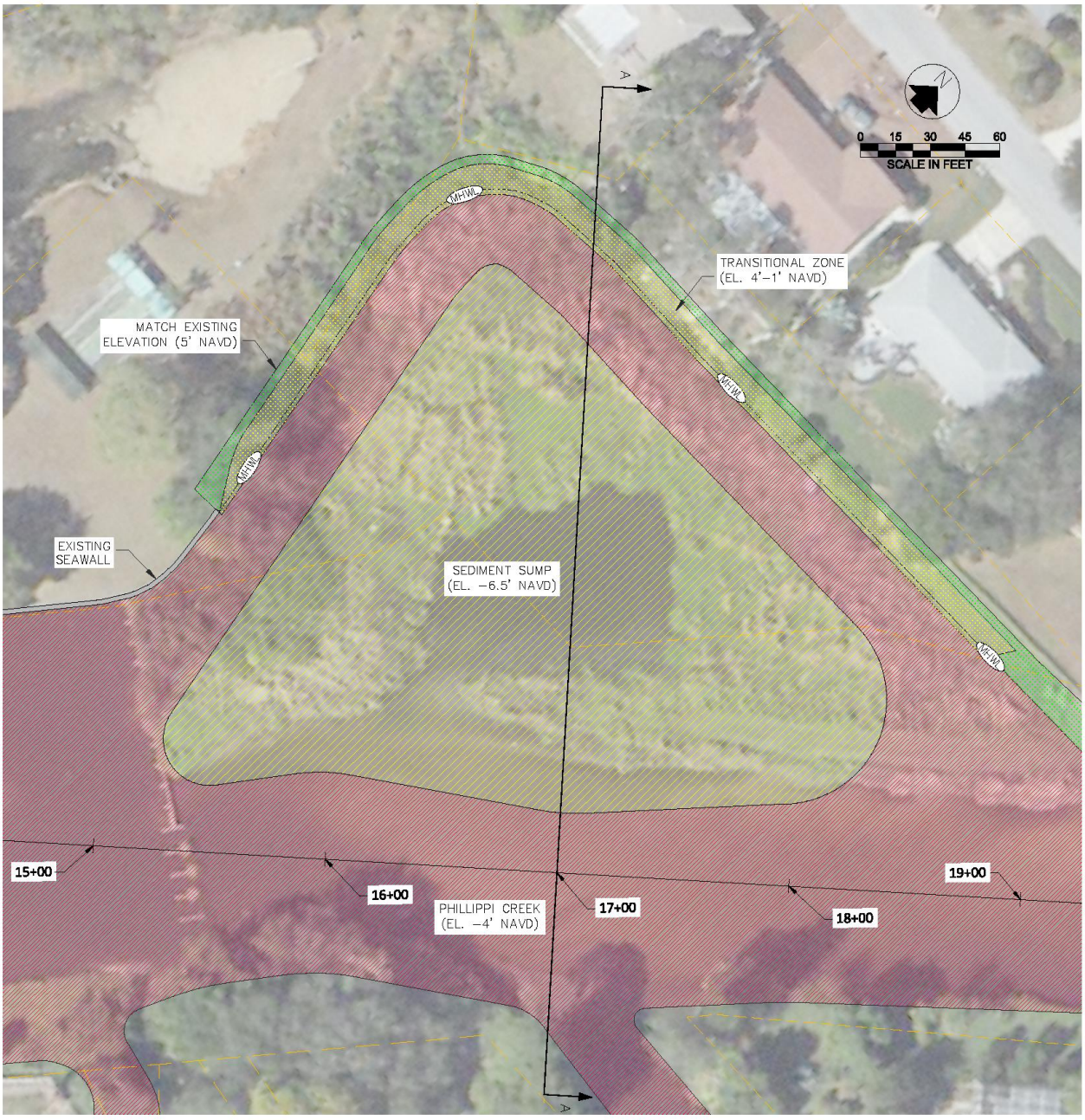

Figure 12: Preliminary Sediment Sump Design - Plan

The Hjulstrom Curve is a simple method used for determining deposition and erosion velocities. This method requires only the sediment particle grain size to obtain the deposition and erosion velocities. See Figure 13 for the Hjulstrom Curve labeled for a fine sediment particle of 2 mm (a metric graph was used). According to the graph, the deposition velocity threshold for a sediment particle of grain size 2 mm is approximately 1.5 cm/sec, or 0.049 ft/sec. The Hjulstrom Curve is considered to be inadequate for accurately modeling sediment transport because of uncertainty in the erosion velocity curve and the lack of depth variance (Hjulstrøm, 1939). This analysis is not concerned with the erosion velocity and according to the note on the Figure 13 graph, this curve is approximated for a flow depth of 1 meter, which is appropriate for Phillippi Creek in this region. Therefore, the Hjulstrom Curve method would be a valid

approach to estimating the deposition velocity. The Shields method was also used and is considered a more accurate method for modeling sediment transport, and using this method yielded a bed shear velocity of 0.054 ft/sec (See Appendix D for equations) (Cao, 2006).

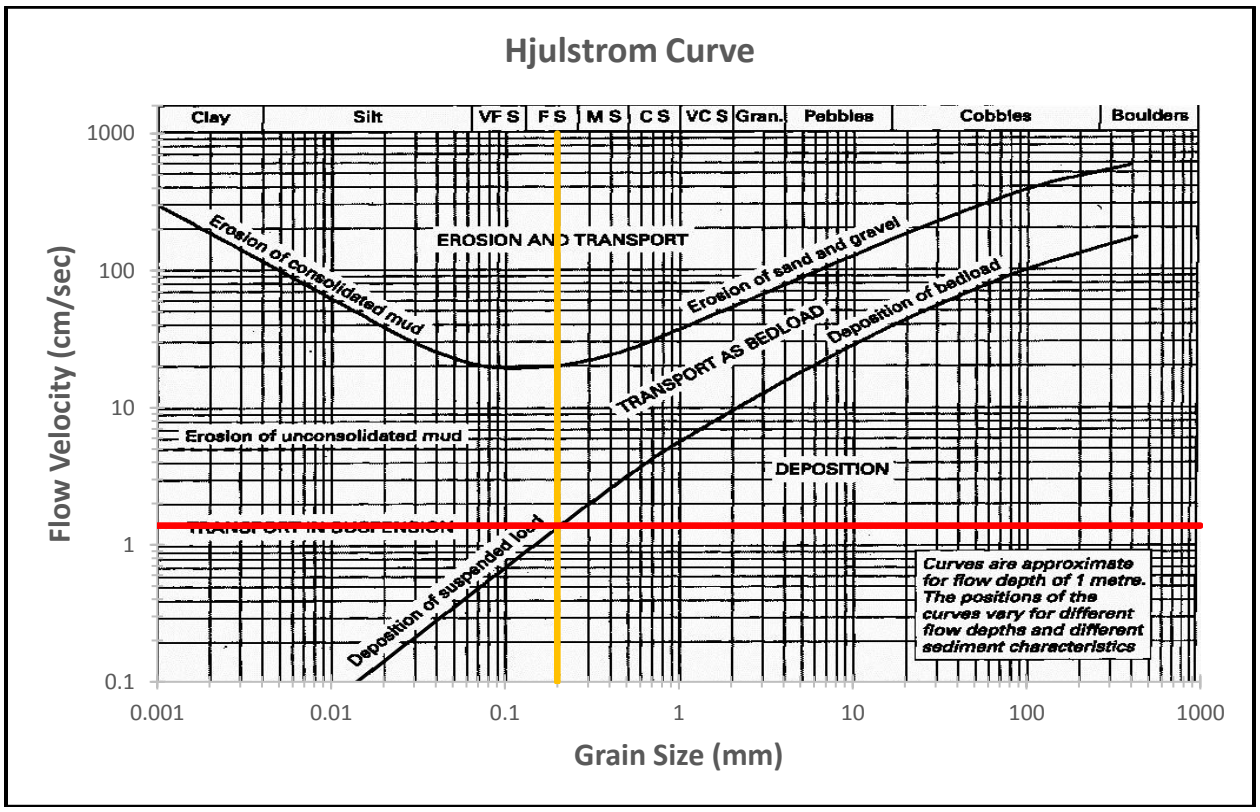

Figure 13: Hjulstrom Curve

These calculated velocities are very low and may be lower than what can naturally be expected in Phillippi Creek near the existing barrier. Approximately 2200 ft^2 of the proposed cross-sectional area at Sta 17+00 of the creek is below MHWL. For a velocity as low as 0.054 ft/sec to occur, the flow rate would be approximately 120 ft^3/sec or lower. This is an estimate based on the cross-sectional area not being independent of flow rate in this open channel scenario – under realistic conditions, the amount of water flowing affects the elevation of the water surface, which affects the cross-sectional area. This location does not offer the benefit of a downstream weir to slow the flow rate, which in-stream sediment sumps generally rely on. The County should investigate during the design phase the normal flow rates of the creek in this location in order to determine if an in-stream sediment sump is a viable option. If data is collected on the stream velocity and coinciding water surface elevation, flow rates can be calculated using the existing conditions cross sections present in the Task 3 report. Once a normal flow rate is established, the value can be used with the proposed cross sections to calculate the post sump construction stream velocity and compare to the required settling velocity previously described. This method assumes water surface elevation is a constant. Available USGS stream gage data is inadequate for determining the normal flow rate at this location, and ICPR is inadequate because the program only models storm event conditions, under which the sump is not expected to operate normally.

Additional Sediment Removal for Proposed Sediment Sump

Constructing an in-stream sediment sump will require additional sediment removal. Table 6 outlines the estimated amount of removal required for sump construction. The "Total *Additional* removal" is the amount of sediment that would need to be excavated in addition to the sediment removal already proposed in Table 6. If the removal activities described in Table 6 does not occur and the sump will still be constructed, then the amount of sediment to be removed for sump construction is the "Total".

Creek Section	Station	Sediment Removal (ft^2)	Fill (ft^2)	Volume of Sediment Removed (cyd) (Scenario 1)*	Volume of Sediment Removed (cyd) (Scenario 2)**
Barrier-16	Barrier	465.00	0.00	1717	1686
	16+00	1389.01	33.07		
16-17	16+00	1389.01	33.07	5829	5655
	17+00	1758.40	60.70		
17-18	17+00	1758.40	60.70	5231	4974
	18+00	1066.21	77.95		
			Total	12776	12315
			Total *Additional* dredging	9648	9644

*Scenario 1: Existing creek sediment is found NOT suitable for use in restructuring the creek bottom

**Scenario 2: Existing creek sediment is found suitable for use in restructuring the creek bottom

Table 6: Proposed Sump Sediment Removal

Alternative 3 – Littoral Zone

In addition to the sediment sump option, another design was created as an alternative use for the area designated for the sump. This design utilizes the area as a littoral zone, which would create an environmentally low-impact area that could provide nutrient uptake. By definition, this area already serves as part of Phillippi Creek's littoral zone, but this design serves to enhance the area. Emergent plants help prevent erosion and provide a habitat for diverse aquatic life. The plants selected for use must be resistant to low levels of salinity. As shown in the Task 3 Report, the salinity at RBW-SALIN over the observed time period was 2.36 ppt. Freshwater is characterized by salinity levels below 0.5 ppt. Figure 14 shows the proposed littoral zone and Figure 15 shows cross section A-A as seen on Figures 12 and 14, which shows the existing creek cross section at Station 17+00 and the cross sections for the sediment sump and littoral zone design alternatives. Although this alternative does not provide an opportunity for collecting the sediment that is dispersed in the creek at this location, it provides the greatest opportunity to restore the natural conditions of the creek and the adjacent wetland marsh.

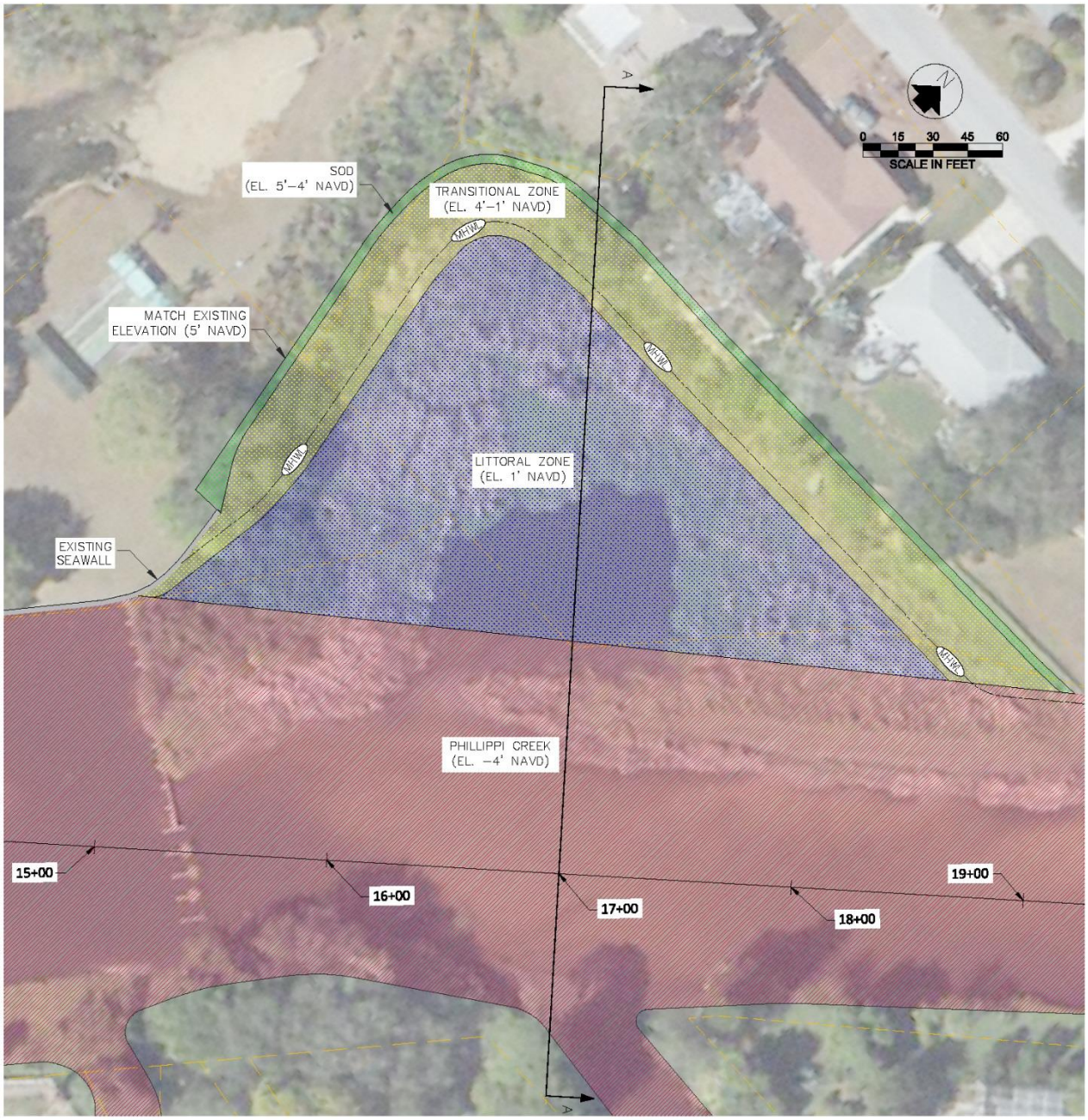

Figure 14: Alternative 3 (Littoral Zone)

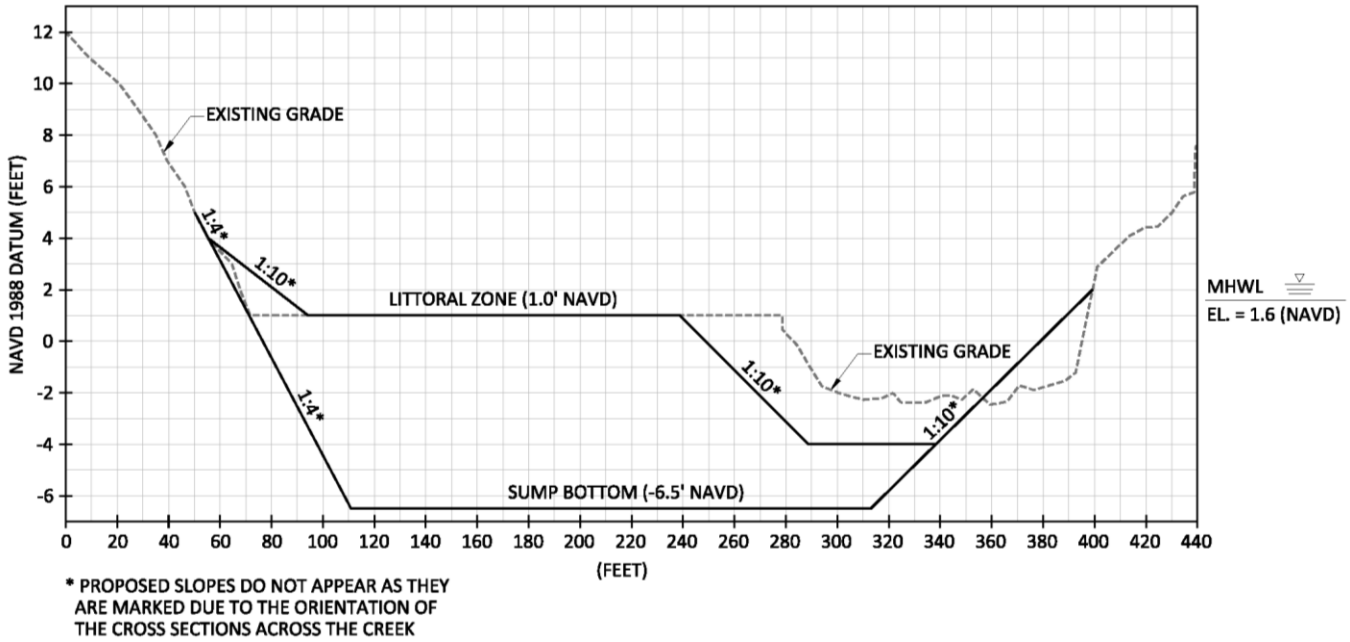

Figure 15: Cross Section A-A

Permitting

In the completion of the barrier removal there will be a series of permits required for construction. This section details each permit and their associated requirements for construction completion.

Southwest Florida Water Management District (DISTRICT)/Florida Department of Environmental Protection (DEPARTMENT)- Environmental Resource Permit (ERP)

The SWFWMD and the FDEP have an operating agreement that was issued in 1998. The operating agreement clarifies the limits of regulation and agency responsibility for processing the statewide ERP required for projects based on their proposed impacts and overall project development. Section II.A. details the DEPARTMENT's responsibilities and states in Section II.A.i. "*Docking facilities, boardwalks, shore protection structures and piers, including the adjacent docking and boating related development and navigational dredging. … The DEPARTMENT shall also review and take final action on permit applications for docking, boating related, boardwalk, shore protection or pier projects which include existing project related commercial or residential development that does not have a previously issued DISTRICT permit under Part IV, Chapter 373, F.S., and which do not propose new project related commercial or residential development."* Due to the environmental impact and that this project is not part of a larger development plan the DEPARTMENT should be the issuing agency for the ERP required for the barrier removal and associated dredging activities. However, a pre-application meeting with the DISTRICT will be required to delegate the appropriate agency.

The requirement for processing the ERP will include detailed construction plans with dredge and fill locations clearly defined and a detailed report of the environmental and hydrological impacts. Such information will include a wetland survey, any necessary mitigation required for wetland impacts, and a hydrology analysis to ensure post construction flow rates and staging do not cause adverse impacts to the

floodplain. Typical permit processing for similar projects can take 6-12 months depending on department reviews.

Army Corps of Engineers (ACOE)- Nationwide Permit (NWP)

Due to the fact that the barrier is located in a navigable waterway an NWP through the ACOE will be required. In 2017, ACOE opted out of the Statewide Individual ERP permit and implemented a separate permitting process rather than the Joint Application with the DISTRICT/DEPARTMENT which was utilized in past years. The proposed barrier removal will fall under two different categories of the Nationwide permit Section B.27. Aquatic Habitat Restoration, Enhancement, and Establishment Activities for the dredging activities required to remove the sediment that has accumulate both upstream and downstream of the barrier, and Section B.53.Removal of Low-Head Dams for the removal of the remaining ±100 linear feet of the barrier. In order to process, permit coordination with Corps district office will be required to determine consistency with the NWP rules and requirements. The NWP will require no adverse impacts to species inhabiting navigable waters, no adverse effects to the aquatic system due to accelerating the passage of water, compliance with applicable FEMA-approved floodplain management requirements, and application of soil erosion and sediment controls. NWP often requires coordination with outside agencies such as: FWC, NMFS, and the Navy; typical permit processing timeline can be 8-18 months depending on coordination requirements.

All regulatory requirements should be reviewed with each agency through pre-application meetings during the design/plans process, in order to adequately meet all the regulations and expedite the permitting process.

Federal Emergency Management Agency (FEMA)

Phillippi Creek is a FEMA regulated waterway and coordination with the agency should be completed during the design phase of any proposed construction altering the existing creek conditions.

Construction Cost Estimates

The cost estimate for sediment removal and sediment sump construction were determined using the construction estimates provided by the County for the RB-3 and RB-5 sumps. Using the estimates as a basis, the total proposed site area was divided by the RB-3 and RB-5 site areas, to develop relative ratios used in computing the amount of material necessary for construction. Once the material quantity was determined, the unit cost was calculated by using the County's current running construction costs, the FDOT's 12-month moving statewide averages and Area 10 12-month moving averages, and construction costs observed by WEC.

Itemized cost estimates for the implementation of each construction option are located in Appendix H.

Alternative 1: Removal of the Barrier and Sediment Accumulated Upstream and Down Stream

Alternative 1 includes the removal of the barrier and removal of the built-up sediment upstream and downstream of the barrier. The region designated for sediment removal extends from Station 6+00 to Station 18+00 of the survey. Costs were calculated assuming the soil from the existing sediment deposits is not suitable for the restructuring of the creek banks. A deduction in cost was calculated to illustrate the change in cost if the sediment is found suitable for restructuring the creek banks. The deduction was made to the "Channel Excavation" item in the amount of the "Embankment" quantity. This method includes the

consideration of the labor involved in restructuring the creek banks. The total estimated construction cost for Alternative 1 is $882,297.67.

Alternative 2: Removal of the Barrier, Sediment Accumulated Upstream and Down Stream, and Construction of Sediment Sump

Alternative 2 includes the removal of the barrier, removal of the built-up sediment upstream and downstream of the barrier, and construction of an instream sediment sump. The region designated for sediment removal extends from Station 6+00 to Station 18+00 of the survey and the proposed sediment sump is located on the property of the West Coast Church of the Cross. This option assumes change in ownership of this land to the County. Alternative 2 includes changes in item quantities and new items relevant to the construction of the sediment sump. Costs were calculated assuming the soil from the existing sediment deposits is not suitable for the restructuring of the creek banks. A deduction in cost was calculated to illustrate the change in cost if the sediment is found suitable for restructuring the creek banks. The deduction was made to the "Channel Excavation" item in the amount of the "Embankment" quantity. This method includes the consideration of the labor involved in restructuring the creek banks. The total estimated construction cost for Alternative 2 is $1,246,820.99.

Alternative 3: Removal of the Barrier, Sediment Accumulated Upstream and Down Stream, and Construction/Restoration of Natural Habitat

Alternative 3 is the same as Alternative 2, except the sediment sump area will be utilized as a littoral zone. Alternative 3 involves restructuring the littoral zone through embankment to create a gentler slope into the littoral zone, preparation of the littoral zone soil, and emergent plant cover over the flat littoral shelf set at +1 ft NAVD. The existing area designated for a sediment sump or littoral zone enhancement hosts some emergent plants, but much of the area has no plant cover. Costs were calculated assuming the soil from the existing sediment deposits is not suitable for the restructuring of the creek banks. A deduction in cost was calculated to illustrate the change in cost if the sediment is found suitable for restructuring the banks. The quantity for "Embankment" is greater than the quantity for "Channel Excavation" for this design alternative, thus, the deduction quantity is equal to the total amount of "Channel Excavation" specified. The total estimated construction cost for Alternative 3 is $1,156,779.05.

Construction Alternatives

The cost estimates for the three design alternatives were made with the most desirable construction method in mind: the use of the South Gate Community Center's property for construction staging and sediment drying through a temporary easement. The County requires the analysis of alternatives in the event that the Southgate Community Center property is not available for construction staging, sediment dewatering, or both.

If the property is unavailable for both construction staging and dewatering, the following option was investigated: utilizing a barge with all the necessary equipment from the mouth of Phillippi Creek up to the project site, loading the barge with sediment and the barrier structure, and transporting the material downstream to be unloaded and disposed of. This option would not only be exceedingly costly, it does not appear feasible in terms of construction, water depths, and bridge locations. The bridges that span Phillippi Creek, specifically S Tuttle Avenue, do not offer enough clearance for a barge loaded with the necessary equipment to pass under. Due to sediment buildup in the creek, a barge would require high tide to navigate to the project site, and high tide would lead to even less clearance under the bridges. Because of this, this construction alternative is not considered a valid option.

In the event the South Gate Community Association only agrees to allow construction staging on their property, an alternative location for sediment drying has been identified. Parcel ID 0059-04-0046 is owned by the County and exists between the two portions of the West Coast Church of the Cross property. This parcel would be available for the project if the County acquires the portion of the West Coast Church of the Cross property where the proposed sediment sump is located. The parcel houses a County stormwater pond and the portion East of the pond has slopes as steep as 1:3 (vertical to horizontal), according to Lidar data. The pond and steep slopes greatly diminish the amount of available space for sediment drying, causing this option to be considered infeasible. See Figure 16 for an illustration of this option.

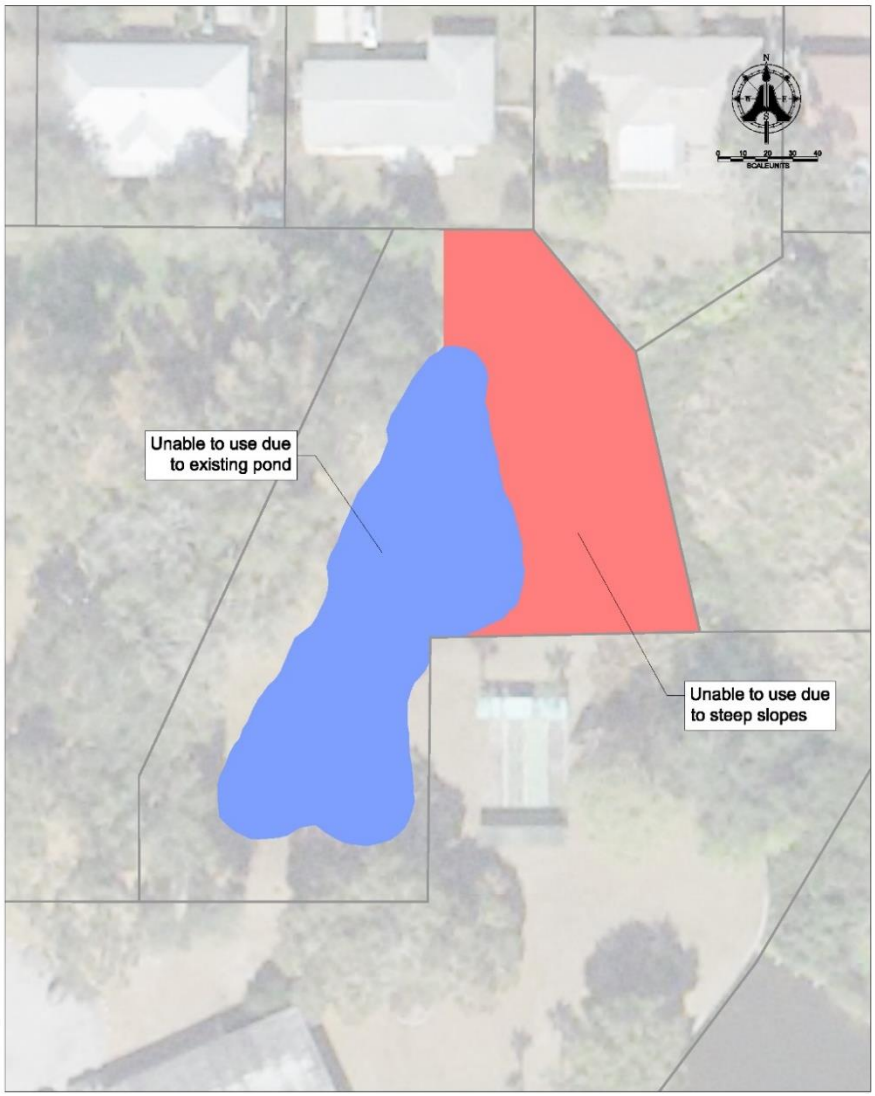

Figure 16: County Parcel 0059-04-0046

Funding Opportunities

District Cooperative Funding Initiative (CFI)

The District CFI program funds projects that have resource benefits related to natural systems, flood protection, and water quality. Based upon the feasibility of the structure removal, the following benefits may be provided by the proposed project:

- Submerged Land Restoration
    - Removing accumulated sediment and the barrier will restore the channel profile to its natural state
    - Unusual bottom hardness caused by the presence of the barrier should return to natural levels with its removal
- Hydrologic Restoration
    - Removing accumulated sediment and the barrier should allow the creek flow rates to return to natural levels
    - No negative impact on the downstream oyster habitats is expected, as shown through ICPR modeling and existing downstream location of the oyster beds
- Shoreline Restoration
    - Restoring the creek banks to their natural, shallower sloped profile should prevent future erosion and create a stable ecosystem for native vegetation
    - Removal of invasive plant species and proposed planting of bank stabilizing vegetation will assist in the overall bank stabilization of the creek, preventing future erosion
- Water Quality Benefits
    - Restoring the creek banks to their natural, shallower sloped profile should prevent future erosion, creating a decrease into total suspended solids (TSS) in the creek
    - The proposed sediment sump should collect suspended solids from upstream in a controlled location for removal
- Floodplain Benefits
    - Decrease in maximum stage within the watershed during the 100 year-24 hour storm event shown through ICPR modeling

Applying for CFI program funding requires the following: a detailed description of how the project will create the specified benefits, a cost benefit analysis of the project, an outline of any complementary efforts completed to date, and plans with details of the proposed construction and thorough timeline.

Fish and Wildlife Commission

The Florida Fish and Wildlife Conservation Commission offers grants through the "Florida State Wildlife Grants Program," federally funded by the State and Tribal Wildlife Grants Program. Funds are appropriated annually, with the 2018 deadline having passed on July 13. The program supports projects that target needs identified in the "State Wildlife Action Plan." Items listed as conservation threats to coastal tidal rivers or streams in the "State Wildlife Action Plan" are addressed by this project, mainly channel modification/shipping lanes, and invasive plants.

To be considered for funding, the "Florida State Wildlife Grants Program Application Form" must be submitted. As part of the application, the target habitat and the objective must be identified, and the potential benefit and project approach/methodology must be expressed. Projects with a duration of greater than three years may not be considered for funding.

Sarasota Bay Estuary Program

The Sarasota Bay Estuary Program (SBEP) Bay Partners Grant Program offers funding for local projects that focus on habitat or water quality improvement, or environmental education. This project qualifies as a habitat improvement project and could also qualify as a water quality improvement project, specifically Design Alternatives 2 and 3. These projects also coincide with SBEP's "Phillippi Creek Shoreline" restoration plan, part of the SBEP "Five-Year Habitat Restoration Plan FY 2016 – FY 2020."

Funds are appropriated annually and the window for application submission for 2018-2019 closed on March 1, 2018. Applications are scored based on four categories: Project Description, Environmental Benefits, Community Benefits, and Budget Proposal.

Federal Clean Water Act Grants

The FDEP administers grant money from the EPA through the Federal Clean Water Act (319 Grants) for projects that will help reduce nonpoint source pollution within watersheds. Funds are appropriated annually, with project proposals due in the spring and fund allocation by September of that year. This funding source should be pursued only if Design Alternative 2 is selected, as 319 Grants focus solely on water quality and pollution reduction is only shown through construction of the sediment sump.

Measurable Benefits

A measurable benefits analysis is needed to determine which CFI funding source Design Alternative 1, 2, or 3 would qualify for. This involves utilizing the CFI ranking tables for each of the proposed funding alternatives to determine if the project provides high, medium, or low impacts as defined in the tables. Table 7 provides a detail for each of the funding alternatives what ranking it qualifies under and how the ranking was determined. The "$/Ac Restored" and "$/foot of shoreline restoration" values reflect only the portion of the design that contributes to restoration. Certain elements of Design 2 and Design 3 contribute to the overall project cost, but not toward restoration. Figure 17 identifies the areas of proposed restoration used in each scoring. The "Shoreline Restoration Area" shown on Figure 17 is the post-construction area above the Annual Low Tide of -0.8 ft (NAVD 88) within the Top of Bank line.

		Design 1	Design 2 (Sump)	Design 3 (Littoral Zone)
Natural Systems Restoration	Project Cost	$882,297.67	$1,246,820.99	$1,156,779.05
	Acres Restored	5.3	5.3	6.2
	$/Ac Restored	$166,471.26	$166,471.26	$186,577.26
	Linear Ft of Shoreline Restored	2,430.4	2,430.4	2,430.4
	$/foot of shoreline restoration	$363.03	$363.03	$363.03
	Combination of Elements Ranking	**LOW**	**LOW**	**LOW**
	Shoreline Restoration Ranking	**LOW**	**LOW**	**LOW**
Flood Protection BMPs	Sum of all Benefit/Cost Ratios	1.88	1.88	1.88
	Total Cost of Mitigation for all Structures	$2,865,240	$2,865,240	$2,865,240
	Benefit/Cost Ratio is greater than or equal to 1.	**HIGH**	**HIGH**	**HIGH**
Water Quality	TSS Target Pollutant- Cost/lb TSS $20 or less	N/A- no reduction	$7.00/lb **MEDIUM**	N/A- no reduction
	TP Target Pollutant- Cost/lb TP $4,715 or less	N/A- no reduction	$19,481.58/lb **LOW**	N/A- no reduction
	TN Target Pollutant- Cost/lb TN $646	N/A- no reduction	$7,792.62/lb **LOW**	N/A- no reduction

Table 7: Measurable Benefit Ranking

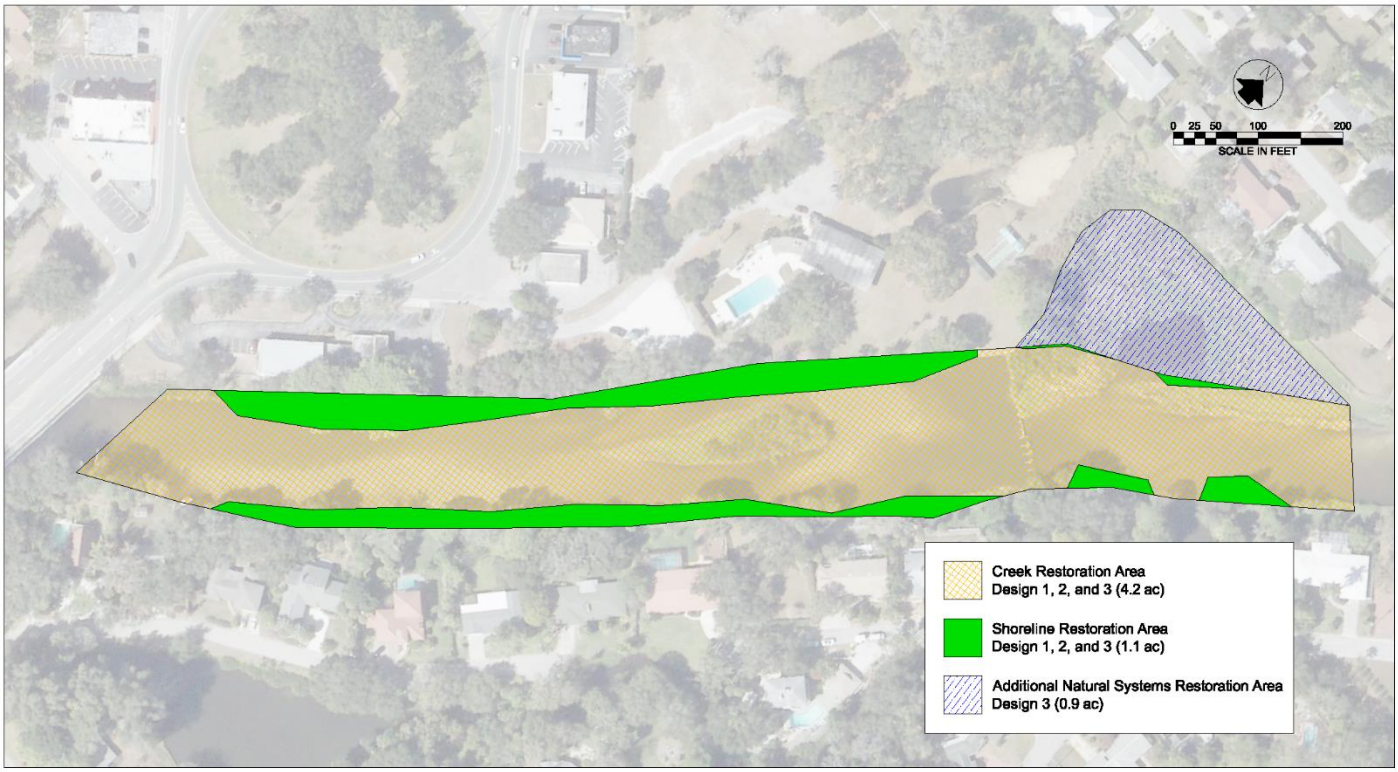

Figure 17: Delineation of Natural Systems Restoration Areas

Natural Systems

The natural systems restoration rankings were determined using the estimated project cost for each design option, the amount of area restored, and the length of shoreline restored. The area restored is the total area within the top of bank line from station 6+00 through station 18+00 of the survey, as this is the extent of the area where sediment removal is proposed. The quantities shown in Table 7 for Natural Systems "Acres Restored" is the Creek Restoration and Shoreline Restoration Areas shown in Figure 17 added together. The linear length of shoreline is the length of the shoreline on each side of the creek from station 6+00 through station 18+00 of the survey added together. This area represents the submerged land restoration and shoreline restoration portions of the project. The shoreline will be restored through the removal of invasive plant species and bank stabilization to prevent erosion and the submerged land restoration will be accomplished through sediment removal and the restructuring of the creek banks to a 1:10 slope. Due to the stabilization of the banks, a relatively small decrease in TSS is expected. The expected TSS decrease caused by the prevention of erosion within the project area is considered small relative to the amount of sediment entering the project area from upstream, as approximately 31,000 acres of the watershed contributes runoff to the project area. Native emergent plants are proposed as part of Design 2 and Design 3 for environmental enhancement and to promote nutrient uptake. Removing the barrier should also restore the bottom hardness of this portion of the creek to a level similar to the surrounding areas. The characteristics of this project result in low natural systems restoration rankings.

Flood Protection

The analysis for the flood protection ranking was completed using the FEMA BCA Toolkit 5.3.0 which provides a Benefit Cost Ratio (BCR) for each structure analyzed. Utilizing Lidar data and the maximum stages from ICPR, it was determined that many residential houses may have an opportunity where they

could be removed from the RECM 100-year floodplain. These structures are on Bougainvillea St, Cronley Pl, Alta Vista St, Irving St, Webber St, and Tanglewood Dr. The total sum of all the BCR from the BCA Toolkit was 1.88, indicating a high ranking. The total mitigation cost of acquisition of all structures is approximately $2,865,824; over double the cost of the proposed project with the sump construction of $1,246,821.

Water Quality

The biggest component in improving water quality for the system is with the construction of the sediment sump. Calculations for the TSS portion of the nutrient reduction section are based on the amount of TSS collected in the existing upstream sediment sump RB3. Total Nitrogen (TN) and Total Phosphorus (TP) reductions were also calculated based on the amount of TSS collected. These nutrients are known to attach to suspended solids, thus a reduction in TSS leads to an expected reduction in TN and TP. The County supplied lb/lb ratios of each nutrient to TSS. See Appendix I for the nutrient reduction calculations.

The restructuring and stabilization of the creek banks as part of each design alternative should also benefit water quality. This action should reduce erosion, leading to lower TSS downstream. Designs 2 and 3 have proposed emergent plantings, which should lead to nutrient uptake in addition to reducing erosion. The removal of the barrier should also eliminate the opportunity for water to stagnate in certain areas through restoring normal flow conditions.

Recommendations

It is recommended that the County pursue design alternative 3: removal of the historic agricultural barrier, removal of accumulated sediment upstream and downstream of the barrier location, and restoration of the existing wetland marsh to natural conditions. Table 8 summarizes each alternatives' benefit and objectives in improving the creek ecosystem.

Parameter	Design Alternative 1	Design Alternative 2	Design Alternative 3
Project Cost	$882,297.67	$1,246,820.99	$1,156,779.05
Submerged Land Restoration	✓	✓	✓
Shoreline Restoration	✓	✓	✓
Velocity Reduction	✓	✓	✓
Sediment Deposition	x	✓	x
Nutrient Reduction	x	Potentially	Potentially
Floodplain Reduction	Potentially	Potentially	Potentially

Table 8: Alternative Benefit Summary

Removing the barrier will have a minimal effect on the environmental conditions, as free flowing conditions already exist in the location of the barrier. The increase in nutrient levels and suspended solids observed in the Task 3 water quality analysis could be due to the presence of the barrier. Therefore, removing the barrier should improve the water quality characteristics closer to what is observed farther upstream.

Removing the accumulated sediment and restructuring the creek banks will restore the creek to its natural state and reverse the effects in the channel morphology downstream of the barrier. Constructing the instream sediment sump offers a potential benefit in the water quality of the creek, allowing a location for unwanted suspended sediment to accumulate and be removed. This may lower turbidity levels and may also prevent future undesirable changes in the channel morphology. However, it is uncertain that flow velocities will be low enough for consistent sediment deposition due to the lack of a downstream weir, but

the channel cross section will increase dramatically in the sump location, allowing for sediment deposition. Restoration of the natural wetland conditions with the littoral zone construction does not require additional investigation into the flow velocities and provides a habitat for diverse aquatic life as well as reducing bank erosion.

Each design alternative has various benefits and funding opportunities with minimal impact on the hydrologic conditions within the Phillippi Creek Watershed.

Reference

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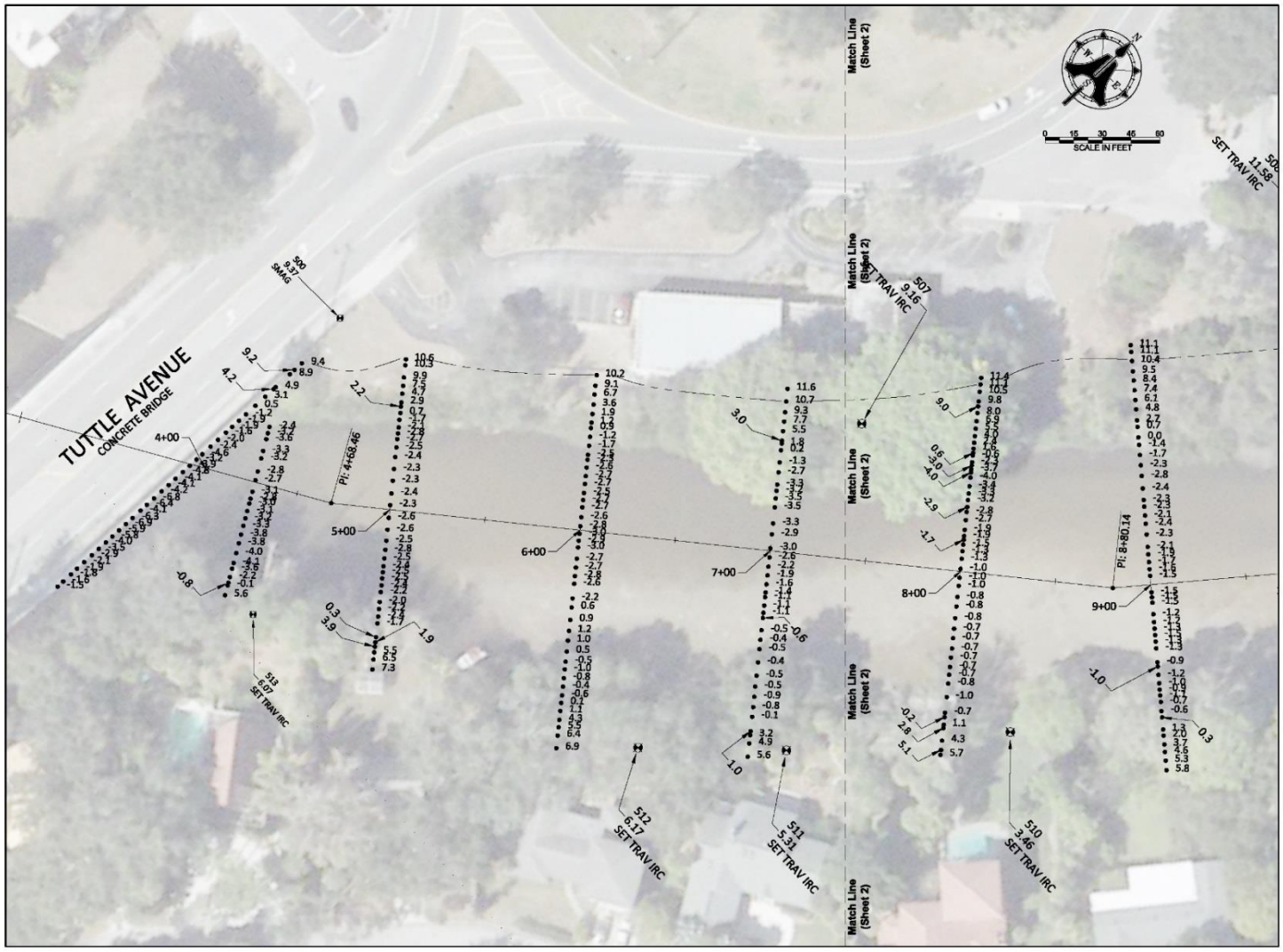
Yell, Dennis, and Riddell, John. (1995). ICE Design and Practice Guide: Dredging. London, UK: Thomas Telford Publications.

Florida Administrative Codes pertaining to water quality:

Dissolved Oxygen Saturation: 62-302.533
Total Nitrogen: 62-302.531
Total Phosphorus: 62-302.531
Chlorophyll a: 62-303.351

Appendix A: Bathymetric Survey

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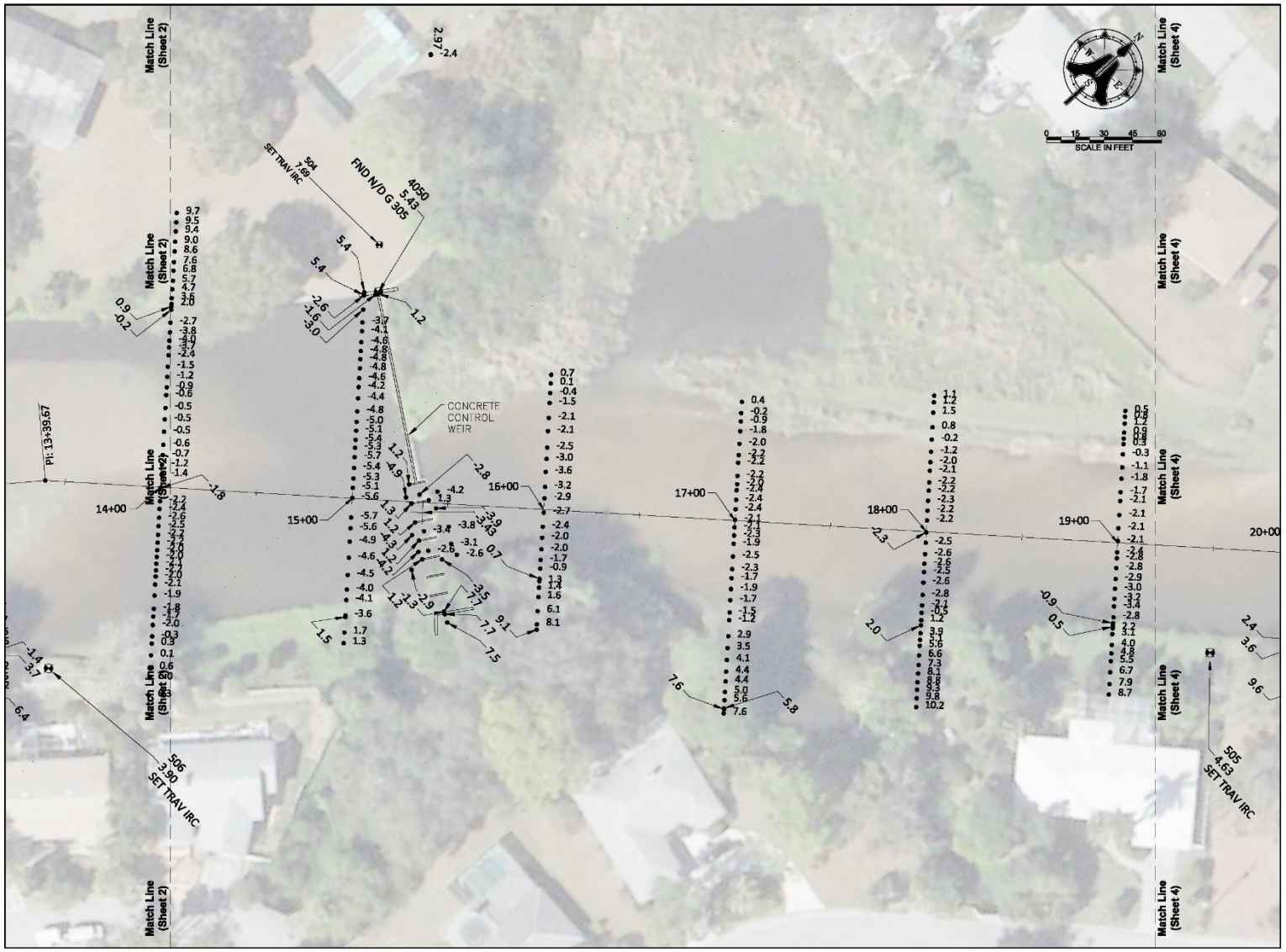
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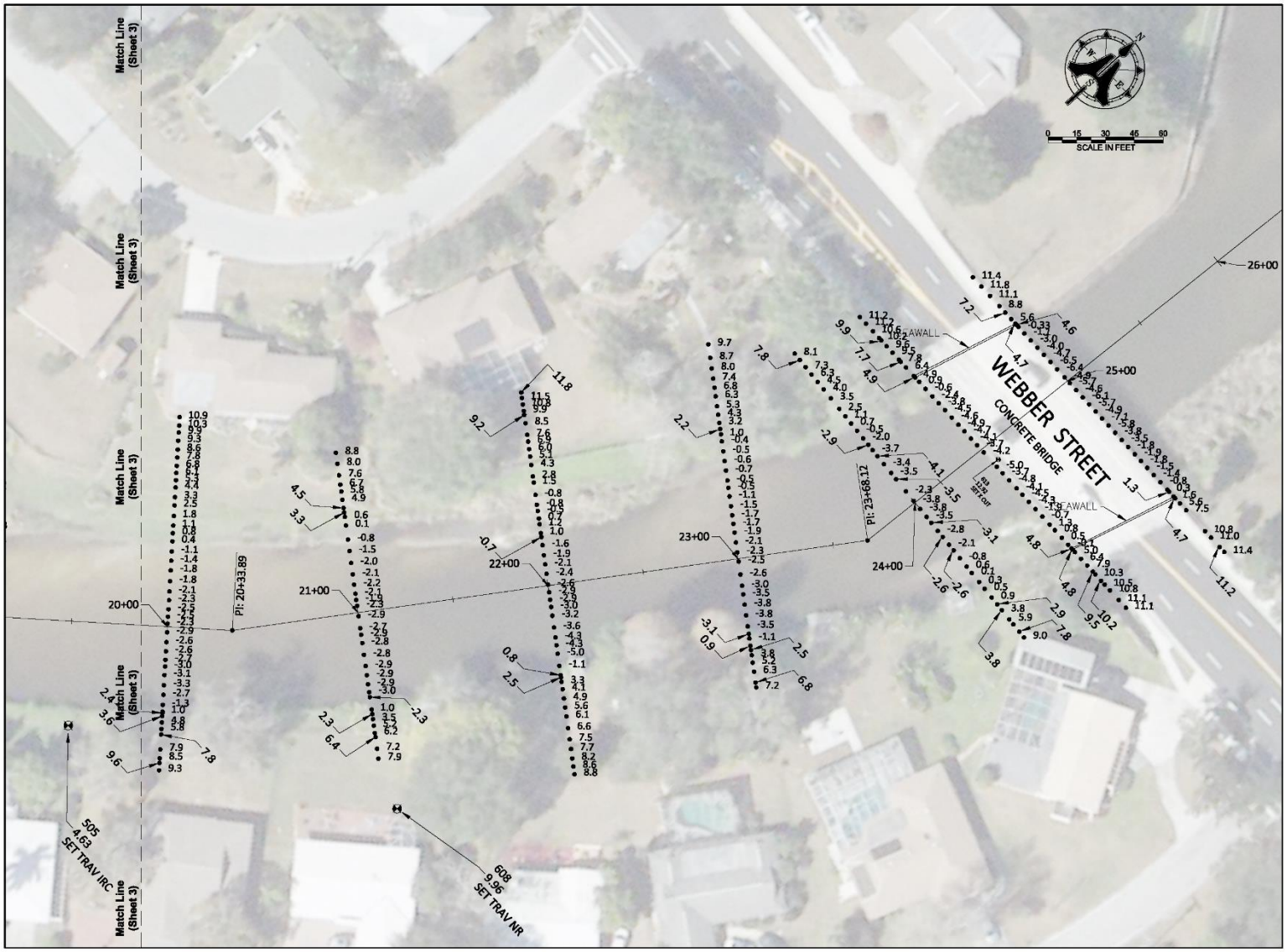
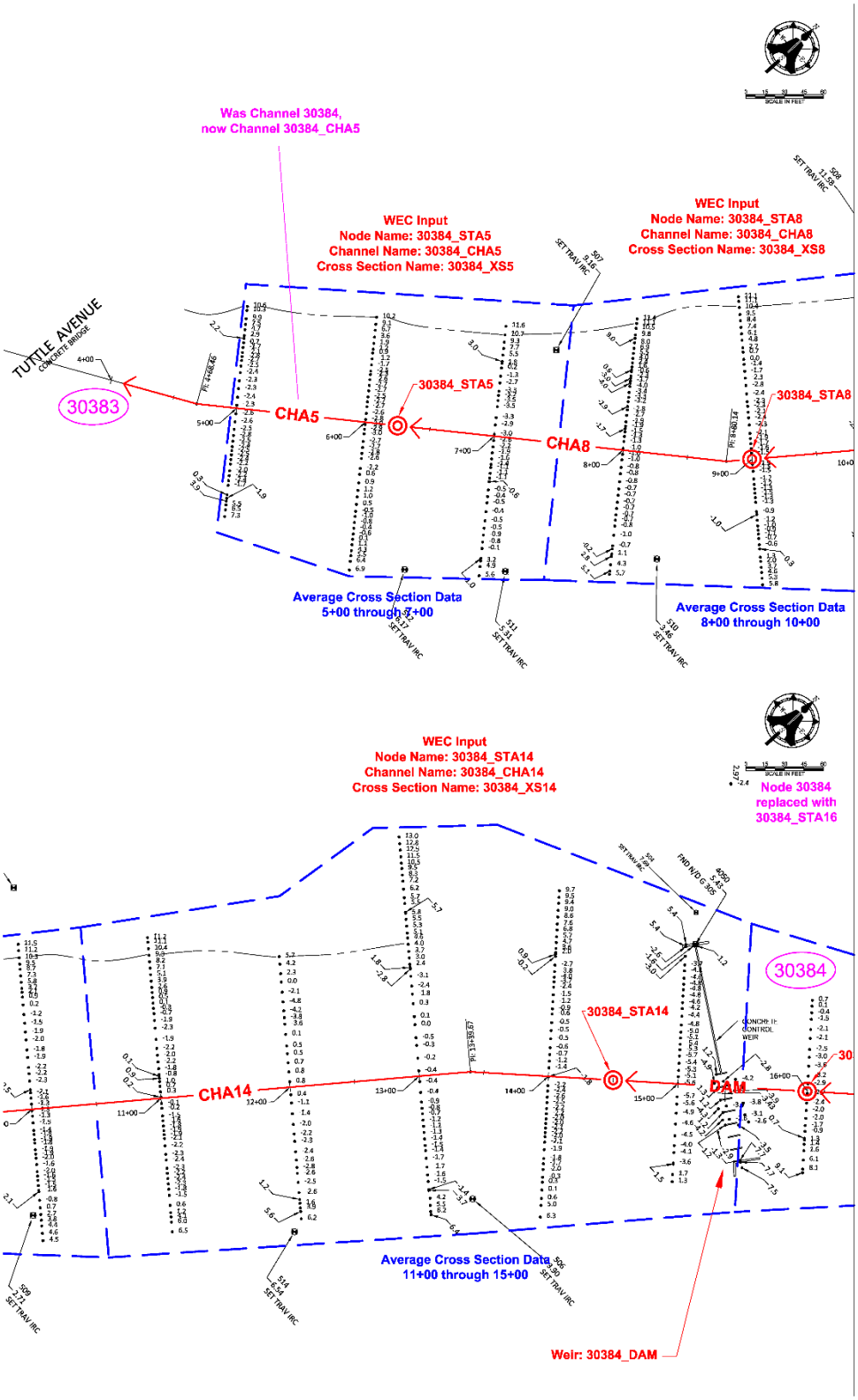
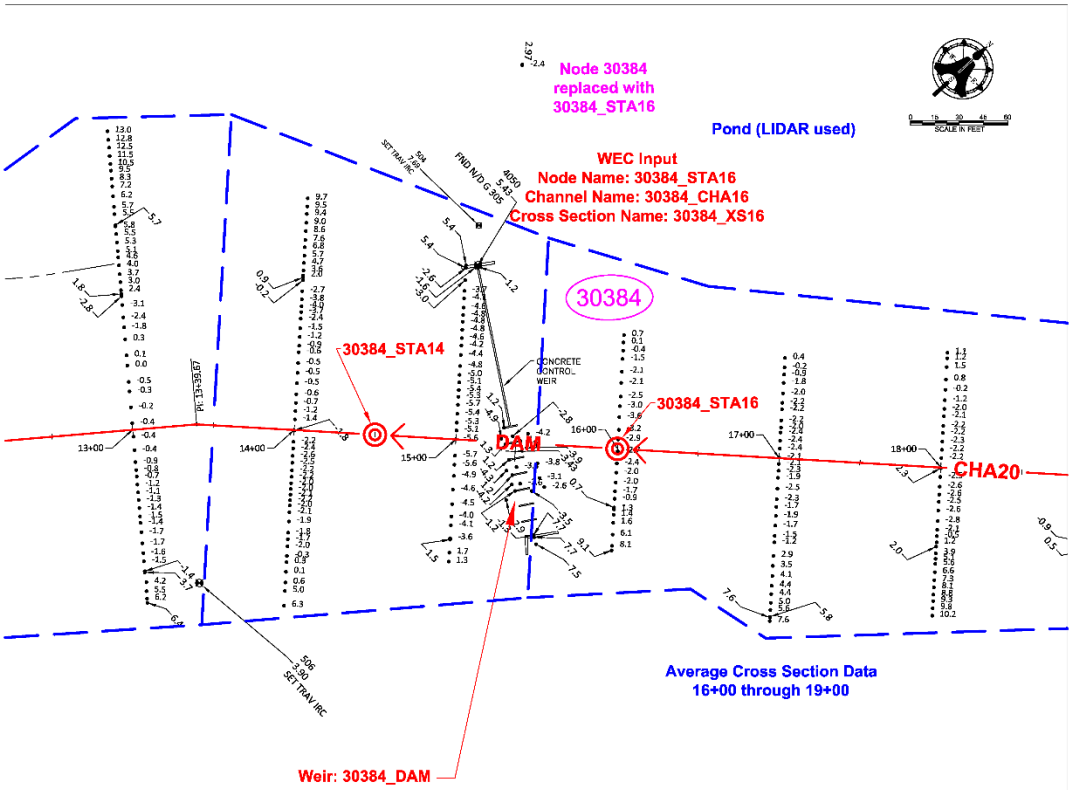
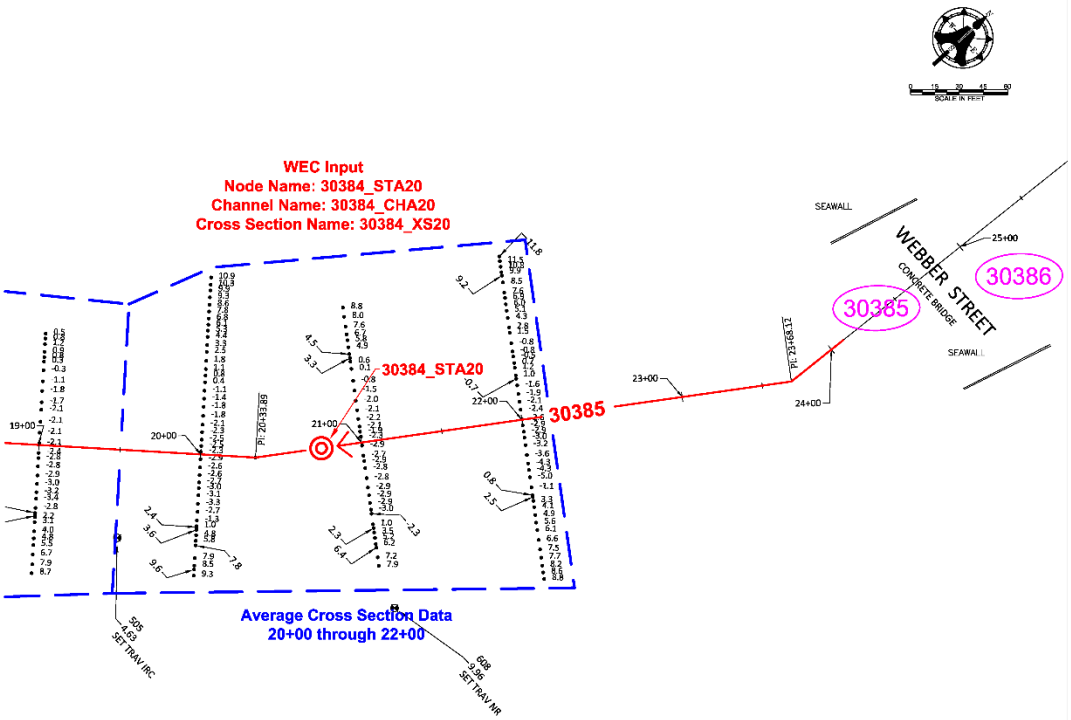
3.90
SET TRAV IRC


Match Line (Sheet 3)
Match Line (Sheet 3)
Match Line (Sheet 3)
Match Line (Sheet 3)
Match Line (Sheet 3)
SCALE IN FEET
0 15 30 45 60
WEBBER STREET
CONCRETE BRIDGE
SEAWALL
SEAWALL
PI: 20+33.89
PI: 23+68.12
20+00
21+00
22+00
23+00
24+00
25+00
26+00
505
4.63
SET TRAV IRC
608
9.96
SET TRAV NR

Appendix B: Survey with Revised ICPR Overlay

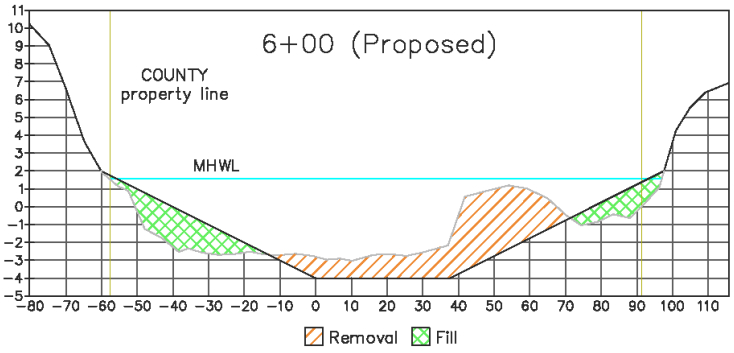



Node 30384
replaced with
30384_STA16
Pond (LIDAR used)
WEC Input
Node Name: 30384_STA16
Channel Name: 30384_CHA16
Cross Section Name: 30384_XS16
30384
30384_STA14
30384_STA16
DAM
CHA20
CONCRETE CONTROL WEIR
Average Cross Section Data
16+00 through 19+00
Weir: 30384_DAM


WEC Input
Node Name: 30384_STA20
Channel Name: 30384_CHA20
Cross Section Name: 30384_XS20
30384_STA20
30385
30386
WEBBER STREET
CONCRETE BRIDGE
SEAWALL
Average Cross Section Data
20+00 through 22+00

Appendix C: Sediment Removal

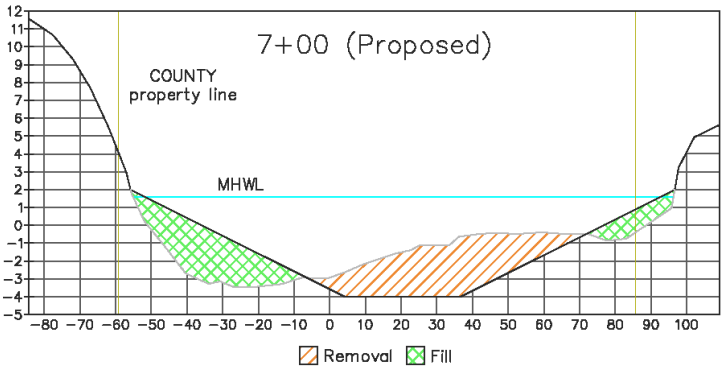
All cross sections oriented facing upstream unless otherwise noted.



Removal = 152.34 sf

Fill = 83.32 sf

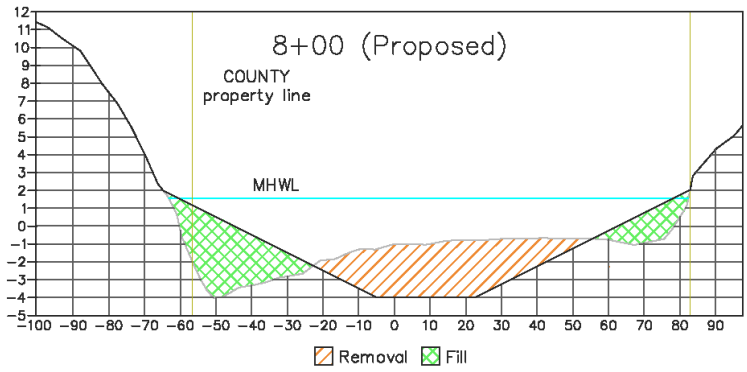
Post CS Area = 520.38 sf
Pre CS Area = 449.55 sf



Removal = 147.51 sf

Fill = 120.72 sf

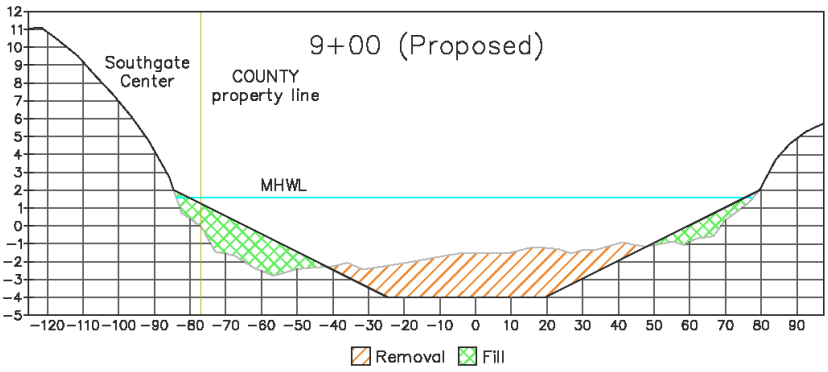
Post CS Area = 491.13 sf
Pre CS Area = 462.76 sf



Removal = 164.10 sf

Fill = 134.77 sf

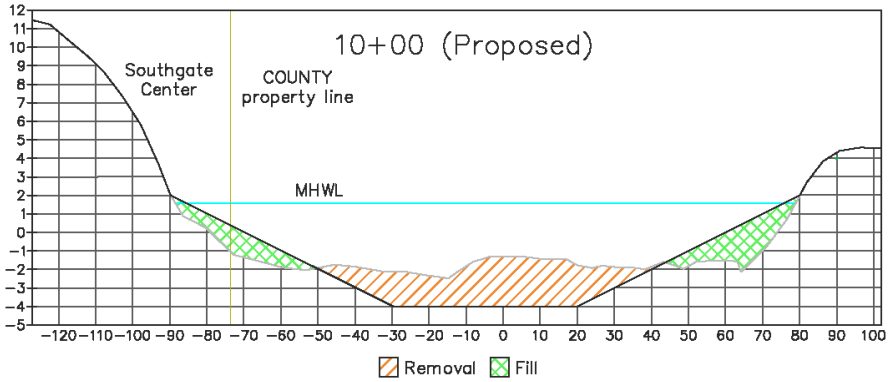
Post CS Area = 463.55 sf
Pre CS Area = 431.98 sf



Removal = 157.57 sf

Fill = 82.12 sf

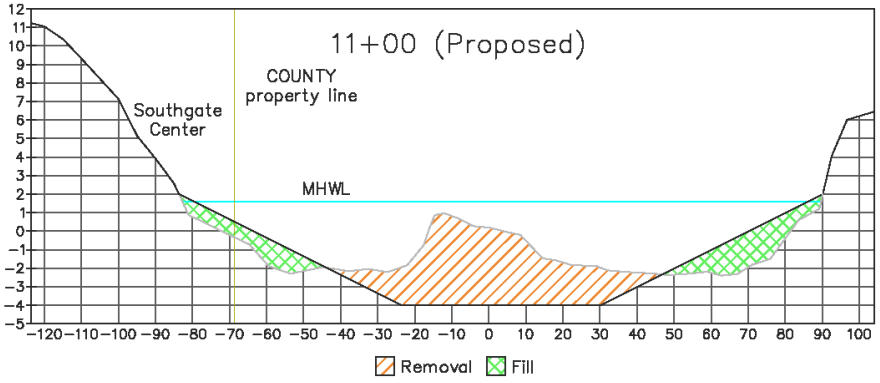
Post CS Area = 557.24 sf
Pre CS Area = 480.21 sf



Removal = 156.12 sf

Fill = 81.94 sf

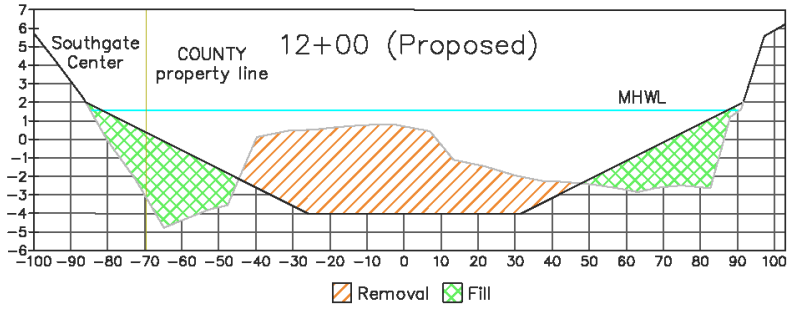
Post CS Area = 588.60 sf
Pre CS Area = 513.84 sf



Removal = 216.52 sf

Fill = 87.84 sf

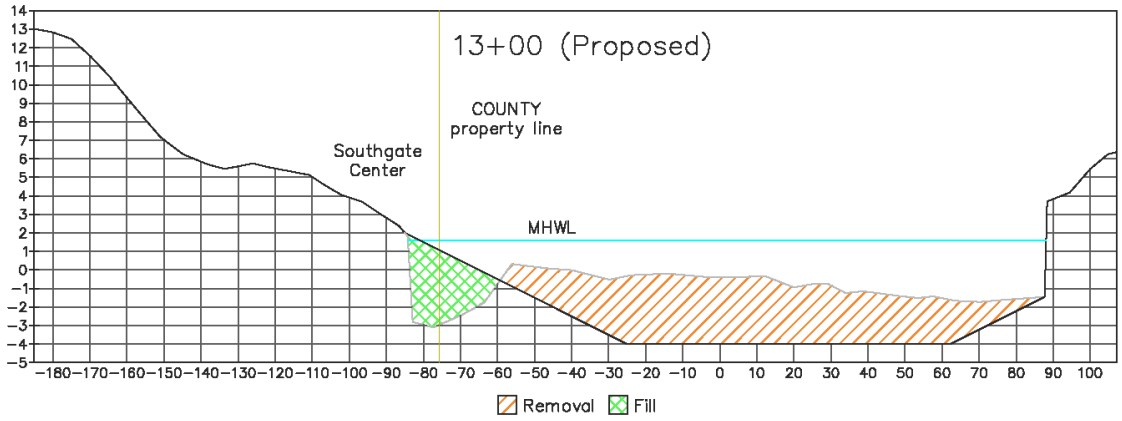
Post CS Area = 612.21 sf
Pre CS Area = 482.09 sf



Removal = 295.04 sf

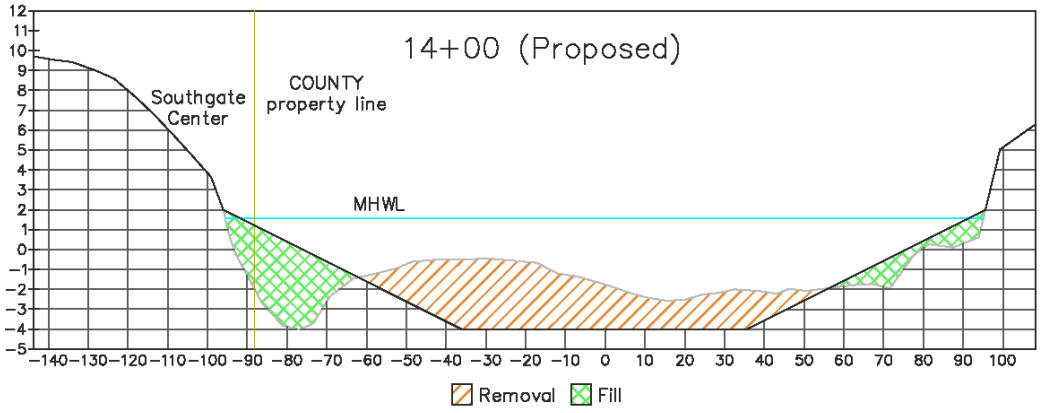
Fill = 186.36 sf

Post CS Area = 633.15 sf
Pre CS Area = 523.68 sf



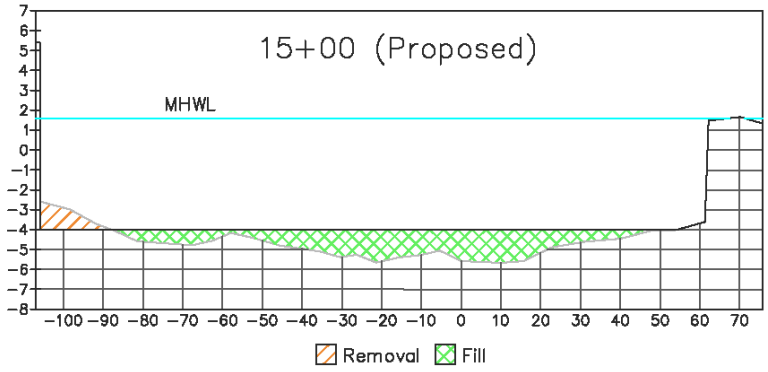
Removal = 385.16 sf
Fill = 72.88 sf

Post CS Area = 754.02 sf
Pre CS Area = 441.28 sf



Removal = 242.24 sf
Fill = 119.97 sf

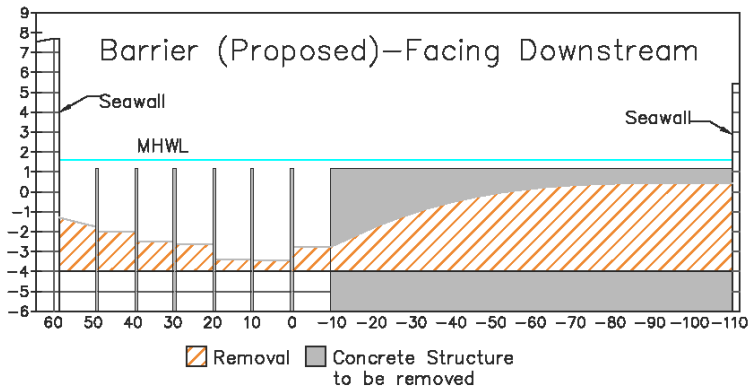
Post CS Area = 714.51 sf
Pre CS Area = 590.63 sf



Removal = 13.91 sf

Fill = 126.45 sf

Post CS Area = 937.72 sf
Pre CS Area = 1049.42 sf

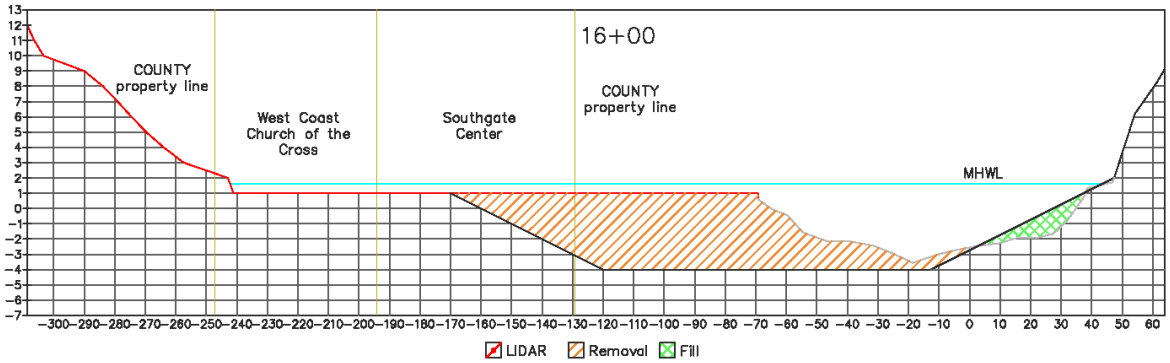


Removal = 465 sf

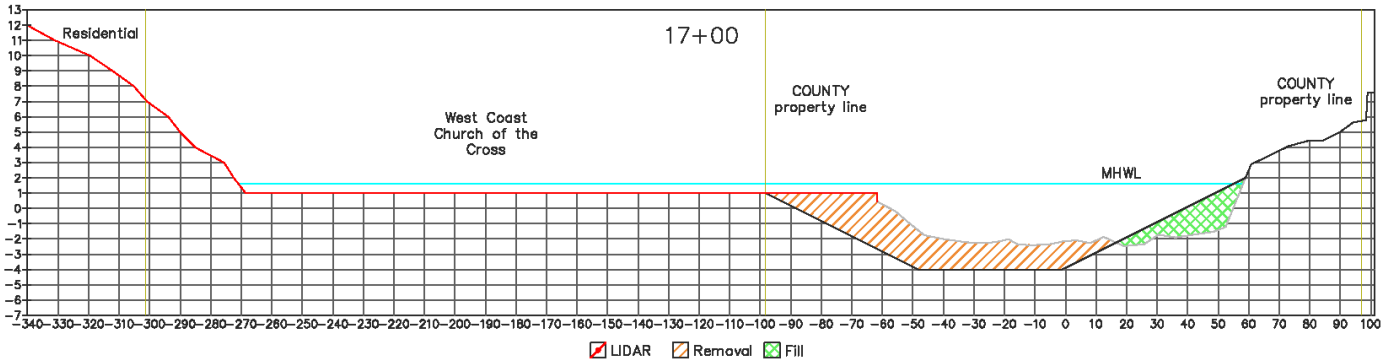
Buildup behind wall estimated

Fill = 0 sf

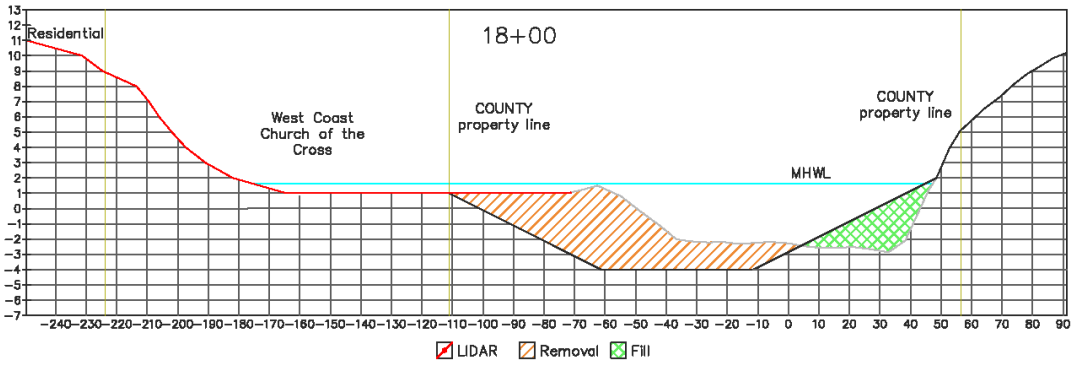
Post CS Area = 947.84 sf
Pre CS Area = 310.40 sf



Removal = 501.24 sf Post CS Area = 955.74 sf
Fill = 31.94 sf Pre CS Area = 485.91 sf



Removal = 211.07 sf Post CS Area = 679.41 sf
Fill = 60.70 sf Pre CS Area = 527.86 sf



Removal = 282.86 sf Post CS Area = 627.78 sf
Fill = 77.95 sf Pre CS Area = 422.19 sf

Figure 18: Sediment Drying Zone

Appendix D: Proposed Sediment Sump

Shields Method for Sediment Transport - Variables		
s	=	specific gravity of sediment
g	=	acceleration due to gravity
d	=	sediment particle diameter
v	=	kinematic viscosity of fluid
R	=	particle Reynolds number
θ_c	=	critical shields parameter for incipient motion
u	=	bed shear velocity

$s = 2.65$

$g = 32.2\ \frac{ft}{sec^2}$

$d = 0.2\ mm = 0.000656\ ft$

$v_{70\,^{\circ}F} = 1.052\ x\ 10^{-5}\ \frac{ft^2}{sec}$

$$R = \frac{d\sqrt{sgd}}{v}$$

$$R = \frac{0.000656\ ft\sqrt{2.65 * 32.2\ \frac{ft}{sec^2} * 0.000656\ ft}}{1.052\ x\ 10^{-5}\ \frac{ft^2}{sec}}$$

$$R = \frac{0.000656\ ft\sqrt{0.056\ \frac{ft^2}{sec^2}}}{1.052\ x\ 10^{-5}\ \frac{ft^2}{sec}}$$

$$R = \frac{0.000656\ ft * 0.237\ \frac{ft}{sec}}{1.052\ x\ 10^{-5}\ \frac{ft^2}{sec}}$$

$$R = \frac{1.55\ x\ 10^{-4}\ \frac{ft^2}{sec}}{1.052\ x\ 10^{-5}\ \frac{ft^2}{sec}}$$

$R = 14.73$

$$ln\theta_C = -0.6769 lnR + 0.3542\ln[1 + (0.0223R)^{2.8358}] - 1.1296$$

$$ln\theta_C = -0.6769\ln(14.73) + 0.3542\ln[1 + (0.0223 * 14.73)^{2.8358}] - 1.1296$$

$ln\theta_C = -2.94$

$\theta_C = e^{-2.94}$

$\theta_C = 0.053$

$$\theta_C = \frac{u^2}{sgd}$$

$$u = \sqrt{\theta_C sgd}$$

$$u = \sqrt{0.053 * 2.65 * 32.2\ \frac{ft}{sec^2} * 0.000656\ ft}$$

$u = 0.054\ \frac{ft}{sec}$

Appendix E: Watershed Maximum Stage Comparison (NAVD)

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
097860	34.96	34.96	34.96	34.96	34.96
099340	41.77	41.77	41.77	41.77	41.77
30000	1.42	1.42	1.42	1.42	1.42
30001	2.76	2.69	2.73	2.70	2.74
30002	3.13	3.05	3.10	3.06	3.11
30003	3.50	3.41	3.46	3.42	3.47
30004	3.69	3.59	3.65	3.61	3.66
30005	3.75	3.65	3.71	3.66	3.72
30008	4.35	4.22	4.30	4.24	4.32
30010	5.01	4.87	4.96	4.89	4.97
30012	5.46	5.30	5.40	5.33	5.42
30014	5.92	5.75	5.85	5.79	5.87
30016	6.24	6.06	6.16	6.10	6.18
30018	6.49	6.31	6.41	6.35	6.43
30020	3.70	3.61	3.67	3.62	3.68
30021	3.72	3.62	3.68	3.64	3.69
30022	6.76	6.76	6.76	6.76	6.76
30023	11.22	11.22	11.22	11.22	11.22
30030	4.66	4.54	4.62	4.55	4.63
30031	4.70	4.58	4.66	4.59	4.67
30032	4.75	4.62	4.71	4.64	4.72
30034	7.63	7.58	7.63	7.57	7.63
30035	7.63	7.58	7.63	7.58	7.63
30036	10.27	10.27	10.27	10.27	10.27
30037	10.78	10.78	10.78	10.78	10.78
30038	10.91	10.91	10.91	10.91	10.91
30039	10.94	10.94	10.94	10.94	10.94
30041A	12.53	12.53	12.53	12.53	12.53
30042	13.47	13.47	13.47	13.47	13.47
30044	13.58	13.58	13.58	13.58	13.58
30046	13.58	13.58	13.58	13.58	13.58
30050	13.97	13.97	13.97	13.97	13.97
30052	14.72	14.72	14.72	14.72	14.72
30054	15.49	15.49	15.49	15.49	15.49
30055	13.98	13.98	13.98	13.98	13.98
30056	15.69	15.69	15.69	15.69	15.69
30058	17.30	17.30	17.30	17.30	17.30
30060	7.82	7.74	7.81	7.73	7.81
30061	12.01	11.94	12.00	11.93	12.00
30062	14.92	14.91	14.92	14.91	14.92
30063	15.25	15.25	15.25	15.25	15.25
30064	15.54	15.54	15.54	15.54	15.54
30065	15.82	15.82	15.82	15.82	15.82
30066	15.99	15.99	15.99	15.99	15.99
30067	16.08	16.08	16.08	16.08	16.08
30068	16.00	16.00	16.00	16.00	16.00

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30068A	15.99	15.99	15.99	15.99	15.99
30070	7.30	7.30	7.30	7.30	7.30
30071	12.72	12.72	12.72	12.72	12.72
30072	14.96	14.96	14.96	14.96	14.96
30073	7.76	7.76	7.76	7.76	7.76
30074	16.50	16.50	16.50	16.50	16.50
30076	5.98	5.82	5.91	5.85	5.93
30077	7.30	7.14	7.13	7.18	7.13
30078	8.71	8.55	8.54	8.59	8.54
30079	11.00	11.00	11.00	11.00	11.00
30080	12.55	12.55	12.55	12.55	12.55
30081	12.81	12.81	12.81	12.81	12.81
30082	13.15	13.15	13.15	13.15	13.15
30083	13.52	13.52	13.52	13.52	13.52
30084	13.93	13.93	13.93	13.93	13.93
30085	14.37	14.37	14.37	14.37	14.37
30086	14.75	14.75	14.75	14.75	14.75
30087	13.68	13.68	13.68	13.68	13.68
30090	17.19	17.19	17.19	17.19	17.19
30091	10.39	10.40	10.40	10.40	10.40
30092	12.12	12.12	12.12	12.12	12.12
30093	15.18	15.18	15.18	15.18	15.18
30094	15.20	15.20	15.20	15.20	15.20
30094A	15.23	15.23	15.23	15.23	15.23
30096	19.90	19.90	19.90	19.90	19.90
30097	20.86	20.86	20.86	20.86	20.86
30098	22.33	22.33	22.33	22.33	22.33
30099	23.39	23.39	23.39	23.39	23.39
30100	23.46	23.46	23.46	23.46	23.46
30100A	23.49	23.49	23.49	23.49	23.49
30105	7.04	6.85	6.95	6.89	6.98
30106	7.82	7.62	7.72	7.66	7.75
30107	8.05	7.84	7.94	7.88	7.97
30110	8.61	8.40	8.50	8.45	8.53
30111	8.78	8.58	8.67	8.62	8.70
30112	9.12	8.91	9.00	8.95	9.03
30113	9.42	9.20	9.29	9.25	9.32
30114	9.51	9.29	9.37	9.34	9.41
30116	15.57	15.57	15.57	15.57	15.57
30117	17.03	17.03	17.03	17.03	17.03
30119	20.24	20.24	20.24	20.24	20.24
30121	20.94	20.94	20.94	20.94	20.94
30124	13.90	13.90	13.90	13.90	13.90
30125	15.07	15.07	15.07	15.07	15.07
30126	18.71	18.71	18.71	18.71	18.71
30128	20.21	20.21	20.21	20.21	20.21
30129	21.30	21.30	21.30	21.30	21.30
30130	21.30	21.30	21.30	21.30	21.30
30130A	21.30	21.30	21.30	21.30	21.30
30131	21.30	21.30	21.30	21.30	21.30

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30134	10.80	10.69	10.79	10.68	10.79
30135	19.76	19.74	19.76	19.73	19.76
30136	19.89	19.88	19.89	19.87	19.89
30137	20.06	20.04	20.06	20.04	20.06
30138	20.72	20.71	20.72	20.70	20.72
30139	20.91	20.90	20.91	20.90	20.91
30140	22.03	22.02	22.03	22.02	22.03
30144	21.10	21.09	21.10	21.08	21.10
30145	22.49	22.49	22.49	22.49	22.49
30147	21.69	21.68	21.69	21.68	21.69
30148	22.37	22.37	22.37	22.37	22.37
30149	11.68	11.60	11.67	11.59	11.67
30150	5.09	4.97	5.07	4.98	5.08
30151	9.43	9.43	9.43	9.43	9.43
30152	10.22	10.22	10.22	10.22	10.22
30153	10.64	10.64	10.64	10.64	10.64
30154	11.38	11.38	11.38	11.38	11.38
30155	12.12	12.12	12.12	12.12	12.12
30156	13.44	13.44	13.44	13.44	13.44
30157	14.14	14.14	14.14	14.14	14.14
30158	14.14	14.14	14.14	14.14	14.14
30160	24.24	24.24	24.24	24.24	24.24
30161	24.11	24.11	24.11	24.11	24.11
30162	23.69	23.69	23.69	23.69	23.69
30201	19.07	19.07	19.07	19.07	19.07
30202	19.07	19.07	19.07	19.07	19.07
30204	22.01	22.01	22.01	22.01	22.01
30206	19.08	19.08	19.08	19.08	19.08
30209	19.08	19.08	19.08	19.08	19.08
30220	19.08	19.08	19.08	19.08	19.08
30221	19.14	19.14	19.14	19.14	19.14
30230	19.08	19.08	19.08	19.08	19.08
30231	19.08	19.08	19.08	19.08	19.08
30232	19.09	19.09	19.09	19.09	19.09
30235	19.08	19.08	19.08	19.08	19.08
30236	19.10	19.10	19.10	19.10	19.10
30238	26.62	26.62	26.62	26.62	26.62
30239	27.30	27.30	27.30	27.30	27.30
30241A	19.72	19.72	19.72	19.72	19.72
30242	19.71	19.71	19.71	19.71	19.71
30243	21.34	21.34	21.34	21.34	21.34
30244	21.35	21.35	21.35	21.35	21.35
30245	22.89	22.89	22.89	22.89	22.89
30246	22.30	22.30	22.30	22.30	22.30
30246A	22.30	22.30	22.30	22.30	22.30
30247	22.88	22.88	22.88	22.88	22.88
30248	19.08	19.08	19.08	19.08	19.08
30249	19.70	19.70	19.70	19.70	19.70
30251	19.69	19.69	19.69	19.69	19.69
30251A	19.69	19.69	19.69	19.69	19.69

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30252	19.70	19.70	19.70	19.70	19.70
30253	19.68	19.68	19.68	19.68	19.68
30253A	19.69	19.69	19.69	19.69	19.69
30254	19.68	19.68	19.68	19.68	19.68
30254A	19.68	19.68	19.68	19.68	19.68
30255	19.75	19.75	19.75	19.75	19.75
30255A	19.69	19.69	19.69	19.69	19.69
30255B	19.68	19.68	19.68	19.68	19.68
30256	19.67	19.67	19.67	19.67	19.67
30257	19.67	19.67	19.67	19.67	19.67
30258	19.67	19.67	19.67	19.67	19.67
30258A	19.67	19.67	19.67	19.67	19.67
30258B	19.67	19.67	19.67	19.67	19.67
30259	19.67	19.67	19.67	19.67	19.67
30260	22.65	22.65	22.65	22.65	22.65
30261	22.80	22.80	22.80	22.80	22.80
30262	22.81	22.81	22.81	22.81	22.81
30263	19.68	19.68	19.68	19.68	19.68
30264	20.10	20.10	20.10	20.10	20.10
30265	22.82	22.82	22.82	22.82	22.82
30267	21.19	21.19	21.19	21.19	21.19
30270	31.40	31.40	31.40	31.40	31.40
30271	28.09	28.09	28.09	28.09	28.09
30272	19.72	19.72	19.72	19.72	19.72
30273	31.26	31.26	31.26	31.26	31.26
30275	31.23	31.23	31.23	31.23	31.23
30276	31.27	31.27	31.27	31.27	31.27
30277	31.85	31.85	31.85	31.85	31.85
30281	19.70	19.70	19.70	19.70	19.70
30282	24.00	24.00	24.00	24.00	24.00
30283	24.10	24.10	24.10	24.10	24.10
30284	27.06	27.06	27.06	27.06	27.06
30285	27.93	27.93	27.93	27.93	27.93
30286	28.69	28.69	28.69	28.69	28.69
30288	28.57	28.57	28.57	28.57	28.57
30289	30.31	30.31	30.31	30.31	30.31
30290	29.01	29.01	29.01	29.01	29.01
30291	30.99	30.99	30.99	30.99	30.99
30292	27.80	27.80	27.80	27.80	27.80
30293	31.29	31.29	31.29	31.29	31.29
30294	30.42	30.42	30.42	30.42	30.42
30295	28.52	28.52	28.52	28.52	28.52
30296	29.51	29.51	29.51	29.51	29.51
30297	30.34	30.34	30.34	30.34	30.34
30299	28.54	28.54	28.54	28.54	28.54
30301	8.96	8.77	8.87	8.81	8.89
30302	9.11	8.97	9.05	9.00	9.06
30303	9.13	8.98	9.07	9.02	9.08
30304	13.83	13.83	13.83	13.83	13.83
30305	9.97	9.91	9.96	9.92	9.96

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30306	11.26	11.25	11.26	11.25	11.26
30307	13.44	13.44	13.44	13.44	13.44
30308	13.59	13.59	13.59	13.59	13.59
30309	17.61	17.61	17.61	17.61	17.61
30310	18.93	18.93	18.93	18.93	18.93
30312	17.88	17.87	17.87	17.87	17.87
30313	17.91	17.91	17.91	17.91	17.91
30315	18.18	18.18	18.18	18.18	18.18
30318	18.33	18.33	18.33	18.33	18.33
30322	18.40	18.39	18.39	18.39	18.39
30323	18.37	18.37	18.37	18.37	18.37
30324	20.79	20.79	20.79	20.79	20.79
30325	21.41	21.41	21.41	21.41	21.41
30326	22.83	22.83	22.83	22.83	22.83
30327	18.21	18.21	18.21	18.21	18.21
30331	25.23	25.23	25.23	25.23	25.23
30332	23.09	23.09	23.09	23.09	23.09
30333	23.10	23.10	23.10	23.10	23.10
30335	23.08	23.08	23.08	23.08	23.08
30337	28.64	28.64	28.64	28.64	28.64
30338	20.88	20.88	20.88	20.88	20.88
30339	25.49	25.49	25.49	25.49	25.49
30340	24.79	24.79	24.79	24.79	24.79
30342	29.51	29.51	29.51	29.51	29.51
30343	22.52	22.52	22.52	22.52	22.52
30344	21.14	21.14	21.14	21.14	21.14
30347	27.85	27.85	27.85	27.85	27.85
30348	29.65	29.65	29.65	29.65	29.65
30349	29.55	29.55	29.55	29.55	29.55
30350	30.31	30.31	30.31	30.31	30.31
30356	29.58	29.58	29.58	29.58	29.58
30357	31.33	31.33	31.33	31.33	31.33
30362	31.45	31.45	31.45	31.45	31.45
30363	30.49	30.49	30.49	30.49	30.49
30366	32.41	32.41	32.41	32.41	32.41
30367	32.80	32.80	32.80	32.80	32.80
30368	31.13	31.13	31.13	31.13	31.13
30369	33.24	33.24	33.24	33.24	33.24
30371	32.48	32.48	32.48	32.48	32.48
30372	32.95	32.95	32.95	32.95	32.95
30374	33.03	33.03	33.03	33.03	33.03
30380	9.75	9.59	9.67	9.64	9.71
30381	9.90	9.73	9.81	9.78	9.85
30382	10.07	9.90	9.97	9.94	10.01
30383	10.63	10.39	10.48	10.44	10.53
30384	10.82	-	-	-	-
30384_STA14	-	10.62	-	-	-
30384_STA16	-	11.23	10.75	10.71	10.79
30384_STA20	-	11.53	11.27	11.34	11.26
30384_STA5	-	10.41	10.50	10.46	10.54

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30384_STA8	-	10.51	10.61	10.57	10.65
30385	10.87	11.61	11.37	11.43	11.36
30386	10.88	11.65	11.42	11.48	11.41
30387	11.06	11.79	11.57	11.63	11.56
30388	11.24	11.94	11.72	11.78	11.71
30391	11.52	12.16	11.96	12.02	11.95
30393	11.84	12.43	12.25	12.30	12.24
30395	12.02	12.59	12.42	12.46	12.41
30396	12.03	12.60	12.49	12.52	12.50
30397	12.17	12.60	12.58	12.59	12.58
30399	12.64	13.01	12.99	13.00	12.99
30400	13.16	13.40	13.39	13.40	13.39
30401	13.50	13.69	13.68	13.69	13.68
30402	13.94	14.11	14.10	14.10	14.10
30403	14.23	14.39	14.38	14.38	14.38
30404	14.86	14.98	14.97	14.98	14.97
30405	9.76	9.60	9.68	9.65	9.72
30406	9.79	9.63	9.71	9.67	9.74
30407	10.03	9.86	9.94	9.91	9.98
30408	10.05	9.88	9.96	9.92	9.99
30410	10.80	11.16	10.71	10.68	10.75
30411	11.02	11.35	11.00	10.93	11.03
30412	11.52	11.68	11.54	11.41	11.54
30413	12.64	12.64	12.64	12.64	12.64
30414	14.56	14.56	14.56	14.56	14.56
30415	14.83	14.83	14.83	14.83	14.83
30416	15.68	15.68	15.68	15.68	15.68
30417	16.61	16.61	16.61	16.61	16.61
30418	17.14	17.14	17.14	17.14	17.14
30419	18.82	18.82	18.82	18.82	18.82
30421	12.25	12.27	12.25	12.24	12.25
30422	20.06	20.06	20.06	20.06	20.06
30423	20.90	20.90	20.90	20.90	20.90
30424	20.91	20.91	20.91	20.91	20.91
30425	14.14	14.14	14.14	14.14	14.14
30426	14.14	14.14	14.14	14.14	14.14
30427	14.14	14.14	14.14	14.14	14.14
30428	9.91	9.75	9.84	9.79	9.87
30429	9.91	9.75	9.84	9.79	9.87
30431	16.67	16.67	16.67	16.67	16.67
30432	20.59	20.59	20.59	20.59	20.59
30434	21.56	21.56	21.56	21.56	21.56
30436	22.84	22.84	22.84	22.84	22.84
30437	25.35	25.35	25.35	25.35	25.35
30438	25.37	25.37	25.37	25.37	25.37
30439	25.38	25.38	25.38	25.38	25.38
30440	25.39	25.39	25.39	25.39	25.39
30441	25.41	25.41	25.41	25.41	25.41
30442	25.48	25.48	25.48	25.48	25.48
30443	25.71	25.71	25.71	25.71	25.71

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30444	22.91	22.91	22.91	22.91	22.91
30445	22.34	22.34	22.34	22.34	22.34
30446	22.29	22.29	22.29	22.29	22.29
30447	22.29	22.29	22.29	22.29	22.29
30448	23.31	23.31	23.31	23.31	23.31
30449	23.64	23.64	23.64	23.64	23.64
30450	24.53	24.53	24.53	24.53	24.53
30451	24.98	24.98	24.98	24.98	24.98
30452	25.36	25.36	25.36	25.36	25.36
30453	25.36	25.36	25.36	25.36	25.36
30454	25.42	25.42	25.42	25.42	25.42
30455	25.40	25.40	25.40	25.40	25.40
30456	25.37	25.37	25.37	25.37	25.37
30457	25.89	25.89	25.89	25.89	25.89
30458	26.80	26.80	26.80	26.80	26.80
30459	27.47	27.47	27.47	27.47	27.47
30460	27.65	27.65	27.65	27.65	27.65
30461	27.83	27.83	27.83	27.83	27.83
30462	26.70	26.70	26.70	26.70	26.70
30463	26.83	26.83	26.83	26.83	26.83
30464	27.48	27.48	27.48	27.48	27.48
30465	27.39	27.39	27.39	27.39	27.39
30466	27.87	27.87	27.87	27.87	27.87
30467	25.45	25.45	25.45	25.45	25.45
30468	25.54	25.54	25.54	25.54	25.54
30469	26.35	26.35	26.35	26.35	26.35
30470	26.44	26.44	26.44	26.44	26.44
30473	26.57	26.57	26.57	26.57	26.57
30474	26.66	26.66	26.66	26.66	26.66
30475	26.85	26.85	26.85	26.85	26.85
30476	26.84	26.84	26.84	26.84	26.84
30477	26.57	26.57	26.57	26.57	26.57
30478	26.57	26.57	26.57	26.57	26.57
30479	26.88	26.88	26.88	26.88	26.88
30480	26.57	26.57	26.57	26.57	26.57
30482	27.08	27.08	27.08	27.08	27.08
30483	27.02	27.02	27.02	27.02	27.02
30484	27.68	27.68	27.68	27.68	27.68
30485	27.41	27.41	27.41	27.41	27.41
30486	27.68	27.68	27.68	27.68	27.68
30487	27.68	27.68	27.68	27.68	27.68
30488	27.75	27.75	27.75	27.75	27.75
30489	27.73	27.73	27.73	27.73	27.73
30490	27.92	27.92	27.92	27.92	27.92
30491	27.99	27.99	27.99	27.99	27.99
30492	28.60	28.60	28.60	28.60	28.60
30493	29.08	29.08	29.08	29.08	29.08
30494	29.42	29.42	29.42	29.42	29.42
30495	29.09	29.09	29.09	29.09	29.09
30496	29.20	29.20	29.20	29.20	29.20

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30497	29.61	29.61	29.61	29.61	29.61
30498	29.67	29.67	29.67	29.67	29.67
30499	30.55	30.55	30.55	30.55	30.55
30500	29.67	29.67	29.67	29.67	29.67
30501	29.54	29.54	29.54	29.54	29.54
30502	30.45	30.45	30.45	30.45	30.45
30503	28.74	28.74	28.74	28.74	28.74
30508	19.22	19.22	19.22	19.22	19.22
30509	19.55	19.55	19.55	19.55	19.55
30510	20.97	20.97	20.97	20.97	20.97
30511	22.11	22.11	22.11	22.11	22.11
30513	19.06	19.06	19.06	19.05	19.06
30514	19.37	19.38	19.37	19.37	19.37
30515	20.79	20.79	20.79	20.79	20.79
30516	21.20	21.20	21.20	21.20	21.20
30517	23.01	23.01	23.01	23.01	23.01
30518	26.10	26.10	26.10	26.10	26.10
30519	28.93	28.93	28.93	28.93	28.93
30520	29.94	29.94	29.94	29.94	29.94
30521	30.19	30.19	30.19	30.19	30.19
30522	30.38	30.38	30.38	30.38	30.38
30523	30.67	30.67	30.67	30.67	30.67
30524	30.75	30.75	30.75	30.75	30.75
30525	30.75	30.75	30.75	30.75	30.75
30526	29.07	29.07	29.07	29.07	29.07
30527	31.02	31.02	31.02	31.02	31.02
30528	32.95	32.95	32.95	32.95	32.95
30529	33.03	33.03	33.03	33.03	33.03
30530	19.73	19.73	19.73	19.73	19.73
30531	20.06	20.07	20.06	20.06	20.06
30532	19.42	19.42	19.42	19.42	19.42
30533	19.40	19.41	19.40	19.40	19.40
30535	22.47	22.47	22.47	22.47	22.47
30536	23.11	23.11	23.11	23.11	23.11
30537	25.37	25.37	25.37	25.37	25.37
30538	26.76	26.76	26.76	26.76	26.76
30539	28.17	28.17	28.17	28.17	28.17
30540	28.69	28.69	28.69	28.69	28.69
30541	28.81	28.81	28.81	28.81	28.81
30542	28.90	28.90	28.90	28.90	28.90
30543	29.63	29.63	29.63	29.63	29.63
30550	25.93	25.93	25.93	25.93	25.93
30552	28.67	28.67	28.67	28.67	28.67
30553	30.87	30.87	30.87	30.87	30.87
30554	31.08	31.08	31.08	31.08	31.08
30555	33.66	33.66	33.66	33.66	33.66
30556	33.25	33.25	33.25	33.25	33.25
30557	33.50	33.50	33.50	33.50	33.50
30558	25.94	25.94	25.94	25.94	25.94
30559	26.36	26.36	26.36	26.36	26.36

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30560	29.90	29.90	29.90	29.90	29.90
30561	30.66	30.66	30.66	30.66	30.66
30562	31.87	31.87	31.87	31.87	31.87
30563	33.11	33.11	33.11	33.11	33.11
30564	34.05	34.05	34.05	34.05	34.05
30565	33.27	33.27	33.27	33.27	33.27
30566	33.85	33.85	33.85	33.85	33.85
30567	33.70	33.70	33.70	33.70	33.70
30568	10.92	11.66	11.44	11.50	11.43
30569	10.95	11.68	11.46	11.52	11.45
30570	11.16	11.88	11.66	11.72	11.65
30571	11.21	11.92	11.70	11.76	11.69
30572	26.86	26.86	26.86	26.86	26.86
30573	11.15	11.79	11.57	11.65	11.56
30574	11.19	11.81	11.59	11.67	11.57
30575	11.89	12.20	12.05	12.18	12.00
30576	12.19	12.44	12.26	12.43	12.26
30577	13.31	13.36	13.33	13.36	13.33
30578	13.67	13.71	13.68	13.72	13.68
30579	13.90	13.94	13.91	13.94	13.91
30580	14.07	14.10	14.08	14.10	14.08
30581	14.18	14.21	14.19	14.21	14.19
30582	15.08	15.09	15.08	15.09	15.08
30583	16.08	16.08	16.08	16.08	16.08
30584	16.33	16.33	16.33	16.33	16.33
30585	17.33	17.33	17.33	17.33	17.33
30586	17.59	17.59	17.59	17.59	17.59
30588	14.28	14.30	14.29	14.31	14.29
30590	19.82	19.82	19.82	19.82	19.82
30591	18.31	18.32	18.32	18.32	18.32
30592	18.13	18.14	18.13	18.14	18.13
30593	16.28	16.29	16.29	16.29	16.29
30595	16.58	16.59	16.59	16.59	16.59
30597	16.77	16.78	16.78	16.78	16.78
30599	17.02	17.02	17.02	17.02	17.02
30601	17.02	17.02	17.02	17.02	17.02
30603	16.22	16.23	16.23	16.23	16.23
30604	16.80	16.80	16.80	16.80	16.80
30605	18.43	18.43	18.43	18.43	18.43
30606	19.24	19.24	19.24	19.24	19.24
30607	20.46	20.46	20.46	20.46	20.46
30608	20.89	20.89	20.89	20.89	20.89
30609	21.39	21.39	21.39	21.39	21.39
30610	22.54	22.54	22.54	22.54	22.54
30611	22.59	22.59	22.59	22.59	22.59
30612	21.41	21.41	21.41	21.41	21.41
30613	22.79	22.79	22.79	22.79	22.79
30614	11.06	11.80	11.57	11.63	11.56
30615	11.70	11.80	11.70	11.70	11.70
30616	13.73	13.73	13.73	13.73	13.73

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30617	17.65	17.65	17.65	17.65	17.65
30618	18.72	18.72	18.72	18.72	18.72
30619	11.43	12.00	11.79	11.87	11.78
30620	11.52	12.03	11.82	11.91	11.80
30621	11.52	12.03	11.82	11.91	11.80
30622	12.60	12.77	12.65	12.78	12.66
30623	13.08	13.14	13.10	13.15	13.10
30624	13.40	13.43	13.41	13.43	13.41
30626	15.15	15.15	15.15	15.15	15.15
30627	12.18	12.49	12.29	12.50	12.29
30628	18.71	18.71	18.71	18.71	18.71
30629	12.15	12.31	12.20	12.29	12.20
30630	12.39	12.44	12.41	12.44	12.41
30631	12.91	12.92	12.91	12.92	12.91
30632	13.07	13.08	13.08	13.08	13.08
30633	13.42	13.42	13.42	13.42	13.42
30634	14.02	14.02	14.02	14.02	14.02
30635	14.06	14.06	14.06	14.07	14.06
30636	14.11	14.12	14.11	14.12	14.11
30637	16.65	16.65	16.65	16.65	16.65
30638	16.66	16.66	16.66	16.66	16.66
30639	16.69	16.69	16.69	16.69	16.69
30640	16.75	16.75	16.75	16.75	16.75
30641	16.81	16.81	16.81	16.81	16.81
30642	16.84	16.84	16.84	16.84	16.84
30643	17.01	17.01	17.01	17.01	17.01
30644	14.31	14.31	14.31	14.31	14.31
30645	17.71	17.71	17.71	17.71	17.71
30646	17.74	17.74	17.74	17.74	17.74
30647	17.89	17.89	17.89	17.89	17.89
30648	17.85	17.85	17.85	17.85	17.85
30649	16.96	16.96	16.96	16.96	16.96
30650	17.03	17.03	17.03	17.03	17.03
30651	11.84	12.43	12.25	12.30	12.25
30652	12.29	12.49	12.36	12.40	12.35
30653	11.95	12.58	12.41	12.45	12.40
30654	15.71	15.74	15.72	15.74	15.72
30655	11.96	12.58	12.41	12.46	12.40
30656	14.07	14.07	14.07	14.07	14.07
30657	12.82	12.81	12.81	12.81	12.81
30658	14.94	14.93	14.93	14.93	14.93
30659	19.07	19.07	19.07	19.07	19.07
30660	12.02	12.59	12.42	12.46	12.41
30661	12.03	12.60	12.49	12.52	12.50
30662	12.09	12.60	12.43	12.47	12.42
30663	12.03	12.60	12.50	12.52	12.50
30664	25.16	25.16	25.16	25.16	25.16
30665	22.12	22.12	22.12	22.12	22.12
30666	20.06	20.06	20.06	20.06	20.06
30667	14.86	14.98	14.97	14.98	14.97

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30668	14.56	14.64	14.63	14.64	14.63
30669	14.83	14.96	14.95	14.96	14.95
30670A	15.45	15.45	15.45	15.45	15.45
30670C	13.14	13.14	13.14	13.14	13.14
30670F	12.57	12.60	12.58	12.60	12.58
30670G	12.32	12.53	12.53	12.53	12.53
30671A	13.99	14.03	14.01	14.03	14.01
30671B	12.32	12.54	12.53	12.53	12.53
30672	12.02	12.76	12.73	12.75	12.73
30673A	13.61	13.74	13.73	13.73	13.73
30673B	13.56	13.74	13.73	13.73	13.73
30673C	11.77	12.77	12.74	12.75	12.73
30674A	13.56	13.73	13.73	13.73	13.73
30674B	13.56	13.73	13.73	13.73	13.72
30674C	13.55	13.73	13.72	13.73	13.72
30674D	13.56	13.73	13.73	13.73	13.73
30674E	11.10	12.77	12.74	12.76	12.74
30675	11.10	12.77	12.74	12.76	12.74
30676	11.10	12.77	12.74	12.76	12.74
30677	11.14	12.77	12.74	12.76	12.74
30677A	11.09	12.77	12.74	12.76	12.74
30678	11.02	12.77	12.74	12.76	12.74
30678A	11.02	12.77	12.74	12.76	12.74
30679A	13.55	13.73	13.72	13.73	13.72
30679B	13.55	13.73	13.72	13.73	13.72
30679C	11.78	12.77	12.74	12.76	12.74
30679D	11.03	12.77	12.74	12.76	12.74
30680	8.90	9.18	9.13	9.15	9.13
30684	8.78	9.13	8.79	8.80	8.79
30690	8.77	9.13	8.78	8.79	8.78
30691AU	8.76	9.14	8.77	8.78	8.77
30691B	9.42	10.12	9.98	10.06	9.97
30691C	10.01	11.84	11.78	11.81	11.77
30691D	10.98	12.77	12.74	12.76	12.74
30691ED	10.98	12.77	12.74	12.76	12.74
30691EU	11.61	12.89	12.84	12.87	12.84
30691F	13.74	13.74	13.74	13.74	13.74
30691G	13.55	13.73	13.72	13.73	13.72
30692A	16.69	16.69	16.69	16.69	16.69
30692B	14.75	14.75	14.75	14.75	14.75
30692C	12.59	12.61	12.59	12.61	12.59
30693A	13.23	13.23	13.23	13.23	13.23
30693B	9.14	9.14	9.14	9.14	9.14
30694A	13.46	13.46	13.46	13.46	13.46
30694B	12.58	12.60	12.58	12.60	12.58
30694C	9.09	9.13	9.09	9.09	9.09
30695	8.85	9.13	8.85	8.85	8.85
30696A	12.64	12.64	12.64	12.64	12.64
30696B	13.66	13.66	13.66	13.66	13.66
30696C	8.77	9.13	8.78	8.79	8.78

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30697A	14.06	14.06	14.06	14.06	14.06
30697C	8.77	9.13	8.78	8.79	8.78
30698	8.77	9.13	8.78	8.79	8.78
30699	8.77	9.13	8.78	8.79	8.78
30700	13.55	13.73	13.72	13.73	13.72
30702	13.68	13.85	13.84	13.84	13.84
30704	13.99	14.13	14.12	14.12	14.12
30706	14.87	14.87	14.87	14.87	14.87
30708	15.45	15.46	15.45	15.46	15.45
30709	16.91	16.96	16.96	16.96	16.96
30710	16.94	16.99	16.99	16.99	16.99
30712	17.27	17.32	17.31	17.32	17.31
30713	17.33	17.37	17.36	17.37	17.36
30714	17.49	17.53	17.52	17.53	17.52
30715	17.73	17.76	17.75	17.76	17.75
30716	17.97	18.00	17.99	18.00	17.99
30717	18.23	18.25	18.24	18.25	18.24
30720	19.52	19.52	19.52	19.52	19.52
30721	19.66	19.66	19.66	19.66	19.66
30722	20.34	20.34	20.34	20.34	20.34
30723	20.94	20.94	20.94	20.94	20.94
30724	18.73	18.73	18.73	18.73	18.73
30725	13.97	13.97	13.97	13.97	13.97
30726	13.69	13.85	13.84	13.85	13.84
30727	15.45	15.45	15.45	15.45	15.45
30728	15.59	15.60	15.59	15.60	15.59
30729	15.94	15.94	15.94	15.94	15.94
30730	17.08	17.08	17.08	17.08	17.08
30732	18.22	18.22	18.22	18.22	18.22
30733	19.63	19.63	19.63	19.63	19.63
30734	22.12	22.12	22.12	22.12	22.12
30735	23.81	23.81	23.81	23.81	23.81
30736	19.87	19.87	19.87	19.87	19.87
30737	17.55	17.55	17.55	17.55	17.55
30738	19.13	19.13	19.13	19.13	19.13
30739	18.26	18.26	18.26	18.26	18.26
30740	17.55	17.55	17.55	17.55	17.55
30741	16.48	16.48	16.48	16.48	16.48
30742	15.31	15.32	15.31	15.32	15.31
30743	15.67	15.68	15.67	15.68	15.67
30744	16.09	16.09	16.09	16.09	16.09
30745	16.76	16.76	16.76	16.76	16.76
30746	18.69	18.69	18.69	18.69	18.69
30747	19.17	19.17	19.17	19.17	19.17
30748	19.59	19.59	19.59	19.59	19.59
30749	20.04	20.04	20.04	20.04	20.04
30750	20.63	20.63	20.63	20.63	20.63
30751	21.21	21.21	21.21	21.21	21.21
30752	21.78	21.78	21.78	21.78	21.78
30753	22.47	22.47	22.47	22.47	22.47

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30754	23.10	23.10	23.10	23.10	23.10
30755	23.28	23.28	23.28	23.28	23.28
30756	23.60	23.60	23.60	23.60	23.60
30757	25.19	25.19	25.19	25.19	25.19
30759	26.43	26.43	26.43	26.43	26.43
30761	27.35	27.35	27.35	27.35	27.35
30762	27.62	27.62	27.62	27.62	27.62
30763	27.66	27.66	27.66	27.66	27.66
30765	29.63	29.63	29.63	29.63	29.63
30767	23.09	23.09	23.09	23.09	23.09
30768	25.45	25.45	25.45	25.45	25.45
30769	23.94	23.94	23.94	23.94	23.94
30770	29.02	29.02	29.02	29.02	29.02
30775	19.13	19.13	19.13	19.13	19.13
30777	25.31	25.31	25.31	25.31	25.31
30779	23.09	23.09	23.09	23.09	23.09
30780	22.96	22.96	22.96	22.96	22.96
30781	24.84	24.84	24.84	24.84	24.84
30782	21.82	21.82	21.82	21.82	21.82
30783	18.80	18.80	18.80	18.80	18.80
30784	19.97	19.97	19.97	19.97	19.97
30785	17.86	17.89	17.88	17.89	17.88
30786	18.94	18.94	18.94	18.94	18.94
30787	22.79	22.79	22.79	22.79	22.79
30788	22.88	22.88	22.88	22.88	22.88
30790	20.65	20.65	20.65	20.65	20.65
30792	26.31	26.31	26.31	26.31	26.31
30793	28.87	28.87	28.87	28.87	28.87
30795	30.03	30.03	30.03	30.03	30.03
30800	20.93	20.93	20.93	20.93	20.93
30801	20.94	20.94	20.94	20.94	20.94
30802	20.95	20.95	20.95	20.95	20.95
30803	21.08	21.08	21.08	21.08	21.08
30804	21.47	21.47	21.47	21.47	21.47
30805	22.42	22.42	22.42	22.42	22.42
30806	23.06	23.06	23.06	23.06	23.06
30807	23.08	23.08	23.08	23.08	23.08
30808	23.89	23.89	23.89	23.89	23.89
30811	24.34	24.34	24.34	24.34	24.34
30814	24.45	24.45	24.45	24.45	24.45
30815	24.51	24.51	24.51	24.51	24.51
30816	24.52	24.52	24.52	24.52	24.52
30817	21.54	21.54	21.54	21.54	21.54
30818	21.55	21.55	21.55	21.55	21.55
30820	24.83	24.83	24.83	24.83	24.83
30821	20.88	20.88	20.88	20.88	20.88
30822	20.87	20.87	20.87	20.87	20.87
30823	20.69	20.69	20.69	20.69	20.69
30824	20.69	20.69	20.69	20.69	20.69
30825	24.17	24.17	24.17	24.17	24.17

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30826	20.87	20.87	20.87	20.87	20.87
30827	20.87	20.87	20.87	20.87	20.87
30828	20.88	20.88	20.88	20.88	20.88
30830	23.43	23.43	23.43	23.43	23.43
30831	24.09	24.09	24.09	24.09	24.09
30832	24.34	24.34	24.34	24.34	24.34
30833	26.13	26.13	26.13	26.13	26.13
30834	26.15	26.15	26.15	26.15	26.15
30835	24.34	24.34	24.34	24.34	24.34
30836	24.44	24.44	24.44	24.44	24.44
30837	24.53	24.53	24.53	24.53	24.53
30838	24.43	24.43	24.43	24.43	24.43
30840	23.09	23.09	23.09	23.09	23.09
30841	24.71	24.71	24.71	24.71	24.71
30842	24.82	24.82	24.82	24.82	24.82
30843	24.82	24.82	24.82	24.82	24.82
30844	24.84	24.84	24.84	24.84	24.84
30845	25.45	25.45	25.45	25.45	25.45
30846	25.72	25.72	25.72	25.72	25.72
30847	27.15	27.15	27.15	27.15	27.15
30848	27.15	27.15	27.15	27.15	27.15
30849	27.16	27.16	27.16	27.16	27.16
30850	24.71	24.71	24.71	24.71	24.71
30852	25.11	25.11	25.11	25.11	25.11
30853	25.57	25.57	25.57	25.57	25.57
30854	24.93	24.93	24.93	24.93	24.93
30855	25.00	25.00	25.00	25.00	25.00
30856	27.07	27.07	27.07	27.07	27.07
30857	27.42	27.42	27.42	27.42	27.42
30858	26.32	26.32	26.32	26.32	26.32
30859	25.78	25.78	25.78	25.78	25.78
30860	26.65	26.65	26.65	26.65	26.65
30861	26.96	26.96	26.96	26.96	26.96
30862	26.97	26.97	26.97	26.97	26.97
30863	27.69	27.69	27.69	27.69	27.69
30864	27.69	27.69	27.69	27.69	27.69
30865	27.71	27.71	27.71	27.71	27.71
30867	26.33	26.33	26.33	26.33	26.33
30868	25.01	25.01	25.01	25.01	25.01
30870	21.54	21.54	21.54	21.54	21.54
30871	21.67	21.67	21.67	21.67	21.67
30872	21.80	21.80	21.80	21.80	21.80
30873	21.93	21.93	21.93	21.93	21.93
30874	23.02	23.02	23.02	23.02	23.02
30875	23.45	23.45	23.45	23.45	23.45
30876	24.38	24.38	24.38	24.38	24.38
30877	23.19	23.19	23.19	23.19	23.19
30878	25.56	25.56	25.56	25.56	25.56
30879	26.32	26.32	26.32	26.32	26.32
30880	26.33	26.33	26.33	26.33	26.33

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30881	26.34	26.34	26.34	26.34	26.34
30882	26.55	26.55	26.55	26.55	26.55
30883	26.59	26.59	26.59	26.59	26.59
30886	24.55	24.55	24.55	24.55	24.55
30887	24.57	24.57	24.57	24.57	24.57
30890	24.66	24.66	24.66	24.66	24.66
30891	24.67	24.67	24.67	24.67	24.67
30892	24.66	24.66	24.66	24.66	24.66
30893	24.67	24.67	24.67	24.67	24.67
30894	25.13	25.13	25.13	25.13	25.13
30895	25.24	25.24	25.24	25.24	25.24
30896	26.40	26.40	26.40	26.40	26.40
30897	26.47	26.47	26.47	26.47	26.47
30898	28.62	28.62	28.62	28.62	28.62
30900	24.55	24.55	24.55	24.55	24.55
30901	24.57	24.57	24.57	24.57	24.57
30902	26.70	26.70	26.70	26.70	26.70
30903	24.57	24.57	24.57	24.57	24.57
30904	24.58	24.58	24.58	24.58	24.58
30905	24.66	24.66	24.66	24.66	24.66
30906	29.25	29.25	29.25	29.25	29.25
30907	24.66	24.66	24.66	24.66	24.66
30908	26.75	26.75	26.75	26.75	26.75
30909	26.86	26.86	26.86	26.86	26.86
30910	27.17	27.17	27.17	27.17	27.17
30911	27.39	27.39	27.39	27.39	27.39
30912	28.24	28.24	28.24	28.24	28.24
30913	26.24	26.24	26.24	26.24	26.24
30915	28.54	28.54	28.54	28.54	28.54
30916	28.58	28.58	28.58	28.58	28.58
30917	29.36	29.36	29.36	29.36	29.36
30918	29.97	29.97	29.97	29.97	29.97
30919	29.97	29.97	29.97	29.97	29.97
30943	24.58	24.58	24.58	24.58	24.58
30944	24.58	24.58	24.58	24.58	24.58
30945	25.43	25.43	25.43	25.43	25.43
30946	25.55	25.55	25.55	25.55	25.55
30947	24.58	24.58	24.58	24.58	24.58
30948	26.99	26.99	26.99	26.99	26.99
30949	25.58	25.58	25.58	25.58	25.58
30950	24.53	24.53	24.53	24.53	24.53
30951	24.53	24.53	24.53	24.53	24.53
30952	24.58	24.58	24.58	24.58	24.58
30953	24.58	24.58	24.58	24.58	24.58
30954	24.61	24.61	24.61	24.61	24.61
30955	24.75	24.75	24.75	24.75	24.75
30956	24.77	24.77	24.77	24.77	24.77
30957	24.77	24.77	24.77	24.77	24.77
30958	24.80	24.80	24.80	24.80	24.80
30959	24.80	24.80	24.80	24.80	24.80

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
30960	24.80	24.80	24.80	24.80	24.80
30961	24.81	24.81	24.81	24.81	24.81
30962	24.82	24.82	24.82	24.82	24.82
30963	24.77	24.77	24.77	24.77	24.77
30964	24.78	24.78	24.78	24.78	24.78
30965	24.79	24.79	24.79	24.79	24.79
30966	24.91	24.91	24.91	24.91	24.91
30967	24.79	24.79	24.79	24.79	24.79
30969	25.56	25.56	25.56	25.56	25.56
30971	25.39	25.39	25.39	25.39	25.39
30972	26.06	26.06	26.06	26.06	26.06
30973	26.44	26.44	26.44	26.44	26.44
30974	26.25	26.25	26.25	26.25	26.25
30975	24.80	24.80	24.80	24.80	24.80
30976	24.80	24.80	24.80	24.80	24.80
30977	24.87	24.87	24.87	24.87	24.87
30978	27.68	27.68	27.68	27.68	27.68
30979	26.69	26.69	26.69	26.69	26.69
30980	27.69	27.69	27.69	27.69	27.69
30981	26.25	26.25	26.25	26.25	26.25
30982	26.23	26.23	26.23	26.23	26.23
30983	26.18	26.18	26.18	26.18	26.18
30984	24.90	24.90	24.90	24.90	24.90
30985	26.01	26.01	26.01	26.01	26.01
30986	25.78	25.78	25.78	25.78	25.78
30989	25.18	25.18	25.18	25.18	25.18
30990	24.86	24.86	24.86	24.86	24.86
30991	24.91	24.91	24.91	24.91	24.91
30993	24.85	24.85	24.85	24.85	24.85
30995	25.01	25.01	25.01	25.01	25.01
30996	26.86	26.86	26.86	26.86	26.86
30997	25.15	25.15	25.15	25.15	25.15
30998	27.42	27.42	27.42	27.42	27.42
30999	25.36	25.36	25.36	25.36	25.36
31000	24.34	24.34	24.34	24.34	24.34
31001	24.41	24.41	24.41	24.41	24.41
31002	24.43	24.44	24.44	24.44	24.44
31003	25.08	25.08	25.08	25.08	25.08
31004	25.71	25.71	25.71	25.71	25.71
31007	25.77	25.77	25.77	25.77	25.77
31008	26.15	26.15	26.15	26.15	26.15
31009	26.19	26.19	26.19	26.19	26.19
31010	26.26	26.26	26.26	26.26	26.26
31011	26.35	26.35	26.35	26.35	26.35
31012	26.43	26.43	26.43	26.43	26.43
31013	26.53	26.53	26.53	26.53	26.53
31014	26.23	26.23	26.23	26.23	26.23
31015	25.72	25.72	25.72	25.72	25.72
31016	25.79	25.79	25.79	25.79	25.79
31018	25.78	25.78	25.78	25.78	25.78

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31019	25.76	25.76	25.76	25.76	25.76
31020	25.80	25.80	25.80	25.80	25.80
31022	25.85	25.85	25.85	25.85	25.85
31023	25.89	25.89	25.89	25.89	25.89
31024	25.88	25.88	25.88	25.88	25.88
31025	27.23	27.23	27.23	27.23	27.23
31026	26.21	26.21	26.21	26.21	26.21
31027	26.91	26.91	26.91	26.91	26.91
31028	26.23	26.23	26.23	26.23	26.23
31029	27.21	27.21	27.21	27.21	27.21
31030	26.20	26.20	26.20	26.20	26.20
31040	24.55	24.55	24.55	24.55	24.55
31041	24.62	24.62	24.62	24.62	24.62
31042	24.66	24.66	24.66	24.66	24.66
31044	24.82	24.82	24.82	24.82	24.82
31045	24.84	24.84	24.84	24.84	24.84
31046	24.88	24.88	24.88	24.88	24.88
31047	26.26	26.26	26.26	26.26	26.26
31048	26.35	26.35	26.35	26.35	26.35
31049	26.56	26.56	26.56	26.56	26.56
31051	24.53	24.53	24.53	24.53	24.53
31052	26.99	26.99	26.99	26.99	26.99
31053	26.18	26.18	26.18	26.18	26.18
31054	29.35	29.35	29.35	29.35	29.35
31055	27.04	27.04	27.04	27.04	27.04
31056	27.86	27.86	27.86	27.86	27.86
31057	28.67	28.67	28.67	28.67	28.67
31059	31.13	31.13	31.13	31.13	31.13
31060	30.92	30.92	30.92	30.92	30.92
31061	26.20	26.20	26.20	26.20	26.20
31062	28.98	28.98	28.98	28.98	28.98
31063	30.35	30.35	30.35	30.35	30.35
31070	29.34	29.34	29.34	29.34	29.34
31072	29.36	29.36	29.36	29.36	29.36
31073	29.39	29.39	29.39	29.39	29.39
31074	29.43	29.43	29.43	29.43	29.43
31076	29.71	29.71	29.71	29.71	29.71
31077	30.78	30.78	30.78	30.78	30.78
31100	15.15	15.27	15.26	15.27	15.26
31101	15.21	15.32	15.31	15.32	15.31
31102	15.36	15.48	15.46	15.47	15.46
31103	15.43	15.54	15.53	15.54	15.53
31104	15.85	15.93	15.92	15.93	15.92
31105	16.06	16.14	16.13	16.14	16.13
31106	16.70	16.76	16.75	16.76	16.75
31107	17.06	17.11	17.10	17.11	17.10
31108	17.73	17.76	17.75	17.76	17.75
31110	17.75	17.77	17.77	17.77	17.77
31113	17.80	17.83	17.82	17.83	17.82
31114	17.82	17.84	17.84	17.84	17.84

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31116	17.99	17.99	17.99	17.99	17.99
31117	18.11	18.11	18.11	18.11	18.11
31118	20.61	20.61	20.61	20.61	20.61
31119	20.96	20.96	20.96	20.96	20.96
31120	21.28	21.28	21.28	21.28	21.28
31122	23.47	23.47	23.47	23.47	23.47
31123	27.98	27.98	27.98	27.98	27.98
31125	15.41	15.52	15.51	15.51	15.51
31126	15.67	15.71	15.71	15.71	15.71
31127	16.06	16.14	16.13	16.14	16.13
31128	15.54	15.54	15.54	15.54	15.54
31129	16.47	16.47	16.47	16.47	16.47
31130	18.33	18.33	18.33	18.33	18.33
31131	15.65	15.65	15.65	15.65	15.65
31132	19.42	19.42	19.42	19.42	19.42
31133	19.50	19.50	19.50	19.50	19.50
31134	15.47	15.55	15.54	15.55	15.54
31135	19.00	19.00	19.00	19.00	19.00
31137	17.75	17.78	17.77	17.78	17.77
31138	17.75	17.78	17.78	17.78	17.78
31139	17.76	17.79	17.78	17.79	17.78
31140	18.53	18.53	18.53	18.53	18.53
31142	17.75	17.78	17.77	17.78	17.77
31144	18.70	18.70	18.70	18.70	18.70
31145	21.94	21.94	21.94	21.94	21.94
31146	22.98	22.98	22.98	22.98	22.98
31148	22.70	22.70	22.70	22.70	22.70
31150	19.68	19.68	19.68	19.68	19.68
31151	19.67	19.67	19.67	19.67	19.67
31152	19.87	19.87	19.87	19.87	19.87
31155	17.84	17.87	17.86	17.87	17.86
31156	18.00	18.00	18.00	18.00	18.00
31158	17.84	17.87	17.86	17.87	17.86
31160	20.65	20.65	20.65	20.65	20.65
31161	21.23	21.23	21.23	21.23	21.23
31163	20.51	20.51	20.51	20.51	20.51
31164	23.85	23.85	23.85	23.85	23.85
31166	19.54	19.54	19.54	19.54	19.54
31167	19.92	19.92	19.92	19.92	19.92
31169	17.77	17.80	17.79	17.80	17.79
31170	17.80	17.83	17.82	17.83	17.82
31172	20.96	20.96	20.96	20.96	20.96
31173	25.69	25.69	25.69	25.69	25.69
31175	27.38	27.38	27.38	27.38	27.38
31177	27.51	27.51	27.51	27.51	27.51
31178	28.06	28.06	28.06	28.06	28.06
31179	28.26	28.26	28.26	28.26	28.26
31180	28.45	28.45	28.45	28.45	28.45
31182	27.94	27.94	27.94	27.94	27.94
31185	23.17	23.17	23.17	23.17	23.17

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31186	23.72	23.72	23.72	23.72	23.72
31202	16.54	16.59	16.58	16.59	16.58
31204	16.54	16.59	16.58	16.59	16.58
31206	16.55	16.60	16.59	16.60	16.59
31208	16.54	16.59	16.58	16.59	16.58
31210	16.54	16.59	16.58	16.59	16.58
31215	16.71	16.75	16.74	16.75	16.74
31216	16.70	16.74	16.73	16.74	16.73
31218	16.65	16.69	16.69	16.69	16.69
31222	16.63	16.67	16.66	16.67	16.66
31224	16.55	16.60	16.59	16.60	16.59
31226	16.55	16.60	16.59	16.60	16.59
31228	17.71	17.71	17.71	17.71	17.71
31228A	17.93	17.93	17.93	17.93	17.93
31228B	18.01	18.01	18.01	18.01	18.01
31228C	18.12	18.12	18.12	18.12	18.12
31230	18.38	18.38	18.38	18.38	18.38
31230A	18.48	18.48	18.48	18.48	18.48
31230B	18.54	18.54	18.54	18.54	18.54
31230C	18.58	18.58	18.58	18.58	18.58
31232	18.70	18.70	18.70	18.70	18.70
31232A	18.74	18.74	18.74	18.74	18.74
31232B	19.25	19.25	19.25	19.25	19.25
31238	20.48	20.48	20.48	20.48	20.48
31240	19.69	19.69	19.69	19.69	19.69
31242	20.88	20.88	20.88	20.88	20.88
31244	23.63	23.63	23.63	23.63	23.63
31245	24.05	24.05	24.05	24.05	24.05
31246	23.98	23.98	23.98	23.98	23.98
31247	25.79	25.79	25.79	25.79	25.79
31248	23.68	23.68	23.68	23.68	23.68
31249	24.33	24.33	24.33	24.33	24.33
31250	16.70	16.74	16.73	16.74	16.73
31252	16.70	16.74	16.74	16.74	16.74
31254	16.70	16.74	16.74	16.74	16.74
31256	18.24	18.24	18.24	18.24	18.24
31258	19.87	19.87	19.87	19.87	19.87
31260	20.55	20.55	20.55	20.55	20.55
31262	20.79	20.79	20.79	20.79	20.79
31264	21.58	21.58	21.58	21.58	21.58
31270	16.84	16.84	16.84	16.84	16.84
31272	17.45	17.45	17.45	17.45	17.45
31274	18.27	18.27	18.27	18.27	18.27
31276	18.32	18.32	18.32	18.32	18.32
31278	18.76	18.76	18.76	18.76	18.76
31280	19.52	19.52	19.52	19.52	19.52
31281	21.78	21.78	21.78	21.78	21.78
31282	23.68	23.68	23.68	23.68	23.68
31283	25.50	25.50	25.50	25.50	25.50
31284	25.50	25.50	25.50	25.50	25.50

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31285	25.50	25.50	25.50	25.50	25.50
31289	23.53	23.53	23.53	23.53	23.53
31290	18.34	18.34	18.34	18.34	18.34
31292	18.85	18.85	18.85	18.85	18.85
31294	19.11	19.11	19.11	19.11	19.11
31296	19.37	19.37	19.37	19.37	19.37
31300	21.98	21.98	21.98	21.98	21.98
31301	22.55	22.55	22.55	22.55	22.55
31302	22.75	22.75	22.75	22.75	22.75
31303	22.94	22.94	22.94	22.94	22.94
31304	23.43	23.43	23.43	23.43	23.43
31305	23.48	23.48	23.48	23.48	23.48
31306	23.88	23.88	23.88	23.88	23.88
31307	24.26	24.26	24.26	24.26	24.26
31308	24.57	24.57	24.57	24.57	24.57
31309	24.90	24.90	24.90	24.90	24.90
31310	24.99	24.99	24.99	24.99	24.99
31311	25.11	25.11	25.11	25.11	25.11
31312	25.41	25.41	25.41	25.41	25.41
31314	25.92	25.92	25.92	25.92	25.92
31315	26.08	26.08	26.08	26.08	26.08
31316	26.23	26.23	26.23	26.23	26.23
31317	28.39	28.39	28.39	28.39	28.39
31318	28.45	28.45	28.45	28.45	28.45
31319	28.72	28.72	28.72	28.72	28.72
31320	28.84	28.84	28.84	28.84	28.84
31321	28.91	28.91	28.91	28.91	28.91
31322	29.40	29.40	29.40	29.40	29.40
31325	29.73	29.73	29.73	29.73	29.73
31326	29.90	29.90	29.90	29.90	29.90
31327	30.11	30.11	30.11	30.11	30.11
31328	30.11	30.11	30.11	30.11	30.11
31329	30.11	30.11	30.11	30.11	30.11
31330	30.12	30.12	30.12	30.12	30.12
31332	30.14	30.14	30.14	30.14	30.14
31334	30.15	30.15	30.15	30.15	30.15
31336	30.19	30.19	30.19	30.19	30.19
31337	30.35	30.35	30.35	30.35	30.35
31338	30.37	30.37	30.37	30.37	30.37
31339	30.75	30.75	30.75	30.75	30.75
31340	31.20	31.20	31.20	31.20	31.20
31343	32.04	32.04	32.04	32.04	32.04
31344	32.91	32.91	32.91	32.91	32.91
31346	32.96	32.96	32.96	32.96	32.96
31347	33.00	33.00	33.00	33.00	33.00
31348	33.00	33.00	33.00	33.00	33.00
31349	21.98	21.98	21.98	21.98	21.98
31350	22.85	22.85	22.85	22.85	22.85
31351	23.54	23.54	23.54	23.54	23.54
31352	25.05	25.05	25.05	25.05	25.05

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31353	25.06	25.06	25.06	25.06	25.06
31354	25.29	25.29	25.29	25.29	25.29
31355	27.31	27.31	27.31	27.31	27.31
31358	24.69	24.69	24.69	24.69	24.69
31359	24.75	24.75	24.75	24.75	24.75
31360	24.90	24.90	24.90	24.90	24.90
31361	25.36	25.36	25.36	25.36	25.36
31362	25.39	25.39	25.39	25.39	25.39
31363	25.83	25.83	25.83	25.83	25.83
31364	25.84	25.84	25.84	25.84	25.84
31365	25.88	25.88	25.88	25.88	25.88
31366	26.74	26.74	26.74	26.74	26.74
31367	26.74	26.74	26.74	26.74	26.74
31368	27.48	27.48	27.48	27.48	27.48
31369	27.57	27.57	27.57	27.57	27.57
31370	27.58	27.58	27.58	27.58	27.58
31371	28.28	28.28	28.28	28.28	28.28
31372	28.29	28.29	28.29	28.29	28.29
31373	28.43	28.43	28.43	28.43	28.43
31374	28.45	28.45	28.45	28.45	28.45
31378	25.84	25.84	25.84	25.84	25.84
31379	25.85	25.85	25.85	25.85	25.85
31381	25.85	25.85	25.85	25.85	25.85
31382	26.11	26.11	26.11	26.11	26.11
31383	27.21	27.21	27.21	27.21	27.21
31385	28.21	28.21	28.21	28.21	28.21
31387	27.57	27.57	27.57	27.57	27.57
31390	25.27	25.27	25.27	25.27	25.27
31391	25.30	25.30	25.30	25.30	25.30
31392	27.29	27.29	27.29	27.29	27.29
31393	27.66	27.66	27.66	27.66	27.66
31394	28.29	28.29	28.29	28.29	28.29
31396	28.59	28.59	28.59	28.59	28.59
31398	25.90	25.90	25.90	25.90	25.90
31400	25.88	25.88	25.88	25.88	25.88
31402	25.91	25.91	25.91	25.91	25.91
31404	27.40	27.40	27.40	27.40	27.40
31405	28.03	28.03	28.03	28.03	28.03
31406	29.95	29.95	29.95	29.95	29.95
31407	30.18	30.18	30.18	30.18	30.18
31408	30.51	30.51	30.51	30.51	30.51
31410	27.96	27.96	27.96	27.96	27.96
31411	28.55	28.55	28.55	28.55	28.55
31413	25.96	25.96	25.96	25.96	25.96
31415	28.68	28.68	28.68	28.68	28.68
31416	28.79	28.79	28.79	28.79	28.79
31417	28.88	28.88	28.88	28.88	28.88
31418	28.96	28.96	28.96	28.96	28.96
31419	28.99	28.99	28.99	28.99	28.99
31420	29.27	29.27	29.27	29.27	29.27

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31421	29.51	29.51	29.51	29.51	29.51
31422	29.84	29.84	29.84	29.84	29.84
31423	28.45	28.45	28.45	28.45	28.45
31424	28.91	28.91	28.91	28.91	28.91
31430	28.44	28.44	28.44	28.44	28.44
31432	30.27	30.27	30.27	30.27	30.27
31433	30.30	30.30	30.30	30.30	30.30
31434	31.35	31.35	31.35	31.35	31.35
31435	34.43	34.43	34.43	34.43	34.43
31436	34.43	34.43	34.43	34.43	34.43
31438	34.44	34.44	34.44	34.44	34.44
31440	28.47	28.47	28.47	28.47	28.47
31442	32.00	32.00	32.00	32.00	32.00
31444	29.49	29.49	29.49	29.49	29.49
31445	32.08	32.08	32.08	32.08	32.08
31446	30.88	30.88	30.88	30.88	30.88
31450	31.17	31.17	31.17	31.17	31.17
31451	34.25	34.25	34.25	34.25	34.25
31455	28.84	28.84	28.84	28.84	28.84
31456	29.25	29.25	29.25	29.25	29.25
31458	29.27	29.27	29.27	29.27	29.27
31460	31.20	31.20	31.20	31.20	31.20
31462	30.73	30.73	30.73	30.73	30.73
31463	31.47	31.47	31.47	31.47	31.47
31464	30.95	30.95	30.95	30.95	30.95
31468	31.90	31.90	31.90	31.90	31.90
31469	32.34	32.34	32.34	32.34	32.34
31470	29.73	29.73	29.73	29.73	29.73
31473	32.65	32.65	32.65	32.65	32.65
31500	30.13	30.13	30.13	30.13	30.13
31501	30.20	30.20	30.20	30.20	30.20
31502	30.62	30.62	30.62	30.62	30.62
31503	31.57	31.57	31.57	31.57	31.57
31504	31.62	31.62	31.62	31.62	31.62
31506	31.74	31.74	31.74	31.74	31.74
31508	31.68	31.68	31.68	31.68	31.68
31509	31.73	31.73	31.73	31.73	31.73
31510	31.97	31.97	31.97	31.97	31.97
31511	31.70	31.70	31.70	31.70	31.70
31512	31.71	31.71	31.71	31.71	31.71
31513	31.96	31.96	31.96	31.96	31.96
31514	31.79	31.79	31.79	31.79	31.79
31515	31.77	31.77	31.77	31.77	31.77
31516	31.98	31.98	31.98	31.98	31.98
31518	30.11	30.11	30.11	30.11	30.11
31519	30.11	30.11	30.11	30.11	30.11
31520	30.11	30.11	30.11	30.11	30.11
31521	30.11	30.11	30.11	30.11	30.11
31522	30.11	30.11	30.11	30.11	30.11
31524	31.25	31.25	31.25	31.25	31.25

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31525	31.25	31.25	31.25	31.25	31.25
31526	31.07	31.07	31.07	31.07	31.07
31527	31.26	31.26	31.26	31.26	31.26
31528	31.29	31.29	31.29	31.29	31.29
31532	31.04	31.04	31.04	31.04	31.04
31533	31.25	31.25	31.25	31.25	31.25
31537	30.16	30.16	30.16	30.16	30.16
31538	30.71	30.71	30.71	30.71	30.71
31539	30.92	30.92	30.92	30.92	30.92
31540	30.99	30.99	30.99	30.99	30.99
31541	33.19	33.19	33.19	33.19	33.19
31542	31.84	31.84	31.84	31.84	31.84
31543	33.20	33.20	33.20	33.20	33.20
31544	33.19	33.19	33.19	33.19	33.19
31545	31.06	31.06	31.06	31.06	31.06
31546	32.10	32.10	32.10	32.10	32.10
31547	30.77	30.77	30.77	30.77	30.77
31548	31.53	31.53	31.53	31.53	31.53
31550	32.04	32.04	32.04	32.04	32.04
31552	31.95	31.95	31.95	31.95	31.95
31553	32.40	32.40	32.40	32.40	32.40
31554	32.61	32.61	32.61	32.61	32.61
31555	33.02	33.02	33.02	33.02	33.02
31602	15.80	15.89	15.88	15.88	15.87
31603	16.08	16.16	16.15	16.16	16.15
31605	16.08	16.16	16.15	16.16	16.15
31607	16.09	16.17	16.16	16.17	16.16
31608	16.09	16.17	16.16	16.17	16.16
31609	16.09	16.17	16.16	16.17	16.16
31610	16.09	16.17	16.16	16.17	16.16
31612	16.10	16.18	16.17	16.18	16.17
31613	16.44	16.49	16.49	16.49	16.49
31614	16.43	16.48	16.47	16.48	16.47
31615	16.44	16.49	16.48	16.49	16.48
31616	16.45	16.50	16.49	16.50	16.49
31617	16.47	16.51	16.51	16.51	16.51
31618	16.52	16.56	16.56	16.56	16.56
31619	16.55	16.60	16.59	16.60	16.59
31620	17.52	17.55	17.55	17.55	17.55
31622	17.58	17.60	17.60	17.60	17.60
31623	17.58	17.60	17.60	17.60	17.60
31624	21.61	21.61	21.61	21.61	21.61
31625	17.58	17.60	17.60	17.60	17.60
31627A	27.12	27.12	27.12	27.12	27.12
31627B	27.11	27.11	27.11	27.11	27.11
31630	16.08	16.16	16.15	16.16	16.15
31640	16.08	16.16	16.15	16.16	16.15
31641	16.08	16.16	16.15	16.16	16.15
31642	16.09	16.17	16.16	16.17	16.16
31643	16.09	16.17	16.16	16.17	16.16

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31644	16.17	16.25	16.24	16.25	16.24
31645	18.44	18.44	18.44	18.44	18.44
31646	18.49	18.49	18.49	18.49	18.49
31647	19.02	19.02	19.02	19.02	19.02
31648	20.41	20.41	20.41	20.41	20.41
31649	20.62	20.62	20.62	20.62	20.62
31650	21.80	21.80	21.80	21.80	21.80
31651	22.11	22.11	22.11	22.11	22.11
31652	22.45	22.45	22.45	22.45	22.45
31653	22.47	22.47	22.47	22.47	22.47
31654	22.48	22.48	22.48	22.48	22.48
31655	22.50	22.50	22.50	22.50	22.50
31656	22.48	22.48	22.48	22.48	22.48
31661	16.09	16.17	16.16	16.17	16.16
31663	16.09	16.17	16.16	16.17	16.16
31665	16.09	16.17	16.16	16.17	16.16
31666	16.29	16.29	16.29	16.29	16.29
31668	16.31	16.31	16.31	16.31	16.31
31671	16.53	16.53	16.53	16.53	16.53
31672	18.10	18.10	18.10	18.10	18.10
31673	22.91	22.91	22.91	22.91	22.91
31674	24.45	24.45	24.45	24.45	24.45
31682	16.09	16.17	16.16	16.17	16.16
31684	16.85	16.85	16.85	16.85	16.85
31690	16.09	16.17	16.16	16.17	16.16
31692	16.10	16.18	16.17	16.18	16.17
31701	16.09	16.18	16.17	16.17	16.16
31702	16.09	16.17	16.16	16.17	16.16
31704	16.10	16.17	16.16	16.17	16.16
31707	23.33	23.33	23.33	23.33	23.33
31708	29.60	29.60	29.60	29.60	29.60
31709	28.42	28.42	28.42	28.42	28.42
31710	29.61	29.61	29.61	29.61	29.61
31711	29.61	29.61	29.61	29.61	29.61
31712	30.13	30.13	30.13	30.13	30.13
31720	24.28	24.28	24.28	24.28	24.28
31720A	24.04	24.04	24.04	24.04	24.04
31721	22.37	22.37	22.37	22.37	22.37
31722	25.42	25.42	25.42	25.42	25.42
31724	31.29	31.29	31.29	31.29	31.29
31725	31.62	31.62	31.62	31.62	31.62
31727	16.10	16.18	16.17	16.18	16.17
31728	16.10	16.18	16.17	16.18	16.17
31730	16.10	16.18	16.17	16.18	16.17
31731	16.12	16.20	16.19	16.20	16.19
31732	16.10	16.18	16.17	16.18	16.17
31733	16.13	16.22	16.21	16.21	16.20
31734	17.70	17.70	17.70	17.70	17.70
31736	16.45	16.50	16.49	16.50	16.49
31737	16.43	16.48	16.47	16.48	16.47

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31738	16.46	16.51	16.51	16.51	16.50
31742	16.52	16.57	16.56	16.57	16.56
31743	16.52	16.57	16.56	16.57	16.56
31744	17.56	17.56	17.56	17.56	17.56
31745	18.38	18.38	18.38	18.38	18.38
31745A	18.38	18.38	18.38	18.38	18.38
31746	18.55	18.55	18.55	18.55	18.55
31748	18.57	18.57	18.57	18.57	18.57
31749	17.77	17.77	17.77	17.77	17.77
31749A	18.57	18.57	18.57	18.57	18.57
31750	21.14	21.14	21.14	21.14	21.14
31750A	20.48	20.48	20.48	20.48	20.48
31751	22.04	22.04	22.04	22.04	22.04
31751A	22.04	22.04	22.04	22.04	22.04
31752	23.62	23.62	23.62	23.62	23.62
31753	34.12	34.12	34.12	34.12	34.12
31754	18.19	18.19	18.19	18.19	18.19
31755	18.38	18.38	18.38	18.38	18.38
31756	19.13	19.13	19.13	19.13	19.13
31762	17.52	17.55	17.54	17.55	17.54
31763	17.51	17.54	17.54	17.54	17.54
31764	16.52	16.57	16.56	16.57	16.56
31765	18.34	18.34	18.34	18.34	18.34
31766	19.09	19.09	19.09	19.09	19.09
31767	18.38	18.38	18.38	18.38	18.38
31770	17.52	17.55	17.55	17.55	17.55
31772	17.52	17.55	17.55	17.55	17.55
31774	18.76	18.76	18.76	18.76	18.76
31775	21.99	21.99	21.99	21.99	21.99
31777	23.22	23.22	23.22	23.22	23.22
31780	15.04	15.16	15.15	15.16	15.15
31781	15.13	15.25	15.24	15.25	15.24
31784	15.38	15.50	15.48	15.49	15.48
31786	15.55	15.66	15.64	15.65	15.64
31787	15.80	15.89	15.88	15.88	15.87
31788	15.91	15.99	15.98	15.99	15.98
31789	15.94	16.02	16.01	16.02	16.01
31790	16.03	16.11	16.10	16.10	16.10
31791	16.31	16.38	16.37	16.38	16.37
31792	16.42	16.48	16.47	16.48	16.47
31793	16.54	16.59	16.58	16.59	16.58
31794	16.68	16.72	16.72	16.72	16.72
31795	16.84	16.88	16.88	16.88	16.88
31798	17.22	17.25	17.24	17.25	17.24
31799	17.38	17.40	17.40	17.40	17.40
31799AP	17.45	17.47	17.47	17.47	17.47
31801	17.61	17.64	17.63	17.64	17.63
31802	17.76	17.78	17.77	17.78	17.77
31803	17.85	17.87	17.87	17.87	17.87
31804	18.27	18.29	18.29	18.29	18.29

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31805	18.41	18.42	18.42	18.42	18.42
31806	18.52	18.53	18.53	18.53	18.53
31807	18.27	18.29	18.29	18.29	18.29
31808	17.71	17.73	17.72	17.73	17.72
31810	15.04	15.17	15.16	15.16	15.16
31811	15.41	15.41	15.41	15.41	15.41
31812	15.40	15.52	15.50	15.51	15.50
31813	15.38	15.50	15.48	15.49	15.48
31814	15.49	15.60	15.59	15.60	15.59
31815	16.07	16.15	16.14	16.15	16.14
31816	16.07	16.15	16.14	16.15	16.14
31817	16.04	16.12	16.11	16.12	16.11
31818	16.07	16.15	16.14	16.15	16.14
31819	16.43	16.48	16.47	16.48	16.47
31821	17.06	17.07	17.07	17.07	17.07
31822	17.92	17.92	17.92	17.92	17.92
31823	17.92	17.92	17.92	17.92	17.92
31824	17.93	17.93	17.93	17.93	17.93
31825	17.93	17.93	17.93	17.93	17.93
31826	17.11	17.11	17.11	17.11	17.11
31830	16.43	16.49	16.48	16.48	16.48
31832	16.52	16.56	16.56	16.56	16.56
31833	16.52	16.56	16.56	16.56	16.56
31834	16.56	16.60	16.60	16.60	16.60
31836	16.09	16.17	16.16	16.17	16.16
31837	16.08	16.16	16.15	16.16	16.15
31838	16.44	16.49	16.48	16.49	16.48
31839	16.53	16.58	16.57	16.57	16.57
31840	16.55	16.60	16.60	16.60	16.60
31844	16.63	16.67	16.66	16.67	16.66
31845	16.58	16.62	16.61	16.62	16.61
31846	16.61	16.66	16.65	16.66	16.65
31847	16.88	16.91	16.91	16.91	16.91
31849	16.71	16.74	16.74	16.74	16.74
31850	16.71	16.75	16.74	16.75	16.74
31852	17.08	17.11	17.10	17.11	17.10
31853	16.99	17.02	17.01	17.02	17.01
31855	17.38	17.40	17.40	17.40	17.40
31857	17.61	17.63	17.63	17.63	17.63
31860	17.32	17.34	17.34	17.34	17.34
31861	17.33	17.36	17.36	17.36	17.35
31862	17.37	17.40	17.39	17.40	17.39
31863	18.59	18.59	18.59	18.59	18.59
31864	19.39	19.39	19.39	19.39	19.39
31865	21.31	21.31	21.31	21.31	21.31
31866	21.60	21.60	21.60	21.60	21.60
31868	22.51	22.51	22.51	22.51	22.51
31869	22.53	22.53	22.53	22.53	22.53
31870	22.67	22.67	22.67	22.67	22.67
31871	22.82	22.82	22.82	22.82	22.82

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31872	25.90	25.90	25.90	25.90	25.90
31873	26.41	26.41	26.41	26.41	26.41
31874	26.57	26.57	26.57	26.57	26.57
31875	28.24	28.24	28.24	28.24	28.24
31876	28.71	28.71	28.71	28.71	28.71
31877	29.21	29.21	29.21	29.21	29.21
31878	30.01	30.01	30.01	30.01	30.01
31896	31.80	31.80	31.80	31.80	31.80
31897	32.51	32.51	32.51	32.51	32.51
31898	32.82	32.82	32.82	32.82	32.82
31899	33.15	33.15	33.15	33.15	33.15
31915	34.65	34.65	34.65	34.65	34.65
31920	23.34	23.34	23.34	23.34	23.34
31921	25.03	25.03	25.03	25.03	25.03
31922	25.87	25.87	25.87	25.87	25.87
31923	26.57	26.57	26.57	26.57	26.57
31924	26.68	26.68	26.68	26.68	26.68
31925	26.85	26.85	26.85	26.85	26.85
31926	26.87	26.87	26.87	26.87	26.87
31928	28.19	28.19	28.19	28.19	28.19
31930	28.98	28.98	28.98	28.98	28.98
31931	31.02	31.02	31.02	31.02	31.02
31932	31.04	31.04	31.04	31.04	31.04
31933	31.04	31.04	31.04	31.04	31.04
31933A	31.48	31.48	31.48	31.48	31.48
31934	31.49	31.49	31.49	31.49	31.49
31935	31.98	31.98	31.98	31.98	31.98
31936	31.99	31.99	31.99	31.99	31.99
31937	32.12	32.12	32.12	32.12	32.12
31938	32.26	32.26	32.26	32.26	32.26
31939	32.40	32.40	32.40	32.40	32.40
31940	32.41	32.41	32.41	32.41	32.41
31941	32.56	32.56	32.56	32.56	32.56
31942	32.84	32.84	32.84	32.84	32.84
31943	33.41	33.41	33.41	33.41	33.41
31944	33.46	33.46	33.46	33.46	33.46
31945	33.66	33.66	33.66	33.66	33.66
31947	33.69	33.69	33.69	33.69	33.69
31948	33.70	33.70	33.70	33.70	33.70
31949	33.70	33.70	33.70	33.70	33.70
31950	33.70	33.70	33.70	33.70	33.70
31951	33.69	33.69	33.69	33.69	33.69
31952	33.70	33.70	33.70	33.70	33.70
31953	33.74	33.74	33.74	33.74	33.74
31954	34.11	34.11	34.11	34.11	34.11
31955	34.11	34.11	34.11	34.11	34.11
31956	34.50	34.50	34.50	34.50	34.50
31957	34.45	34.45	34.45	34.45	34.45
31958	34.47	34.47	34.47	34.47	34.47
31958A	34.45	34.45	34.45	34.45	34.45

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
31959A	34.51	34.51	34.51	34.51	34.51
31960	19.62	19.62	19.62	19.62	19.62
31961	19.79	19.79	19.79	19.79	19.79
31964	20.57	20.57	20.57	20.57	20.57
31969	21.20	21.20	21.20	21.20	21.20
31970	26.72	26.72	26.72	26.72	26.72
31971	27.62	27.62	27.62	27.62	27.62
31972	29.75	29.75	29.75	29.75	29.75
31973	31.02	31.02	31.02	31.02	31.02
31974	31.21	31.21	31.21	31.21	31.21
31975	34.05	34.05	34.05	34.05	34.05
31976	33.76	33.76	33.76	33.76	33.76
31977	34.10	34.10	34.10	34.10	34.10
31978	34.25	34.25	34.25	34.25	34.25
31979	34.55	34.55	34.55	34.55	34.55
31980	33.42	33.42	33.42	33.42	33.42
31981	33.42	33.42	33.42	33.42	33.42
31982	33.43	33.43	33.43	33.43	33.43
31983	33.43	33.43	33.43	33.43	33.43
31985	33.69	33.69	33.69	33.69	33.69
31986	33.86	33.86	33.86	33.86	33.86
31987	33.86	33.86	33.86	33.86	33.86
31988	34.30	34.30	34.30	34.30	34.30
31989	34.50	34.50	34.50	34.50	34.50
31990	34.59	34.59	34.59	34.59	34.59
31991	34.58	34.58	34.58	34.58	34.58
31992	34.52	34.52	34.52	34.52	34.52
31995	26.34	26.34	26.34	26.34	26.34
31996	26.36	26.36	26.36	26.36	26.36
31997	27.57	27.57	27.57	27.57	27.57
31998	27.78	27.78	27.78	27.78	27.78
31999	26.43	26.43	26.43	26.43	26.43
32000	28.71	28.71	28.71	28.71	28.71
32001	28.68	28.68	28.68	28.68	28.68
32002	28.70	28.70	28.70	28.70	28.70
32003	28.97	28.97	28.97	28.97	28.97
32006	17.38	17.40	17.40	17.40	17.40
32007	17.32	17.35	17.34	17.35	17.34
32008	17.81	17.81	17.81	17.81	17.81
32009	18.62	18.62	18.62	18.62	18.62
32010	26.87	26.87	26.87	26.87	26.87
32011	29.15	29.15	29.15	29.15	29.15
32012	25.60	25.60	25.60	25.60	25.60
32013	28.84	28.84	28.84	28.84	28.84
32014	28.82	28.82	28.82	28.82	28.82
32015	28.81	28.81	28.81	28.81	28.81
32016	28.81	28.81	28.81	28.81	28.81
32017	29.19	29.19	29.19	29.19	29.19
32020	33.70	33.70	33.70	33.70	33.70
32021	34.56	34.56	34.56	34.56	34.56

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32022	34.58	34.58	34.58	34.58	34.58
32023	34.58	34.58	34.58	34.58	34.58
32025	34.70	34.70	34.70	34.70	34.70
32026	34.72	34.72	34.72	34.72	34.72
32031	33.70	33.70	33.70	33.70	33.70
32033	34.01	34.01	34.01	34.01	34.01
32034	34.21	34.21	34.21	34.21	34.21
32035	34.38	34.38	34.38	34.38	34.38
32037	34.46	34.46	34.46	34.46	34.46
32039	34.94	34.94	34.94	34.94	34.94
32040	17.61	17.64	17.63	17.64	17.63
32041	17.61	17.63	17.63	17.63	17.63
32042	17.60	17.63	17.62	17.63	17.62
32043	17.61	17.63	17.63	17.63	17.63
32044	17.61	17.63	17.63	17.63	17.63
32045	18.20	18.20	18.20	18.20	18.20
32046	19.25	19.25	19.25	19.25	19.25
32047	17.59	17.62	17.61	17.62	17.61
32048	17.59	17.62	17.61	17.62	17.61
32049	17.59	17.62	17.61	17.62	17.61
32050	26.65	26.65	26.65	26.65	26.65
32051	25.62	25.62	25.62	25.62	25.62
32053	17.61	17.63	17.63	17.63	17.63
32055	17.62	17.64	17.64	17.64	17.64
32056	18.80	18.80	18.80	18.80	18.80
32057	22.30	22.30	22.30	22.30	22.30
32058	17.68	17.70	17.70	17.70	17.70
32059	17.68	17.70	17.70	17.70	17.70
32060	17.69	17.71	17.71	17.71	17.71
32061	19.01	19.01	19.01	19.01	19.01
32063	24.32	24.32	24.32	24.32	24.32
32064	25.30	25.30	25.30	25.30	25.30
32065	25.28	25.28	25.28	25.28	25.28
32066	17.68	17.70	17.70	17.70	17.70
32067	17.67	17.70	17.69	17.70	17.69
32068	19.04	19.04	19.04	19.04	19.04
32069	21.49	21.49	21.49	21.49	21.49
32070	20.25	20.25	20.25	20.25	20.25
32071	21.55	21.55	21.55	21.55	21.55
32072	21.63	21.63	21.63	21.63	21.63
32073	22.65	22.65	22.65	22.65	22.65
32074	23.19	23.19	23.19	23.19	23.19
32075	23.18	23.18	23.18	23.18	23.18
32076	23.05	23.05	23.05	23.05	23.05
32077	23.07	23.07	23.07	23.07	23.07
32078	22.32	22.32	22.32	22.32	22.32
32079	23.69	23.69	23.69	23.69	23.69
32080	25.60	25.60	25.60	25.60	25.60
32081	23.07	23.07	23.07	23.07	23.07
32084	26.90	26.90	26.90	26.90	26.90

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32086	27.40	27.40	27.40	27.40	27.40
32087	27.25	27.25	27.25	27.25	27.25
32088	17.70	17.72	17.71	17.72	17.71
32089	17.70	17.72	17.72	17.72	17.71
32090	17.70	17.72	17.72	17.72	17.72
32091	17.70	17.72	17.72	17.72	17.72
32092	17.70	17.72	17.72	17.72	17.72
32093	17.72	17.74	17.73	17.74	17.73
32093A	17.72	17.74	17.74	17.74	17.73
32094	19.19	19.19	19.19	19.19	19.19
32095	19.19	19.19	19.19	19.19	19.19
32095A	19.30	19.30	19.30	19.30	19.30
32096	19.45	19.45	19.45	19.45	19.45
32096A	19.15	19.15	19.15	19.15	19.15
32097	19.21	19.21	19.21	19.21	19.21
32098	18.29	18.30	18.30	18.30	18.30
32101	19.15	19.16	19.16	19.16	19.15
32102	19.42	19.42	19.42	19.42	19.42
32103	19.44	19.45	19.44	19.45	19.44
32104	19.46	19.47	19.46	19.47	19.46
32105	19.52	19.53	19.53	19.53	19.53
32108	19.56	19.56	19.56	19.56	19.56
32109	19.57	19.57	19.57	19.57	19.57
32110	19.58	19.59	19.59	19.59	19.59
32111	19.69	19.70	19.70	19.70	19.70
32112	19.73	19.74	19.74	19.74	19.74
32113	19.78	19.79	19.79	19.79	19.79
32115	19.79	19.80	19.80	19.80	19.80
32117	19.79	19.80	19.80	19.80	19.80
32117A	19.79	19.80	19.80	19.80	19.80
32117B	19.94	19.94	19.94	19.94	19.94
32117C	24.45	24.45	24.45	24.45	24.45
32117D	19.95	19.95	19.95	19.95	19.95
32120	21.21	21.21	21.21	21.21	21.21
32121	20.71	20.71	20.71	20.71	20.71
32122	20.73	20.73	20.73	20.73	20.73
32123	20.77	20.77	20.77	20.77	20.77
32123A	20.77	20.77	20.77	20.77	20.77
32125	20.98	20.99	20.99	20.99	20.99
32125A	20.96	20.96	20.96	20.96	20.96
32125B	20.96	20.96	20.96	20.96	20.96
32126	21.13	21.13	21.13	21.13	21.13
32127	21.36	21.36	21.36	21.36	21.36
32128	21.39	21.39	21.39	21.39	21.39
32129	21.64	21.64	21.64	21.64	21.64
32130	26.37	26.37	26.37	26.37	26.37
32130A	24.79	24.79	24.79	24.79	24.79
32130C	24.66	24.66	24.66	24.66	24.66
32130D	26.29	26.29	26.29	26.29	26.29
32131	24.86	24.86	24.86	24.86	24.86

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32131A	24.87	24.87	24.87	24.87	24.87
32131B	30.34	30.34	30.34	30.34	30.34
32132	25.38	25.38	25.38	25.38	25.38
32132A	27.82	27.82	27.82	27.82	27.82
32133	25.88	25.88	25.88	25.88	25.88
32134	26.07	26.07	26.07	26.07	26.07
32135	26.56	26.56	26.56	26.56	26.56
32136	26.71	26.71	26.71	26.71	26.71
32137	26.76	26.76	26.76	26.76	26.76
32138	27.12	27.12	27.12	27.12	27.12
32140	27.36	27.36	27.36	27.36	27.36
32141	27.69	27.69	27.69	27.69	27.69
32142	27.79	27.79	27.79	27.79	27.79
32143	28.57	28.57	28.57	28.57	28.57
32144	29.31	29.31	29.31	29.31	29.31
32144A	29.35	29.35	29.35	29.35	29.35
32145	29.71	29.71	29.71	29.71	29.71
32146	30.17	30.17	30.17	30.17	30.17
32147	30.41	30.41	30.41	30.41	30.41
32148	30.42	30.42	30.42	30.42	30.42
32149	30.43	30.43	30.43	30.43	30.43
32150	30.79	30.79	30.79	30.79	30.79
32151	31.49	31.49	31.49	31.49	31.49
32152	32.05	32.05	32.05	32.05	32.05
32152A	33.36	33.36	33.36	33.36	33.36
32153	32.18	32.18	32.18	32.18	32.18
32153A	32.18	32.18	32.18	32.18	32.18
32154	32.18	32.18	32.18	32.18	32.18
32155	33.76	33.76	33.76	33.76	33.76
32155A	33.70	33.70	33.70	33.70	33.70
32156	33.82	33.82	33.82	33.82	33.82
32157	33.88	33.88	33.88	33.88	33.88
32158	34.04	34.04	34.04	34.04	34.04
32170	24.94	24.94	24.94	24.94	24.94
32171	25.09	25.09	25.09	25.09	25.09
32172	25.26	25.26	25.26	25.26	25.26
32173	19.08	19.09	19.08	19.09	19.08
32174	21.15	21.15	21.15	21.15	21.15
32177	23.34	23.34	23.34	23.34	23.34
32178	24.04	24.04	24.04	24.04	24.04
32179	25.02	25.02	25.02	25.02	25.02
32180	19.56	19.57	19.57	19.57	19.57
32181	20.10	20.10	20.10	20.10	20.10
32183	19.57	19.57	19.57	19.57	19.57
32184	19.54	19.55	19.55	19.55	19.55
32185	19.57	19.57	19.57	19.57	19.57
32188	19.57	19.58	19.57	19.58	19.57
32190	19.57	19.57	19.57	19.57	19.57
32191	19.57	19.58	19.58	19.58	19.58
32192	19.57	19.58	19.58	19.58	19.58

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32193	19.57	19.57	19.57	19.57	19.57
32194	19.57	19.57	19.57	19.57	19.57
32195	19.57	19.58	19.58	19.58	19.58
32197	19.59	19.60	19.60	19.60	19.60
32198	19.60	19.61	19.61	19.61	19.61
32199	20.00	20.00	20.00	20.00	20.00
32205	19.70	19.71	19.71	19.71	19.71
32206	19.78	19.79	19.78	19.79	19.78
32207	19.78	19.79	19.78	19.79	19.78
32208	19.92	19.92	19.92	19.92	19.92
32209	22.62	22.62	22.62	22.62	22.62
32210	20.55	20.55	20.55	20.55	20.55
32211	21.78	21.78	21.78	21.78	21.78
32212	20.01	20.01	20.01	20.01	20.01
32214	23.95	23.95	23.95	23.95	23.95
32220	19.78	19.79	19.78	19.79	19.78
32221	19.78	19.79	19.78	19.79	19.78
32222	19.78	19.79	19.78	19.79	19.78
32224	19.78	19.79	19.79	19.79	19.79
32226	19.78	19.79	19.79	19.79	19.79
32227	19.78	19.79	19.79	19.79	19.79
32227A	20.77	20.78	20.78	20.78	20.78
32228	21.13	21.13	21.13	21.13	21.13
32228A	21.36	21.37	21.36	21.37	21.36
32228B	21.13	21.13	21.13	21.13	21.13
32228C	21.13	21.13	21.13	21.13	21.13
32230	21.39	21.39	21.39	21.39	21.39
32231	21.39	21.39	21.39	21.39	21.39
32235	28.22	28.22	28.22	28.22	28.22
32236	28.27	28.27	28.27	28.27	28.27
32237	28.32	28.32	28.32	28.32	28.32
32238	28.32	28.32	28.32	28.32	28.32
32240	27.11	27.11	27.11	27.11	27.11
32241	27.37	27.37	27.37	27.37	27.37
32242	28.16	28.16	28.16	28.16	28.16
32243	28.16	28.16	28.16	28.16	28.16
32244	28.16	28.16	28.16	28.16	28.16
32245	28.16	28.16	28.16	28.16	28.16
32246	28.16	28.16	28.16	28.16	28.16
32247	28.16	28.16	28.16	28.16	28.16
32248	28.17	28.17	28.17	28.17	28.17
32249	28.17	28.17	28.17	28.17	28.17
32250	28.23	28.23	28.23	28.23	28.23
32251	29.00	29.00	29.00	29.00	29.00
32253	30.26	30.26	30.26	30.26	30.26
32254	30.43	30.43	30.43	30.43	30.43
32257	29.98	29.98	29.98	29.98	29.98
32258	29.64	29.64	29.64	29.64	29.64
32260	32.06	32.06	32.06	32.06	32.06
32261	35.88	35.88	35.88	35.88	35.88

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32262	36.89	36.89	36.89	36.89	36.89
32264	30.41	30.41	30.41	30.41	30.41
32265	30.45	30.45	30.45	30.45	30.45
32266	30.51	30.51	30.51	30.51	30.51
32267	30.71	30.71	30.71	30.71	30.71
32268	30.77	30.77	30.77	30.77	30.77
32270	36.50	36.50	36.50	36.50	36.50
32271	32.64	32.64	32.64	32.64	32.64
32272	32.78	32.78	32.78	32.78	32.78
32273	32.92	32.92	32.92	32.92	32.92
32274	30.80	30.80	30.80	30.80	30.80
32276	30.79	30.79	30.79	30.79	30.79
32277	31.70	31.70	31.70	31.70	31.70
32278	32.00	32.00	32.00	32.00	32.00
32280	33.33	33.33	33.33	33.33	33.33
32283	31.69	31.69	31.69	31.69	31.69
32284	31.70	31.70	31.70	31.70	31.70
32285	31.74	31.74	31.74	31.74	31.74
32286	31.78	31.78	31.78	31.78	31.78
32287	31.86	31.86	31.86	31.86	31.86
32288	31.89	31.89	31.89	31.89	31.89
32289	31.97	31.97	31.97	31.97	31.97
32290	32.54	32.54	32.54	32.54	32.54
32291	31.76	31.76	31.76	31.76	31.76
32292	31.88	31.88	31.88	31.88	31.88
32293	32.49	32.49	32.49	32.49	32.49
32295	33.33	33.33	33.33	33.33	33.33
32298	32.05	32.05	32.05	32.05	32.05
32299	32.08	32.08	32.08	32.08	32.08
32301	32.13	32.13	32.13	32.13	32.13
32302	32.36	32.36	32.36	32.36	32.36
32303	32.74	32.74	32.74	32.74	32.74
32306	32.96	32.96	32.96	32.96	32.96
32308	34.31	34.31	34.31	34.31	34.31
32309	34.26	34.26	34.26	34.26	34.26
32312	32.40	32.40	32.40	32.40	32.40
32313	32.56	32.56	32.56	32.56	32.56
32315	34.61	34.61	34.61	34.61	34.61
32317	36.69	36.69	36.69	36.69	36.69
32318	33.76	33.76	33.76	33.76	33.76
32319	34.31	34.31	34.31	34.31	34.31
32320	34.01	34.01	34.01	34.01	34.01
32322	37.13	37.13	37.13	37.13	37.13
32324	34.58	34.58	34.58	34.58	34.58
32327	34.83	34.83	34.83	34.83	34.83
32329	34.83	34.83	34.83	34.83	34.83
32330	34.69	34.69	34.69	34.69	34.69
32331	34.89	34.89	34.89	34.89	34.89
32332	34.81	34.81	34.81	34.81	34.81
32335	34.42	34.42	34.42	34.42	34.42

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32400	19.77	19.78	19.78	19.78	19.78
32401A	19.75	19.76	19.75	19.76	19.75
32401B	19.77	19.77	19.77	19.77	19.77
32402	19.79	19.80	19.80	19.80	19.80
32403	19.81	19.81	19.81	19.81	19.81
32405	19.93	19.93	19.93	19.93	19.93
32406	19.95	19.96	19.96	19.96	19.96
32407	19.95	19.96	19.96	19.96	19.96
32408	20.44	20.44	20.44	20.44	20.44
32409	20.46	20.46	20.46	20.46	20.46
32410	21.06	21.06	21.06	21.06	21.06
32411	21.59	21.59	21.59	21.59	21.59
32412	21.61	21.61	21.61	21.61	21.61
32414	24.72	24.72	24.72	24.72	24.72
32415	25.93	25.93	25.93	25.93	25.93
32418	21.31	21.31	21.31	21.31	21.31
32421	22.16	22.16	22.16	22.16	22.16
32424	19.94	19.94	19.94	19.94	19.94
32425	19.94	19.94	19.94	19.94	19.94
32426	19.94	19.95	19.94	19.95	19.94
32427	19.95	19.95	19.95	19.95	19.95
32428	20.03	20.03	20.03	20.03	20.03
32429	22.07	22.07	22.07	22.07	22.07
32430	23.43	23.43	23.43	23.43	23.43
32432	27.11	27.11	27.11	27.11	27.11
32433	27.19	27.19	27.19	27.19	27.19
32434	19.60	19.60	19.60	19.60	19.60
32435	20.85	20.85	20.85	20.85	20.85
32436	21.39	21.39	21.39	21.39	21.39
32437	22.05	22.05	22.05	22.05	22.05
32440	22.66	22.66	22.66	22.66	22.66
32441	23.60	23.60	23.60	23.60	23.60
32442	24.15	24.15	24.15	24.15	24.15
32443	27.27	27.27	27.27	27.27	27.27
32444	29.19	29.19	29.19	29.19	29.19
32446	20.70	20.70	20.70	20.70	20.70
32447	20.24	20.24	20.24	20.24	20.24
32450	23.92	23.92	23.92	23.92	23.92
32452	21.38	21.38	21.38	21.38	21.38
32455	20.15	20.16	20.15	20.16	20.15
32456	22.11	22.11	22.11	22.11	22.11
32458	19.95	19.96	19.96	19.96	19.96
32460	21.48	21.48	21.48	21.48	21.48
32464	27.17	27.17	27.17	27.17	27.17
32470	29.06	29.06	29.06	29.06	29.06
32471	28.29	28.29	28.29	28.29	28.29
32472	26.22	26.22	26.22	26.22	26.22
32473	28.37	28.37	28.37	28.37	28.37
32474	24.87	24.87	24.87	24.87	24.87
32474A	26.22	26.22	26.22	26.22	26.22

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32474B	26.92	26.92	26.92	26.92	26.92
32474C	26.23	26.23	26.23	26.23	26.23
32474MH	24.86	24.86	24.86	24.86	24.86
32475	30.05	30.05	30.05	30.05	30.05
32482	27.73	27.73	27.73	27.73	27.73
32483	27.16	27.16	27.16	27.16	27.16
32500	19.79	19.80	19.79	19.80	19.79
32501	19.80	19.81	19.81	19.81	19.81
32502	20.04	20.05	20.05	20.05	20.05
32503	20.05	20.06	20.05	20.06	20.05
32504	20.06	20.06	20.06	20.06	20.06
32505	20.06	20.06	20.06	20.06	20.06
32506	20.06	20.07	20.07	20.07	20.07
32507	20.06	20.06	20.06	20.06	20.06
32508	20.06	20.06	20.06	20.06	20.06
32509	20.07	20.07	20.07	20.07	20.07
32510	20.77	20.77	20.77	20.77	20.77
32511	20.07	20.07	20.07	20.07	20.07
32512	20.07	20.07	20.07	20.07	20.07
32513	20.07	20.07	20.07	20.07	20.07
32518	26.80	26.80	26.80	26.80	26.80
32530	20.06	20.07	20.06	20.07	20.06
32531	20.06	20.07	20.06	20.07	20.06
32532	20.06	20.07	20.06	20.07	20.06
32533	20.06	20.07	20.06	20.07	20.06
32534	20.07	20.07	20.07	20.07	20.07
32535	20.07	20.07	20.07	20.07	20.07
32537	27.60	27.60	27.60	27.60	27.60
32538	20.72	20.72	20.72	20.72	20.72
32540	20.06	20.06	20.06	20.06	20.06
32549	21.54	21.54	21.54	21.54	21.54
32550	22.85	22.85	22.85	22.85	22.85
32552	27.35	27.35	27.35	27.35	27.35
32553	27.42	27.42	27.42	27.42	27.42
32555	22.85	22.85	22.85	22.85	22.85
32559	25.39	25.39	25.39	25.39	25.39
32560	25.41	25.41	25.41	25.41	25.41
32561	25.50	25.50	25.50	25.50	25.50
32575	30.82	30.82	30.82	30.82	30.82
32576	31.83	31.83	31.83	31.83	31.83
32577	31.98	31.98	31.98	31.98	31.98
32578	32.10	32.10	32.10	32.10	32.10
32579	32.06	32.06	32.06	32.06	32.06
32601	21.42	21.42	21.42	21.42	21.42
32602	21.60	21.60	21.60	21.60	21.60
32604	22.55	22.55	22.55	22.55	22.55
32605	21.68	21.68	21.68	21.68	21.68
32606	21.86	21.86	21.86	21.86	21.86
32606A	21.90	21.90	21.90	21.90	21.90
32607	21.95	21.95	21.95	21.95	21.95

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32608	21.95	21.95	21.95	21.95	21.95
32609	21.96	21.96	21.96	21.96	21.96
32610	22.03	22.03	22.03	22.03	22.03
32611	22.09	22.09	22.09	22.09	22.09
32612	22.10	22.10	22.10	22.10	22.10
32614	22.12	22.12	22.12	22.12	22.12
32615	22.15	22.15	22.15	22.15	22.15
32616	22.28	22.28	22.28	22.28	22.28
32619	22.37	22.37	22.37	22.37	22.37
32620	23.91	23.91	23.91	23.91	23.91
32621	23.98	23.98	23.98	23.98	23.98
32622	24.42	24.42	24.42	24.42	24.42
32623	24.52	24.52	24.52	24.52	24.52
32624	24.53	24.53	24.53	24.53	24.53
32625	25.07	25.07	25.07	25.07	25.07
32626	25.92	25.92	25.92	25.92	25.92
32627	25.92	25.92	25.92	25.92	25.92
32628	24.57	24.57	24.57	24.57	24.57
32629	23.29	23.29	23.29	23.29	23.29
32630	22.05	22.05	22.05	22.05	22.05
32631	22.23	22.23	22.23	22.23	22.23
32632	22.60	22.60	22.60	22.60	22.60
32633	23.59	23.59	23.59	23.59	23.59
32635	27.50	27.50	27.50	27.50	27.50
32636	27.66	27.66	27.66	27.66	27.66
32637	27.54	27.54	27.54	27.54	27.54
32640	27.82	27.82	27.82	27.82	27.82
32642	29.10	29.10	29.10	29.10	29.10
32643	29.36	29.36	29.36	29.36	29.36
32645	29.85	29.85	29.85	29.85	29.85
32646	29.84	29.84	29.84	29.84	29.84
32647	30.05	30.05	30.05	30.05	30.05
32648	30.09	30.09	30.09	30.09	30.09
32656	30.46	30.46	30.46	30.46	30.46
32660	25.42	25.42	25.42	25.42	25.42
32661	27.25	27.25	27.25	27.25	27.25
32661A	23.76	23.76	23.76	23.76	23.76
32662	28.60	28.60	28.60	28.60	28.60
32665	27.74	27.74	27.74	27.74	27.74
32666	28.01	28.01	28.01	28.01	28.01
32667	28.49	28.49	28.49	28.49	28.49
32668	28.59	28.59	28.59	28.59	28.59
32670	29.19	29.19	29.19	29.19	29.19
32672	28.10	28.10	28.10	28.10	28.10
32673	28.33	28.33	28.33	28.33	28.33
32674	28.78	28.78	28.78	28.78	28.78
32675	28.89	28.89	28.89	28.89	28.89
32677	28.13	28.13	28.13	28.13	28.13
32678	28.76	28.76	28.76	28.76	28.76
32680	27.80	27.80	27.80	27.80	27.80

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32681	27.15	27.15	27.15	27.15	27.15
32685	22.31	22.31	22.31	22.31	22.31
32685A	22.33	22.33	22.33	22.33	22.33
32686	22.45	22.45	22.45	22.45	22.45
32687	22.46	22.47	22.47	22.47	22.47
32688	22.48	22.48	22.48	22.48	22.48
32690	22.49	22.49	22.49	22.49	22.49
32691	22.49	22.49	22.49	22.49	22.49
32692	26.93	26.93	26.93	26.93	26.93
32693	26.50	26.50	26.50	26.50	26.50
32695	22.49	22.49	22.49	22.49	22.49
32696	23.50	23.50	23.50	23.50	23.50
32697	23.31	23.31	23.31	23.31	23.31
32698	24.14	24.14	24.14	24.14	24.14
32699	22.94	22.94	22.94	22.94	22.94
32700	21.97	21.97	21.97	21.97	21.97
32701	21.95	21.95	21.95	21.95	21.95
32702	21.97	21.97	21.97	21.97	21.97
32703	21.99	21.99	21.99	21.99	21.99
32704	26.63	26.63	26.63	26.63	26.63
32705	26.71	26.71	26.71	26.71	26.71
32706	26.74	26.74	26.74	26.74	26.74
32707	26.75	26.75	26.75	26.75	26.75
32708	26.76	26.76	26.76	26.76	26.76
32711	28.37	28.37	28.37	28.37	28.37
32712	28.41	28.41	28.41	28.41	28.41
32713	28.41	28.41	28.41	28.41	28.41
32714	28.40	28.40	28.40	28.40	28.40
32715	27.64	27.64	27.64	27.64	27.64
32716	27.64	27.64	27.64	27.64	27.64
32718	27.64	27.64	27.64	27.64	27.64
32719	27.74	27.74	27.74	27.74	27.74
32720	27.74	27.74	27.74	27.74	27.74
32721	27.74	27.74	27.74	27.74	27.74
32725	22.08	22.08	22.08	22.08	22.08
32726	22.04	22.04	22.04	22.04	22.04
32728	26.71	26.71	26.71	26.71	26.71
32729	26.71	26.71	26.71	26.71	26.71
32732	22.30	22.30	22.30	22.30	22.30
32734	22.67	22.67	22.67	22.67	22.67
32736	23.07	23.07	23.07	23.07	23.07
32737	23.08	23.08	23.08	23.08	23.08
32738	23.47	23.47	23.47	23.47	23.47
32740	22.36	22.36	22.36	22.36	22.36
32741	22.44	22.44	22.44	22.44	22.44
32742	25.11	25.11	25.11	25.11	25.11
32743	24.61	24.61	24.61	24.61	24.61
32744	25.38	25.38	25.38	25.38	25.38
32745	26.36	26.36	26.36	26.36	26.36
32747	22.79	22.79	22.79	22.79	22.79

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32748	23.47	23.47	23.47	23.47	23.47
32749	24.59	24.59	24.59	24.59	24.59
32752	21.62	21.62	21.62	21.62	21.62
32754	25.18	25.18	25.18	25.18	25.18
32755	28.54	28.54	28.54	28.54	28.54
32756	24.90	24.90	24.90	24.90	24.90
32758	25.70	25.70	25.70	25.70	25.70
32760	22.09	22.09	22.09	22.09	22.09
32761	23.51	23.51	23.51	23.51	23.51
32765	24.34	24.34	24.34	24.34	24.34
32768	23.95	23.95	23.95	23.95	23.95
32770	23.39	23.39	23.39	23.39	23.39
32773	19.61	19.62	19.62	19.62	19.62
32774	22.36	22.36	22.36	22.36	22.36
32775	19.62	19.62	19.62	19.62	19.62
32776	20.65	20.65	20.65	20.65	20.65
32777	22.29	22.29	22.29	22.29	22.29
32778	22.86	22.86	22.86	22.86	22.86
32779	22.88	22.88	22.88	22.88	22.88
32780	23.04	23.04	23.04	23.04	23.04
32781	23.07	23.07	23.07	23.07	23.07
32782	23.56	23.56	23.56	23.56	23.56
32783	26.08	26.08	26.08	26.08	26.08
32784	26.13	26.13	26.13	26.13	26.13
32785	28.93	28.93	28.93	28.93	28.93
32787	27.75	27.75	27.75	27.75	27.75
32789	27.47	27.47	27.47	27.47	27.47
32794	26.31	26.31	26.31	26.31	26.31
32795	26.47	26.47	26.47	26.47	26.47
32796	26.47	26.47	26.47	26.47	26.47
32797	26.49	26.49	26.49	26.49	26.49
32798	26.50	26.50	26.50	26.50	26.50
32801	18.29	18.30	18.30	18.30	18.30
32802	18.18	18.20	18.19	18.20	18.19
32803	18.31	18.32	18.31	18.32	18.31
32805	20.89	20.89	20.89	20.89	20.89
32806	20.97	20.97	20.97	20.97	20.97
32807	22.08	22.08	22.08	22.08	22.08
32808	22.18	22.18	22.18	22.18	22.18
32809	22.52	22.53	22.53	22.53	22.53
32810	25.18	25.18	25.18	25.18	25.18
32811	26.65	26.65	26.65	26.65	26.65
32812	27.14	27.14	27.14	27.14	27.14
32812A	26.78	26.78	26.78	26.78	26.78
32813	30.39	30.39	30.39	30.39	30.39
32814	30.39	30.39	30.39	30.39	30.39
32815	30.39	30.39	30.39	30.39	30.39
32816	30.49	30.49	30.49	30.49	30.49
32817	33.18	33.18	33.18	33.18	33.18
32818	34.27	34.27	34.27	34.27	34.27

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32819	33.96	33.96	33.96	33.96	33.96
32820	33.78	33.78	33.78	33.78	33.78
32821	18.53	18.54	18.53	18.54	18.53
32822	18.31	18.32	18.31	18.32	18.31
32823	18.46	18.46	18.46	18.46	18.46
32824	19.15	19.15	19.15	19.15	19.15
32825	19.15	19.16	19.15	19.16	19.15
32826	19.19	19.19	19.19	19.19	19.19
32828	19.19	19.19	19.19	19.19	19.19
32830	18.83	18.83	18.83	18.83	18.83
32831	20.42	20.42	20.42	20.42	20.42
32832	20.52	20.52	20.52	20.52	20.52
32833	20.58	20.58	20.58	20.58	20.58
32834	20.70	20.70	20.70	20.70	20.70
32835	21.17	21.17	21.17	21.17	21.17
32836	22.43	22.43	22.43	22.43	22.43
32837	22.97	22.97	22.97	22.97	22.97
32838	23.46	23.46	23.46	23.46	23.46
32839	23.68	23.68	23.68	23.68	23.68
32840	23.86	23.86	23.86	23.86	23.86
32842	24.07	24.07	24.07	24.07	24.07
32844	24.04	24.04	24.04	24.04	24.04
32845	20.62	20.62	20.62	20.62	20.62
32847	19.93	19.93	19.93	19.93	19.93
32849	21.55	21.55	21.55	21.55	21.55
32850	22.01	22.01	22.01	22.01	22.01
32850A	21.01	21.01	21.01	21.01	21.01
32851	23.68	23.68	23.68	23.68	23.68
32851A	22.96	22.96	22.96	22.96	22.96
32852	23.90	23.90	23.90	23.90	23.90
32852A	23.68	23.68	23.68	23.68	23.68
32853	24.56	24.56	24.56	24.56	24.56
32854	24.79	24.79	24.79	24.79	24.79
32855	24.63	24.63	24.63	24.63	24.63
32856	23.88	23.88	23.88	23.88	23.88
32857	23.56	23.56	23.56	23.56	23.56
32858	23.22	23.22	23.22	23.22	23.22
32859	22.75	22.75	22.75	22.75	22.75
32861	22.01	22.01	22.01	22.01	22.01
32862	22.06	22.06	22.06	22.06	22.06
32863	21.56	21.56	21.56	21.56	21.56
32864	23.64	23.64	23.64	23.64	23.64
32865	24.40	24.40	24.40	24.40	24.40
32866	24.43	24.43	24.43	24.43	24.43
32870	25.37	25.37	25.37	25.37	25.37
32871	25.75	25.75	25.75	25.75	25.75
32872	25.75	25.75	25.75	25.75	25.75
32873	26.47	26.47	26.47	26.47	26.47
32874	26.98	26.98	26.98	26.98	26.98
32875	25.91	25.91	25.91	25.91	25.91

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32876	26.26	26.26	26.26	26.26	26.26
32879	29.67	29.67	29.67	29.67	29.67
32880	33.14	33.14	33.14	33.14	33.14
32881	34.95	34.95	34.95	34.95	34.95
32882	35.15	35.15	35.15	35.15	35.15
32883	35.24	35.24	35.24	35.24	35.24
32884	35.37	35.37	35.37	35.37	35.37
32885	36.26	36.26	36.26	36.26	36.26
32886	36.26	36.26	36.26	36.26	36.26
32887	35.80	35.80	35.80	35.80	35.80
32888	36.27	36.27	36.27	36.27	36.27
32889	37.16	37.16	37.16	37.16	37.16
32890	27.63	27.63	27.63	27.63	27.63
32891	28.94	28.94	28.94	28.94	28.94
32892	31.18	31.18	31.18	31.18	31.18
32894	31.20	31.20	31.20	31.20	31.20
32901	24.17	24.17	24.17	24.17	24.17
32902	24.19	24.19	24.19	24.19	24.19
32903	25.06	25.06	25.06	25.06	25.06
32904	25.54	25.54	25.54	25.54	25.54
32905	29.03	29.03	29.03	29.03	29.03
32910	23.00	23.00	23.00	23.00	23.00
32911	23.83	23.83	23.83	23.83	23.83
32912	22.42	22.42	22.42	22.42	22.42
32913	23.37	23.37	23.37	23.37	23.37
32914	25.00	25.00	25.00	25.00	25.00
32915	20.55	20.55	20.55	20.55	20.55
32916	28.70	28.70	28.70	28.70	28.70
32920	27.14	27.14	27.14	27.14	27.14
32921	27.86	27.86	27.86	27.86	27.86
32922	27.88	27.88	27.88	27.88	27.88
32924	30.41	30.41	30.41	30.41	30.41
32925	30.39	30.39	30.39	30.39	30.39
32930	27.14	27.14	27.14	27.14	27.14
32931	29.33	29.33	29.33	29.33	29.33
32932	30.01	30.01	30.01	30.01	30.01
32933	30.28	30.28	30.28	30.28	30.28
32934	30.28	30.28	30.28	30.28	30.28
32935	30.28	30.28	30.28	30.28	30.28
32936	30.28	30.28	30.28	30.28	30.28
32937	32.01	32.01	32.01	32.01	32.01
32938	32.12	32.12	32.12	32.12	32.12
32939	32.85	32.85	32.85	32.85	32.85
32940	34.47	34.47	34.47	34.47	34.47
32941	34.47	34.47	34.47	34.47	34.47
32942	36.17	36.17	36.17	36.17	36.17
32943	36.71	36.71	36.71	36.71	36.71
32944	37.01	37.01	37.01	37.01	37.01
32945	37.07	37.07	37.07	37.07	37.07
32950	30.15	30.15	30.15	30.15	30.15

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
32951	30.74	30.74	30.74	30.74	30.74
32952	31.46	31.46	31.46	31.46	31.46
32953	32.18	32.18	32.18	32.18	32.18
32954	33.95	33.95	33.95	33.95	33.95
32955	34.34	34.34	34.34	34.34	34.34
32956	34.70	34.70	34.70	34.70	34.70
32957	34.72	34.72	34.72	34.72	34.72
32959	32.84	32.84	32.84	32.84	32.84
33001	19.10	19.11	19.11	19.11	19.11
33002	19.38	19.39	19.39	19.39	19.39
33003	19.85	19.85	19.85	19.85	19.85
33006	20.32	20.32	20.32	20.32	20.32
33007	20.83	20.83	20.83	20.83	20.83
33008	21.29	21.29	21.29	21.29	21.29
33009	21.57	21.57	21.57	21.57	21.57
33010	21.71	21.71	21.71	21.71	21.71
33011	22.02	22.02	22.02	22.02	22.02
33012	22.18	22.18	22.18	22.18	22.18
33013	22.30	22.31	22.31	22.31	22.31
33014	22.64	22.64	22.64	22.64	22.64
33015	22.92	22.92	22.92	22.92	22.92
33016	23.18	23.18	23.18	23.18	23.18
33017	23.55	23.55	23.55	23.55	23.55
33018	23.82	23.82	23.82	23.82	23.82
33019	24.03	24.03	24.03	24.03	24.03
33020	24.05	24.05	24.05	24.05	24.05
33023	24.29	24.29	24.29	24.29	24.29
33024	24.54	24.54	24.54	24.54	24.54
33025	24.61	24.61	24.61	24.61	24.61
33026	24.70	24.70	24.70	24.70	24.70
33027	24.88	24.88	24.88	24.88	24.88
33028	24.89	24.89	24.89	24.89	24.89
33029	24.90	24.90	24.90	24.90	24.90
33030	24.93	24.93	24.93	24.93	24.93
33031	25.12	25.12	25.12	25.12	25.12
33033	25.99	25.99	25.99	25.99	25.99
33035	25.16	25.16	25.16	25.16	25.16
33040	20.37	20.37	20.37	20.37	20.37
33041	21.45	21.45	21.45	21.45	21.45
33042	20.37	20.37	20.37	20.37	20.37
33043	20.39	20.39	20.39	20.39	20.39
33044	20.95	20.95	20.95	20.95	20.95
33046	20.32	20.33	20.32	20.33	20.32
33047	20.35	20.36	20.36	20.36	20.36
33048	20.35	20.36	20.36	20.36	20.36
33049	22.11	22.11	22.11	22.11	22.11
33049A	20.45	20.46	20.45	20.46	20.45
33050	20.86	20.86	20.86	20.86	20.86
33051	22.22	22.22	22.22	22.22	22.22
33052	22.22	22.22	22.22	22.22	22.22

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33055	22.12	22.12	22.12	22.12	22.12
33056	22.16	22.16	22.16	22.16	22.16
33057	22.16	22.16	22.16	22.16	22.16
33060	21.59	21.59	21.59	21.59	21.59
33061	23.30	23.30	23.30	23.30	23.30
33064	23.38	23.38	23.38	23.38	23.38
33065	23.43	23.43	23.43	23.43	23.43
33066	23.48	23.48	23.48	23.48	23.48
33067	23.49	23.49	23.49	23.49	23.49
33068	28.59	28.59	28.59	28.59	28.59
33069	30.33	30.33	30.33	30.33	30.33
33070	32.43	32.43	32.43	32.43	32.43
33071	23.67	23.67	23.67	23.67	23.67
33072	24.02	24.02	24.02	24.02	24.02
33073	22.15	22.15	22.15	22.15	22.15
33074	22.15	22.15	22.15	22.15	22.15
33075	24.28	24.28	24.28	24.28	24.28
33076	22.98	22.98	22.98	22.98	22.98
33077	23.01	23.01	23.01	23.01	23.01
33078	24.86	24.86	24.86	24.86	24.86
33079	26.36	26.36	26.36	26.36	26.36
33082	22.31	22.31	22.31	22.31	22.31
33083	22.33	22.33	22.33	22.33	22.33
33084	22.45	22.45	22.45	22.45	22.45
33085	24.84	24.84	24.84	24.84	24.84
33086	24.83	24.83	24.83	24.83	24.83
33087	22.67	22.67	22.67	22.67	22.67
33088	22.64	22.64	22.64	22.64	22.64
33090	23.56	23.56	23.56	23.56	23.56
33091	23.62	23.62	23.62	23.62	23.62
33092	23.80	23.80	23.80	23.80	23.80
33093	24.16	24.16	24.16	24.16	24.16
33095	28.03	28.03	28.03	28.03	28.03
33096	28.46	28.46	28.46	28.46	28.46
33097	31.35	31.35	31.35	31.35	31.35
33098	31.48	31.48	31.48	31.48	31.48
33099	32.44	32.44	32.44	32.44	32.44
33101	22.30	22.30	22.30	22.30	22.30
33102	23.59	23.59	23.59	23.59	23.59
33103	23.83	23.83	23.83	23.83	23.83
33105	24.35	24.35	24.35	24.35	24.35
33106	24.43	24.43	24.43	24.43	24.43
33107	24.81	24.81	24.81	24.81	24.81
33108	25.51	25.51	25.51	25.51	25.51
33109	25.97	25.97	25.97	25.97	25.97
33110	26.53	26.53	26.53	26.53	26.53
33111	27.20	27.20	27.20	27.20	27.20
33112	27.36	27.36	27.36	27.36	27.36
33113	27.49	27.49	27.49	27.49	27.49
33114	27.58	27.58	27.58	27.58	27.58

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33116	27.86	27.86	27.86	27.86	27.86
33118	28.20	28.20	28.20	28.20	28.20
33119	31.69	31.69	31.69	31.69	31.69
33120	29.60	29.60	29.60	29.60	29.60
33121	30.00	30.00	30.00	30.00	30.00
33123	30.09	30.09	30.09	30.09	30.09
33123A	30.02	30.02	30.02	30.02	30.02
33124	30.25	30.25	30.25	30.25	30.25
33125	30.30	30.30	30.30	30.30	30.30
33128	30.45	30.45	30.45	30.45	30.45
33129	33.10	33.10	33.10	33.10	33.10
33130	34.02	34.02	34.02	34.02	34.02
33131	34.17	34.17	34.17	34.17	34.17
33132	34.25	34.25	34.25	34.25	34.25
33135	22.32	22.32	22.32	22.32	22.32
33136	24.30	24.30	24.30	24.30	24.30
33137	24.38	24.38	24.38	24.38	24.38
33138	27.25	27.25	27.25	27.25	27.25
33139	27.51	27.51	27.51	27.51	27.51
33140	24.42	24.42	24.42	24.42	24.42
33141	24.46	24.46	24.46	24.46	24.46
33142	25.28	25.28	25.28	25.28	25.28
33143	27.83	27.83	27.83	27.83	27.83
33146	25.60	25.60	25.60	25.60	25.60
33147	26.04	26.04	26.04	26.04	26.04
33148	26.51	26.51	26.51	26.51	26.51
33150	27.38	27.38	27.38	27.38	27.38
33151	27.40	27.40	27.40	27.40	27.40
33152	28.08	28.08	28.08	28.08	28.08
33153	29.27	29.27	29.27	29.27	29.27
33154	29.96	29.96	29.96	29.96	29.96
33155	30.92	30.92	30.92	30.92	30.92
33156	28.57	28.57	28.57	28.57	28.57
33157	31.61	31.61	31.61	31.61	31.61
33158	31.88	31.88	31.88	31.88	31.88
33159	31.34	31.34	31.34	31.34	31.34
33160	32.61	32.61	32.61	32.61	32.61
33161	33.78	33.78	33.78	33.78	33.78
33163	29.15	29.15	29.15	29.15	29.15
33164	29.03	29.03	29.03	29.03	29.03
33165	29.61	29.61	29.61	29.61	29.61
33167	32.71	32.71	32.71	32.71	32.71
33168	34.54	34.54	34.54	34.54	34.54
33169	30.24	30.24	30.24	30.24	30.24
33170	32.14	32.14	32.14	32.14	32.14
33171	32.56	32.56	32.56	32.56	32.56
33172	32.87	32.87	32.87	32.87	32.87
33173	32.89	32.89	32.89	32.89	32.89
33174	32.94	32.94	32.94	32.94	32.94
33175	32.77	32.77	32.77	32.77	32.77

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33176	32.14	32.14	32.14	32.14	32.14
33177	32.20	32.20	32.20	32.20	32.20
33178	33.34	33.34	33.34	33.34	33.34
33179	33.34	33.34	33.34	33.34	33.34
33180	23.02	23.02	23.02	23.02	23.02
33181	23.27	23.27	23.27	23.27	23.27
33182	23.88	23.88	23.88	23.88	23.88
33183	25.72	25.72	25.72	25.72	25.72
33184	26.50	26.50	26.50	26.50	26.50
33185	27.66	27.66	27.66	27.66	27.66
33186	29.63	29.63	29.63	29.63	29.63
33188	23.64	23.64	23.64	23.64	23.64
33189	23.65	23.65	23.65	23.65	23.65
33190	27.62	27.62	27.62	27.62	27.62
33191	29.42	29.42	29.42	29.42	29.42
33192	32.10	32.10	32.10	32.10	32.10
33193	32.44	32.44	32.44	32.44	32.44
33194	32.43	32.43	32.43	32.43	32.43
33197	23.65	23.65	23.65	23.65	23.65
33198	23.65	23.65	23.65	23.65	23.65
33199	23.94	23.94	23.94	23.94	23.94
33200	24.04	24.04	24.04	24.04	24.04
33201	24.81	24.81	24.81	24.81	24.81
33202	24.92	24.92	24.92	24.92	24.92
33203	25.18	25.18	25.18	25.18	25.18
33204	25.79	25.79	25.79	25.79	25.79
33205	26.23	26.23	26.23	26.23	26.23
33206	26.97	26.97	26.97	26.97	26.97
33207	27.03	27.03	27.03	27.03	27.03
33208	27.50	27.50	27.50	27.50	27.50
33209	27.67	27.67	27.67	27.67	27.67
33210	28.40	28.40	28.40	28.40	28.40
33211	28.52	28.52	28.52	28.52	28.52
33212	29.08	29.08	29.08	29.08	29.08
33213	31.10	31.10	31.10	31.10	31.10
33215	23.95	23.95	23.95	23.95	23.95
33216	24.11	24.11	24.11	24.11	24.11
33217	25.56	25.56	25.56	25.56	25.56
33218	28.38	28.38	28.38	28.38	28.38
33219	29.60	29.60	29.60	29.60	29.60
33221	29.46	29.46	29.46	29.46	29.46
33223	23.60	23.60	23.60	23.60	23.60
33224	23.60	23.60	23.60	23.60	23.60
33225	23.60	23.60	23.60	23.60	23.60
33226	23.60	23.60	23.60	23.60	23.60
33227	24.06	24.06	24.06	24.06	24.06
33228	28.33	28.33	28.33	28.33	28.33
33229	28.92	28.92	28.92	28.92	28.92
33230	29.44	29.44	29.44	29.44	29.44
33231	32.21	32.21	32.21	32.21	32.21

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33232	33.48	33.48	33.48	33.48	33.48
33235	23.97	23.97	23.97	23.97	23.97
33236	24.70	24.70	24.70	24.70	24.70
33237	27.86	27.86	27.86	27.86	27.86
33238	28.77	28.77	28.77	28.77	28.77
33239	28.83	28.83	28.83	28.83	28.83
33240	24.81	24.81	24.81	24.81	24.81
33241	28.82	28.82	28.82	28.82	28.82
33242	23.91	23.91	23.91	23.91	23.91
33243	28.81	28.81	28.81	28.81	28.81
33244	29.84	29.84	29.84	29.84	29.84
33245	29.89	29.89	29.89	29.89	29.89
33246	31.06	31.06	31.06	31.06	31.06
33247	25.50	25.50	25.50	25.50	25.50
33248	28.88	28.88	28.88	28.88	28.88
33250	24.54	24.54	24.54	24.54	24.54
33251	24.54	24.54	24.54	24.54	24.54
33252	24.55	24.55	24.55	24.55	24.55
33253	24.56	24.56	24.56	24.56	24.56
33254	24.56	24.56	24.56	24.56	24.56
33257	26.04	26.04	26.04	26.04	26.04
33258	30.17	30.17	30.17	30.17	30.17
33259	31.76	31.76	31.76	31.76	31.76
33259A	32.45	32.45	32.45	32.45	32.45
33259B	31.64	31.64	31.64	31.64	31.64
33260	24.53	24.53	24.53	24.53	24.53
33261	31.09	31.09	31.09	31.09	31.09
33261A	31.20	31.20	31.20	31.20	31.20
33262	24.53	24.53	24.53	24.53	24.53
33265	24.50	24.50	24.50	24.50	24.50
33266	24.13	24.13	24.13	24.13	24.13
33267	24.13	24.13	24.13	24.13	24.13
33268	24.13	24.13	24.13	24.13	24.13
33269	24.53	24.53	24.53	24.53	24.53
33272	28.24	28.24	28.24	28.24	28.24
33273	30.38	30.38	30.38	30.38	30.38
33275	24.64	24.64	24.64	24.64	24.64
33276	25.21	25.21	25.21	25.21	25.21
33277	25.21	25.21	25.21	25.21	25.21
33278	25.22	25.22	25.22	25.22	25.22
33283	24.94	24.94	24.94	24.94	24.94
33284	24.88	24.88	24.88	24.88	24.88
33285	25.21	25.21	25.21	25.21	25.21
33287	24.84	24.84	24.84	24.84	24.84
33301	24.88	24.88	24.88	24.88	24.88
33302	24.75	24.75	24.75	24.75	24.75
33303	24.76	24.76	24.76	24.76	24.76
33304	24.76	24.76	24.76	24.76	24.76
33305	24.77	24.77	24.77	24.77	24.77
33307	24.77	24.77	24.77	24.77	24.77

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33308	24.77	24.77	24.77	24.77	24.77
33309	27.66	27.66	27.66	27.66	27.66
33312	27.67	27.67	27.67	27.67	27.67
33313	28.28	28.28	28.28	28.28	28.28
33314	24.75	24.75	24.75	24.75	24.75
33315	30.54	30.54	30.54	30.54	30.54
33317	26.93	26.93	26.93	26.93	26.93
33318	24.62	24.62	24.62	24.62	24.62
33319	24.70	24.70	24.70	24.70	24.70
33320	27.69	27.69	27.69	27.69	27.69
33323	26.06	26.06	26.06	26.06	26.06
33325	26.11	26.11	26.11	26.11	26.11
33326	26.12	26.12	26.12	26.12	26.12
33328	26.82	26.82	26.82	26.82	26.82
33330	26.83	26.83	26.83	26.83	26.83
33331	27.53	27.53	27.53	27.53	27.53
33332	27.12	27.12	27.12	27.12	27.12
33334	27.22	27.22	27.22	27.22	27.22
33335	27.29	27.29	27.29	27.29	27.29
33346	28.36	28.36	28.36	28.36	28.36
33347	28.36	28.36	28.36	28.36	28.36
33348	28.42	28.42	28.42	28.42	28.42
33352	31.38	31.38	31.38	31.38	31.38
33353	31.92	31.92	31.92	31.92	31.92
33353A	32.26	32.26	32.26	32.26	32.26
33353B	32.84	32.84	32.84	32.84	32.84
33353C	32.87	32.87	32.87	32.87	32.87
33354	32.18	32.18	32.18	32.18	32.18
33355	32.35	32.35	32.35	32.35	32.35
33358	28.36	28.36	28.36	28.36	28.36
33362	37.17	37.17	37.17	37.17	37.17
33366	25.70	25.70	25.70	25.70	25.70
33367	26.57	26.57	26.57	26.57	26.57
33368	27.84	27.84	27.84	27.84	27.84
33369	28.29	28.29	28.29	28.29	28.29
33370	29.19	29.19	29.19	29.19	29.19
33371	30.23	30.23	30.23	30.23	30.23
33372	30.40	30.40	30.40	30.40	30.40
33373	30.99	30.99	30.99	30.99	30.99
33374	31.25	31.25	31.25	31.25	31.25
33375	31.29	31.29	31.29	31.29	31.29
33376	32.93	32.93	32.93	32.93	32.93
33377	32.93	32.93	32.93	32.93	32.93
33378	33.06	33.06	33.06	33.06	33.06
33379	33.59	33.59	33.59	33.59	33.59
33380	34.36	34.36	34.36	34.36	34.36
33381	34.54	34.54	34.54	34.54	34.54
33382	34.56	34.56	34.56	34.56	34.56
33383	34.90	34.90	34.90	34.90	34.90
33384	36.72	36.72	36.72	36.72	36.72

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33385	36.85	36.85	36.85	36.85	36.85
33386	37.09	37.09	37.09	37.09	37.09
33387	37.18	37.18	37.18	37.18	37.18
33388	37.63	37.63	37.63	37.63	37.63
33389	38.94	38.94	38.94	38.94	38.94
33390	41.22	41.22	41.22	41.22	41.22
33391	41.60	41.60	41.60	41.60	41.60
33392	41.63	41.63	41.63	41.63	41.63
33394	43.97	43.97	43.97	43.97	43.97
33395	42.28	42.28	42.28	42.28	42.28
33403	30.39	30.39	30.39	30.39	30.39
33404	30.26	30.26	30.26	30.26	30.26
33405	30.40	30.40	30.40	30.40	30.40
33406	31.77	31.77	31.77	31.77	31.77
33407	33.95	33.95	33.95	33.95	33.95
33409	33.45	33.45	33.45	33.45	33.45
33410	33.73	33.73	33.73	33.73	33.73
33411	35.75	35.75	35.75	35.75	35.75
33412	35.92	35.92	35.92	35.92	35.92
33413	36.61	36.61	36.61	36.61	36.61
33414	36.76	36.76	36.76	36.76	36.76
33415	37.78	37.78	37.78	37.78	37.78
33416	39.40	39.40	39.40	39.40	39.40
33417	40.65	40.65	40.65	40.65	40.65
33419	36.99	36.99	36.99	36.99	36.99
33421	40.52	40.52	40.52	40.52	40.52
33422	44.07	44.07	44.07	44.07	44.07
33430	25.98	25.98	25.98	25.98	25.98
33431	27.55	27.55	27.55	27.55	27.55
33432	27.76	27.76	27.76	27.76	27.76
33433	27.90	27.90	27.90	27.90	27.90
33437	31.45	31.45	31.45	31.45	31.45
33438	33.44	33.44	33.44	33.44	33.44
33439	34.56	34.56	34.56	34.56	34.56
33440	34.58	34.58	34.58	34.58	34.58
33441	35.88	35.88	35.88	35.88	35.88
33442	35.90	35.90	35.90	35.90	35.90
33443	37.60	37.60	37.60	37.60	37.60
33444	33.78	33.78	33.78	33.78	33.78
33446	38.98	38.98	38.98	38.98	38.98
33448	31.19	31.19	31.19	31.19	31.19
33449	31.30	31.30	31.30	31.30	31.30
33451	31.33	31.33	31.33	31.33	31.33
33458	31.47	31.47	31.47	31.47	31.47
33460	28.93	28.93	28.93	28.93	28.93
33461	31.33	31.33	31.33	31.33	31.33
33475	31.59	31.59	31.59	31.59	31.59
33480	26.05	26.05	26.05	26.05	26.05
33481	29.68	29.68	29.68	29.68	29.68
33482	30.26	30.26	30.26	30.26	30.26

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33500	17.77	17.77	17.77	17.77	17.77
33501	17.69	17.72	17.71	17.72	17.71
33501AP	17.67	17.69	17.69	17.69	17.69
33501EX	17.64	17.66	17.66	17.66	17.66
33502	17.79	17.81	17.81	17.81	17.80
33503	18.18	18.19	18.19	18.19	18.19
33504	18.18	18.19	18.19	18.19	18.19
33505	18.82	18.83	18.83	18.83	18.83
33506	19.14	19.14	19.14	19.14	19.14
33507	19.84	19.84	19.84	19.84	19.84
33508	20.06	20.07	20.07	20.07	20.07
33509	20.08	20.08	20.08	20.08	20.08
33510	20.37	20.37	20.37	20.37	20.37
33511	20.82	20.82	20.82	20.82	20.82
33513	22.42	22.42	22.42	22.42	22.42
33514	21.24	21.24	21.24	21.24	21.24
33515	21.63	21.63	21.63	21.63	21.63
33516	21.71	21.72	21.72	21.72	21.71
33517	22.59	22.59	22.59	22.59	22.59
33519	21.80	21.80	21.80	21.80	21.80
33522	22.66	22.67	22.67	22.67	22.67
33524	23.22	23.22	23.22	23.22	23.22
33525	23.57	23.57	23.57	23.57	23.57
33526	24.85	24.85	24.85	24.85	24.85
33529	26.01	26.01	26.01	26.01	26.01
33530	26.68	26.68	26.68	26.68	26.68
33531	27.02	27.02	27.02	27.02	27.02
33532	27.69	27.69	27.69	27.69	27.69
33533	28.39	28.39	28.39	28.39	28.39
33534	20.84	20.84	20.84	20.84	20.84
33535	20.84	20.84	20.84	20.84	20.84
33536	28.56	28.56	28.56	28.56	28.56
33537	28.61	28.61	28.61	28.61	28.61
33538	28.64	28.64	28.64	28.64	28.64
33539	28.84	28.84	28.84	28.84	28.84
33540	29.86	29.86	29.86	29.86	29.86
33542	30.63	30.63	30.63	30.63	30.63
33544	30.72	30.72	30.72	30.72	30.72
33545	30.80	30.80	30.80	30.80	30.80
33546	31.60	31.60	31.60	31.60	31.60
33547	31.01	31.01	31.01	31.01	31.01
33548	31.63	31.63	31.63	31.63	31.63
33549	31.64	31.64	31.64	31.64	31.64
33550	31.64	31.64	31.64	31.64	31.64
33551	31.69	31.69	31.69	31.69	31.69
33552	31.72	31.72	31.72	31.72	31.72
33553	31.78	31.78	31.78	31.78	31.78
33554	31.86	31.86	31.86	31.86	31.86
33555	31.93	31.93	31.93	31.93	31.93
33556	32.81	32.81	32.81	32.81	32.81

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33557	32.79	32.79	32.79	32.79	32.79
33558	33.43	33.43	33.43	33.43	33.43
33559	34.14	34.14	34.14	34.14	34.14
33560	28.59	28.59	28.59	28.59	28.59
33561	28.62	28.62	28.62	28.62	28.62
33562	28.72	28.72	28.72	28.72	28.72
33564	29.45	29.45	29.45	29.45	29.45
33565	29.89	29.89	29.89	29.89	29.89
33566	30.54	30.54	30.54	30.54	30.54
33567	31.04	31.04	31.04	31.04	31.04
33568	31.04	31.04	31.04	31.04	31.04
33569	31.90	31.90	31.90	31.90	31.90
33570	32.39	32.39	32.39	32.39	32.39
33571	32.57	32.57	32.57	32.57	32.57
33571A	34.63	34.63	34.63	34.63	34.63
33572	35.79	35.79	35.79	35.79	35.79
33575	31.91	31.91	31.91	31.91	31.91
33576	34.05	34.05	34.05	34.05	34.05
33577	35.53	35.53	35.53	35.53	35.53
33577A	34.72	34.72	34.72	34.72	34.72
33580	17.70	17.72	17.72	17.72	17.72
33581	17.70	17.72	17.72	17.72	17.72
33582	18.86	18.86	18.86	18.86	18.86
33583	21.06	21.06	21.06	21.06	21.06
33584	21.07	21.07	21.07	21.07	21.07
33585	22.36	22.36	22.36	22.36	22.36
33586	18.87	18.87	18.87	18.87	18.87
33587	20.13	20.13	20.13	20.13	20.13
33588	18.30	18.31	18.30	18.31	18.30
33589	18.30	18.31	18.30	18.31	18.30
33590	20.51	20.51	20.51	20.51	20.51
33591	19.84	19.85	19.85	19.85	19.85
33592	19.84	19.84	19.84	19.84	19.84
33593	20.71	20.71	20.71	20.71	20.71
33595	22.42	22.42	22.42	22.42	22.42
33596	21.72	21.72	21.72	21.72	21.72
33598	21.76	21.76	21.76	21.76	21.76
33599	24.39	24.39	24.39	24.39	24.39
33602	22.75	22.75	22.75	22.75	22.75
33603	22.92	22.92	22.92	22.92	22.92
33605	24.98	24.98	24.98	24.98	24.98
33608	22.71	22.71	22.71	22.71	22.71
33609	23.86	23.86	23.86	23.86	23.86
33610	23.88	23.88	23.88	23.88	23.88
33611	30.77	30.77	30.77	30.77	30.77
33614	23.22	23.22	23.22	23.22	23.22
33618	24.86	24.86	24.86	24.86	24.86
33619	24.87	24.87	24.87	24.87	24.87
33620	25.23	25.23	25.23	25.23	25.23
33621	25.88	25.88	25.88	25.88	25.88

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33622	28.07	28.07	28.07	28.07	28.07
33623	31.41	31.41	31.41	31.41	31.41
33624	26.88	26.88	26.88	26.88	26.88
33625	27.50	27.50	27.50	27.50	27.50
33626	28.00	28.00	28.00	28.00	28.00
33627	28.81	28.81	28.81	28.81	28.81
33628	31.44	31.44	31.44	31.44	31.44
33629	32.40	32.40	32.40	32.40	32.40
33632	34.74	34.74	34.74	34.74	34.74
33633	35.36	35.36	35.36	35.36	35.36
33634	35.68	35.68	35.68	35.68	35.68
33635	36.52	36.52	36.52	36.52	36.52
33637	35.51	35.51	35.51	35.51	35.51
33638	35.52	35.52	35.52	35.52	35.52
33640	36.26	36.26	36.26	36.26	36.26
33642	32.66	32.66	32.66	32.66	32.66
33643	32.73	32.73	32.73	32.73	32.73
33644	25.84	25.84	25.84	25.84	25.84
33644A	24.93	24.93	24.93	24.93	24.93
33645	25.04	25.04	25.04	25.04	25.04
33647	27.39	27.39	27.39	27.39	27.39
33648	27.75	27.75	27.75	27.75	27.75
33649	27.69	27.69	27.69	27.69	27.69
33650	29.61	29.61	29.61	29.61	29.61
33650A	29.89	29.89	29.89	29.89	29.89
33650B	29.21	29.21	29.21	29.21	29.21
33650C	30.04	30.04	30.04	30.04	30.04
33650D	26.69	26.69	26.69	26.69	26.69
33651	27.03	27.03	27.03	27.03	27.03
33652	28.40	28.40	28.40	28.40	28.40
33653	28.46	28.46	28.46	28.46	28.46
33654	28.56	28.56	28.56	28.56	28.56
33655	31.16	31.16	31.16	31.16	31.16
33656	31.18	31.18	31.18	31.18	31.18
33658	31.20	31.20	31.20	31.20	31.20
33659	31.43	31.43	31.43	31.43	31.43
33660	32.21	32.21	32.21	32.21	32.21
33661	32.21	32.21	32.21	32.21	32.21
33663	31.21	31.21	31.21	31.21	31.21
33664	35.70	35.70	35.70	35.70	35.70
33665	28.70	28.70	28.70	28.70	28.70
33667	29.19	29.19	29.19	29.19	29.19
33668	31.46	31.46	31.46	31.46	31.46
33669	31.46	31.46	31.46	31.46	31.46
33670	31.69	31.69	31.69	31.69	31.69
33671	31.69	31.69	31.69	31.69	31.69
33672	36.49	36.49	36.49	36.49	36.49
33674	30.78	30.78	30.78	30.78	30.78
33674A	31.82	31.82	31.82	31.82	31.82
33675	31.93	31.93	31.93	31.93	31.93

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33675A	32.94	32.94	32.94	32.94	32.94
33676	33.66	33.66	33.66	33.66	33.66
33677	33.66	33.66	33.66	33.66	33.66
33678	33.66	33.66	33.66	33.66	33.66
33679	34.54	34.54	34.54	34.54	34.54
33680	34.43	34.43	34.43	34.43	34.43
33681	32.32	32.32	32.32	32.32	32.32
33682	30.93	30.93	30.93	30.93	30.93
33683	30.82	30.82	30.82	30.82	30.82
33683A	30.81	30.81	30.81	30.81	30.81
33684	30.85	30.85	30.85	30.85	30.85
33685	31.14	31.14	31.14	31.14	31.14
33686	31.58	31.58	31.58	31.58	31.58
33687	31.65	31.65	31.65	31.65	31.65
33688	31.65	31.65	31.65	31.65	31.65
33689	32.88	32.88	32.88	32.88	32.88
33690	32.84	32.84	32.84	32.84	32.84
33691	32.84	32.84	32.84	32.84	32.84
33692	32.84	32.84	32.84	32.84	32.84
33693	32.06	32.06	32.06	32.06	32.06
33694	32.50	32.50	32.50	32.50	32.50
33695	33.69	33.69	33.69	33.69	33.69
33696	33.92	33.92	33.92	33.92	33.92
33697	37.92	37.92	37.92	37.92	37.92
33698	33.72	33.72	33.72	33.72	33.72
33699	32.59	32.59	32.59	32.59	32.59
33699A	31.82	31.82	31.82	31.82	31.82
33700	25.73	25.73	25.73	25.73	25.73
33701	25.39	25.39	25.39	25.39	25.39
33702	25.39	25.39	25.39	25.39	25.39
33703	25.41	25.41	25.41	25.41	25.41
33704	25.36	25.36	25.36	25.36	25.36
33705	25.48	25.48	25.48	25.48	25.48
33706	25.37	25.37	25.37	25.37	25.37
33707	25.37	25.37	25.37	25.37	25.37
33708	25.37	25.37	25.37	25.37	25.37
33709	25.37	25.37	25.37	25.37	25.37
33710	25.36	25.36	25.36	25.36	25.36
33711	25.36	25.36	25.36	25.36	25.36
33712	25.33	25.33	25.33	25.33	25.33
33713	24.70	24.70	24.70	24.70	24.70
33714	24.66	24.66	24.66	24.66	24.66
33715	25.83	25.83	25.83	25.83	25.83
33720	25.38	25.38	25.38	25.38	25.38
33721	25.92	25.92	25.92	25.92	25.92
33722	25.78	25.78	25.78	25.78	25.78
33723	24.69	24.69	24.69	24.69	24.69
33724	24.24	24.24	24.24	24.24	24.24
33725	24.70	24.70	24.70	24.70	24.70
33726	24.94	24.94	24.94	24.94	24.94

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
33727	25.21	25.21	25.21	25.21	25.21
33750	9.91	9.83	9.85	9.82	9.86
33751	9.91	9.81	9.83	9.80	9.86
33752	9.91	9.78	9.82	9.79	9.86
33753	9.90	9.74	9.82	9.79	9.86
33754	9.90	9.74	9.82	9.79	9.86
33755	9.90	9.74	9.82	9.79	9.86
33756	9.90	9.74	9.82	9.79	9.86
33757	9.90	9.74	9.82	9.79	9.86
33758	9.90	9.74	9.82	9.78	9.86
33759	9.90	9.74	9.82	9.78	9.86
33760	9.90	9.74	9.82	9.79	9.86
33761	9.90	9.74	9.82	9.78	9.86
33762	9.90	9.74	9.82	9.78	9.85
33763	9.90	9.74	9.82	9.78	9.85
33764	9.91	9.75	9.81	9.79	9.86
33765	9.91	9.75	9.82	9.79	9.86
34000	27.21	27.21	27.21	27.21	27.21
34001	30.26	30.26	30.26	30.26	30.26
34002	27.58	27.58	27.58	27.58	27.58
34003	28.14	28.14	28.14	28.14	28.14
34004	27.63	27.63	27.63	27.63	27.63
34005	33.03	33.03	33.03	33.03	33.03
34006	29.88	29.88	29.88	29.88	29.88
34007	27.20	27.20	27.20	27.20	27.20
34008	27.18	27.18	27.18	27.18	27.18
34009	28.23	28.23	28.23	28.23	28.23
34010	27.50	27.50	27.50	27.50	27.50
34011	29.81	29.81	29.81	29.81	29.81
34012	28.52	28.52	28.52	28.52	28.52
34013	29.88	29.88	29.88	29.88	29.88
34014	25.37	25.37	25.37	25.37	25.37
34015	25.40	25.40	25.40	25.40	25.40
34016	25.51	25.51	25.51	25.51	25.51
34017	27.73	27.73	27.73	27.73	27.73
34018	26.88	26.88	26.88	26.88	26.88
34019	26.90	26.90	26.90	26.90	26.90
34020	27.52	27.52	27.52	27.52	27.52
34021	29.02	29.02	29.02	29.02	29.02
34022	29.69	29.69	29.69	29.69	29.69
34023	33.16	33.16	33.16	33.16	33.16
34024	30.52	30.52	30.52	30.52	30.52
34025	35.85	35.85	35.85	35.85	35.85
34026	27.26	27.26	27.26	27.26	27.26
34027	27.36	27.36	27.36	27.36	27.36
34028	28.31	28.31	28.31	28.31	28.31
34029	28.30	28.30	28.30	28.30	28.30
34030	30.66	30.66	30.66	30.66	30.66
34031	30.80	30.80	30.80	30.80	30.80
34032	30.83	30.83	30.83	30.83	30.83

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
34033	32.97	32.97	32.97	32.97	32.97
34034	25.64	25.64	25.64	25.64	25.64
34035	25.79	25.79	25.79	25.79	25.79
34036	25.99	25.99	25.99	25.99	25.99
34037	26.27	26.27	26.27	26.27	26.27
34038	27.73	27.73	27.73	27.73	27.73
34039	29.72	29.72	29.72	29.72	29.72
34040	30.80	30.80	30.80	30.80	30.80
34041	30.84	30.84	30.84	30.84	30.84
34042	31.13	31.13	31.13	31.13	31.13
34043	31.18	31.18	31.18	31.18	31.18
34044	32.60	32.60	32.60	32.60	32.60
34045	33.84	33.84	33.84	33.84	33.84
34046	32.60	32.60	32.60	32.60	32.60
34047	31.26	31.26	31.26	31.26	31.26
34048	31.46	31.46	31.46	31.46	31.46
34049	27.52	27.52	27.52	27.52	27.52
34050	31.34	31.34	31.34	31.34	31.34
34051	31.65	31.65	31.65	31.65	31.65
34052	32.95	32.95	32.95	32.95	32.95
34053	27.51	27.51	27.51	27.51	27.51
34054	27.51	27.51	27.51	27.51	27.51
34055	27.52	27.52	27.52	27.52	27.52
34056	31.47	31.47	31.47	31.47	31.47
34057	27.52	27.52	27.52	27.52	27.52
34058	29.18	29.18	29.18	29.18	29.18
34059	29.22	29.22	29.22	29.22	29.22
34060	29.15	29.15	29.15	29.15	29.15
34061	29.48	29.48	29.48	29.48	29.48
34062	29.17	29.17	29.17	29.17	29.17
34063	27.37	27.37	27.37	27.37	27.37
34064	27.51	27.51	27.51	27.51	27.51
34065	28.71	28.71	28.71	28.71	28.71
34066	28.75	28.75	28.75	28.75	28.75
34067	26.07	26.07	26.07	26.07	26.07
34068	28.67	28.67	28.67	28.67	28.67
34069	29.71	29.71	29.71	29.71	29.71
34070	29.30	29.30	29.30	29.30	29.30
34071	30.39	30.39	30.39	30.39	30.39
34072	30.67	30.67	30.67	30.67	30.67
34073	30.69	30.69	30.69	30.69	30.69
34074	30.73	30.73	30.73	30.73	30.73
34075	30.52	30.52	30.52	30.52	30.52
34076	31.12	31.12	31.12	31.12	31.12
34077	34.81	34.81	34.81	34.81	34.81
34078	27.70	27.70	27.70	27.70	27.70
34079	27.70	27.70	27.70	27.70	27.70
34080	27.70	27.70	27.70	27.70	27.70
34081	27.70	27.70	27.70	27.70	27.70
34082	27.63	27.63	27.63	27.63	27.63

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
34083	28.22	28.22	28.22	28.22	28.22
34084	28.20	28.20	28.20	28.20	28.20
34085	30.38	30.38	30.38	30.38	30.38
34086	30.44	30.44	30.44	30.44	30.44
34087	28.29	28.29	28.29	28.29	28.29
34088	28.95	28.95	28.95	28.95	28.95
34089	29.59	29.59	29.59	29.59	29.59
34090	32.30	32.30	32.30	32.30	32.30
34091	29.21	29.21	29.21	29.21	29.21
34092	29.21	29.21	29.21	29.21	29.21
34093	31.37	31.37	31.37	31.37	31.37
34094	31.25	31.25	31.25	31.25	31.25
34095	29.24	29.24	29.24	29.24	29.24
34096	29.49	29.49	29.49	29.49	29.49
34098	30.80	30.80	30.80	30.80	30.80
34101	32.82	32.82	32.82	32.82	32.82
34115	35.02	35.02	35.02	35.02	35.02
34220	17.71	17.73	17.72	17.73	17.72
34222	17.72	17.74	17.74	17.74	17.74
34225	18.26	18.27	18.27	18.27	18.27
34229	18.29	18.29	18.29	18.29	18.29
34230	18.33	18.34	18.33	18.34	18.33
34235	17.72	17.74	17.74	17.74	17.74
34250	35.44	35.44	35.44	35.44	35.44
34252	35.34	35.34	35.34	35.34	35.34
34254	35.05	35.05	35.05	35.05	35.05
34256	34.76	34.76	34.76	34.76	34.76
34258	33.92	33.92	33.92	33.92	33.92
34260	35.00	35.00	35.00	35.00	35.00
34300	30.78	30.78	30.78	30.78	30.78
34302	31.35	31.35	31.35	31.35	31.35
34304	31.35	31.35	31.35	31.35	31.35
34306	31.91	31.91	31.91	31.91	31.91
34320	31.31	31.31	31.31	31.31	31.31
34320A	31.30	31.30	31.30	31.30	31.30
34321	31.30	31.30	31.30	31.30	31.30
34322	31.30	31.30	31.30	31.30	31.30
34340	30.44	30.44	30.44	30.44	30.44
34342	30.17	30.17	30.17	30.17	30.17
34344	30.09	30.09	30.09	30.09	30.09
35000	24.77	24.77	24.77	24.77	24.77
35005	24.77	24.77	24.77	24.77	24.77
35010	24.77	24.77	24.77	24.77	24.77
35015	24.77	24.77	24.77	24.77	24.77
35020	24.77	24.77	24.77	24.77	24.77
35025	24.77	24.77	24.77	24.77	24.77
35030	24.77	24.77	24.77	24.77	24.77
35035	24.77	24.77	24.77	24.77	24.77
35040	24.77	24.77	24.77	24.77	24.77
35050	27.25	27.25	27.25	27.25	27.25

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
35060	29.01	29.01	29.01	29.01	29.01
35509	23.17	23.17	23.17	23.17	23.17
35510	25.19	25.19	25.19	25.19	25.19
35512	27.02	27.02	27.02	27.02	27.02
35513	27.19	27.19	27.19	27.19	27.19
35522	21.15	21.15	21.15	21.15	21.15
35523	21.25	21.25	21.25	21.25	21.25
35523A	21.86	21.86	21.86	21.86	21.86
35524	21.16	21.16	21.16	21.16	21.16
35525	23.31	23.31	23.31	23.31	23.31
35526A	25.25	25.25	25.25	25.25	25.25
35526B	25.14	25.14	25.14	25.14	25.14
35527	25.33	25.33	25.33	25.33	25.33
35528	25.33	25.33	25.33	25.33	25.33
35528A	25.34	25.34	25.34	25.34	25.34
35528B	25.42	25.42	25.42	25.42	25.42
35528C	25.48	25.48	25.48	25.48	25.48
35528D	25.42	25.42	25.42	25.42	25.42
35529	25.34	25.34	25.34	25.34	25.34
35529A	25.38	25.38	25.38	25.38	25.38
35530	25.58	25.58	25.58	25.58	25.58
35531	28.31	28.31	28.31	28.31	28.31
35532	27.26	27.26	27.26	27.26	27.26
35532A	28.26	28.26	28.26	28.26	28.26
35533	29.42	29.42	29.42	29.42	29.42
35534	31.20	31.20	31.20	31.20	31.20
35535	28.39	28.39	28.39	28.39	28.39
35536	31.73	31.73	31.73	31.73	31.73
35537	31.46	31.46	31.46	31.46	31.46
35538	32.16	32.16	32.16	32.16	32.16
35539	32.59	32.59	32.59	32.59	32.59
35540	33.38	33.38	33.38	33.38	33.38
35541	30.70	30.70	30.70	30.70	30.70
35542	21.16	21.16	21.16	21.16	21.16
35543	21.16	21.16	21.16	21.16	21.16
35544	21.16	21.16	21.16	21.16	21.16
35544A	21.16	21.16	21.16	21.16	21.16
35544B	25.61	25.61	25.61	25.61	25.61
35545	21.16	21.16	21.16	21.16	21.16
35546	22.92	22.92	22.92	22.92	22.92
35547	26.58	26.58	26.58	26.58	26.58
35548	26.58	26.58	26.58	26.58	26.58
35549	27.75	27.75	27.75	27.75	27.75
35550	27.77	27.77	27.77	27.77	27.77
35550A	26.46	26.46	26.46	26.46	26.46
35551	27.08	27.08	27.08	27.08	27.08
35552	27.17	27.17	27.17	27.17	27.17
35553	27.69	27.69	27.69	27.69	27.69
35553B	27.21	27.21	27.21	27.21	27.21
35554	28.50	28.50	28.50	28.50	28.50

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
35554A	27.29	27.29	27.29	27.29	27.29
35555	27.69	27.69	27.69	27.69	27.69
35555A	31.16	31.16	31.16	31.16	31.16
35556	32.13	32.13	32.13	32.13	32.13
35556A	31.18	31.18	31.18	31.18	31.18
35557	31.93	31.93	31.93	31.93	31.93
35558	32.66	32.66	32.66	32.66	32.66
35558A	31.92	31.92	31.92	31.92	31.92
35559	32.87	32.87	32.87	32.87	32.87
35560	33.46	33.46	33.46	33.46	33.46
35561	31.51	31.51	31.51	31.51	31.51
35562	32.88	32.88	32.88	32.88	32.88
35563	33.72	33.72	33.72	33.72	33.72
35563A	33.72	33.72	33.72	33.72	33.72
35564	33.58	33.58	33.58	33.58	33.58
35565	32.05	32.05	32.05	32.05	32.05
35566	34.11	34.11	34.11	34.11	34.11
35566A	32.17	32.17	32.17	32.17	32.17
35567	32.27	32.27	32.27	32.27	32.27
35568	32.27	32.27	32.27	32.27	32.27
35570	31.15	31.15	31.15	31.15	31.15
35571	36.06	36.06	36.06	36.06	36.06
35572	33.89	33.89	33.89	33.89	33.89
35575	35.47	35.47	35.47	35.47	35.47
35577	33.82	33.82	33.82	33.82	33.82
35578	33.83	33.83	33.83	33.83	33.83
35579	33.82	33.82	33.82	33.82	33.82
35581	33.01	33.01	33.01	33.01	33.01
35592	33.88	33.88	33.88	33.88	33.88
35594	34.53	34.53	34.53	34.53	34.53
35595	34.04	34.04	34.04	34.04	34.04
35596	34.70	34.70	34.70	34.70	34.70
35597	34.95	34.95	34.95	34.95	34.95
35598	34.70	34.70	34.70	34.70	34.70
35599	35.53	35.53	35.53	35.53	35.53
35599A	34.71	34.71	34.71	34.71	34.71
35600	33.50	33.50	33.50	33.50	33.50
35600A	38.39	38.39	38.39	38.39	38.39
35601	30.62	30.62	30.62	30.62	30.62
35610	25.56	25.56	25.56	25.56	25.56
35611	28.98	28.98	28.98	28.98	28.98
35612	29.17	29.17	29.17	29.17	29.17
35614	29.62	29.62	29.62	29.62	29.62
35615	29.83	29.83	29.83	29.83	29.83
35617	30.62	30.62	30.62	30.62	30.62
35620	17.33	17.36	17.36	17.36	17.36
35621	17.33	17.36	17.36	17.36	17.36
35622	17.34	17.36	17.36	17.36	17.36
35623	17.34	17.36	17.36	17.36	17.36
35624	17.61	17.64	17.63	17.64	17.63

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
35625	17.61	17.64	17.63	17.64	17.63
35626	17.61	17.64	17.63	17.64	17.63
35627	17.61	17.64	17.63	17.64	17.63
35628	17.61	17.64	17.63	17.64	17.63
35629	17.61	17.64	17.63	17.64	17.63
35630	16.13	16.22	16.21	16.21	16.20
35631	16.51	16.51	16.51	16.51	16.51
35632	17.28	17.28	17.28	17.28	17.28
35633	16.43	16.47	16.47	16.47	16.47
35640	20.77	20.77	20.77	20.77	20.77
35641	20.77	20.77	20.77	20.77	20.77
35641A	20.84	20.84	20.84	20.84	20.84
35641B	20.94	20.94	20.94	20.94	20.94
35642	21.30	21.30	21.30	21.30	21.30
35643	22.74	22.74	22.74	22.74	22.74
35644	21.03	21.03	21.03	21.03	21.03
35644A	21.04	21.04	21.04	21.04	21.04
35645	24.88	24.88	24.88	24.88	24.88
35646	24.88	24.88	24.88	24.88	24.88
35650	29.96	29.96	29.96	29.96	29.96
35651	29.97	29.96	29.97	29.97	29.97
35652	29.97	29.96	29.97	29.97	29.97
35653	30.08	30.08	30.08	30.08	30.08
35655	33.95	33.95	33.95	33.95	33.95
35656	33.95	33.95	33.95	33.95	33.95
35657	33.95	33.95	33.95	33.95	33.95
35660	34.27	34.27	34.27	34.27	34.27
35661	34.29	34.29	34.29	34.29	34.29
35662	34.32	34.32	34.32	34.32	34.32
35665A	20.77	20.77	20.77	20.77	20.77
35665B	20.77	20.77	20.77	20.77	20.77
35665C	20.77	20.77	20.77	20.77	20.77
35665D	20.77	20.77	20.77	20.77	20.77
35665E	21.61	21.61	21.61	21.61	21.61
35665F	24.96	24.96	24.96	24.96	24.96
35665G	25.30	25.30	25.30	25.30	25.30
35665H	26.01	26.01	26.01	26.01	26.01
35670	23.16	23.16	23.16	23.16	23.16
35671	23.16	23.16	23.16	23.16	23.16
35672	23.16	23.16	23.16	23.16	23.16
35673	23.16	23.16	23.16	23.16	23.16
35674	24.88	24.88	24.88	24.88	24.88
35680	22.47	22.47	22.47	22.47	22.47
35684	24.06	24.06	24.06	24.06	24.06
35690	22.88	22.88	22.88	22.88	22.88
35691	23.31	23.31	23.31	23.31	23.31
35693	23.87	23.87	23.87	23.87	23.87
35694	23.83	23.83	23.83	23.83	23.83
35695	23.15	23.15	23.15	23.15	23.15
35696	24.78	24.78	24.78	24.78	24.78

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
35697	24.77	24.77	24.77	24.77	24.77
35698	25.14	25.14	25.14	25.14	25.14
35700	21.95	21.95	21.95	21.95	21.95
35710	19.73	19.74	19.74	19.74	19.74
35712	19.73	19.74	19.74	19.74	19.74
35713	19.73	19.74	19.74	19.74	19.74
35715	19.73	19.74	19.74	19.74	19.74
35716	19.73	19.74	19.74	19.74	19.74
35717	19.73	19.74	19.74	19.74	19.74
35719	19.73	19.74	19.74	19.74	19.74
35720	21.77	21.77	21.77	21.77	21.77
35721	23.11	23.11	23.11	23.11	23.11
35722	23.11	23.11	23.11	23.11	23.11
35723	27.75	27.75	27.75	27.75	27.75
35724	23.12	23.12	23.12	23.12	23.12
35725	23.12	23.12	23.12	23.12	23.12
35726	23.13	23.13	23.13	23.13	23.13
35727	23.51	23.51	23.51	23.51	23.51
35728	23.97	23.97	23.97	23.97	23.97
35729	24.22	24.22	24.22	24.22	24.22
35730	25.36	25.36	25.36	25.36	25.36
35731	24.01	24.01	24.01	24.01	24.01
35732	24.06	24.06	24.06	24.06	24.06
35733	24.78	24.78	24.78	24.78	24.78
35734	25.37	25.37	25.37	25.37	25.37
35735	26.76	26.76	26.76	26.76	26.76
35740	24.30	24.30	24.30	24.30	24.30
35741	24.59	24.59	24.59	24.59	24.59
35742	25.84	25.84	25.84	25.84	25.84
35743	26.59	26.59	26.59	26.59	26.59
35744	24.64	24.64	24.64	24.64	24.64
35745	24.67	24.67	24.67	24.67	24.67
35746	19.04	19.04	19.04	19.04	19.04
35747	18.27	18.29	18.29	18.29	18.29
35750	19.20	19.21	19.20	19.21	19.20
35751	21.09	21.09	21.09	21.09	21.09
35752	20.37	20.38	20.38	20.38	20.38
35753	20.38	20.38	20.38	20.38	20.38
35754	20.70	20.70	20.70	20.70	20.70
35755	20.38	20.39	20.38	20.39	20.38
35756	21.44	21.44	21.44	21.44	21.44
35800	29.09	29.09	29.09	29.09	29.09
35805	28.08	28.08	28.08	28.08	28.08
35810	28.70	28.70	28.70	28.70	28.70
35815	29.87	29.87	29.87	29.87	29.87
35820	29.89	29.89	29.89	29.89	29.89
35825	28.75	28.75	28.75	28.75	28.75
35830	29.88	29.88	29.88	29.88	29.88
35835	30.01	30.01	30.01	30.01	30.01
35840	30.18	30.18	30.18	30.18	30.18

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
35845	30.71	30.71	30.71	30.71	30.71
35850	30.18	30.18	30.18	30.18	30.18
35855	29.00	29.00	29.00	29.00	29.00
35860	30.02	30.02	30.02	30.02	30.02
35865	29.82	29.82	29.82	29.82	29.82
35870	30.25	30.25	30.25	30.25	30.25
35875	31.67	31.67	31.67	31.67	31.67
35880	30.83	30.83	30.83	30.83	30.83
35885	31.54	31.54	31.54	31.54	31.54
35890	31.14	31.14	31.14	31.14	31.14
35895	31.19	31.19	31.19	31.19	31.19
35900	31.55	31.55	31.55	31.55	31.55
35905	30.74	30.74	30.74	30.74	30.74
35910	30.36	30.36	30.36	30.36	30.36
35915	30.80	30.80	30.80	30.80	30.80
35920	36.09	36.09	36.09	36.09	36.09
35930	35.83	35.83	35.83	35.83	35.83
35935	26.92	26.92	26.92	26.92	26.92
35940	26.88	26.88	26.88	26.88	26.88
35945	25.63	25.63	25.63	25.63	25.63
35950	25.63	25.63	25.63	25.63	25.63
35955	27.42	27.42	27.42	27.42	27.42
35960	26.18	26.18	26.18	26.18	26.18
35965	29.45	29.45	29.45	29.45	29.45
35970	29.12	29.12	29.12	29.12	29.12
35975	25.63	25.63	25.63	25.63	25.63
35980	25.81	25.81	25.81	25.81	25.81
35985	27.81	27.81	27.81	27.81	27.81
35990	26.29	26.29	26.29	26.29	26.29
36000	23.86	23.86	23.86	23.86	23.86
36005	25.79	25.79	25.79	25.79	25.79
36010	26.26	26.26	26.26	26.26	26.26
36015	28.19	28.19	28.19	28.19	28.19
36020	26.48	26.48	26.48	26.48	26.48
36025	28.57	28.57	28.57	28.57	28.57
36030	26.59	26.59	26.59	26.59	26.59
36035	28.65	28.65	28.65	28.65	28.65
36040	26.81	26.81	26.81	26.81	26.81
36045	28.73	28.73	28.73	28.73	28.73
36050	29.25	29.25	29.25	29.25	29.25
36055	29.33	29.33	29.33	29.33	29.33
36060	30.20	30.20	30.20	30.20	30.20
36065	31.77	31.77	31.77	31.77	31.77
36075	28.56	28.56	28.56	28.56	28.56
36080	26.15	26.15	26.15	26.15	26.15
36085	28.56	28.56	28.56	28.56	28.56
36090	26.32	26.32	26.32	26.32	26.32
36095	28.57	28.57	28.57	28.57	28.57
36100	29.51	29.51	29.51	29.51	29.51
36105	28.57	28.57	28.57	28.57	28.57

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
36110	31.81	31.81	31.81	31.81	31.81
36115	34.11	34.11	34.11	34.11	34.11
36120	29.71	29.71	29.71	29.71	29.71
36125	29.58	29.58	29.58	29.58	29.58
36130	30.57	30.57	30.57	30.57	30.57
36135	30.58	30.58	30.58	30.58	30.58
36140	30.62	30.62	30.62	30.62	30.62
36145	31.79	31.79	31.79	31.79	31.79
36150	16.72	16.76	16.76	16.76	16.76
36155	17.25	17.29	17.28	17.29	17.28
36158	17.51	17.54	17.54	17.54	17.54
36160	19.09	19.09	19.09	19.09	19.09
36175	18.42	18.42	18.42	18.42	18.42
36185	19.27	19.27	19.27	19.27	19.27
36190	18.90	18.90	18.90	18.90	18.90
36195	18.90	18.90	18.90	18.90	18.90
36200	25.94	25.94	25.94	25.94	25.94
36205	20.02	20.02	20.02	20.02	20.02
36210	21.91	21.91	21.91	21.91	21.91
36215	20.02	20.02	20.02	20.02	20.02
36220	22.90	22.90	22.90	22.90	22.90
36225	22.66	22.66	22.66	22.66	22.66
36230	17.30	17.33	17.32	17.33	17.32
36235	17.05	17.07	17.07	17.07	17.07
36240	16.99	17.02	17.02	17.02	17.02
36245	17.01	17.04	17.03	17.04	17.03
36250	17.44	17.45	17.45	17.45	17.45
36255	16.99	17.02	17.02	17.02	17.02
36260	17.73	17.73	17.73	17.73	17.73
36263	17.45	17.47	17.47	17.47	17.47
36265	18.43	18.43	18.43	18.43	18.43
36270	18.88	18.88	18.88	18.88	18.88
36275	18.98	18.98	18.98	18.98	18.98
36280	19.11	19.11	19.11	19.11	19.11
36285	19.27	19.27	19.27	19.27	19.27
36295	20.15	20.15	20.15	20.15	20.15
36300	20.69	20.69	20.69	20.69	20.69
36305	20.20	20.20	20.20	20.20	20.20
36310	20.20	20.20	20.20	20.20	20.20
36315	20.53	20.53	20.53	20.53	20.53
36320	20.70	20.70	20.70	20.70	20.70
36325	20.64	20.64	20.64	20.64	20.64
36330	20.64	20.64	20.64	20.64	20.64
36335	21.54	21.54	21.54	21.54	21.54
36340	20.82	20.82	20.82	20.82	20.82
36350	21.32	21.32	21.32	21.32	21.32
36352	21.55	21.55	21.55	21.55	21.55
36355	21.71	21.71	21.71	21.71	21.71
36360	22.41	22.41	22.41	22.41	22.41
36365	22.30	22.30	22.30	22.30	22.30

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
36370	22.55	22.55	22.55	22.55	22.55
36375	22.31	22.31	22.31	22.31	22.31
36380	21.63	21.63	21.63	21.63	21.63
36385	22.46	22.46	22.46	22.46	22.46
36390	21.64	21.64	21.64	21.64	21.64
36395	23.02	23.02	23.02	23.02	23.02
36400	28.38	28.38	28.38	28.38	28.38
36405	30.94	30.94	30.94	30.94	30.94
36410	31.24	31.24	31.24	31.24	31.24
36415	31.25	31.25	31.25	31.25	31.25
36420	31.50	31.50	31.50	31.50	31.50
36430	31.50	31.50	31.50	31.50	31.50
36435	31.27	31.27	31.27	31.27	31.27
36445	31.29	31.29	31.29	31.29	31.29
36450	16.99	17.02	17.02	17.02	17.02
36500	24.53	24.53	24.53	24.53	24.53
36510	24.53	24.53	24.53	24.53	24.53
36520	26.73	26.73	26.73	26.73	26.73
36530	30.02	30.02	30.02	30.02	30.02
36540	30.21	30.21	30.21	30.21	30.21
36550	29.38	29.38	29.38	29.38	29.38
36560	25.41	25.41	25.41	25.41	25.41
36570	30.21	30.21	30.21	30.21	30.21
36580	28.57	28.57	28.57	28.57	28.57
36590	28.57	28.57	28.57	28.57	28.57
36600	28.79	28.79	28.79	28.79	28.79
36610	32.15	32.15	32.15	32.15	32.15
36620	32.29	32.29	32.29	32.29	32.29
36630	32.43	32.43	32.43	32.43	32.43
36640	34.86	34.86	34.86	34.86	34.86
36650	34.86	34.86	34.86	34.86	34.86
36660	34.30	34.30	34.30	34.30	34.30
36670	33.95	33.95	33.95	33.95	33.95
36680	34.92	34.92	34.92	34.92	34.92
36690	33.96	33.96	33.96	33.96	33.96
36700	34.04	34.04	34.04	34.04	34.04
36710	34.61	34.61	34.61	34.61	34.61
36720	34.09	34.09	34.09	34.09	34.09
36730	34.49	34.49	34.49	34.49	34.49
36740	34.39	34.39	34.39	34.39	34.39
36750	34.38	34.38	34.38	34.38	34.38
36760	34.37	34.37	34.37	34.37	34.37
36770	34.42	34.42	34.42	34.42	34.42
36780	34.42	34.42	34.42	34.42	34.42
36790	34.71	34.71	34.71	34.71	34.71
36800	34.92	34.92	34.92	34.92	34.92
36810	33.59	33.59	33.59	33.59	33.59
36820	34.41	34.41	34.41	34.41	34.41
36830	33.63	33.63	33.63	33.63	33.63
36840	33.60	33.60	33.60	33.60	33.60

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
36850	34.59	34.59	34.59	34.59	34.59
36860	34.54	34.54	34.54	34.54	34.54
36870	34.46	34.46	34.46	34.46	34.46
36880	33.61	33.61	33.61	33.61	33.61
36890	29.61	29.61	29.61	29.61	29.61
36900	28.57	28.57	28.57	28.57	28.57
36910	34.19	34.19	34.19	34.19	34.19
36930	34.18	34.18	34.18	34.18	34.18
36940	33.68	33.68	33.68	33.68	33.68
36950	34.16	34.16	34.16	34.16	34.16
36960	37.09	37.09	37.09	37.09	37.09
36970	37.14	37.14	37.14	37.14	37.14
36980	33.50	33.50	33.50	33.50	33.50
37000	27.12	27.12	27.12	27.12	27.12
37010	27.15	27.15	27.15	27.15	27.15
37020	27.15	27.15	27.15	27.15	27.15
37030	27.46	27.46	27.46	27.46	27.46
37040	27.55	27.55	27.55	27.55	27.55
37050	27.97	27.97	27.97	27.97	27.97
37060	28.34	28.34	28.34	28.34	28.34
37070	27.55	27.55	27.55	27.55	27.55
37080	24.56	24.56	24.56	24.56	24.56
37090	24.56	24.56	24.56	24.56	24.56
37100	34.67	34.67	34.67	34.67	34.67
37110	33.16	33.16	33.16	33.16	33.16
37120	30.36	30.36	30.36	30.36	30.36
37130	31.53	31.53	31.53	31.53	31.53
37140	31.47	31.47	31.47	31.47	31.47
37150	29.61	29.61	29.61	29.61	29.61
37200	12.19	12.19	12.19	12.19	12.19
37205	12.24	12.24	12.24	12.24	12.24
37210	12.52	12.52	12.52	12.52	12.52
37215	13.47	13.47	13.47	13.47	13.47
37220	14.23	14.23	14.23	14.23	14.23
37225	14.85	14.85	14.85	14.85	14.85
37230	13.73	13.73	13.73	13.73	13.73
37235	9.91	9.91	9.91	9.91	9.91
37240	11.97	11.97	11.97	11.97	11.97
37245	22.17	22.17	22.17	22.17	22.17
37250	20.65	20.65	20.65	20.65	20.65
37255	21.58	21.58	21.58	21.58	21.58
37260	22.14	22.14	22.14	22.14	22.14
37265	21.31	21.31	21.31	21.31	21.31
37270	23.27	23.27	23.27	23.27	23.27
37275	16.52	16.52	16.52	16.52	16.52
37280	16.12	16.12	16.12	16.12	16.12
37285	23.21	23.21	23.21	23.21	23.21
37290	24.05	24.05	24.05	24.05	24.05
37295	19.86	19.86	19.86	19.86	19.86
37300	15.86	15.86	15.86	15.86	15.86

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
37305	21.41	21.41	21.41	21.41	21.41
37310	20.12	20.12	20.12	20.12	20.12
37315	19.72	19.72	19.72	19.72	19.72
37320	21.53	21.53	21.53	21.53	21.53
37325	26.44	26.44	26.44	26.44	26.44
37330	26.77	26.77	26.77	26.77	26.77
37335	29.14	29.14	29.14	29.14	29.14
37340	32.36	32.36	32.36	32.36	32.36
37345	31.37	31.37	31.37	31.37	31.37
37347	28.79	28.79	28.79	28.79	28.79
37350	31.30	31.30	31.30	31.30	31.30
37355	32.43	32.43	32.43	32.43	32.43
37360	31.63	31.63	31.63	31.63	31.63
37365	31.54	31.54	31.54	31.54	31.54
37370	33.14	33.14	33.14	33.14	33.14
37375	31.29	31.29	31.29	31.29	31.29
37380	31.85	31.85	31.85	31.85	31.85
37385	18.39	18.39	18.39	18.39	18.39
37390	29.71	29.71	29.71	29.71	29.71
37395	29.67	29.67	29.67	29.67	29.67
37400	31.11	31.11	31.11	31.11	31.11
37405	30.38	30.38	30.38	30.38	30.38
37410	30.19	30.19	30.19	30.19	30.19
37415	30.19	30.19	30.19	30.19	30.19
37420	31.12	31.12	31.12	31.12	31.12
37425	31.75	31.75	31.75	31.75	31.75
37430	33.29	33.29	33.29	33.29	33.29
37435	33.26	33.26	33.26	33.26	33.26
37440	24.34	24.34	24.34	24.34	24.34
37445	27.48	27.48	27.48	27.48	27.48
37450	24.31	24.31	24.31	24.31	24.31
37455	28.16	28.16	28.16	28.16	28.16
37460	19.49	19.49	19.49	19.49	19.49
37465	16.51	16.52	16.51	16.52	16.51
37470	18.33	18.33	18.33	18.33	18.33
37475	17.62	17.62	17.62	17.62	17.62
37480	18.76	18.76	18.76	18.76	18.76
37485	26.49	26.49	26.49	26.49	26.49
37490	29.71	29.71	29.71	29.71	29.71
37495	29.89	29.89	29.89	29.89	29.89
37500	30.03	30.03	30.03	30.03	30.03
37505	26.75	26.75	26.75	26.75	26.75
37510	29.68	29.68	29.68	29.68	29.68
37515	29.58	29.58	29.58	29.58	29.58
37520	26.75	26.75	26.75	26.75	26.75
37525	27.12	27.12	27.12	27.12	27.12
37530	27.06	27.06	27.06	27.06	27.06
37535	29.63	29.63	29.63	29.63	29.63
37540	20.91	20.91	20.91	20.91	20.91
37545	21.66	21.66	21.66	21.66	21.66

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
37550	20.56	20.56	20.56	20.56	20.56
37555	22.08	22.08	22.08	22.08	22.08
37560	25.85	25.85	25.85	25.85	25.85
37565	21.14	21.14	21.14	21.14	21.14
37570	22.85	22.85	22.85	22.85	22.85
37575	31.14	31.14	31.14	31.14	31.14
37580	37.85	37.85	37.85	37.85	37.85
37583	30.10	30.10	30.10	30.10	30.10
37585	30.16	30.16	30.16	30.16	30.16
37590	31.04	31.04	31.04	31.04	31.04
37595	31.49	31.49	31.49	31.49	31.49
37600	32.82	32.82	32.82	32.82	32.82
37605	32.91	32.91	32.91	32.91	32.91
37610	33.13	33.13	33.13	33.13	33.13
37615	33.14	33.14	33.14	33.14	33.14
37620	17.73	17.76	17.75	17.76	17.75
37625	21.15	21.15	21.15	21.15	21.15
37630	17.74	17.77	17.76	17.77	17.76
37635	17.75	17.77	17.77	17.77	17.77
37640	17.76	17.79	17.78	17.79	17.78
37645	17.76	17.79	17.78	17.79	17.78
37650	18.21	18.21	18.21	18.21	18.21
37655	23.44	23.44	23.44	23.44	23.44
37660	26.24	26.24	26.24	26.24	26.24
37665	22.43	22.43	22.43	22.43	22.43
37670	19.33	19.33	19.33	19.33	19.33
37675	30.67	30.67	30.67	30.67	30.67
37680	24.58	24.58	24.58	24.58	24.58
37685	26.10	26.10	26.10	26.10	26.10
37690	24.19	24.19	24.19	24.19	24.19
37695	24.67	24.67	24.67	24.67	24.67
37700	29.34	29.34	29.34	29.34	29.34
37705	26.40	26.40	26.40	26.40	26.40
37710	25.23	25.23	25.23	25.23	25.23
37715	25.41	25.41	25.41	25.41	25.41
37720	29.39	29.39	29.39	29.39	29.39
37725	30.92	30.92	30.92	30.92	30.92
37730	30.89	30.89	30.89	30.89	30.89
37735	25.92	25.92	25.92	25.92	25.92
37740	30.44	30.44	30.44	30.44	30.44
37745	21.46	21.46	21.46	21.46	21.46
37750	31.17	31.17	31.17	31.17	31.17
37755	32.61	32.61	32.61	32.61	32.61
37760	32.68	32.68	32.68	32.68	32.68
37765	34.25	34.25	34.25	34.25	34.25
37770	34.30	34.30	34.30	34.30	34.30
37775	34.54	34.54	34.54	34.54	34.54
37780	34.49	34.49	34.49	34.49	34.49
37785	34.57	34.57	34.57	34.57	34.57
37790	34.63	34.63	34.63	34.63	34.63

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
37795	33.98	33.98	33.98	33.98	33.98
37800	36.98	36.98	36.98	36.98	36.98
37805	36.68	36.68	36.68	36.68	36.68
37810	37.77	37.77	37.77	37.77	37.77
37815	36.80	36.80	36.80	36.80	36.80
37820	19.84	19.84	19.84	19.84	19.84
37825	24.18	24.18	24.18	24.18	24.18
37830	21.68	21.68	21.68	21.68	21.68
37835	21.49	21.49	21.49	21.49	21.49
37840	18.56	18.56	18.56	18.56	18.56
37845	24.66	24.66	24.66	24.66	24.66
37850	29.64	29.64	29.64	29.64	29.64
37855	25.32	25.32	25.32	25.32	25.32
37860	26.83	26.83	26.83	26.83	26.83
37865	30.15	30.15	30.15	30.15	30.15
37870	30.68	30.68	30.68	30.68	30.68
37875	31.19	31.19	31.19	31.19	31.19
37880	23.96	23.96	23.96	23.96	23.96
37885	24.08	24.08	24.08	24.08	24.08
37890	24.09	24.09	24.09	24.09	24.09
37895	28.44	28.44	28.44	28.44	28.44
37900	29.51	29.51	29.51	29.51	29.51
37905	21.67	21.67	21.67	21.67	21.67
37910	21.89	21.89	21.89	21.89	21.89
37915	16.04	16.12	16.11	16.12	16.11
37920	16.82	16.82	16.82	16.82	16.82
37925	19.62	19.62	19.62	19.62	19.62
37930	27.69	27.69	27.69	27.69	27.69
37935	26.54	26.54	26.54	26.54	26.54
37940	24.93	24.93	24.93	24.93	24.93
37945	21.96	21.96	21.96	21.96	21.96
37950	23.18	23.18	23.18	23.18	23.18
37955	25.70	25.70	25.70	25.70	25.70
37960	26.52	26.52	26.52	26.52	26.52
37965	28.20	28.20	28.20	28.20	28.20
37970	28.20	28.20	28.20	28.20	28.20
37975	28.20	28.20	28.20	28.20	28.20
37980	27.91	27.91	27.91	27.91	27.91
37985	26.72	26.72	26.72	26.72	26.72
37990	28.51	28.51	28.51	28.51	28.51
37995	28.54	28.54	28.54	28.54	28.54
38000	34.60	34.60	34.60	34.60	34.60
38005	34.60	34.60	34.60	34.60	34.60
38010	35.93	35.93	35.93	35.93	35.93
38015	20.84	20.85	20.85	20.85	20.84
38020	22.20	22.20	22.20	22.20	22.20
38025	22.34	22.34	22.34	22.34	22.34
38030	22.94	22.94	22.94	22.94	22.94
38035	23.16	23.16	23.16	23.16	23.16
38040	23.16	23.16	23.16	23.16	23.16

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
38045	22.15	22.15	22.15	22.15	22.15
38050	22.86	22.86	22.86	22.86	22.86
38055	21.73	21.73	21.73	21.73	21.73
38060	23.38	23.38	23.38	23.38	23.38
38065	24.14	24.14	24.14	24.14	24.14
38070	27.65	27.65	27.65	27.65	27.65
38075	25.91	25.91	25.91	25.91	25.91
38080	24.52	24.52	24.52	24.52	24.52
38085	29.96	29.96	29.96	29.96	29.96
38090	30.21	30.21	30.21	30.21	30.21
38095	25.22	25.22	25.22	25.22	25.22
38100	25.21	25.21	25.21	25.21	25.21
38105	34.27	34.27	34.27	34.27	34.27
38110	31.02	31.02	31.02	31.02	31.02
38115	33.45	33.45	33.45	33.45	33.45
38120	34.90	34.90	34.90	34.90	34.90
38125	39.53	39.53	39.53	39.53	39.53
38130	36.26	36.26	36.26	36.26	36.26
38135	22.95	22.95	22.95	22.95	22.95
38140	30.71	30.71	30.71	30.71	30.71
38145	36.66	36.66	36.66	36.66	36.66
38150	30.09	30.09	30.09	30.09	30.09
38155	30.61	30.61	30.61	30.61	30.61
38160	23.91	23.91	23.91	23.91	23.91
38165	16.75	16.75	16.75	16.75	16.75
38170	15.94	15.94	15.94	15.94	15.94
38175P	33.28	33.28	33.28	33.28	33.28
38180	17.74	17.77	17.76	17.77	17.76
38185	11.11	12.77	12.74	12.75	12.73
38190	21.30	21.30	21.30	21.30	21.30
38195	26.70	26.70	26.70	26.70	26.70
38200	26.43	26.43	26.43	26.43	26.43
38205	27.84	27.84	27.84	27.84	27.84
38210	28.58	28.58	28.58	28.58	28.58
38215	29.63	29.63	29.63	29.63	29.63
38220	29.77	29.77	29.77	29.77	29.77
38295	32.06	32.06	32.06	32.06	32.06
38300	32.28	32.28	32.28	32.28	32.28
38305	32.39	32.39	32.39	32.39	32.39
38310	32.43	32.43	32.43	32.43	32.43
38315	33.23	33.23	33.23	33.23	33.23
38320	33.97	33.97	33.97	33.97	33.97
38325	34.30	34.30	34.30	34.30	34.30
38330	34.46	34.46	34.46	34.46	34.46
38335	34.49	34.49	34.49	34.49	34.49
38340	34.55	34.55	34.55	34.55	34.55
38345	19.95	19.95	19.95	19.95	19.95
38350	20.53	20.53	20.53	20.53	20.53
38355	22.87	22.87	22.87	22.87	22.87
38360	23.64	23.64	23.64	23.64	23.64

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
38365	22.57	22.57	22.57	22.57	22.57
38370	23.81	23.81	23.81	23.81	23.81
38380	23.08	23.08	23.08	23.08	23.08
38385	26.67	26.67	26.67	26.67	26.67
38390	28.25	28.25	28.25	28.25	28.25
38395	31.03	31.03	31.03	31.03	31.03
38400	18.27	18.28	18.28	18.28	18.28
38405	19.71	19.71	19.71	19.71	19.71
38410	19.71	19.71	19.71	19.71	19.71
38415	19.72	19.72	19.72	19.72	19.72
38420	19.72	19.72	19.72	19.72	19.72
38425	31.28	31.28	31.28	31.28	31.28
38430	29.12	29.12	29.12	29.12	29.12
38435	29.77	29.77	29.77	29.77	29.77
38440	29.81	29.81	29.81	29.81	29.81
38445	29.89	29.89	29.89	29.89	29.89
38450	30.30	30.30	30.30	30.30	30.30
38455	30.45	30.45	30.45	30.45	30.45
38460	30.44	30.44	30.44	30.44	30.44
38465	31.27	31.27	31.27	31.27	31.27
38470	29.20	29.20	29.20	29.20	29.20
38475	30.17	30.17	30.17	30.17	30.17
38480	9.11	9.13	9.11	9.11	9.11
38485	9.01	9.13	9.01	9.01	9.01
38490	8.81	9.13	8.81	8.82	8.81
38495	8.77	9.13	8.78	8.79	8.78
38500	8.33	8.62	8.33	8.33	8.33
38505	13.04	13.04	13.04	13.04	13.04
38510	13.36	13.36	13.36	13.36	13.36
38515	14.09	14.09	14.09	14.09	14.09
38520	14.41	14.41	14.41	14.41	14.41
38525	13.68	13.68	13.68	13.68	13.68
38530	13.73	13.73	13.73	13.73	13.73
38535	13.84	13.84	13.84	13.84	13.84
38540	13.96	13.96	13.96	13.96	13.96
38545	12.75	12.75	12.75	12.75	12.75
38550	21.33	21.33	21.33	21.33	21.33
38555	31.57	31.57	31.57	31.57	31.57
38560	31.80	31.80	31.80	31.80	31.80
38565	32.78	32.78	32.78	32.78	32.78
38570	28.01	28.01	28.01	28.01	28.01
38575	28.14	28.14	28.14	28.14	28.14
38580	29.51	29.51	29.51	29.51	29.51
38585	30.02	30.02	30.02	30.02	30.02
38590	19.67	19.67	19.67	19.67	19.67
38595	17.31	17.31	17.31	17.31	17.31
38600	31.76	31.76	31.76	31.76	31.76
38605	31.69	31.69	31.69	31.69	31.69
38610	28.15	28.15	28.15	28.15	28.15
38615	35.19	35.19	35.19	35.19	35.19

Node	ECM (ft)	RECM (ft)	PCM 1 (ft)	PCM 2 (ft)	PCM 3 (ft)
38620	25.72	25.72	25.72	25.72	25.72
38625	31.18	31.18	31.18	31.18	31.18
38630	22.00	21.99	22.00	21.99	22.00
38645	26.21	26.21	26.21	26.21	26.21
38650	24.72	24.72	24.72	24.72	24.72
39000	17.54	17.54	17.54	17.54	17.54
39010	20.57	20.57	20.57	20.57	20.57
39050	13.69	13.69	13.69	13.69	13.69
39055	27.16	27.16	27.16	27.16	27.16
39060	30.89	30.89	30.89	30.89	30.89
39065	31.12	31.12	31.12	31.12	31.12
39070	30.43	30.43	30.43	30.43	30.43
39075	29.57	29.57	29.57	29.57	29.57
39080	25.78	25.78	25.78	25.78	25.78
39085	22.22	22.22	22.22	22.22	22.22
39090	40.78	40.78	40.78	40.78	40.78
39095	21.86	21.86	21.86	21.86	21.86
39105	9.81	9.83	9.82	9.83	9.82
39110	7.22	7.22	7.21	7.22	7.21
39115	9.21	9.21	9.21	9.21	9.21
39120	17.10	17.10	17.10	17.10	17.10
39125	34.57	34.57	34.57	34.57	34.57
40127	15.45	15.45	15.45	15.45	15.45
40188	16.36	16.36	16.36	16.36	16.36
40298	13.53	13.53	13.53	13.53	13.53
40622	15.22	15.22	15.22	15.22	15.22
40645	15.39	15.39	15.39	15.39	15.39
40666	22.90	22.90	22.90	22.90	22.90
61400	33.52	33.52	33.52	33.52	33.52
61615	34.25	34.25	34.25	34.25	34.25
61760	34.64	34.64	34.64	34.64	34.64
61810	34.15	34.15	34.15	34.15	34.15
62600	35.54	35.54	35.54	35.54	35.54
62900	37.30	37.30	37.30	37.30	37.30
62940	34.48	34.48	34.48	34.48	34.48
64072	34.60	34.60	34.60	34.60	34.60
64073	34.63	34.63	34.63	34.63	34.63
80790	34.92	34.92	34.92	34.92	34.92
80931	34.66	34.66	34.66	34.66	34.66
MH1	12.58	12.60	12.59	12.60	12.59
MH2	12.57	12.60	12.58	12.60	12.58
MH3	12.57	12.60	12.58	12.60	12.58
MH6	12.58	12.60	12.59	12.60	12.59
MH7	12.58	12.60	12.59	12.60	12.59
MH8	12.57	12.60	12.58	12.60	12.58
MH9	12.57	12.60	12.58	12.60	12.58
PSF	13.50	13.69	13.67	13.68	13.67
PUMP	8.16	8.33	8.16	8.16	8.16

Appendix F: ICPR Input

MODEL UPDATE SUMMARY WORKSHEET
Created by DBF Comparator

Basin: _____ Bayshed: _____

Project Name: PJ1_ECMvRECM Sec/Twn/Ran: _____

Modification Type: _____ New Construction
_____ Modification of Existing Conditions

Modification Date: 7/17/2018 SEU Staff: _____

NAME	BASIN	NODE	PIPE	CHAN	WEIR	X-SECT	DRP STR	BRIDGE
30384_CHA5				Addition				
30384_CHA8				Addition				
30384_CHA14				Addition				
30384_CHA20				Addition				
30384_DAM					Addition			
30385				Modification				
30384				Deletion				
30384_STA5		Addition						
30384_STA8		Addition						
30384_STA14		Addition						
30384		Modification						
30384_STA20		Addition						
30384_XS5						Addition		
30384_XS8						Addition		
30384_XS14						Addition		
30384_XS16						Addition		
30384_XS20						Addition		
30384_XSDAM						Addition		
30383AP						Modification		

NOTES: _____

SKETCH

- Nodes -

CHOOSE ONE	EXISTING	REVISED
	Name:	Name: 30384_STA5
X Addition	Group:	Group: MIDPHILL
	Comment:	Comment:
___ Modification	Init Stage (ft):	Init Stage (ft): 1.42
	Warn Stage (ft):	Warn Stage (ft): 6.42
___ Deletion		

Stage (ft)	Area (ac)

Stage (ft)	Area (ac)
No data	

CHOOSE ONE	EXISTING	REVISED
	Name:	Name: 30384_STA8
X Addition	Group:	Group: MIDPHILL
	Comment:	Comment:
___ Modification	Init Stage (ft):	Init Stage (ft): 1.42
	Warn Stage (ft):	Warn Stage (ft): 6.42
___ Deletion		

Stage (ft)	Area (ac)

Stage (ft)	Area (ac)
6	0.02
7	0.11
8	0.16
9	0.21
10	0.29
11	0.34
12	0.39
14.14	0.5
14.64	0.79
15.14	1.1
16.14	1.49
16.64	1.74
17.14	1.82
17.78	1.83
32.78	1.83

CHOOSE ONE	EXISTING	REVISED
	Name:	Name: 30384_STA14
X Addition	Group:	Group: MIDPHILL
	Comment:	Comment:
___ Modification	Init Stage (ft):	Init Stage (ft): 1.42
	Warn Stage (ft):	Warn Stage (ft): 6.42
___ Deletion		

Stage (ft)	Area (ac)

Stage (ft)	Area (ac)
No data	

CHOOSE ONE	
___	Addition
X	Modification
___	Deletion

EXISTING

Name: 30384
Group: MIDPHILL
Comment:

Init Stage (ft): 1.42
Warn Stage (ft): 6.42

Stage (ft)	Area (ac)
-3.38	0.01
0.13	0.01
0.14	0.01
0.64	0.82
1.64	0.92
2.14	0.95
2.64	0.98
3.14	1.02
3.64	1.05
4.14	1.09
5.14	1.21
5.64	1.27
6.14	1.31
6.64	1.38
7.14	1.47
8.14	1.82
8.64	1.94
9.14	2.19
9.64	2.51
10.64	3.58
11.14	4.47
11.64	5.37
13.14	8.68
14.14	10.07
14.64	10.78
15.14	11.66
15.64	12.48
16.64	13.62
17.14	14.12
17.64	14.54
18.24	14.57
33.24	14.57

REVISED

Name: 30384_STA16
Group: MIDPHILL
Comment:

Init Stage (ft): 1.42
Warn Stage (ft): 6.42

Stage (ft)	Area (ac)
13.14	2.38
14.14	3.77
14.64	4.48
15.14	5.36
15.64	6.18
16.64	7.32
17.14	7.82
17.64	8.24
18.24	8.27
33.24	8.27

CHOOSE ONE	
X	Addition
___	Modification

EXISTING

Name:
Group:
Comment:

Init Stage (ft):
Warn Stage (ft):

REVISED

Name: 30384_STA20
Group: MIDPHILL
Comment:

Init Stage (ft): 1.42
Warn Stage (ft): 6.42

___ Deletion	Stage (ft)	Area (ac)	Stage (ft)	Area (ac)
			No data	

- Cross Sections -

CHOOSE ONE	EXISTING			REVISED		
	Name:			Name:	30384_XS5	
	Group:			Group:	MIDPHILL	
X Addition	Comment:			Comment:		
	X-sta (ft)	Y-ele.(ft)	Manning's n	X-sta (ft)	Y-ele.(ft)	Manning's n
Modification ___				950	10.58	0.08
				960	8.42	0.08
___ Deletion				970	3.78	0.08
				980	0.11	0.04
				990	-2.5	0.04
				1000	-2.76	0.04
				1010	-2.76	0.04
				1020	-2.71	0.04
				1030	-2.69	0.04
				1040	-2.59	0.04
				1050	-2.27	0.04
				1060	-2.04	0.04
				1070	-1.14	0.04
				1080	-0.49	0.04
				1090	-0.46	0.04
				1100	0.13	0.04
				1110	1.65	0.08
				1120	2.4	0.08
				1130	5	0.08
				1140	6.45	0.08

CHOOSE ONE	EXISTING			REVISED		
	Name:			Name:	30384_XS8	
	Group:			Group:	MIDPHILL	
X Addition	Comment:			Comment:		
	X-sta (ft)	Y-ele.(ft)	Manning's n	X-sta (ft)	Y-ele.(ft)	Manning's n
Modification ___				940	11.03	0.08
				950	9.89	0.08
___ Deletion				960	8.28	0.08
				970	5.47	0.08
				980	2.68	0.08
				990	0.38	0.04
				1000	-1.54	0.04
				1010	-2.79	0.04
				1020	-2.48	0.04
				1030	-2.44	0.04
				1040	-2.1	0.04

1050	-1.62	0.04
1060	-1.28	0.04
1070	-1.31	0.04
1080	-1.26	0.04
1090	-1.31	0.04
1100	-1.17	0.04
1110	-1.2	0.04
1120	-1.06	0.04
1130	-0.54	0.04
1140	1.55	0.08
1150	4.5	0.08
1160	5.32	0.08

CHOOSE ONE

X Addition

Modification

Deletion

EXISTING

Name:
Group:
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n

REVISED

Name: 30384_XS14
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
920	12.82	0.08
930	11.57	0.08
940	10.26	0.08
950	9.36	0.08
960	9.06	0.08
970	8.78	0.08
980	8.12	0.08
990	6.62	0.08
1000	3.01	0.08
1010	0.37	0.04
1020	-2.5	0.04
1030	-2.78	0.04
1040	-2.57	0.04
1050	-2.14	0.04
1060	-1.72	0.04
1070	-1.82	0.04
1080	-1.72	0.04
1090	-1.42	0.04
1100	-1.75	0.04
1110	-2.21	0.04
1120	-2.59	0.04
1130	-2.48	0.04
1140	-2.6	0.04
1150	-2.57	0.04
1160	-2.47	0.04
1170	-1.1	0.04
1180	-0.41	0.04
1190	1.61	0.08
1200	5.5	0.08

CHOOSE ONE	
X	Addition
	Modification
	Deletion

EXISTING

Name:
Group:
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n

REVISED

Name: 30384_XS16
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
950	11.66	0.08
960	11.49	0.08
970	11.34	0.08
980	11.12	0.08
990	10.82	0.08
1000	9.37	0.08
1010	8.68	0.08
1020	7.46	0.08
1030	6.36	0.08
1040	5.53	0.08
1050	4.99	0.08
1060	4.13	0.08
1070	3.93	0.08
1080	3.69	0.08
1090	3.27	0.08
1100	2.99	0.08
1110	2.82	0.08
1120	2.72	0.08
1130	2.67	0.08
1140	2.57	0.08
1150	2.43	0.08
1160	2.27	0.08
1170	2.09	0.08
1180	1.8	0.08
1190	1.46	0.04
1200	1.22	0.04
1210	1	0.04
1220	1	0.04
1230	1.06	0.04
1240	0.22	0.04
1250	-1.1	0.04
1260	-1.79	0.04
1270	-2.31	0.04
1280	-2.78	0.04
1290	-2.63	0.04
1300	-2.36	0.04
1310	-2.37	0.04
1320	-2.27	0.04
1330	-1.88	0.04
1340	-0.21	0.04
1350	2.6	0.04
1360	6.16	0.08
1370	7.62	0.08
1380	8.25	0.08
1390	8.53	0.08

1400	8.96	0.08

CHOOSE ONE

X Addition

Modification

Deletion

EXISTING

Name:
Group:
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n

REVISED

Name: 30384_XS20
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
1600	10.7	0.08
1610	8.7	0.08
1620	7.33	0.08
1630	5.52	0.08
1640	3.45	0.08
1650	0.45	0.04
1660	-0.67	0.04
1670	-0.81	0.04
1680	-1.92	0.04
1690	-2.22	0.04
1700	-2.61	0.04
1710	-2.83	0.04
1720	-3.07	0.04
1730	-3.5	0.04
1740	-2.42	0.04
1750	2.83	0.08
1760	6.12	0.08
1770	7.36	0.08
1780	8.16	0.08
1790	8.4	0.08

CHOOSE ONE

X Addition

Modification

Deletion

EXISTING

Name:
Group:
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n

REVISED

Name: 30384_XSDAM
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
1060	1.18	0.04
1161	1.19	0.045
1161	-2.76	0.045
1171	-2.76	0.045
1171	1.27	0.045
1172	1.27	0.045
1172	-3.39	0.045
1181	-3.39	0.045
1181	1.2	0.045
1182	1.2	0.045
1182	-2.62	0.045
1191	-2.62	0.045
1191	1.2	0.045
1192	1.2	0.045

1192	-2.5	0.045
1201	-2.5	0.045
1201	1.2	0.045
1202	1.2	0.045
1202	-2	0.045
1211	-2	0.045
1211	1.2	0.045
1212	1.2	0.045
1212	-1.28	0.045
1221	-1.28	0.045
1221	7.72	0.045

CHOOSE ONE

___ Addition

X Modification

___ Deletion

EXISTING

Name: 30383AP
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
874.9	25.92	0.08
875	13.92	0.08
875.1	10.92	0.08
900	9.92	0.08
914	9.82	0.08
928	9.62	0.08
939	0.02	0.08
970	-4.98	0.035
1000	-6.58	0.035
1022	-7.18	0.035
1050	-0.78	0.035
1063	7.52	0.04
1079	8.02	0.06
1120	8.92	0.06
1124.9	10.92	0.06
1125	13.92	0.06
1125.1	25.92	0.06

REVISED

Name: 30383AP
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
874.9	25.92	0.08
875	13.92	0.08
875.1	10.92	0.08
912.5	9.4	0.08
917.6	9.2	0.08
921	8.9	0.08
931	4.9	0.08
932.5	4.1	0.08
938.4	3	0.08
945.5	0.5	0.04
952.2	-1.2	0.04
957.1	-1.9	0.04
962	-1.9	0.04
966.4	-1.6	0.04
972	-2	0.04
977.3	-2.4	0.04
983.2	-4.6	0.04
987.3	-3.1	0.04
992.2	-3.9	0.04
997	-4.8	0.04
1002.2	-4.1	0.04
1007.1	-4.1	0.04
1012.1	-4.2	0.04
1017.5	-6.7	0.04
1022.5	-6.4	0.04
1027	-4.1	0.04
1032.7	-6.3	0.04
1037.5	-6.9	0.04
1042.3	-5.9	0.04
1047	-5.8	0.04
1051.6	-4	0.04
1056.5	-3.5	0.04

1061.4	-2.9	0.04
1066.9	-2.1	0.04
1071.9	-1.9	0.04
1076.3	-1.8	0.04
1081.8	-1.6	0.04
1085.8	-1.5	0.04
1090	2.55	0.04
1100	4.63	0.08
1110	6.47	0.08
1120	8.92	0.08
1124.9	10.92	0.08
1125	13.92	0.08
1125.1	25.92	0.08

- Channels -

CHOOSE ONE

X Addition

___ Modification

___ Deletion

	EXISTING		REVISED		
Name:			Name:	30384_CHA5	
Group:			Group:	MIDPHILL	
From Node:			From Node:	30384_STA5	
To Node:			To Node:	30383	
Length (ft):			Length (ft):	300	
Count:			Count:	1	
	Upstream	Downstream		Upstream	Downstream
Geometry:			Geometry:	Irregular	Irregular
Invert (ft):			Invert (ft):	-2.76	-7.18
TclpInitZ (ft):			TclpInitZ (ft):	97.92	97.92
Manning's n:			Manning's n:		
Tclip (ft):			Tclip (ft):		
Bclip (ft):			Bclip (ft):		
Main Xsec:			Main Xsec:	30384_XS5	30383AP
AxEl1 (ft):			AxEl1 (ft):	0	0
Aux Xsec1:			Aux Xsec1:		
AxEl2 (ft):			AxEl2 (ft):	0	0
Aux Xsec2:			Aux Xsec2:		
Twidth (ft):			Twidth (ft):		
Depth (ft):			Depth (ft):		
Bwidth (ft):			Bwidth (ft):		
LSdSlp (h/v):			LSdSlp (h/v):		
RSdSlp (h/v):			RSdSlp (h/v):		
Equation:			Equation:	Average Conveyance	
Flow:			Flow:	Both	
Eddy Contrac Coef:			Eddy Contrac Coef:	0.1	
Eddy Expans Coef:			Eddy Expans Coef:	0.3	
Entrance Loss Coef:			Entrance Loss Coef:	0	
Exit Loss Coef:			Exit Loss Coef:	0	
Outlet Cntrl Spec:			Outlet Cntrl Spec:	Use dc or tw	

Inlet Cntrl Spec:		Use dn
Stabilizer Option:		No Stabilization

CHOOSE ONE		EXISTING		REVISED	
				Name:	30384_CHA8
				Group:	MIDPHILL
X	Addition			From Node:	30384_STA8
				To Node:	30384_STA5
	Modification			Length (ft):	300
				Count:	1
	Deletion				
		Upstream	Downstream	Upstream	Downstream
				Geometry:	Irregular / Irregular
				Invert (ft):	-2.79 / -2.76
				TclpInitZ (ft):	97.92 / 97.922
				Manning's n:	
				Tclip (ft):	
				Bclip (ft):	
				Main Xsec:	30384_XS8 / 30384_XS5
				AxEl1 (ft):	0 / 0
				Aux Xsec1:	
				AxEl2 (ft):	0 / 0
				Aux Xsec2:	
				Twidth (ft):	
				Depth (ft):	
				Bwidth (ft):	
				LSdSlp (h/v):	
				RSdSlp (h/v):	
				Equation:	Average Conveyance
				Flow:	Both
				Eddy Contrac Coef:	0.1
				Eddy Expans Coef:	0.3
				Entrance Loss Coef:	0
				Exit Loss Coef:	0
				Outlet Cntrl Spec:	Use dc or tw
				Inlet Cntrl Spec:	Use dc
				Stabilizer Option:	No Stabilization

CHOOSE ONE		EXISTING	REVISED	
			Name:	30384_CHA14
			Group:	MIDPHILL
X	Addition		From Node:	30384_STA14
			To Node:	30384_STA8

___ Modification	Length (ft):			Length (ft):	500	
	Count:			Count:	1	
___ Deletion						
		Upstream	Downstream		Upstream	Downstream
	Geometry:			Geometry:	Irregular	Irregular
	Invert (ft):			Invert (ft):	-2.78	-2.79
	TclpInitZ (ft):			TclpInitZ (ft):	97.92	97.92
	Manning's n:			Manning's n:		
	Tclip (ft):			Tclip (ft):		
	Bclip (ft):			Bclip (ft):		
	Main Xsec:			Main Xsec:	30384_XS14	30384_XS8
	AxEl1 (ft):			AxEl1 (ft):	0	0
	Aux Xsec1:			Aux Xsec1:		
	AxEl2 (ft):			AxEl2 (ft):	0	0
	Aux Xsec2:			Aux Xsec2:		
	Twidth (ft):			Twidth (ft):		
	Depth (ft):			Depth (ft):		
	Bwidth (ft):			Bwidth (ft):		
	LSdSlp (h/v):			LSdSlp (h/v):		
	RSdSlp (h/v):			RSdSlp (h/v):		
	Equation:			Equation:	Average Conveyance	
	Flow:			Flow:	Both	
	Eddy Contrac Coef:			Eddy Contrac Coef:	0.1	
	Eddy Expans Coef:			Eddy Expans Coef:	0.3	
	Entrance Loss Coef:			Entrance Loss Coef:	0	
	Exit Loss Coef:			Exit Loss Coef:	0	
	Outlet Cntrl Spec:			Outlet Cntrl Spec:	Use dc or tw	
	Inlet Cntrl Spec:			Inlet Cntrl Spec:	Use dc	
	Stabilizer Option:			Stabilizer Option:	No Stabilization	

	EXISTING			**REVISED**		
CHOOSE ONE	Name:			Name:	30384_CHA20	
	Group:			Group:	MIDPHILL	
X Addition	From Node:			From Node:	30384_STA20	
	To Node:			To Node:	30384_STA16	
___ Modification	Length (ft):			Length (ft):	500	
	Count:			Count:	1	
___ Deletion						
		Upstream	Downstream		Upstream	Downstream
	Geometry:			Geometry:	Irregular	Irregular
	Invert (ft):			Invert (ft):	-3.5	-2.78
	TclpInitZ (ft):			TclpInitZ (ft):	97.92	97.92
	Manning's n:			Manning's n:		
	Tclip (ft):			Tclip (ft):		
	Bclip (ft):			Bclip (ft):		
	Main Xsec:			Main Xsec:	30384_XS20	30384_XS16

AxEl1 (ft):		0
Aux Xsec1:		
AxEl2 (ft):		0
Aux Xsec2:		
Twidth (ft):		
Depth (ft):		
Bwidth (ft):		
LSdSlp (h/v):		
RSdSlp (h/v):		
Equation:		Average Conveyance
Flow:		Both
Eddy Contrac Coef:		0.1
Eddy Expans Coef:		0.3
Entrance Loss Coef:		0
Exit Loss Coef:		0
Outlet Cntrl Spec:		Use dc or tw
Inlet Cntrl Spec:		Use dc
Stabilizer Option:		No Stabilization

CHOOSE ONE

___ Addition

X Modification

___ Deletion

	EXISTING		**REVISED**	
Name:	30385		30385	
Group:	MIDPHILL		MIDPHILL	
From Node:	30385		30385	
To Node:	30384		30384_STA20	
Length (ft):	764		150	
Count:	1		1	
	Upstream	Downstream	Upstream	Downstream
Geometry:	Irregular	Irregular	Irregular	Irregular
Invert (ft):	-7.08	-3.38	-7.08	-3.5
TclpInitZ (ft):	9997.92	9997.92	97.92	97.92
Manning's n:				
Tclip (ft):				
Bclip (ft):				
Main Xsec:	30386EX	30384	30386EX	30384_XS20
AxEl1 (ft):	0	0	0	0
Aux Xsec1:				
AxEl2 (ft):	0	0	0	0
Aux Xsec2:				
Twidth (ft):				
Depth (ft):				
Bwidth (ft):				
LSdSlp (h/v):				
RSdSlp (h/v):				
Equation:	Average Conveyance		Average Conveyance	
Flow:	Both		Both	

Eddy Contrac Coef:	0.1	Eddy Contrac Coef:	0.1
Eddy Expans Coef:	0.3	Eddy Expans Coef:	0.3
Entrance Loss Coef:	0	Entrance Loss Coef:	0
Exit Loss Coef:	0	Exit Loss Coef:	0
Outlet Cntrl Spec:	Use dc or tw	Outlet Cntrl Spec:	Use dc or tw
Inlet Cntrl Spec:	Use dn	Inlet Cntrl Spec:	Use dn
Stabilizer Option:	No Stabilization	Stabilizer Option:	No Stabilization

CHOOSE ONE

___ Addition

___ Modification

X Deletion

	EXISTING		REVISED		
Name:	30384		Name:		
Group:	MIDPHILL		Group:		
From Node:	30384		From Node:		
To Node:	30383		To Node:		
Length (ft):	900		Length (ft):		
Count:	1		Count:		
	Upstream	Downstream		Upstream	Downstream
Geometry:	Irregular	Irregular	Geometry:		
Invert (ft):	-3.38	-7.18	Invert (ft):		
TclpInitZ (ft):	9997.92	9997.92	TclpInitZ (ft):		
Manning's n:			Manning's n:		
Tclip (ft):			Tclip (ft):		
Bclip (ft):			Bclip (ft):		
Main Xsec:	30384	30383AP	Main Xsec:		
AxEl1 (ft):	0	0	AxEl1 (ft):		
Aux Xsec1:			Aux Xsec1:		
AxEl2 (ft):	0	0	AxEl2 (ft):		
Aux Xsec2:			Aux Xsec2:		
Twidth (ft):			Twidth (ft):		
Depth (ft):			Depth (ft):		
Bwidth (ft):			Bwidth (ft):		
LSdSlp (h/v):			LSdSlp (h/v):		
RSdSlp (h/v):			RSdSlp (h/v):		
Equation:	Average Conveyance		Equation:		
Flow:	Both		Flow:		
Eddy Contrac Coef:	0.1		Eddy Contrac Coef:		
Eddy Expans Coef:	0.3		Eddy Expans Coef:		
Entrance Loss Coef:	0		Entrance Loss Coef:		
Exit Loss Coef:	0		Exit Loss Coef:		
Outlet Cntrl Spec:	Use dc or tw		Outlet Cntrl Spec:		
Inlet Cntrl Spec:	Use dn		Inlet Cntrl Spec:		
Stabilizer Option:	No Stabilization		Stabilizer Option:		

- Irregular Weirs -

CHOOSE ONE		EXISTING	REVISED	
X	Addition	Name:	Name:	30384_DAM
		Group:	Group:	MIDPHILL
		From Node:	From Node:	30384_STA16
		To Node:	To Node:	**30384_STA14**
	Modification	Count:	Count:	1
		Type:	Type:	Vertical: Mavis Equation
	Deletion	Xsec Name:	Xsec Name:	30384_XSDAM
		Invert (ft):	Invert (ft):	-3.39
		Control Elev (ft):	Control Elev (ft):	1.2
		Struct Opening Dim (ft):	Struct Opening Dim (ft):	9999
		Bottom Clip (in):	Bottom Clip (in):	0
		Top Clip (in):	Top Clip (in):	0
		Weir Discharge Coef:	Weir Discharge Coef:	3.2
		Orifice Discharge Coef:	Orifice Discharge Coef:	0.6

MODEL UPDATE SUMMARY WORKSHEET
Created by DBF Comparator

Basin: _____ Bayshed: _____

Project Name: PJ1_RECMvPCM 1 Sec/Twn/Ran: _____

Modification Type: _____ New Construction
_____ Modification of Existing Conditions

Modification Date: 7/17/2018 SEU Staff: _____

NAME	BASIN	NODE	PIPE	CHAN	WEIR	X-SECT	DRP STR	BRIDGE
30384_CHA5				Modification				
30384_CHA8				Modification				
30384_CHA14				Modification				
30384_CHA20				Modification				
30384_DAM					Deletion			
30384_XS5						Modification		
30384_XS8						Modification		
30384_XS14						Deletion		
30384_XS16						Modification		
30384_XSDAM						Deletion		
30384_STA14		Deletion						

NOTES: _____

SKETCH

- Cross Sections -

CHOOSE ONE

___ Addition

X Modification

___ Deletion

EXISTING

Name: 30384_XS5
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
950	10.58	0.08
960	8.42	0.08
970	3.78	0.08

REVISED

Name: 30384_XS5
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
950	10.58	0.08
960	8.42	0.08
970	3.79	0.08

980	0.11	0.04
990	-2.5	0.04
1000	-2.76	0.04
1010	-2.76	0.04
1020	-2.71	0.04
1030	-2.69	0.04
1040	-2.59	0.04
1050	-2.27	0.04
1060	-2.04	0.04
1070	-1.14	0.04
1080	-0.49	0.04
1090	-0.46	0.04
1100	0.13	0.04
1110	1.65	0.08
1120	2.4	0.08
1130	5	0.08
1140	6.45	0.08

980	1.08	0.08
990	-0.7	0.04
1000	-1.35	0.04
1010	-1.96	0.04
1020	-2.64	0.04
1030	-3.3	0.04
1040	-3.53	0.04
1050	-3.54	0.04
1060	-3.48	0.04
1070	-3.28	0.04
1080	-2.48	0.04
1090	-1.78	0.04
1100	-0.03	0.04
1110	2.36	0.08
1120	3.28	0.08
1130	5	0.08
1140	6.45	0.08

CHOOSE ONE

____ Addition

X Modification

____ Deletion

EXISTING

Name: 30384_XS8
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
940	11.03	0.08
950	9.89	0.08
960	8.28	0.08
970	5.47	0.08
980	2.68	0.08
990	0.38	0.04
1000	-1.54	0.04
1010	-2.79	0.04
1020	-2.48	0.04
1030	-2.44	0.04
1040	-2.1	0.04
1050	-1.62	0.04
1060	-1.28	0.04
1070	-1.31	0.04
1080	-1.26	0.04
1090	-1.31	0.04
1100	-1.17	0.04
1110	-1.2	0.04
1120	-1.06	0.04
1130	-0.54	0.04
1140	1.55	0.08
1150	4.5	0.08
1160	5.32	0.08

REVISED

Name: 30384_XS8
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
940	11.03	0.08
950	9.89	0.08
960	8.28	0.08
970	5.47	0.08
980	3.35	0.08
990	1.55	0.08
1000	0.03	0.04
1010	-0.97	0.04
1020	-1.97	0.04
1030	-2.97	0.04
1040	-3.5	0.04
1050	-3.83	0.04
1060	-4	0.04
1070	-4	0.04
1080	-3.99	0.04
1090	-3.07	0.04
1100	-2.07	0.04
1110	-1.07	0.04
1120	-0.07	0.04
1130	0.93	0.04
1140	1.98	0.08
1150	4.5	0.08
1160	5.32	0.08

CHOOSE ONE		EXISTING			REVISED		
		Name:	30384_XS14		Name:		
		Group:	MIDPHILL		Group:		
___	Addition	Comment:			Comment:		
	Modification	X-sta (ft)	Y-ele.(ft)	Manning's n	X-sta (ft)	Y-ele.(ft)	Manning's n
___		920	12.82	0.08			
X	Deletion	930	11.57	0.08			
___		940	10.26	0.08			
		950	9.36	0.08			
		960	9.06	0.08			
		970	8.78	0.08			
		980	8.12	0.08			
		990	6.62	0.08			
		1000	3.01	0.08			
		1010	0.37	0.04			
		1020	-2.5	0.04			
		1030	-2.78	0.04			
		1040	-2.57	0.04			
		1050	-2.14	0.04			
		1060	-1.72	0.04			
		1070	-1.82	0.04			
		1080	-1.72	0.04			
		1090	-1.42	0.04			
		1100	-1.75	0.04			
		1110	-2.21	0.04			
		1120	-2.59	0.04			
		1130	-2.48	0.04			
		1140	-2.6	0.04			
		1150	-2.57	0.04			
		1160	-2.47	0.04			
		1170	-1.1	0.04			
		1180	-0.41	0.04			
		1190	1.61	0.08			
		1200	5.5	0.08			

CHOOSE ONE		EXISTING			REVISED		
		Name:	30384_XS16		Name:	30384_XS16	
		Group:	MIDPHILL		Group:	MIDPHILL	
___	Addition	Comment:			Comment:		
X	Modification	X-sta (ft)	Y-ele.(ft)	Manning's n	X-sta (ft)	Y-ele.(ft)	Manning's n
___		950	11.66	0.08	960	11.49	0.08
___	Deletion	960	11.49	0.08	970	11.23	0.08
		970	11.34	0.08	980	11.01	0.08
		980	11.12	0.08	990	10.67	0.08
		990	10.82	0.08	1000	10.22	0.08
		1000	9.37	0.08	1010	9.75	0.08

1010	8.68	0.08	1020	9.37	0.08
1020	7.46	0.08	1030	8.69	0.08
1030	6.36	0.08	1040	8.14	0.08
1040	5.53	0.08	1050	7.89	0.08
1050	4.99	0.08	1060	7.28	0.08
1060	4.13	0.08	1070	6.59	0.08
1070	3.93	0.08	1080	5.89	0.08
1080	3.69	0.08	1090	5.36	0.08
1090	3.27	0.08	1100	4.75	0.08
1100	2.99	0.08	1110	4.25	0.08
1110	2.82	0.08	1120	3.9	0.08
1120	2.72	0.08	1130	3.58	0.08
1130	2.67	0.08	1140	3.5	0.08
1140	2.57	0.08	1150	3.36	0.08
1150	2.43	0.08	1160	3.14	0.08
1160	2.27	0.08	1170	2.84	0.08
1170	2.09	0.08	1180	2.31	0.08
1180	1.8	0.08	1190	1.6	0.08
1190	1.46	0.04	1200	0.59	0.04
1200	1.22	0.04	1210	-0.49	0.04
1210	1	0.04	1220	-1.49	0.04
1220	1	0.04	1230	-1.99	0.04
1230	1.06	0.04	1240	-2.45	0.04
1240	0.22	0.04	1250	-2.92	0.04
1250	-1.1	0.04	1260	-3.24	0.04
1260	-1.79	0.04	1270	-3.44	0.04
1270	-2.31	0.04	1280	-3.53	0.04
1280	-2.78	0.04	1290	-3.51	0.04
1290	-2.63	0.04	1300	-3.22	0.04
1300	-2.36	0.04	1310	-2.89	0.04
1310	-2.37	0.04	1320	-2.42	0.04
1320	-2.27	0.04	1330	-1.66	0.04
1330	-1.88	0.04	1340	-0.31	0.04
1340	-0.21	0.04	1350	2.62	0.08
1350	2.6	0.04	1360	5.27	0.08
1360	6.16	0.08	1370	6.86	0.08
1370	7.62	0.08	1380	7.81	0.08
1380	8.25	0.08	1390	8.22	0.08
1390	8.53	0.08	1400	8.87	0.08
1400	8.96	0.08			

CHOOSE ONE

____ Addition

____ Modification

_X_ Deletion

EXISTING

Name: 30384_XSDAM
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
1060	1.18	0.04
1161	1.19	0.045
1161	-2.76	0.045

REVISED

Name:
Group:
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n

1171	-2.76	0.045
1171	1.27	0.045
1172	1.27	0.045
1172	-3.39	0.045
1181	-3.39	0.045
1181	1.2	0.045
1182	1.2	0.045
1182	-2.62	0.045
1191	-2.62	0.045
1191	1.2	0.045
1192	1.2	0.045
1192	-2.5	0.045
1201	-2.5	0.045
1201	1.2	0.045
1202	1.2	0.045
1202	-2	0.045
1211	-2	0.045
1211	1.2	0.045
1212	1.2	0.045
1212	-1.28	0.045
1221	-1.28	0.045
1221	7.72	0.045

- Channels -

CHOOSE ONE

___ Addition

X Modification

___ Deletion

	EXISTING		REVISED	
Name:	30384_CHA5		30384_CHA5	
Group:	MIDPHILL		MIDPHILL	
From Node:	30384_STA5		30384_STA5	
To Node:	30383		30383	
Length (ft):	300		300	
Count:	1		1	
	Upstream	Downstream	Upstream	Downstream
Geometry:	Irregular	Irregular	Irregular	Irregular
Invert (ft):	-2.76	-7.18	-3.54	-7.18
TclpInitZ (ft):	97.92	97.92	97.92	97.92
Manning's n:				
Tclip (ft):				
Bclip (ft):				
Main Xsec:	30384_XS5	30383AP	30384_XS5	30383AP
AxEl1 (ft):	0	0	0	0
Aux Xsec1:				
AxEl2 (ft):	0	0	0	0
Aux Xsec2:				
Twidth (ft):				
Depth (ft):				
Bwidth (ft):				
LSdSlp (h/v):				
RSdSlp (h/v):				
Equation:	Average Conveyance		Average Conveyance	

Flow:	Both
Eddy Contrac Coef:	0.1
Eddy Expans Coef:	0.3
Entrance Loss Coef:	0
Exit Loss Coef:	0
Outlet Cntrl Spec:	Use dc or tw
Inlet Cntrl Spec:	Use dn
Stabilizer Option:	No Stabilization

Flow:	Both
Eddy Contrac Coef:	0.1
Eddy Expans Coef:	0.3
Entrance Loss Coef:	0
Exit Loss Coef:	0
Outlet Cntrl Spec:	Use dc or tw
Inlet Cntrl Spec:	Use dn
Stabilizer Option:	No Stabilization

CHOOSE ONE

___ Addition

X Modification

___ Deletion

EXISTING

Name:	30384_CHA8	
Group:	MIDPHILL	
From Node:	30384_STA8	
To Node:	30384_STA5	
Length (ft):	300	
Count:	1	
	Upstream	Downstream
Geometry:	Irregular	Irregular
Invert (ft):	-2.79	-2.76
TclpInitZ (ft):	97.92	97.922
Manning's n:		
Tclip (ft):		
Bclip (ft):		
Main Xsec:	30384_XS8	30384_XS5
AxEl1 (ft):	0	0
Aux Xsec1:		
AxEl2 (ft):	0	0
Aux Xsec2:		
Twidth (ft):		
Depth (ft):		
Bwidth (ft):		
LSdSlp (h/v):		
RSdSlp (h/v):		
Equation:	Average Conveyance	
Flow:	Both	
Eddy Contrac Coef:	0.1	
Eddy Expans Coef:	0.3	
Entrance Loss Coef:	0	
Exit Loss Coef:	0	
Outlet Cntrl Spec:	Use dc or tw	

REVISED

Name:	30384_CHA8	
Group:	MIDPHILL	
From Node:	30384_STA8	
To Node:	30384_STA5	
Length (ft):	300	
Count:	1	
	Upstream	Downstream
Geometry:	Irregular	Irregular
Invert (ft):	-4	-3.54
TclpInitZ (ft):	97.92	97.922
Manning's n:		
Tclip (ft):		
Bclip (ft):		
Main Xsec:	30384_XS8	30384_XS5
AxEl1 (ft):	0	0
Aux Xsec1:		
AxEl2 (ft):	0	0
Aux Xsec2:		
Twidth (ft):		
Depth (ft):		
Bwidth (ft):		
LSdSlp (h/v):		
RSdSlp (h/v):		
Equation:	Average Conveyance	
Flow:	Both	
Eddy Contrac Coef:	0.1	
Eddy Expans Coef:	0.3	
Entrance Loss Coef:	0	
Exit Loss Coef:	0	
Outlet Cntrl Spec:	Use dc or tw	

	Inlet Cntrl Spec:	Use dc	Inlet Cntrl Spec:	Use dc
	Stabilizer Option:	No Stabilization	Stabilizer Option:	No Stabilization

CHOOSE ONE		EXISTING		REVISED	
		Name:	30384_CHA14	Name:	30384_CHA14
		Group:	MIDPHILL	Group:	MIDPHILL
___	Addition	From Node:	30384_STA14	From Node:	30384_STA14
		To Node:	30384_STA8	To Node:	30384_STA8
X	Modification	Length (ft):	500	Length (ft):	500
		Count:	1	Count:	1
___	Deletion				
			Upstream / Downstream		Upstream / Downstream
		Geometry:	Irregular / Irregular	Geometry:	Irregular / Irregular
		Invert (ft):	-2.78 / -2.79	Invert (ft):	-4 / -4
		TclpInitZ (ft):	97.92 / 97.92	TclpInitZ (ft):	97.92 / 97.92
		Manning's n:		Manning's n:	
		Tclip (ft):		Tclip (ft):	
		Bclip (ft):		Bclip (ft):	
		Main Xsec:	30384_XS14 / 30384_XS8	Main Xsec:	30384_XS14 / 30384_XS8
		AxEl1 (ft):	0 / 0	AxEl1 (ft):	0 / 0
		Aux Xsec1:		Aux Xsec1:	
		AxEl2 (ft):	0 / 0	AxEl2 (ft):	0 / 0
		Aux Xsec2:		Aux Xsec2:	
		Twidth (ft):		Twidth (ft):	
		Depth (ft):		Depth (ft):	
		Bwidth (ft):		Bwidth (ft):	
		LSdSlp (h/v):		LSdSlp (h/v):	
		RSdSlp (h/v):		RSdSlp (h/v):	
		Equation:	Average Conveyance	Equation:	Average Conveyance
		Flow:	Both	Flow:	Both
		Eddy Contrac Coef:	0.1	Eddy Contrac Coef:	0.1
		Eddy Expans Coef:	0.3	Eddy Expans Coef:	0.3
		Entrance Loss Coef:	0	Entrance Loss Coef:	0
		Exit Loss Coef:	0	Exit Loss Coef:	0
		Outlet Cntrl Spec:	Use dc or tw	Outlet Cntrl Spec:	Use dc or tw
		Inlet Cntrl Spec:	Use dc	Inlet Cntrl Spec:	Use dc
		Stabilizer Option:	No Stabilization	Stabilizer Option:	No Stabilization

CHOOSE ONE		EXISTING		REVISED	
		Name:	30384_CHA20	Name:	30384_CHA20
		Group:	MIDPHILL	Group:	MIDPHILL
___	Addition	From Node:	30384_STA20	From Node:	30384_STA20

X	Modification
___	Deletion

To Node:	30384_STA16	
Length (ft):	500	
Count:	1	
	Upstream	Downstream
Geometry:	Irregular	Irregular
Invert (ft):	-3.5	-2.78
TclpInitZ (ft):	97.92	97.92
Manning's n:		
Tclip (ft):		
Bclip (ft):		
Main Xsec:	30384_XS20	30384_XS16
AxEl1 (ft):	0	0
Aux Xsec1:		
AxEl2 (ft):	0	0
Aux Xsec2:		
Twidth (ft):		
Depth (ft):		
Bwidth (ft):		
LSdSlp (h/v):		
RSdSlp (h/v):		
Equation:	Average Conveyance	
Flow:	Both	
Eddy Contrac Coef:	0.1	
Eddy Expans Coef:	0.3	
Entrance Loss Coef:	0	
Exit Loss Coef:	0	
Outlet Cntrl Spec:	Use dc or tw	
Inlet Cntrl Spec:	Use dc	
Stabilizer Option:	No Stabilization	

To Node:	30384_STA16	
Length (ft):	500	
Count:	1	
	Upstream	Downstream
Geometry:	Irregular	Irregular
Invert (ft):	-3.5	-3.53
TclpInitZ (ft):	97.92	97.92
Manning's n:		
Tclip (ft):		
Bclip (ft):		
Main Xsec:	30384_XS20	30384_XS16
AxEl1 (ft):	0	0
Aux Xsec1:		
AxEl2 (ft):	0	0
Aux Xsec2:		
Twidth (ft):		
Depth (ft):		
Bwidth (ft):		
LSdSlp (h/v):		
RSdSlp (h/v):		
Equation:	Average Conveyance	
Flow:	Both	
Eddy Contrac Coef:	0.1	
Eddy Expans Coef:	0.3	
Entrance Loss Coef:	0	
Exit Loss Coef:	0	
Outlet Cntrl Spec:	Use dc or tw	
Inlet Cntrl Spec:	Use dc	
Stabilizer Option:	No Stabilization	

- Irregular Weirs -

CHOOSE ONE

___	Addition
___	Modification
X	Deletion

EXISTING	
Name:	30384_DAM
Group:	MIDPHILL
From Node:	30384_STA16
To Node:	**30384_STA14**
Count:	1
Type:	Vertical: Mavis Equation
Xsec Name:	30384_XSDAM
Invert (ft):	-3.39
Control Elev (ft):	1.2
Struct Opening Dim (ft):	9999
Bottom Clip (in):	0
Top Clip (in):	0

REVISED	
Name:	
Group:	
From Node:	
To Node:	
Count:	
Type:	
Xsec Name:	
Invert (ft):	
Control Elev (ft):	
Struct Opening Dim (ft):	
Bottom Clip (in):	
Top Clip (in):	

Weir Discharge Coef:	3.2	Weir Discharge Coef:	
Orifice Discharge Coef:	0.6	Orifice Discharge Coef:	

MODEL UPDATE SUMMARY WORKSHEET
Created by DBF Comparator

Basin: _____ Bayshed: _____

Project Name: PJ1_PCM 1vPCM 2 Sec/Twn/Ran: _____

Modification Type: _____ New Construction
_____ Modification of Existing Conditions

Modification Date: 7/17/2018 SEU Staff: _____

NAME	BASIN	NODE	PIPE	CHAN	WEIR	X-SECT	DRP STR	BRIDGE
30384_CHA20				Modification				
30384_XS16						Modification		

NOTES: _____

SKETCH

- Cross Sections -

CHOOSE ONE

___ Addition
X Modification
___
___ Deletion

EXISTING

Name: 30384_XS16
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
960	11.49	0.08
970	11.23	0.08
980	11.01	0.08

REVISED

Name: 30384_XS16
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
960	11.49	0.08
970	11.23	0.08
980	11.01	0.08

990	10.67	0.08	990	10.67	0.08
1000	10.22	0.08	1000	9.66	0.08
1010	9.75	0.08	1010	9	0.08
1020	9.37	0.08	1020	8.17	0.08
1030	8.69	0.08	1030	7.04	0.08
1040	8.14	0.08	1040	5.7	0.08
1050	7.89	0.08	1050	4.9	0.08
1060	7.28	0.08	1060	4.25	0.08
1070	6.59	0.08	1070	3.28	0.08
1080	5.89	0.08	1080	2.37	0.08
1090	5.36	0.08	1090	1.4	0.08
1100	4.4	0.08	1100	0.65	0.04
1110	3.98	0.08	1110	0.23	0.04
1120	3.72	0.08	1120	-0.18	0.04
1130	3.58	0.08	1130	-1.09	0.04
1140	3.5	0.08	1140	-2.01	0.04
1150	3.36	0.08	1150	-2.27	0.04
1160	3.14	0.08	1160	-2.49	0.04
1170	2.84	0.08	1170	-2.72	0.04
1180	2.31	0.08	1180	-3	0.04
1190	1.6	0.08	1190	-3.43	0.04
1200	0.59	0.04	1200	-3.94	0.04
1210	-0.49	0.04	1210	-4.3	0.04
1220	-1.49	0.04	1220	-4.63	0.04
1230	-1.99	0.04	1230	-4.63	0.04
1240	-2.45	0.04	1240	-4.61	0.04
1250	-2.92	0.04	1250	-4.83	0.04
1260	-3.24	0.04	1260	-5.11	0.04
1270	-3.44	0.04	1270	-4.96	0.04
1280	-3.53	0.04	1280	-4.4	0.04
1290	-3.51	0.04	1290	-3.67	0.04
1300	-3.22	0.04	1300	-2.9	0.04
1310	-2.89	0.04	1310	-2.32	0.04
1320	-2.42	0.04	1320	-1.6	0.04
1330	-1.66	0.04	1330	-0.93	0.04
1340	-0.31	0.04	1340	0.04	0.04
1350	2.62	0.08	1350	2.7	0.04
1360	5.27	0.08	1360	5.31	0.08
1370	6.86	0.08	1370	6.86	0.08
1380	7.81	0.08	1380	7.81	0.08
1390	8.22	0.08	1390	8.23	0.08
1400	8.87	0.08	1400	8.87	0.08

- Channels -

CHOOSE ONE		EXISTING		REVISED	
	Addition	Name:	30384_CHA20	Name:	30384_CHA20
		Group:	MIDPHILL	Group:	MIDPHILL
		From Node:	30384_STA20	From Node:	30384_STA20
		To Node:	30384_STA16	To Node:	30384_STA16
X	Modification	Length (ft):	500	Length (ft):	500

___ Deletion

	Count:	1	
		Upstream	Downstream
	Geometry:	Irregular	Irregular
	Invert (ft):	-3.5	-3.53
	TclpInitZ (ft):	97.92	97.92
	Manning's n:		
	Tclip (ft):		
	Bclip (ft):		
	Main Xsec:	30384_XS20	30384_XS16
	AxEl1 (ft):	0	0
	Aux Xsec1:		
	AxEl2 (ft):	0	0
	Aux Xsec2:		
	Twidth (ft):		
	Depth (ft):		
	Bwidth (ft):		
	LSdSlp (h/v):		
	RSdSlp (h/v):		
	Equation:	Average Conveyance	
	Flow:	Both	
Eddy Contrac Coef:		0.1	
Eddy Expans Coef:		0.3	
Entrance Loss Coef:		0	
	Exit Loss Coef:	0	
	Outlet Cntrl Spec:	Use dc or tw	
	Inlet Cntrl Spec:	Use dc	
	Stabilizer Option:	No Stabilization	

	Count:	1	
		Upstream	Downstream
	Geometry:	Irregular	Irregular
	Invert (ft):	-3.5	-5.11
	TclpInitZ (ft):	97.92	97.92
	Manning's n:		
	Tclip (ft):		
	Bclip (ft):		
	Main Xsec:	30384_XS20	30384_XS16
	AxEl1 (ft):	0	0
	Aux Xsec1:		
	AxEl2 (ft):	0	0
	Aux Xsec2:		
	Twidth (ft):		
	Depth (ft):		
	Bwidth (ft):		
	LSdSlp (h/v):		
	RSdSlp (h/v):		
	Equation:	Average Conveyance	
	Flow:	Both	
Eddy Contrac Coef:		0.1	
Eddy Expans Coef:		0.3	
Entrance Loss Coef:		0	
	Exit Loss Coef:	0	
	Outlet Cntrl Spec:	Use dc or tw	
	Inlet Cntrl Spec:	Use dc	
	Stabilizer Option:	No Stabilization	

MODEL UPDATE SUMMARY WORKSHEET
Created by DBF Comparator

Basin: _____ Bayshed: _____

Project Name: PJ1_PCM 1 v PCM 3 Sec/Twn/Ran: _____

Modification Type: _____ New Construction
_____ Modification of Existing Conditions

Modification Date: 7/17/2018 SEU Staff: _____

NAME	BASIN	NODE	PIPE	CHAN	WEIR	X-SECT	DRP STR	BRIDGE
30384_XS16						Modification		

NOTES: _____

SKETCH

- Cross Sections -

CHOOSE ONE

___ Addition

X Modification

___ Deletion

EXISTING

Name: 30384_XS16
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
960	11.49	0.08
970	11.23	0.08
980	11.01	0.08

REVISED

Name: 30384_XS16
Group: MIDPHILL
Comment:

X-sta (ft)	Y-ele.(ft)	Manning's n
960	11.49	0.08
970	11.23	0.08
980	11.01	0.08

990	10.67	0.08	990	10.67	0.08
1000	10.22	0.08	1000	10.22	0.08
1010	9.75	0.08	1010	9.75	0.08
1020	9.37	0.08	1020	9.37	0.08
1030	8.69	0.08	1030	8.69	0.08
1040	8.14	0.08	1040	8.14	0.08
1050	7.89	0.08	1050	7.89	0.08
1060	7.28	0.08	1060	7.28	0.08
1070	6.59	0.08	1070	6.59	0.08
1080	5.89	0.08	1080	5.89	0.08
1090	5.36	0.08	1090	5.36	0.08
1100	4.4	0.08	1100	4.75	0.08
1110	3.98	0.08	1110	4.25	0.08
1120	3.72	0.08	1120	3.9	0.08
1130	3.58	0.08	1130	3.58	0.08
1140	3.5	0.08	1140	3.5	0.08
1150	3.36	0.08	1150	3.36	0.08
1160	3.14	0.08	1160	3.14	0.08
1170	2.84	0.08	1170	2.84	0.08
1180	2.31	0.08	1180	2.31	0.08
1190	1.6	0.08	1190	1.6	0.08
1200	0.59	0.04	1200	0.59	0.04
1210	-0.49	0.04	1210	-0.49	0.04
1220	-1.49	0.04	1220	-1.49	0.04
1230	-1.99	0.04	1230	-1.99	0.04
1240	-2.45	0.04	1240	-2.45	0.04
1250	-2.92	0.04	1250	-2.92	0.04
1260	-3.24	0.04	1260	-3.24	0.04
1270	-3.44	0.04	1270	-3.44	0.04
1280	-3.53	0.04	1280	-3.53	0.04
1290	-3.51	0.04	1290	-3.51	0.04
1300	-3.22	0.04	1300	-3.22	0.04
1310	-2.89	0.04	1310	-2.89	0.04
1320	-2.42	0.04	1320	-2.42	0.04
1330	-1.66	0.04	1330	-1.66	0.04
1340	-0.31	0.04	1340	-0.31	0.04
1350	2.62	0.08	1350	2.62	0.08
1360	5.27	0.08	1360	5.27	0.08
1370	6.86	0.08	1370	6.86	0.08
1380	7.81	0.08	1380	7.81	0.08
1390	8.22	0.08	1390	8.22	0.08
1400	8.87	0.08	1400	8.87	0.08

Appendix G: Estimate of Engineer's Probable BMP Cost

Design Alternative 1

Item No.	Description	Unit	Unit Price	Unit Price Source	Quantity	Amount
5-7-3	Construction Stakeout	HR	$90.15	F. Derr and Co.	45	$4,056.75
5-7-7	Record drawings	LS	$20,000.00	WEC	1	$20,000.00
102-1-3	Mobilization (10%)	EA	$45,311.50	WEC	1	$45,311.50
101-2-1S	Project Sign	EA	$1,500.00	FDOT	1	$1,500.00
104-10-3	Sediment barrier	LF	$1.24	FDOT	850	$1,054.00
104-11	Turbidity barrier, floating	LF	$11.61	FDOT	600	$6,966.00
104-15	Soil tracking prevention device	EA	$2,824.13	FDOT	1	$2,824.13
104-30S	Prevention, control, abatement of erosion & water pollution	LS	$100,000.00	WEC	1	$100,000.00
104-31-15	Dust abatement water	MG	$1,000.00	WEC	10	$10,000.00
110-1	Clearing and grubbing	AC	$10,752.56	FDOT	1.5	$16,128.84
120-5	Channel Excavation	CY	$10.19	FDOT	10414	$106,118.66
120-6	Embankment	CY	$6.95	FDOT	4247	$29,516.65
146-1	Special bank treatment 1	SF	$15.00	WEC	5000	$75,000.00
162-1-11	Prepared soil layer, finish soil layer, littoral shelf, 6"	SY	$15.00	WEC	1200	$18,000.00
110-73	Remove existing bulkhead	LF	$350.00	WEC	177	$61,950.00
570-1-2	Performance Turf - Sod	SY	$3.00	FDOT	4300	$12,900.00
	Additional items					
	Rehabilitate shuffleboard courts		$4,000.00		1	$4,000.00
	Geotechnical Analysis		$3,600.00		1	$3,600.00
	Design and Permitting		$85,000.00		1	$85,000.00
	Temporary Easement acquisition			unknown		
	CEI	15% total	$ 74,763.98		1	$74,763.98
					Subtotal	$678,690.51
					30% contingency	**$882,297.67**

Deduct (Excavated sediment found suitable for bank restructuring)

120-5	Channel Excavation	CY	$10.19	FDOT	4247	$43,276.93

Design Alternative 2

Item No.	Description	Unit	Unit Price	Unit Price Source	Quantity	Amount
5-7-3	Construction Stakeout	HR	$90.15	F. Derr and Co.	60	$5,409.00
5-7-7	Record drawings	LS	$20,000.00	WEC	1	$20,000.00
102-1-3	Mobilization (10%)	EA	$65,717.63	WEC	1	$65,717.63
101-2-1S	Project Sign	EA	$1,500.00	FDOT	1	$1,500.00
104-10-3	Sediment barrier	LF	$1.24	FDOT	850	$1,054.00
104-11	Turbidity barrier, floating	LF	$11.61	FDOT	600	$6,966.00
104-15	Soil tracking prevention device	EA	$2,824.13	FDOT	1	$2,824.13
104-30S	Prevention, control, abatement of erosion & water pollution	LS	$150,000.00	WEC	1	$150,000.00
104-31-15	Dust abatement water	MG	$1,000.00	WEC	15	$15,000.00
110-1	Clearing and grubbing	AC	$10,752.56	FDOT	1.75	$18,816.98
120-5	Channel Excavation	CY	$10.19	FDOT	20062	$204,431.78
120-6	Embankment	CY	$6.95	FDOT	4251	$29,544.45
BS-1	#250 Sand	CY	$25.04	F. Derr and Co.	750	$18,780.00
146-1	Special bank treatment 1	SF	$15.00	WEC	5000	$75,000.00
162-1-11	Prepared soil layer, finish soil layer, littoral shelf, 6"	SY	$15.00	WEC	2200	$33,000.00
110-73	Remove existing bulkhead	LF	$350.00	WEC	177	$61,950.00
570-1-2	Performance Turf - Sod	SY	$3.00	FDOT	4300	$12,900.00
580-1-1	Emergent plants	LS	$8,500.00	FDOT	1	$8,500.00
	Additional items					
	Rehabilitate shuffleboard courts		$4,000.00		1	$4,000.00
	Geotechnical Analysis		$3,600.00		1	$3,600.00
	Design and Permitting		$95,000.00		1	$95,000.00
	Temporary Easement acquisition			unknown		
	CEI	15% total	$125,099.10		1	$125,099.10
					Subtotal	$959,093.07
					30% contingency	**$1,246,820.99**

Deduct (Excavated sediment found suitable for bank restructuring)

120-5	Channel Excavation	CY	$10.19	FDOT	4251	$43,317.69

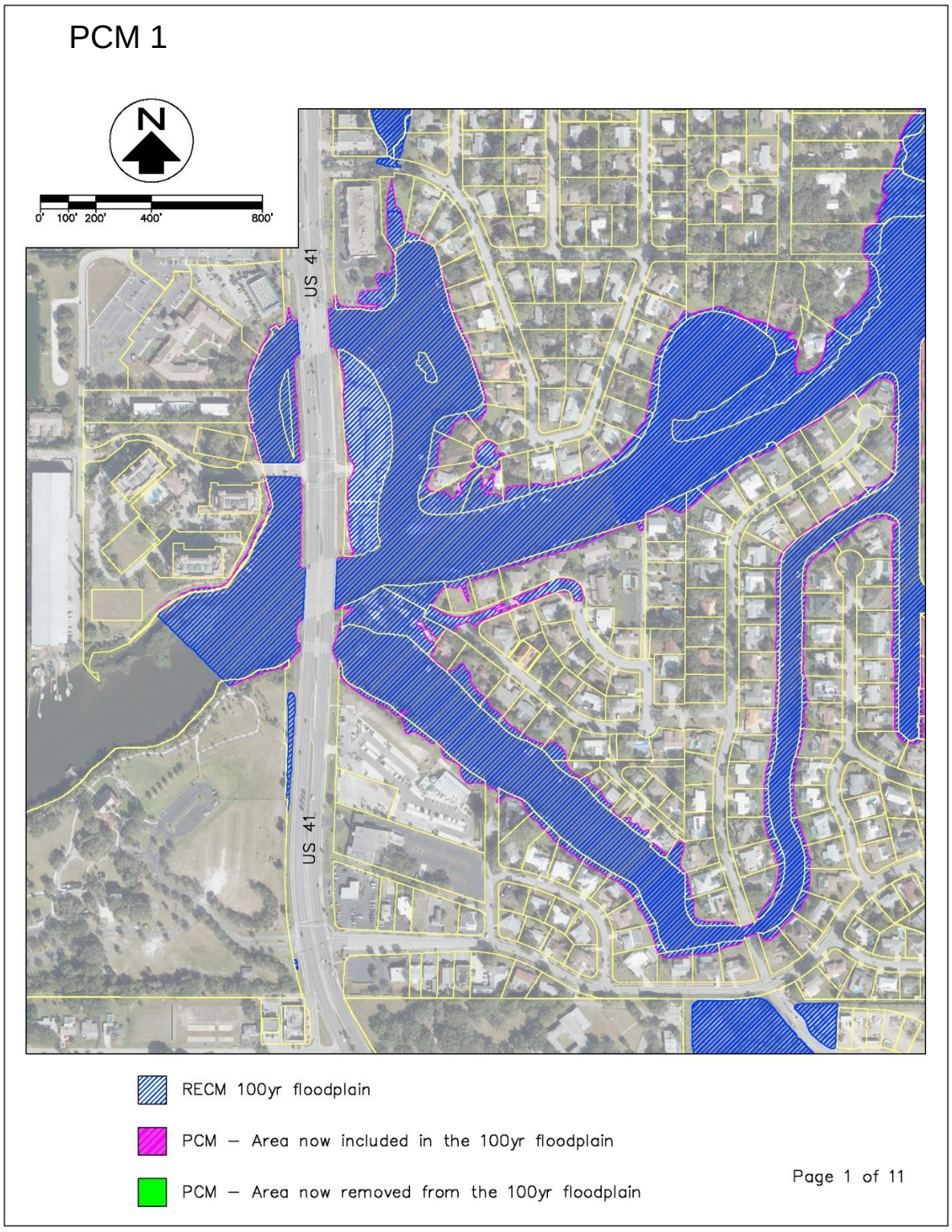
Design Alternative 3

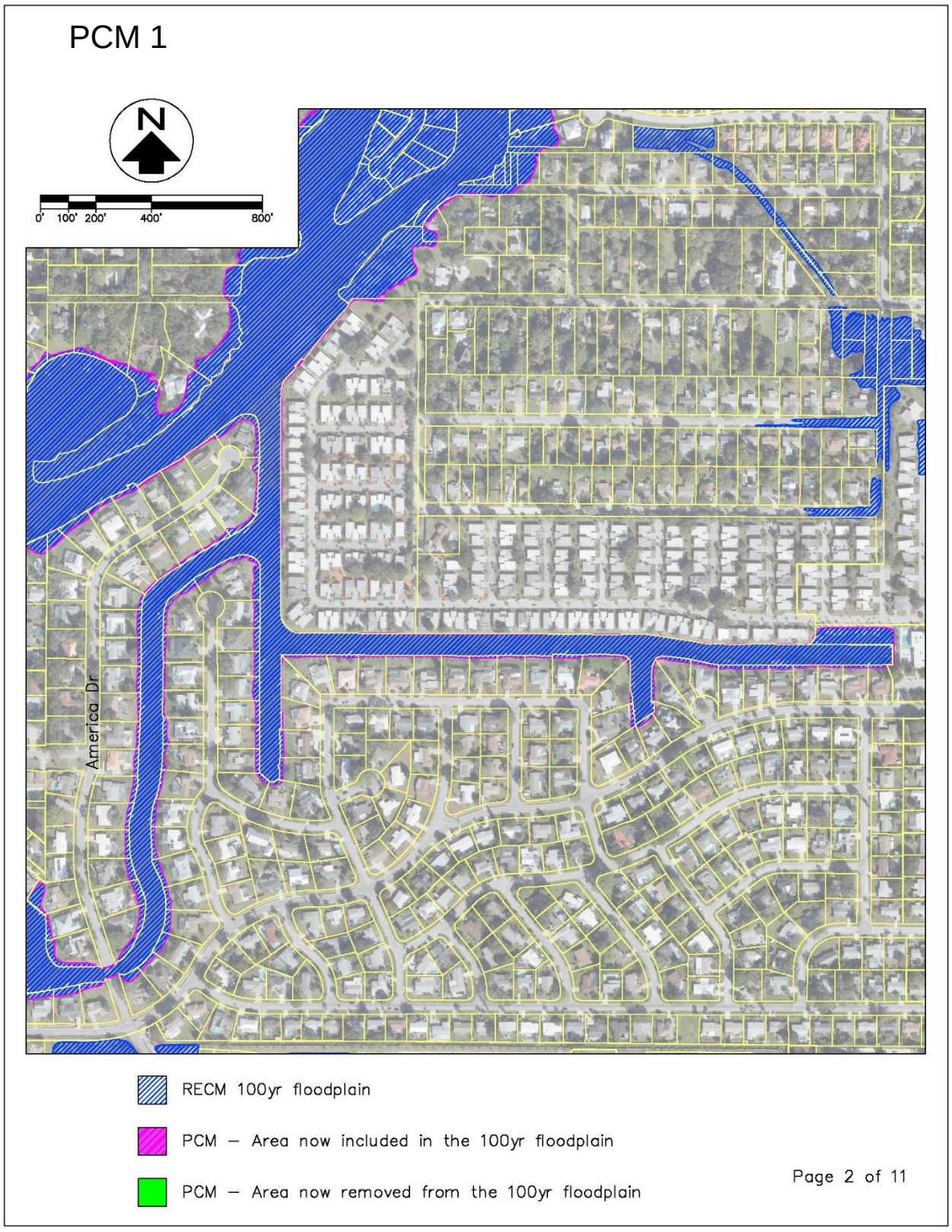
Item No.	Description	Unit	Unit Price	Unit Price Source	Quantity	Amount
5-7-3	Construction Stakeout	HR	$90.15	F. Derr and Co.	45	$4,056.75
5-7-7	Record drawings	LS	$20,000.00	WEC	1	$20,000.00
102-1-3	Mobilization (10%)	EA	$60,200.00	WEC	1	$60,200.00
101-2-1S	Project Sign	EA	$1,500.00	FDOT	1	$1,500.00
104-10-3	Sediment barrier	LF	$1.24	FDOT	850	$1,054.00
104-11	Turbidity barrier, floating	LF	$11.61	FDOT	600	$6,966.00
104-15	Soil tracking prevention device	EA	$2,824.13	FDOT	1	$2,824.13
104-30S	Prevention, control, abatement of erosion & water pollution	LS	$100,000.00	WEC	1	$100,000.00
104-31-15	Dust abatement water	MG	$1,000.00	WEC	10	$10,000.00
110-1	Clearing and grubbing	AC	$10,752.56	FDOT	1.5	$16,128.84
120-5	Channel Excavation	CY	$10.19	FDOT	10414	$106,118.66
120-6	Embankment	CY	$6.95	FDOT	18547	$128,901.65
146-1	Special bank treatment 1	SF	$15.00	WEC	5000	$75,000.00
162-1-11	Prepared soil layer, finish soil layer, littoral shelf, 6"	SY	$15.00	WEC	4500	$67,500.00
110-73	Remove existing bulkhead	LF	$350.00	WEC	177	$61,950.00
570-1-2	Performance Turf - Sod	SY	$3.00	FDOT	4300	$12,900.00
580-1-1	Emergent plants	LS	$22,800.00	FDOT	1	$22,800.00
	Additional items					
	Rehabilitate shuffleboard courts		$4,000.00		1	$4,000.00
	Geotechnical Analysis		$3,600.00		1	$3,600.00
	Design and Permitting		$85,000.00		1	$85,000.00
	Temporary Easement acquisition			unknown		
	CEI	15% total	$ 99,330.00		1	$99,330.00
					Subtotal	$889,830.04
					30% contingency	**$1,156,779.05**

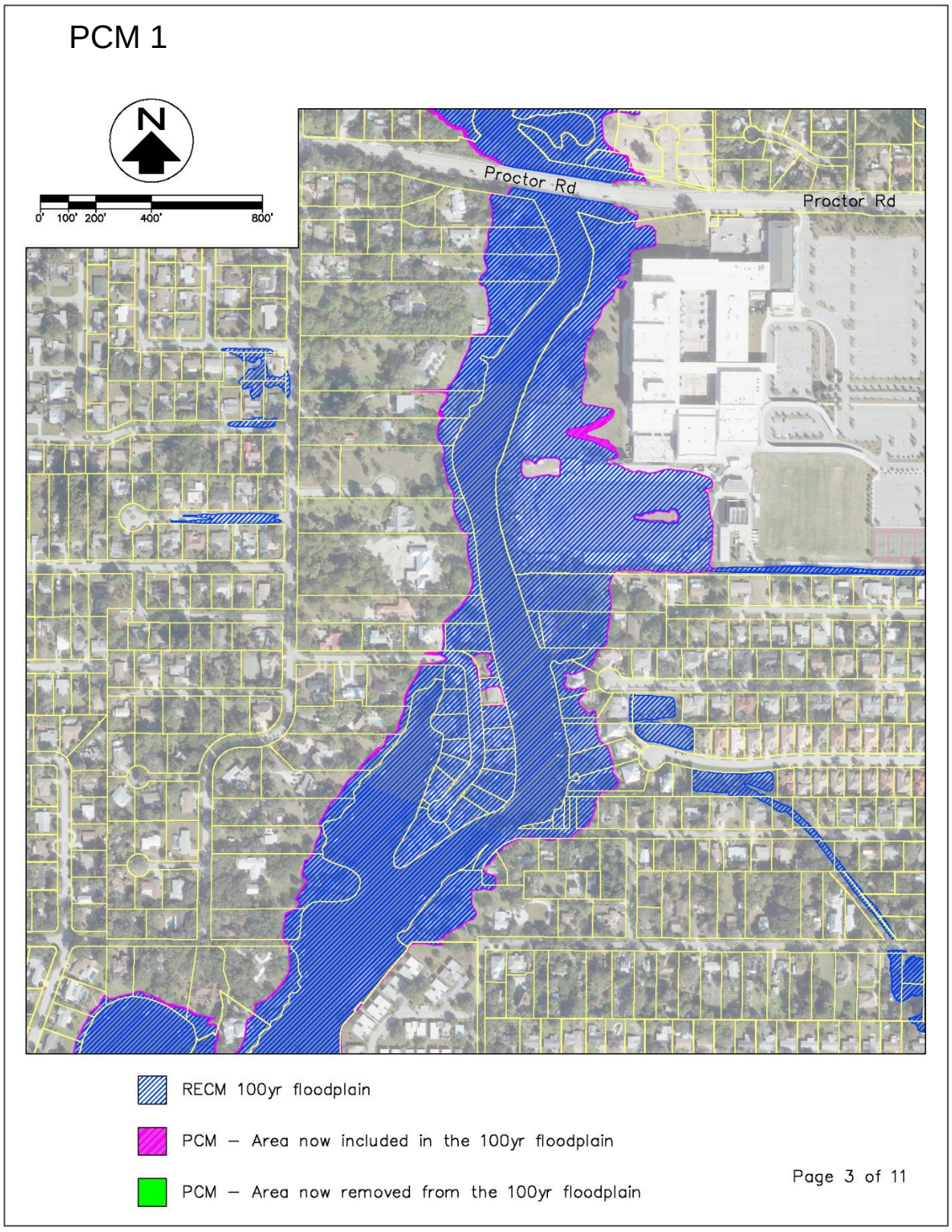
Deduct (Excavated sediment found suitable for bank restructuring)

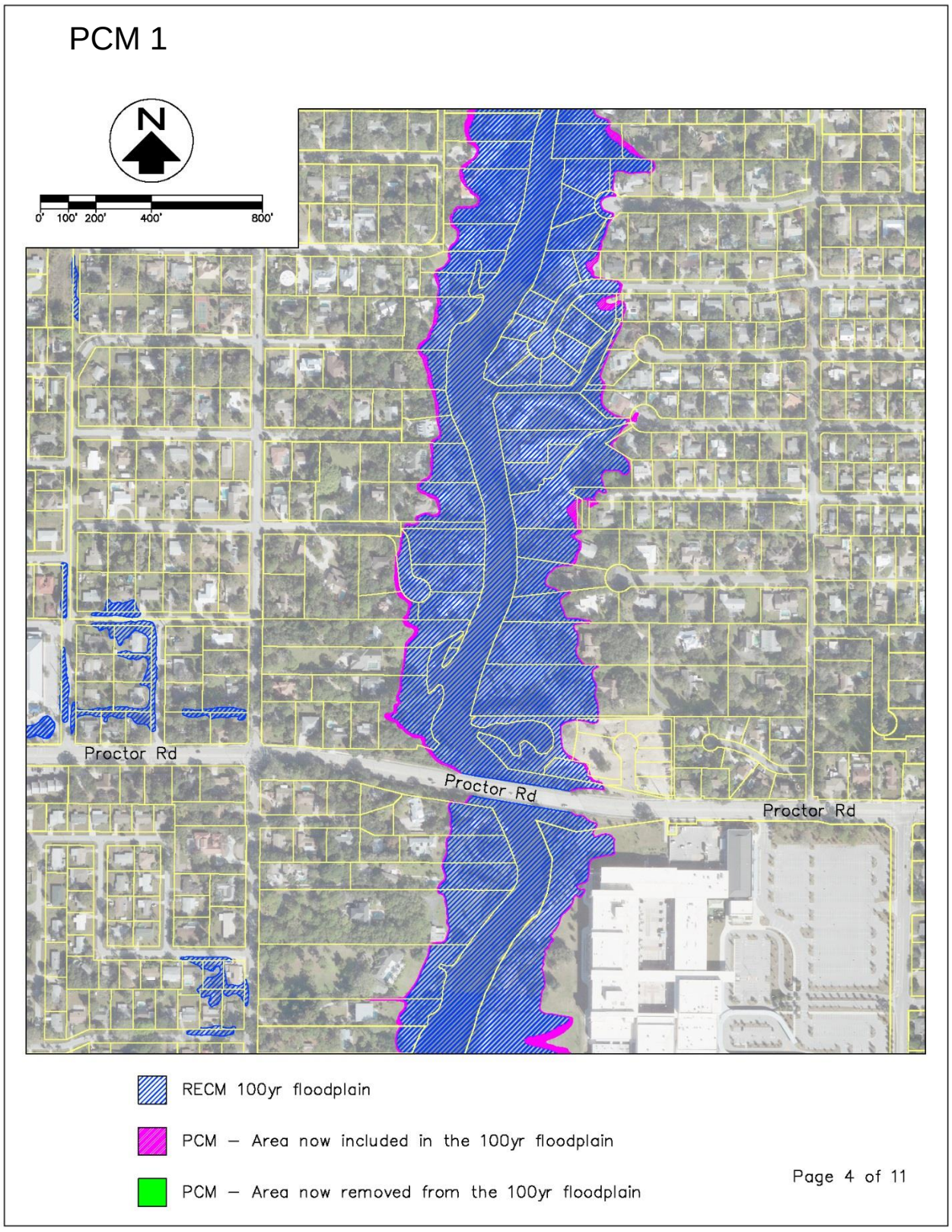
120-5	Channel Excavation	CY	$10.19	FDOT	10414	$106,118.66

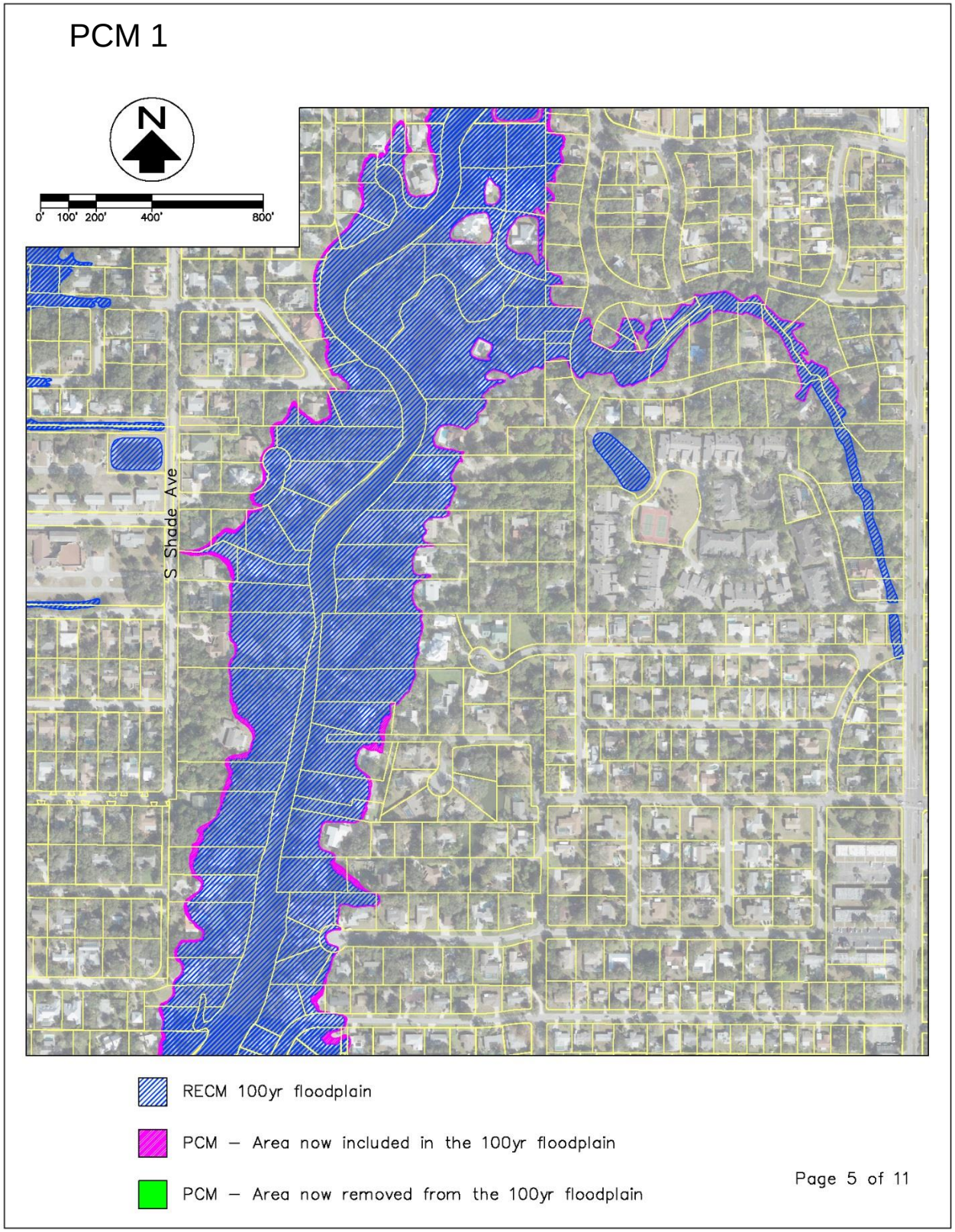
Appendix H: 100-Year Floodplain Property Graphics

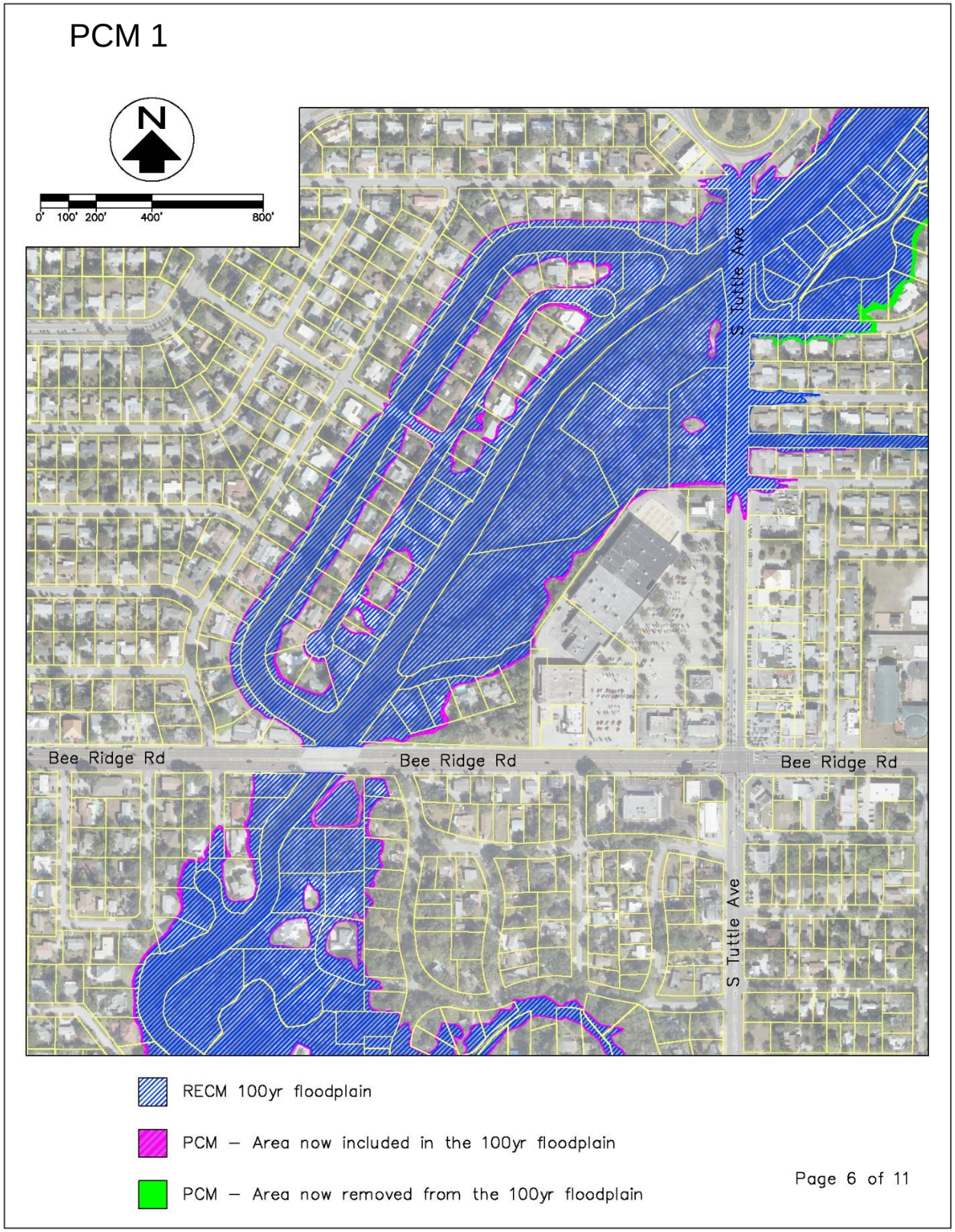

PCM 1
N
0' 100' 200' 400' 800'
US 41
US 41
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 1 of 11

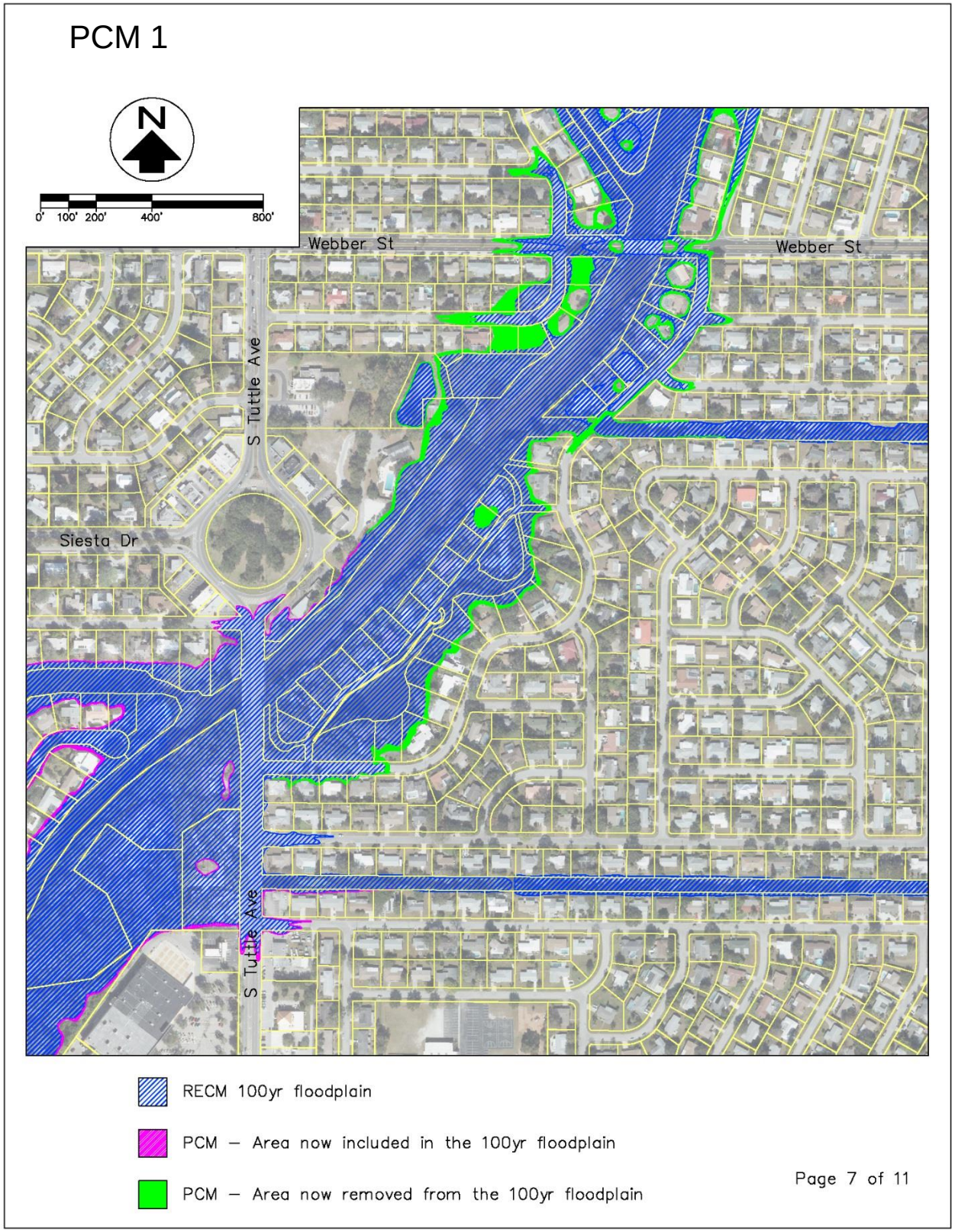

PCM 1
N
0' 100' 200' 400' 800'
America Dr
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 2 of 11

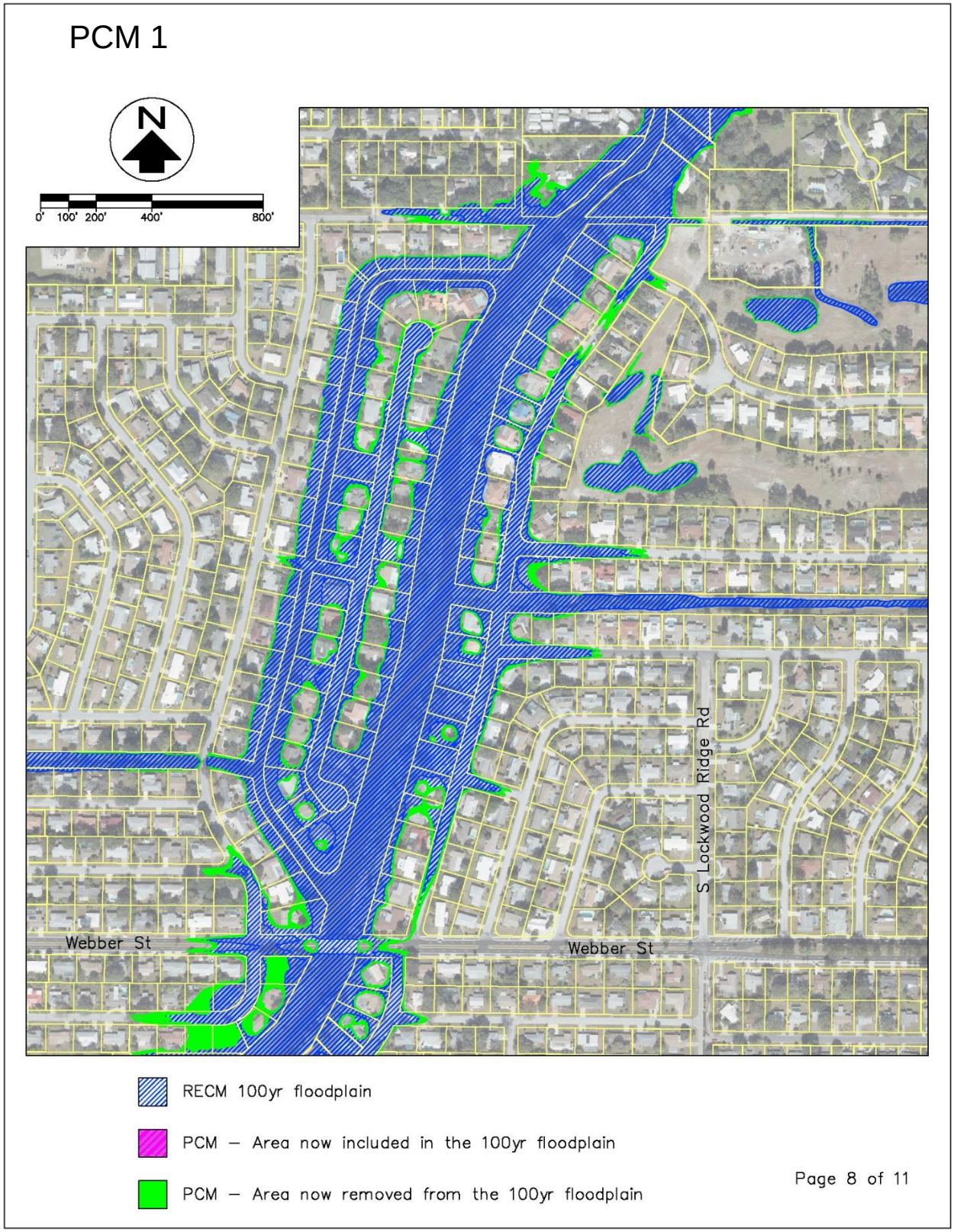

PCM 1
N
0' 100' 200' 400' 800'
Proctor Rd
Proctor Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 3 of 11

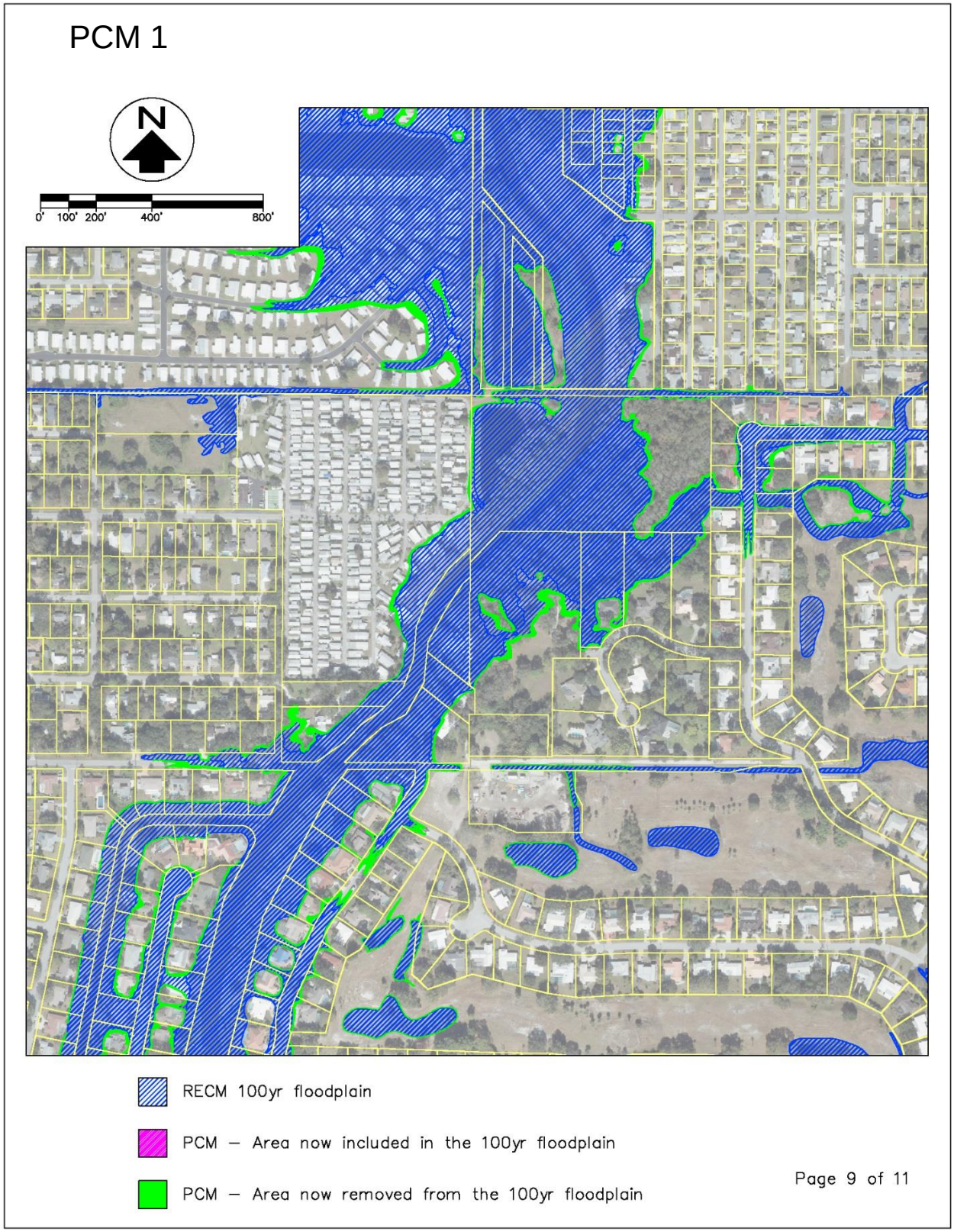

PCM 1
N
0' 100' 200' 400' 800'
Proctor Rd
Proctor Rd
Proctor Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 4 of 11

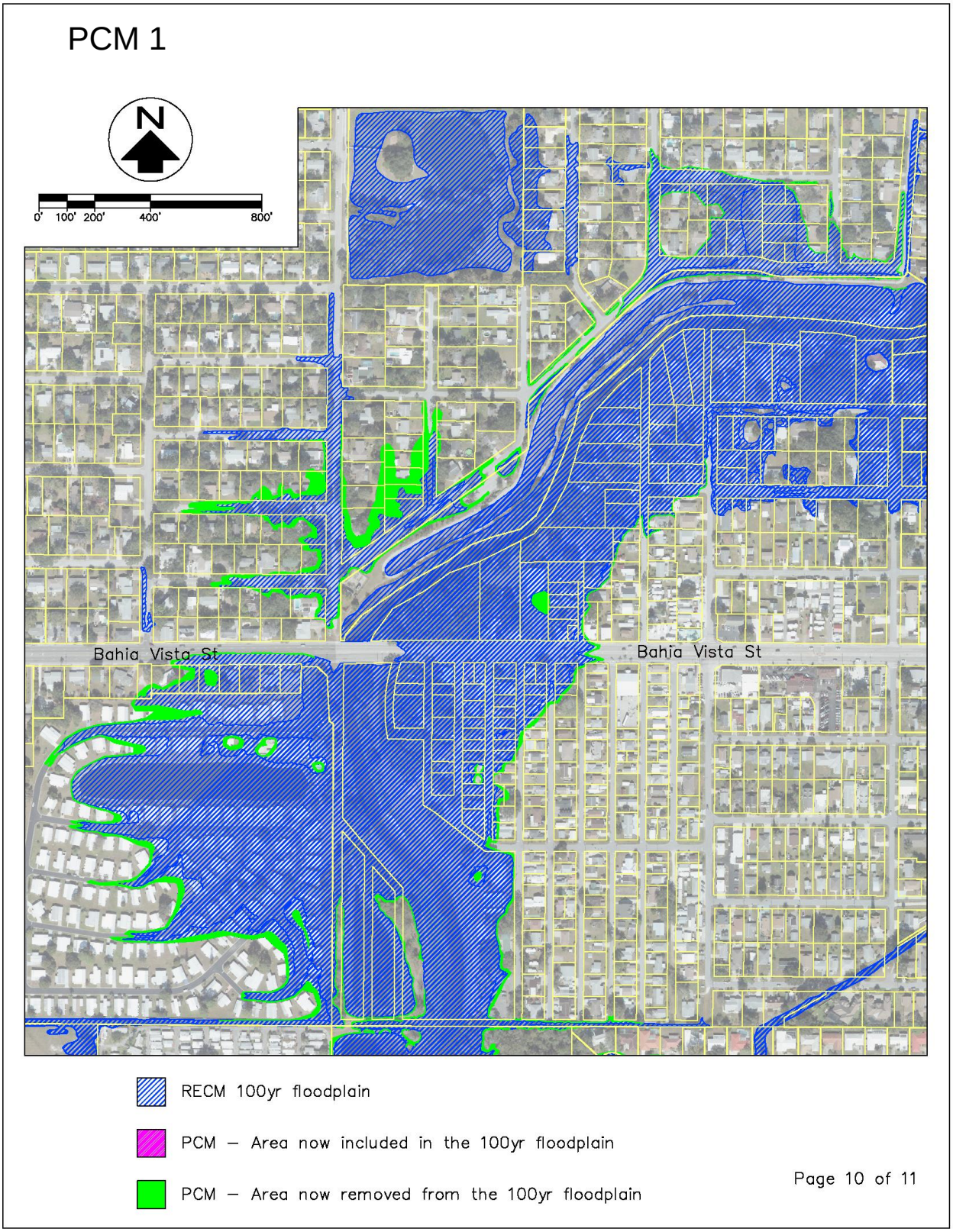

PCM 1
N
0'
100'
200'
400'
800'
S Shade Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 5 of 11

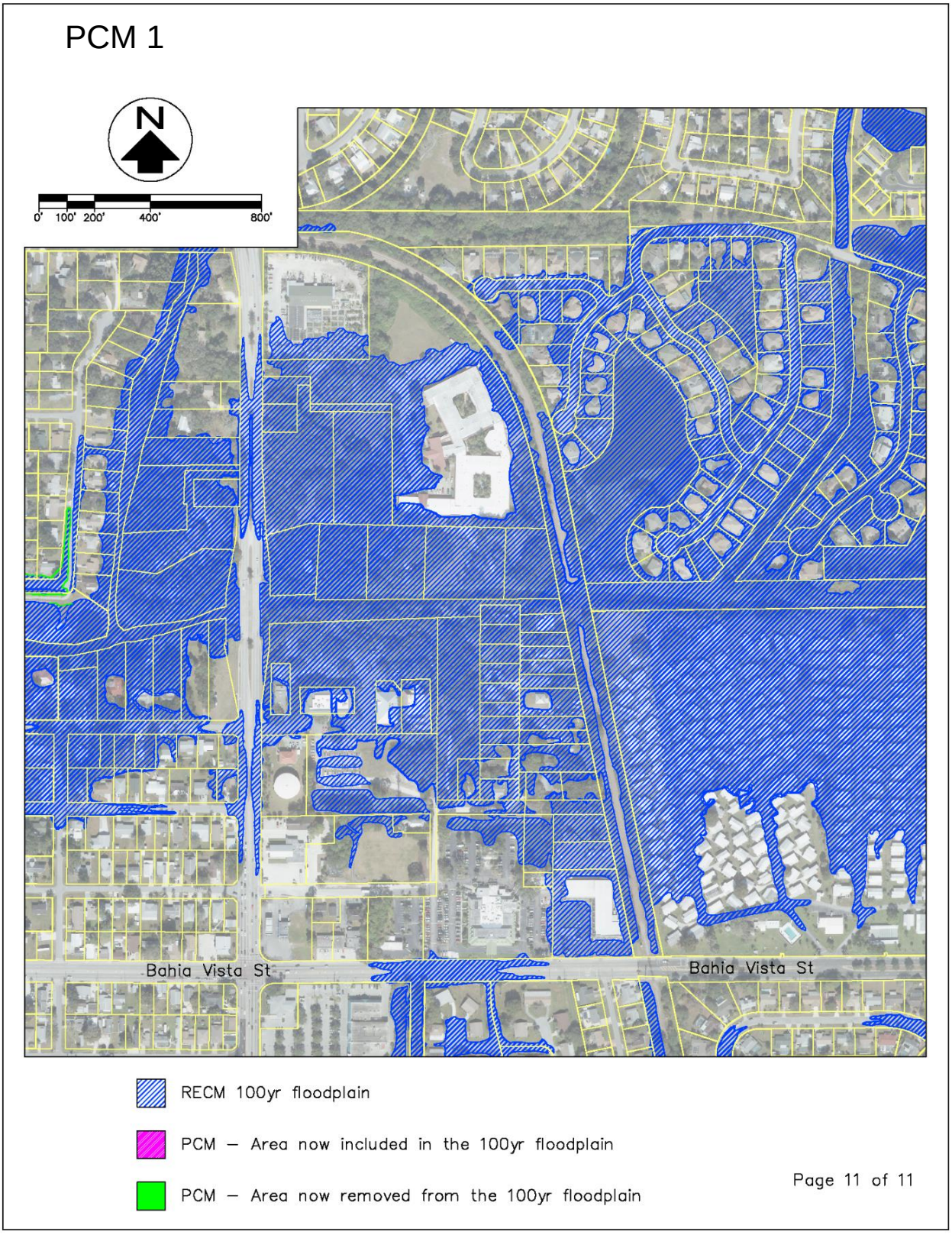

PCM 1
N
0' 100' 200' 400' 800'
S Tuttle Ave
Bee Ridge Rd
Bee Ridge Rd
Bee Ridge Rd
S Tuttle Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 6 of 11

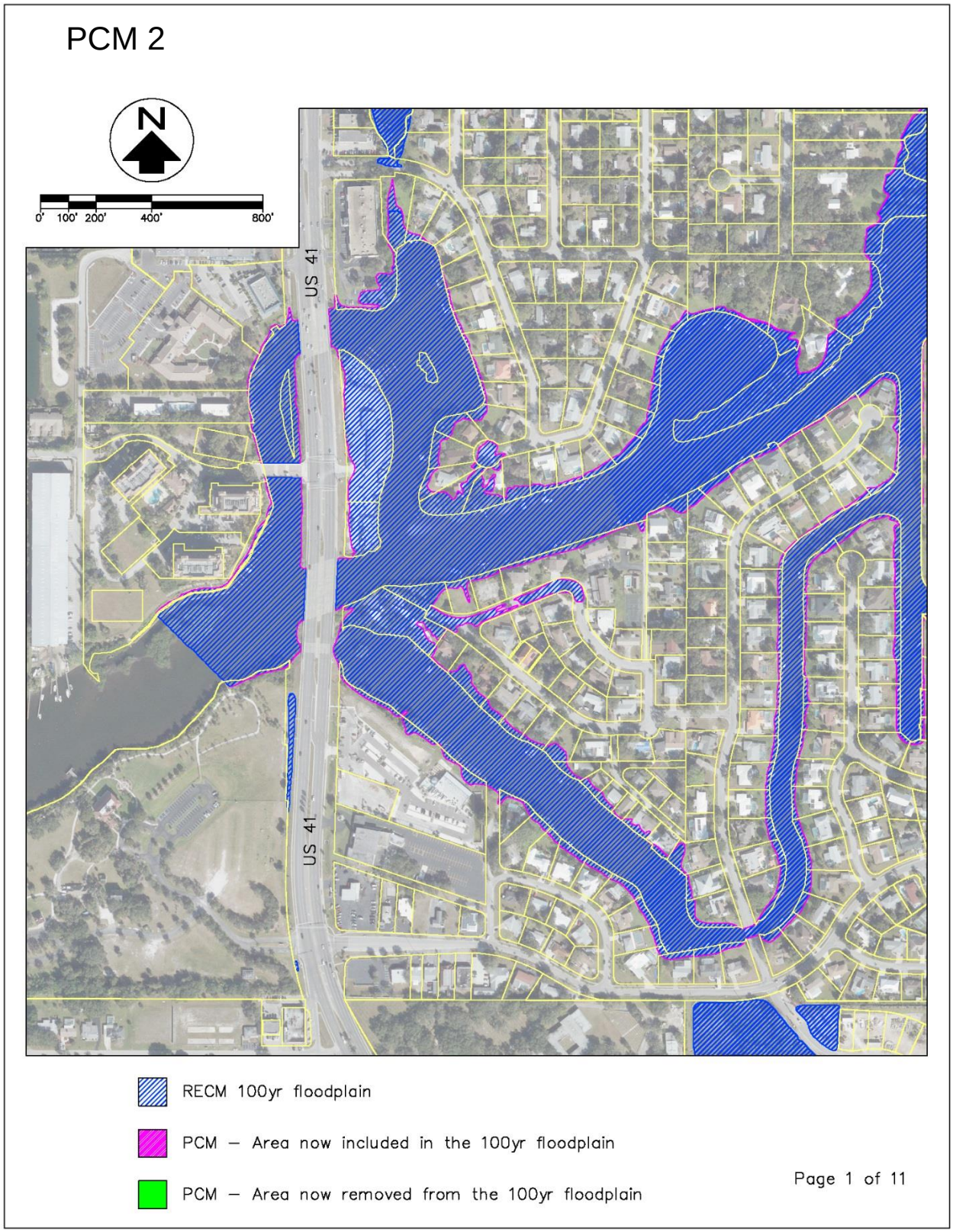

PCM 1
N
0' 100' 200' 400' 800'
Webber St
Webber St
S Tuttle Ave
Siesta Dr
S Tuttle Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 7 of 11

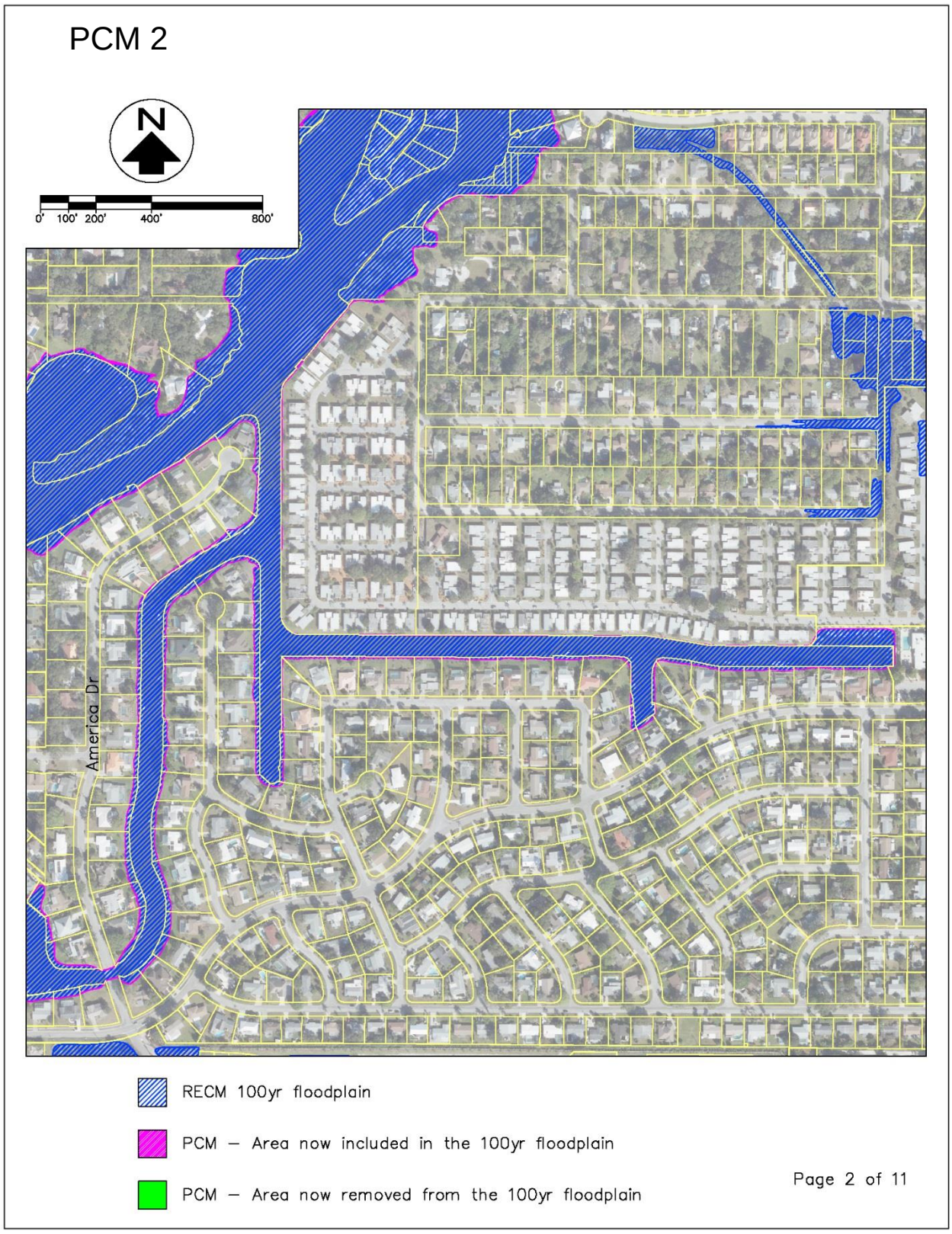

PCM 1
N
0' 100' 200' 400' 800'
Webber St
Webber St
S Lockwood Ridge Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 8 of 11

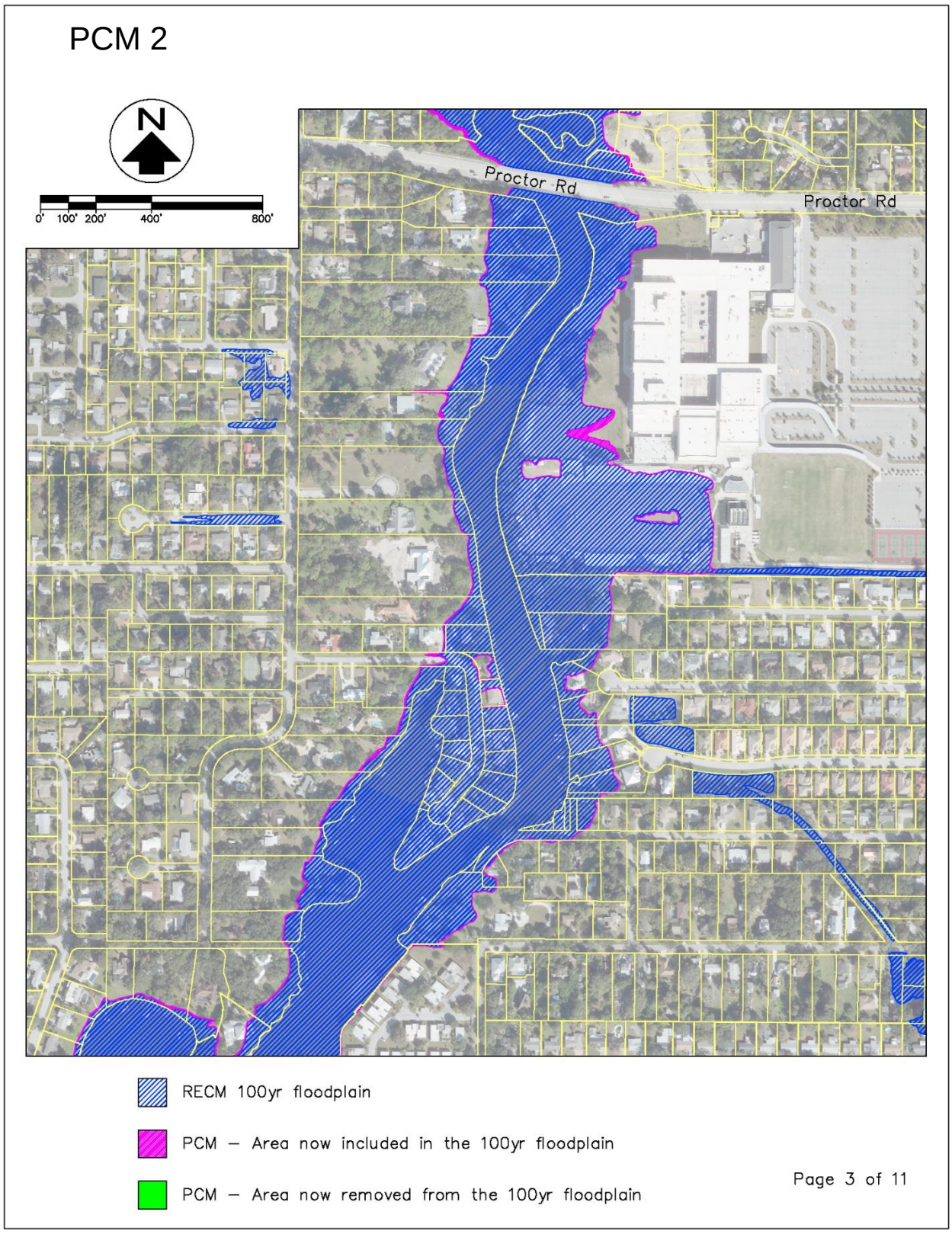

PCM 1
N
0'
100'
200'
400'
800'
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 9 of 11

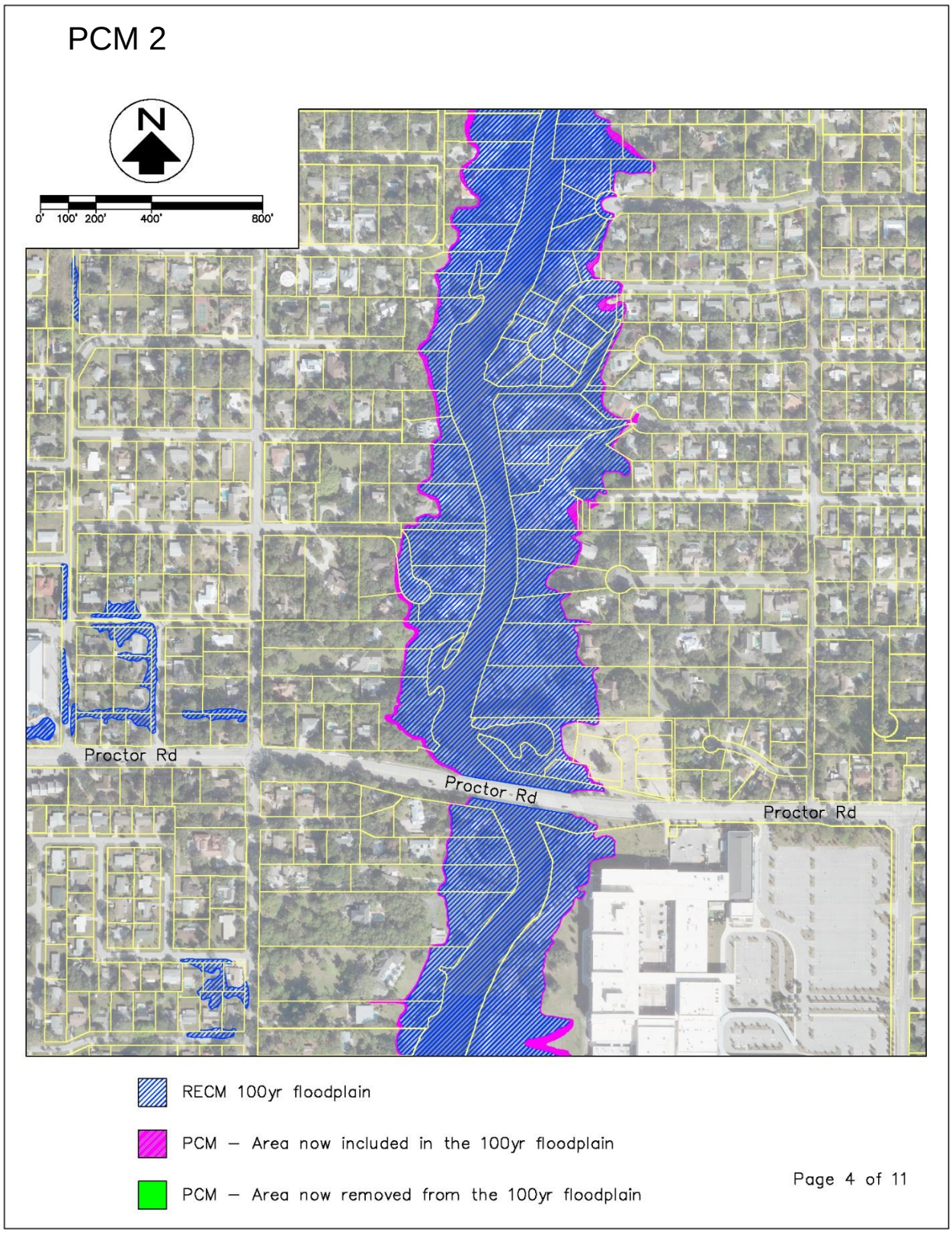

PCM 1
N
0'
100'
200'
400'
800'
Bahia Vista St
Bahia Vista St
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 10 of 11

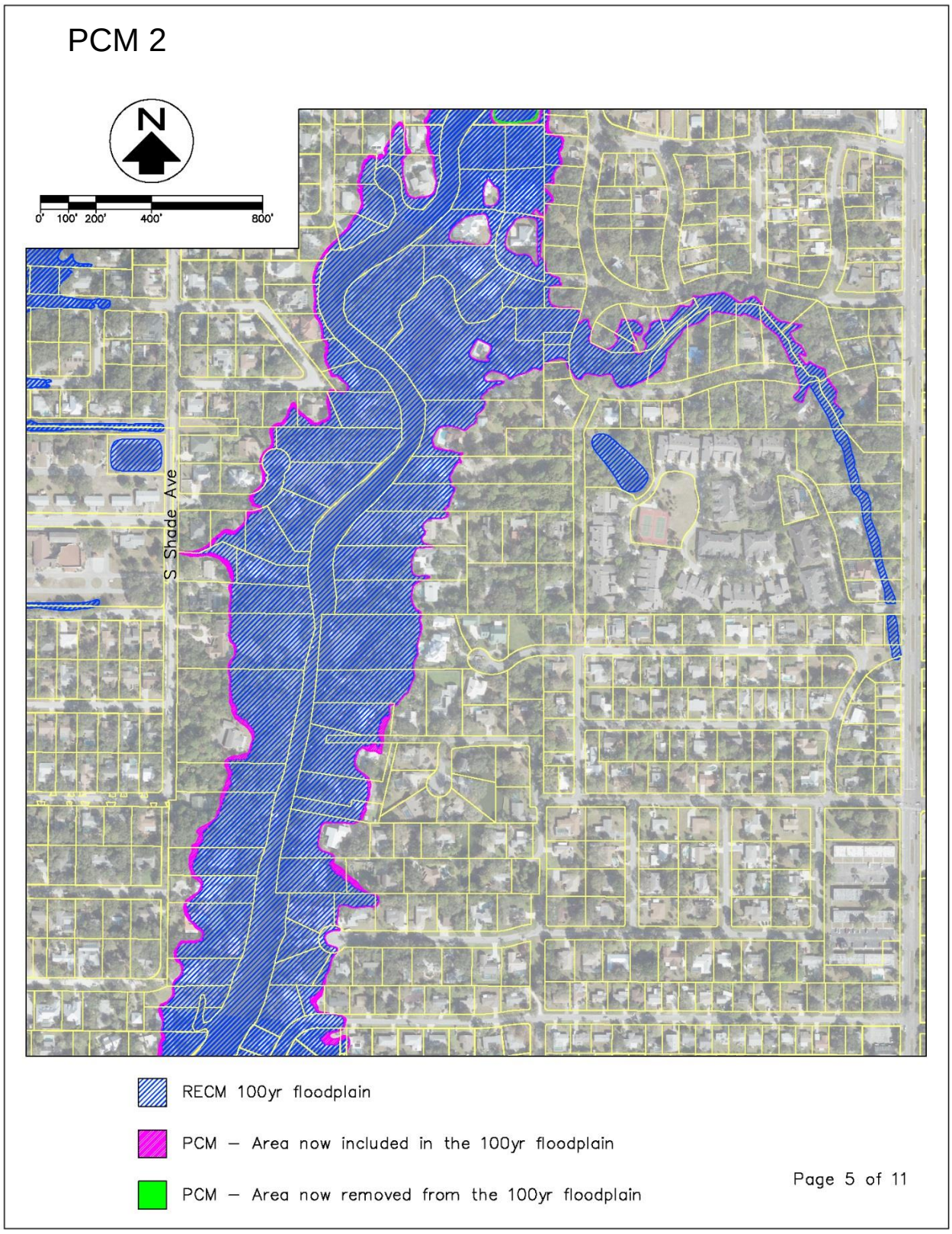

PCM 1
N
0'
100'
200'
400'
800'
Bahia Vista St
Bahia Vista St
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 11 of 11

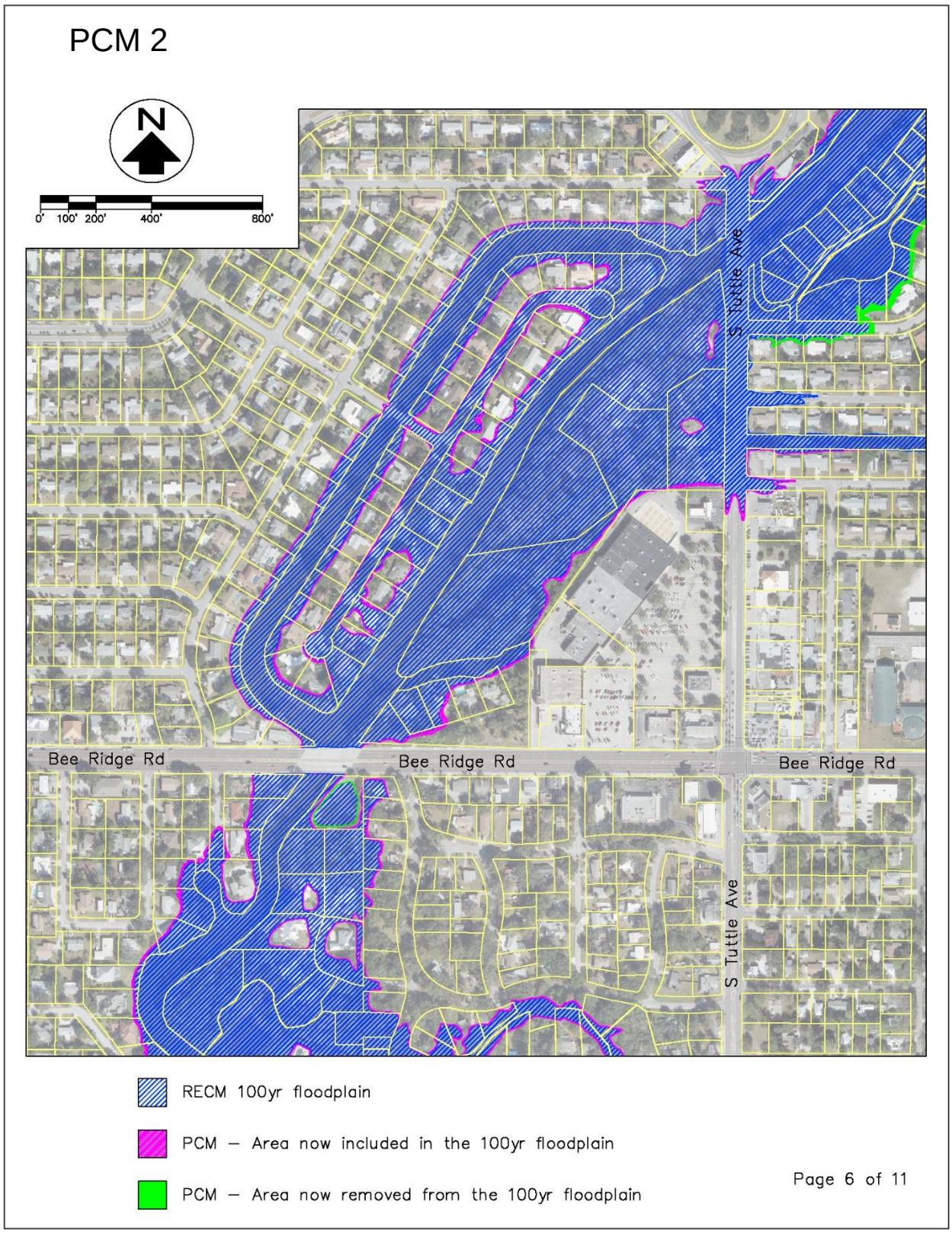

PCM 2
N
0' 100' 200' 400' 800'
US 41
US 41
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 1 of 11

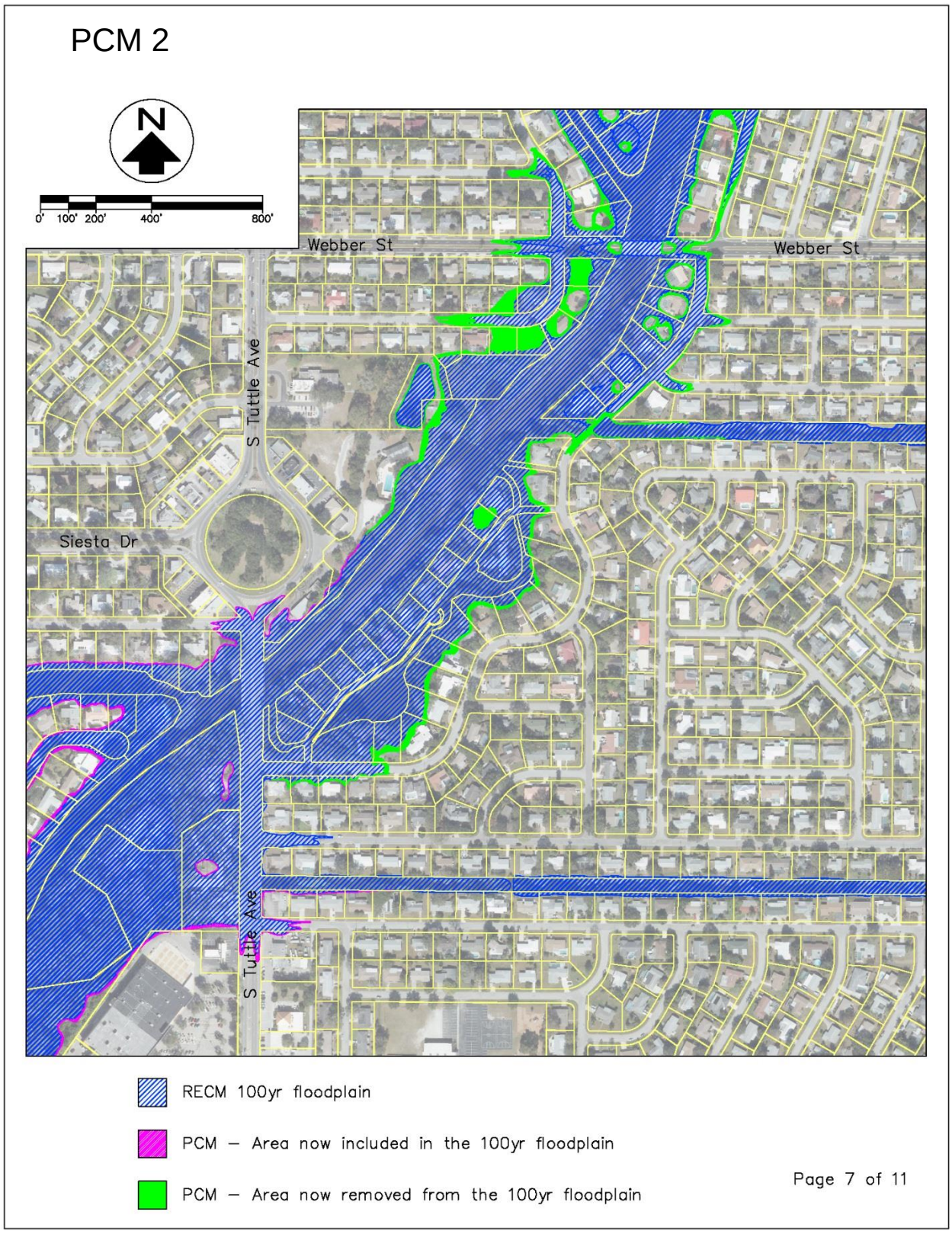

PCM 2
N
0'
100'
200'
400'
800'
America Dr
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 2 of 11

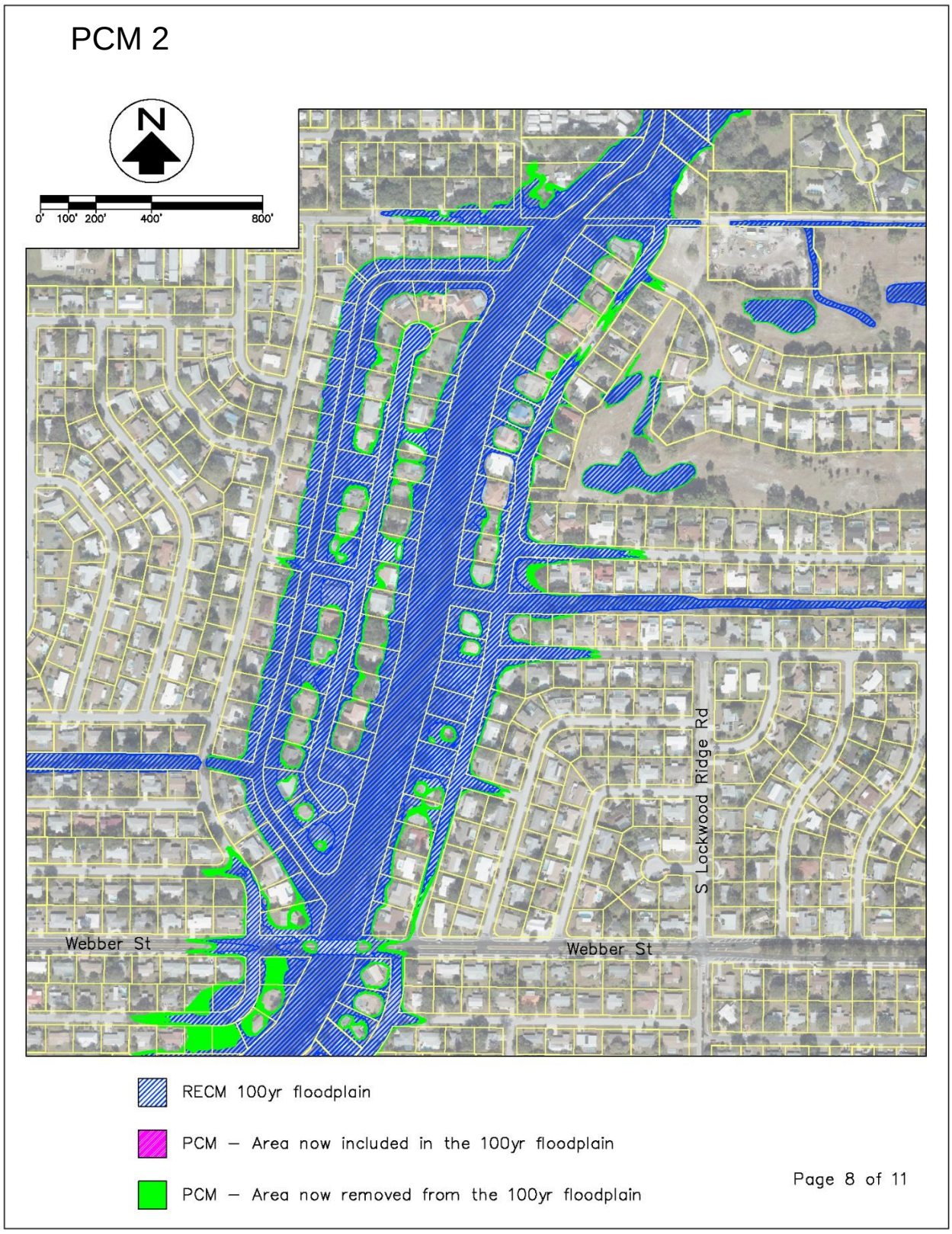

PCM 2
N
0' 100' 200' 400' 800'
Proctor Rd
Proctor Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 3 of 11

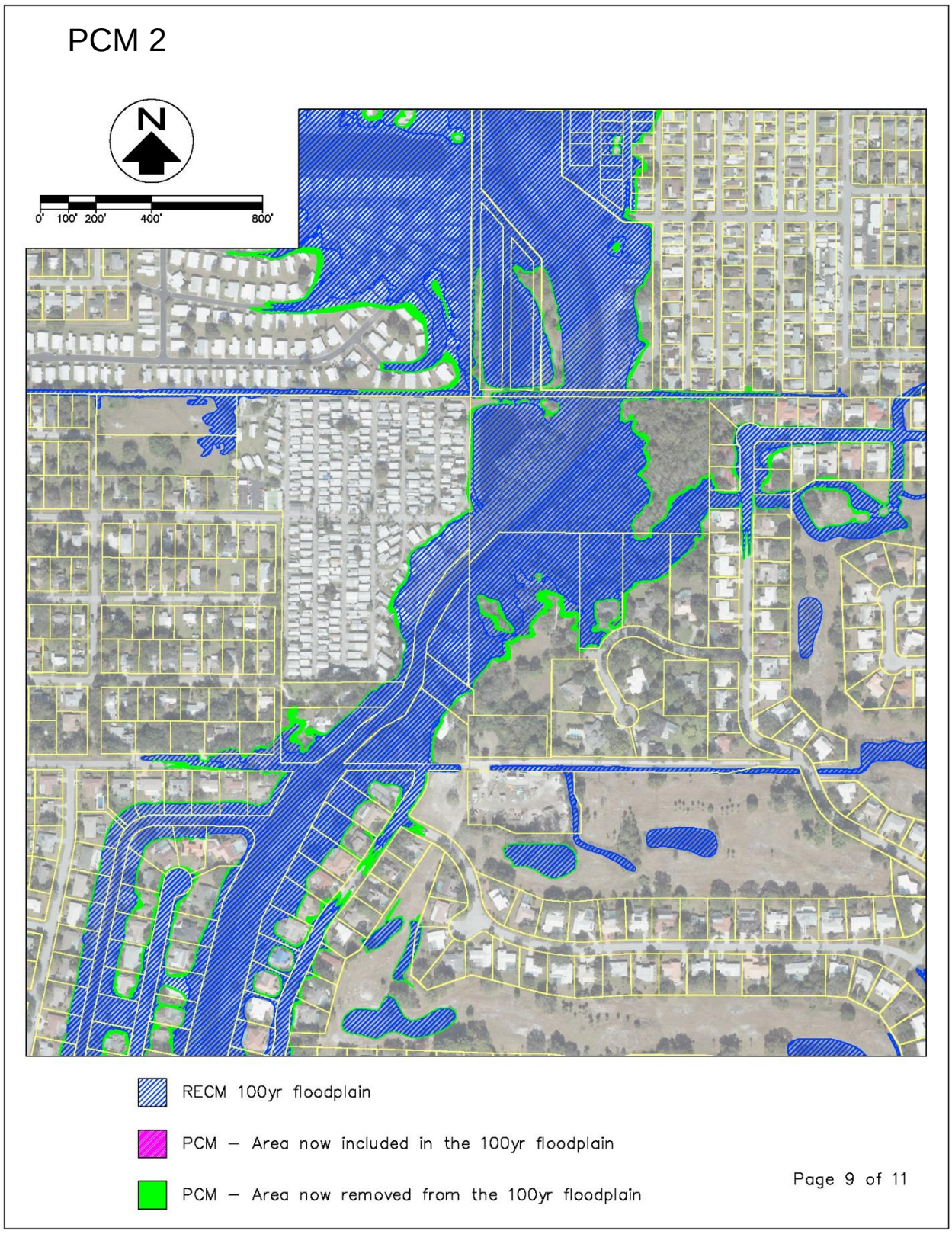

PCM 2
N
0'
100'
200'
400'
800'
Proctor Rd
Proctor Rd
Proctor Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 4 of 11

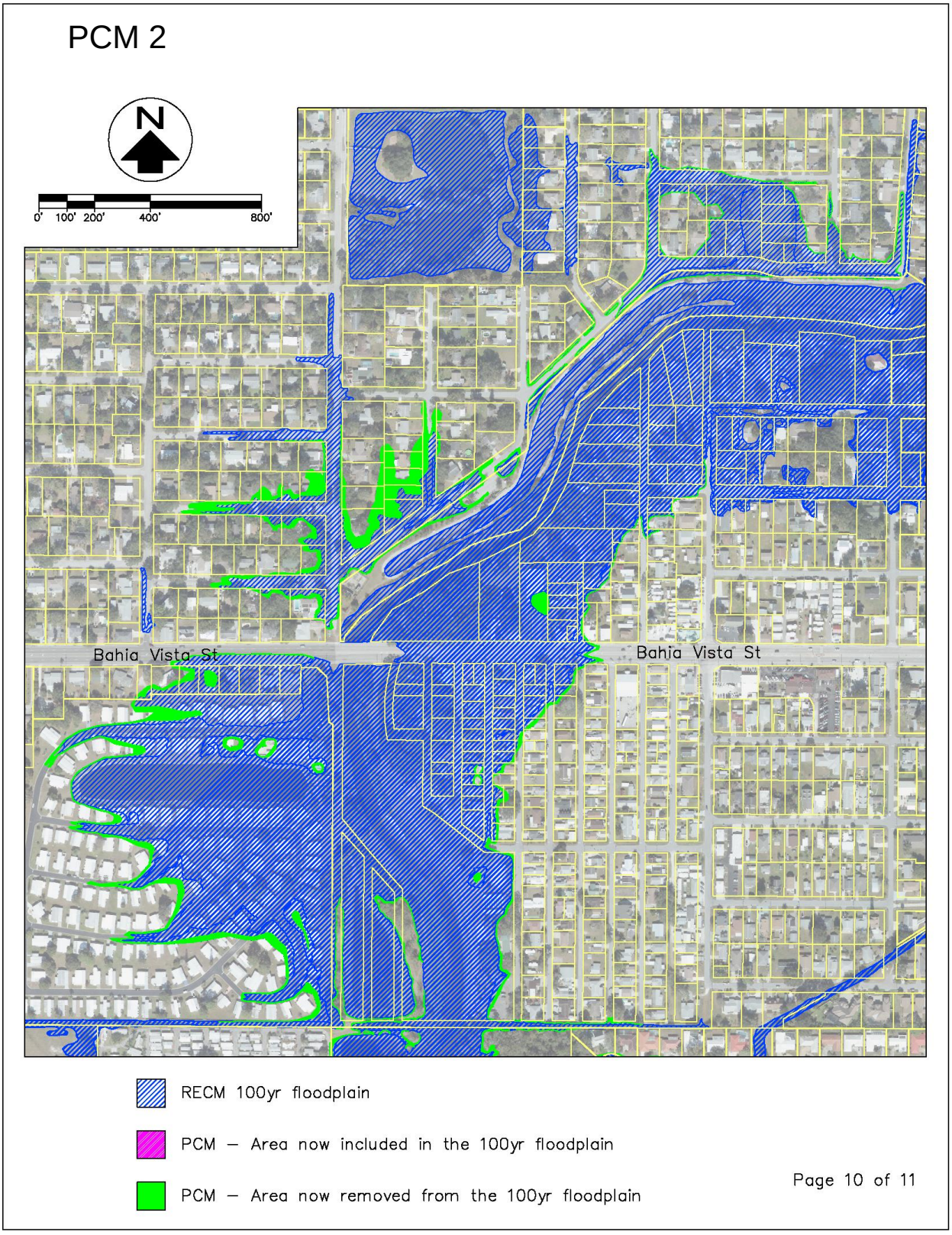

PCM 2
N
0' 100' 200' 400' 800'
S Shade Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 5 of 11

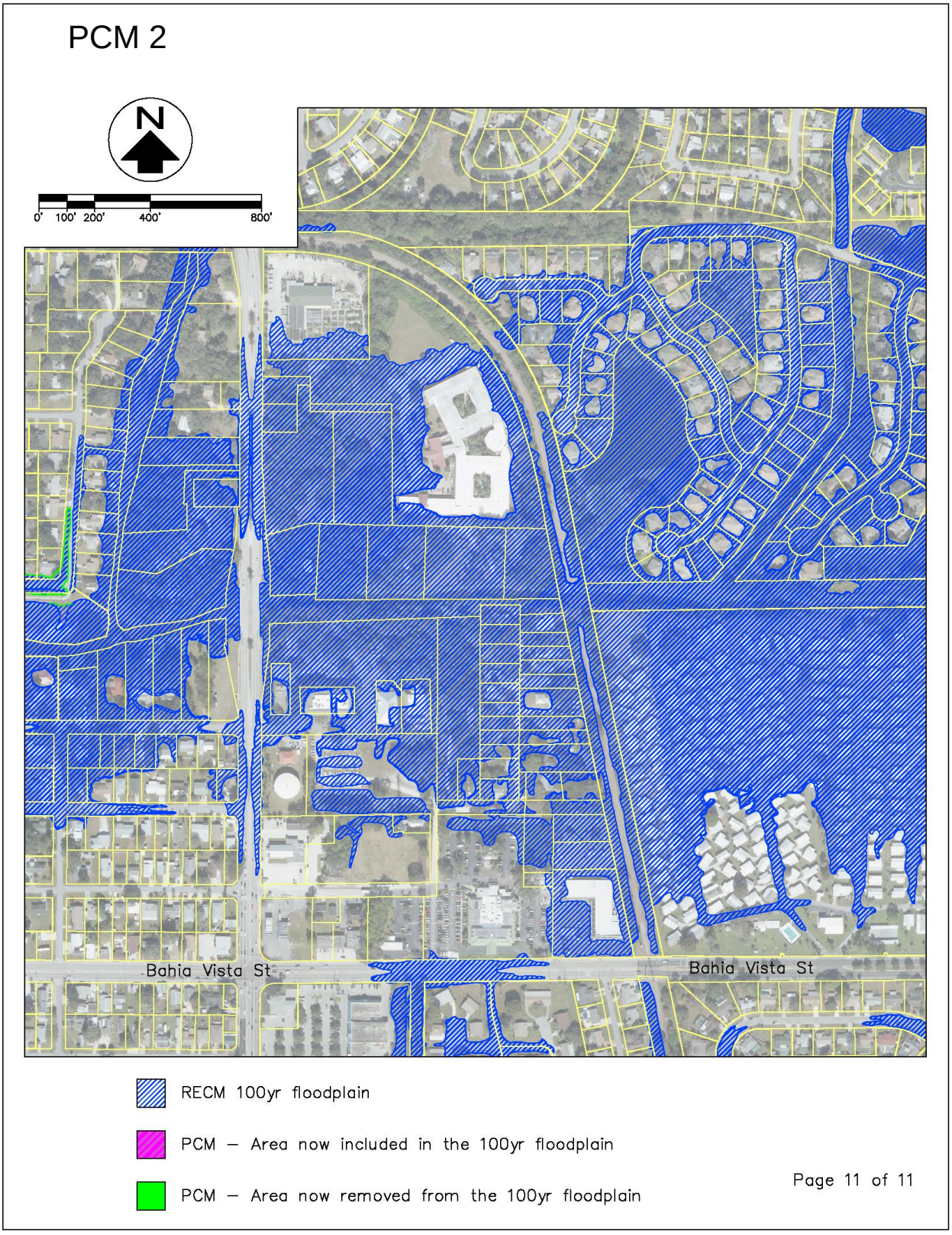

PCM 2
N
0' 100' 200' 400' 800'
S Tuttle Ave
Bee Ridge Rd
Bee Ridge Rd
Bee Ridge Rd
S Tuttle Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 6 of 11

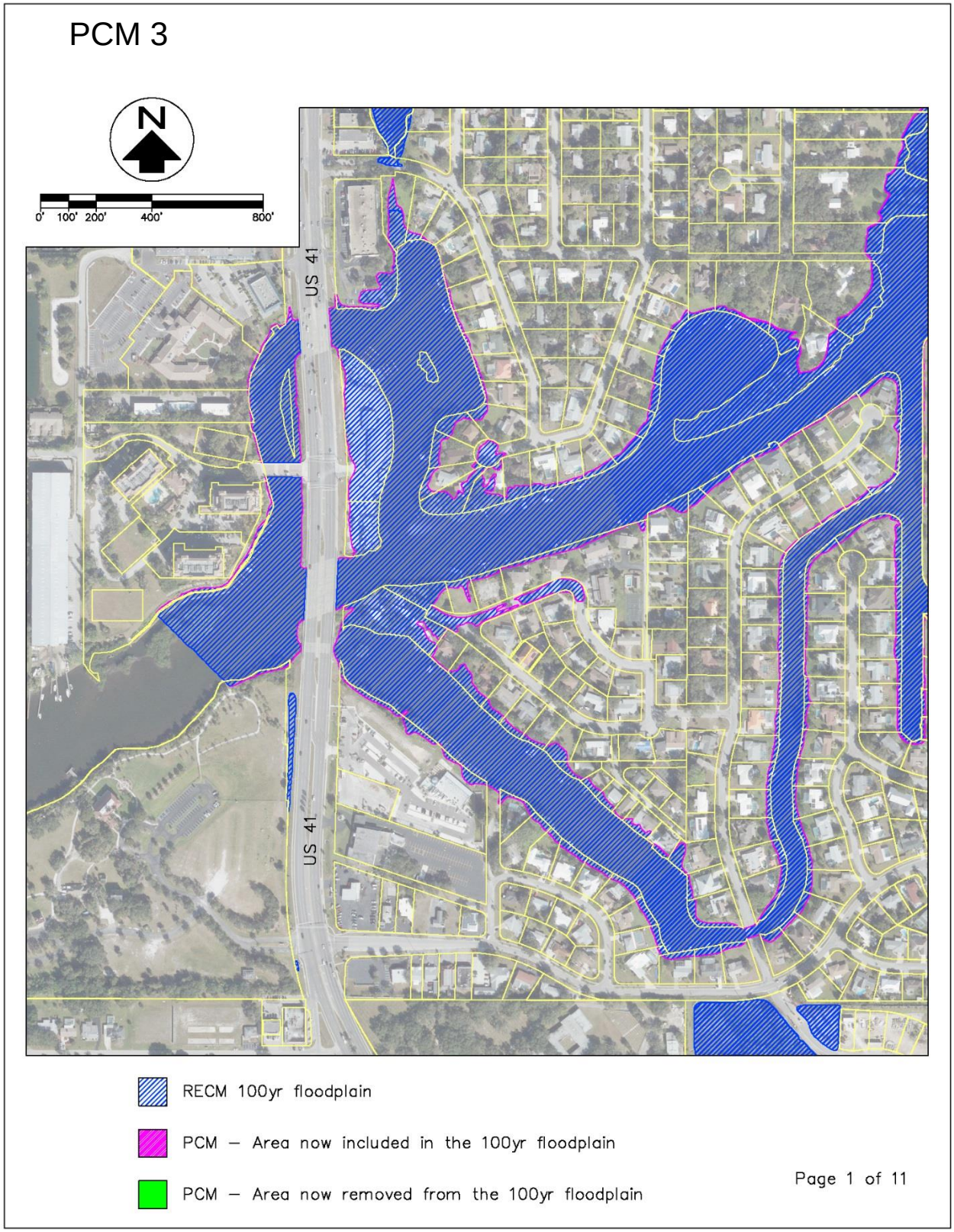

PCM 2
N
0' 100' 200' 400' 800'
Webber St
Webber St
S Tuttle Ave
Siesta Dr
S Tuttle Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 7 of 11

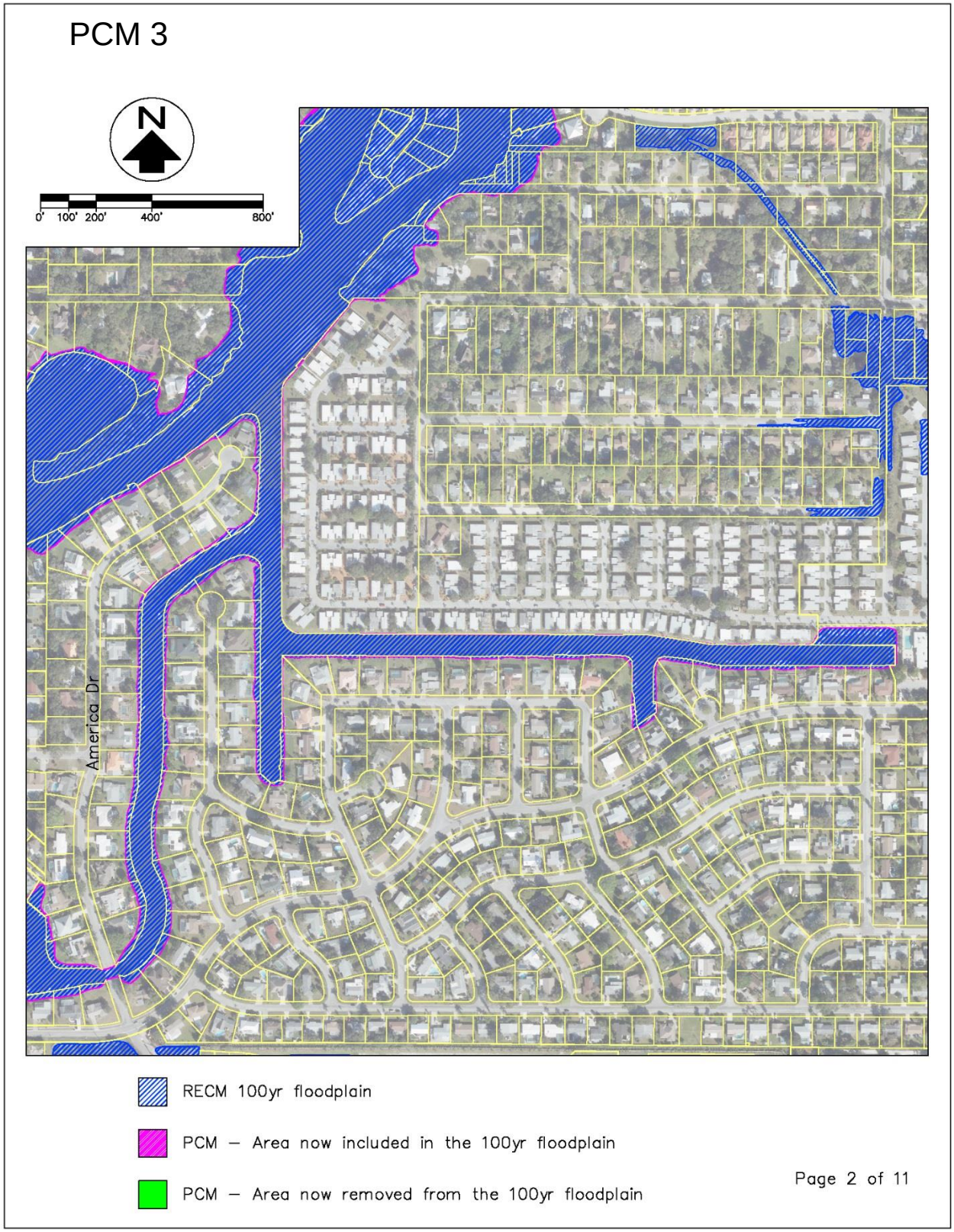

PCM 2
N
0' 100' 200' 400' 800'
Webber St
Webber St
S Lockwood Ridge Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 8 of 11

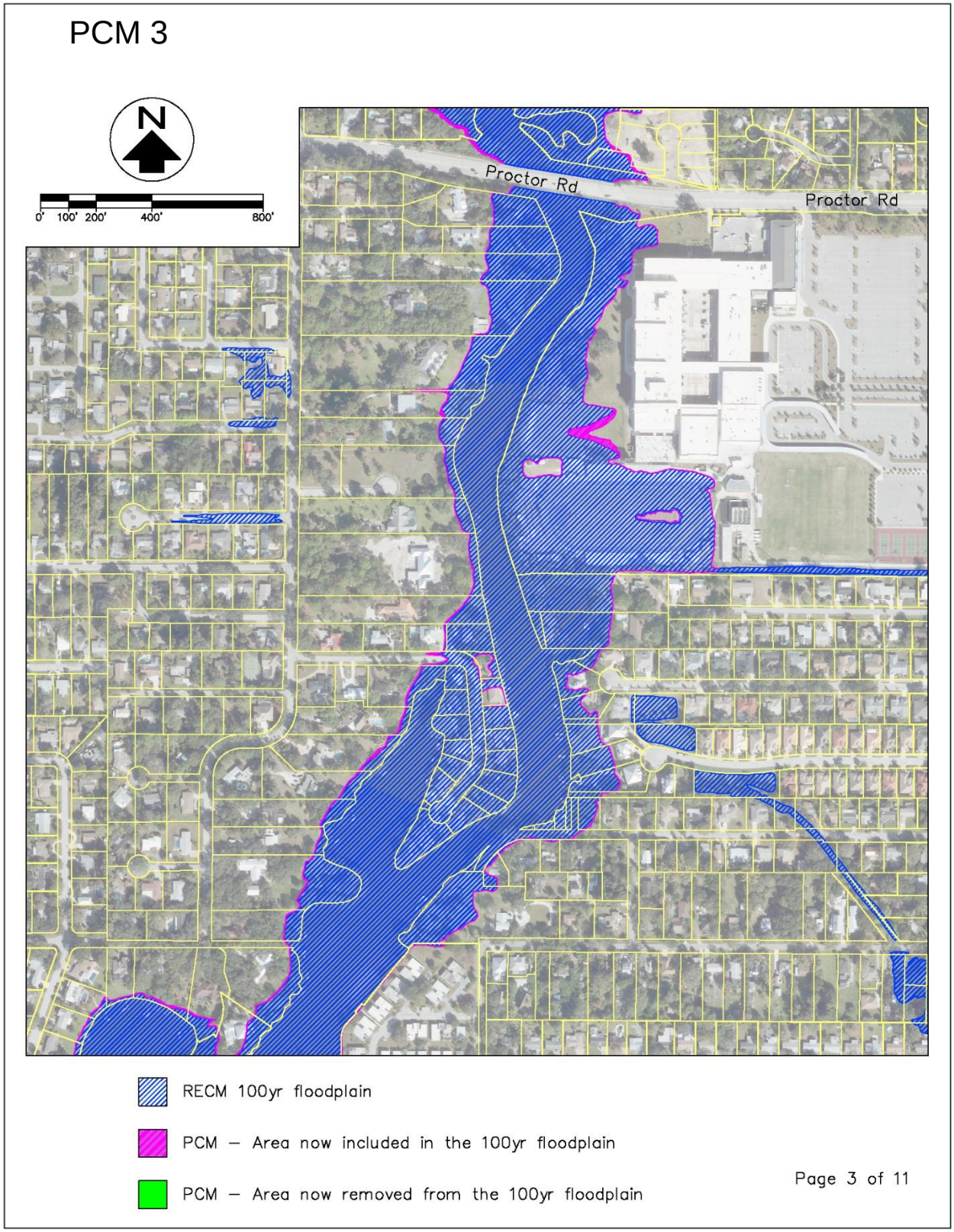

PCM 2
N
0' 100' 200' 400' 800'
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 9 of 11


PCM 2
N
0' 100' 200' 400' 800'
Bahia Vista St
Bahia Vista St
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 10 of 11


PCM 2
N
0'
100'
200'
400'
800'
Bahia Vista St
Bahia Vista St
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 11 of 11


PCM 3
N
0' 100' 200' 400' 800'
US 41
US 41
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 1 of 11


PCM 3
N
0' 100' 200' 400' 800'
America Dr
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
Page 2 of 11


PCM 3
N
0' 100' 200' 400' 800'
Proctor Rd
Proctor Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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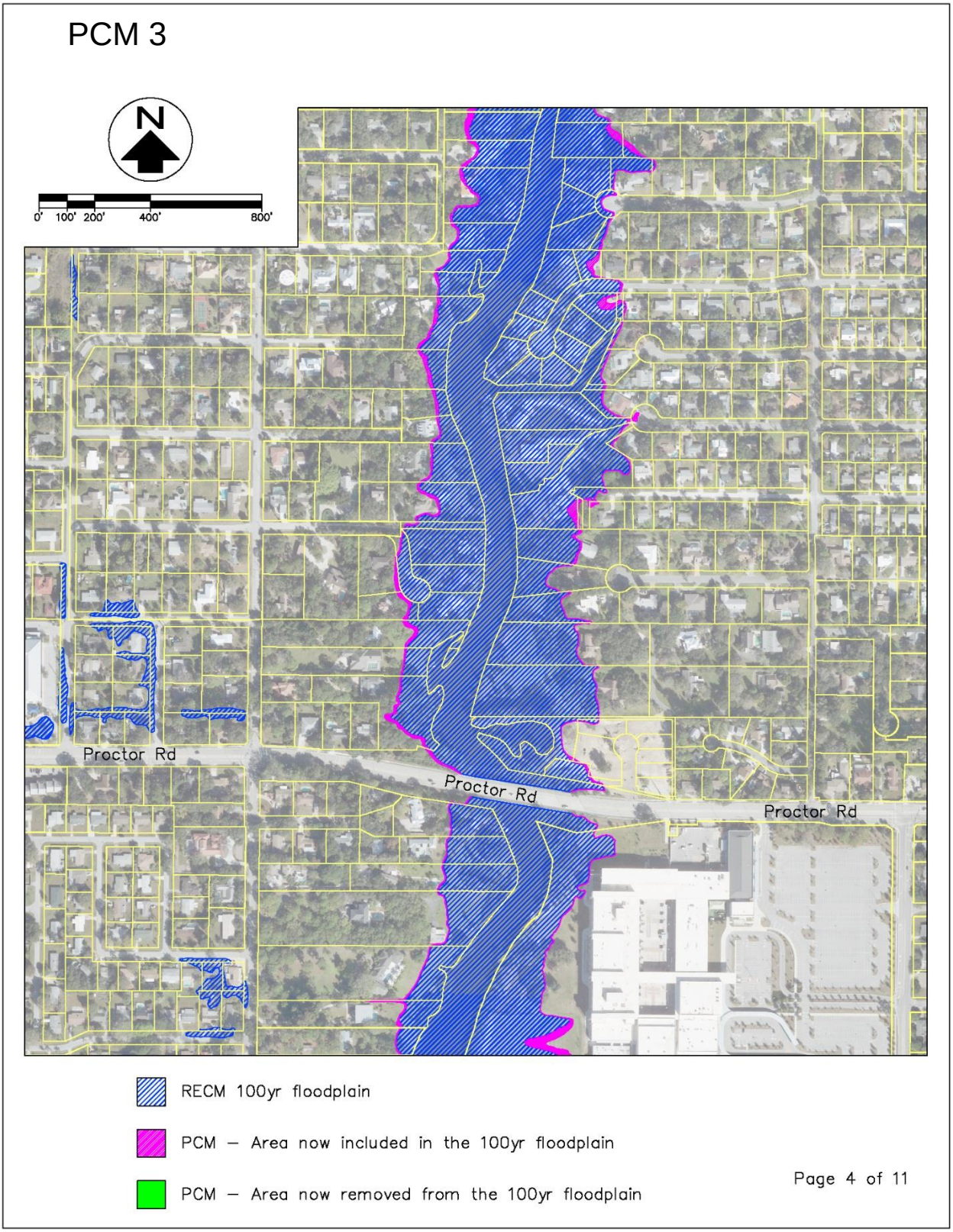
PCM 3
N
0' 100' 200' 400' 800'
Proctor Rd
Proctor Rd
Proctor Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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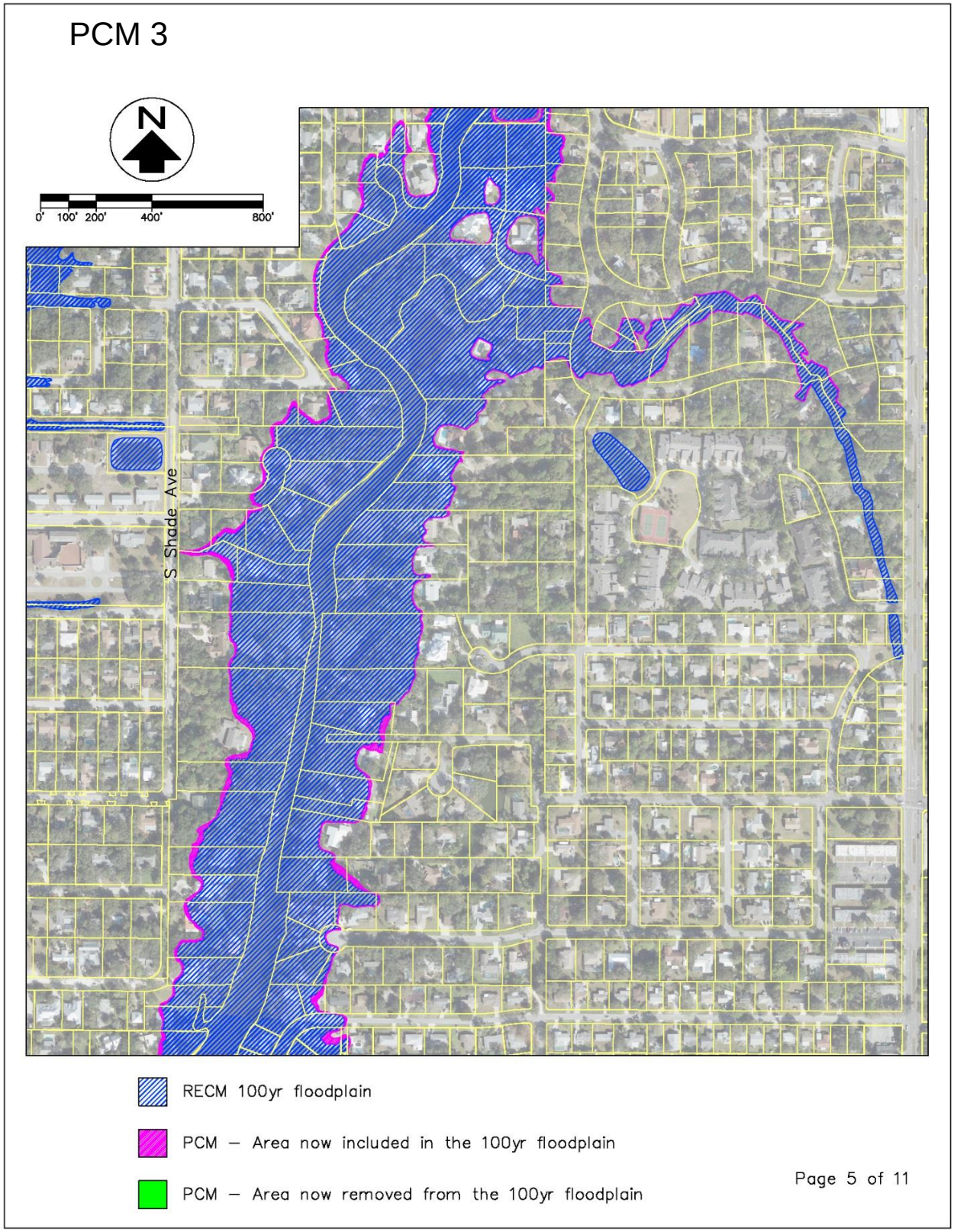
PCM 3
N
0'
100'
200'
400'
800'
S Shade Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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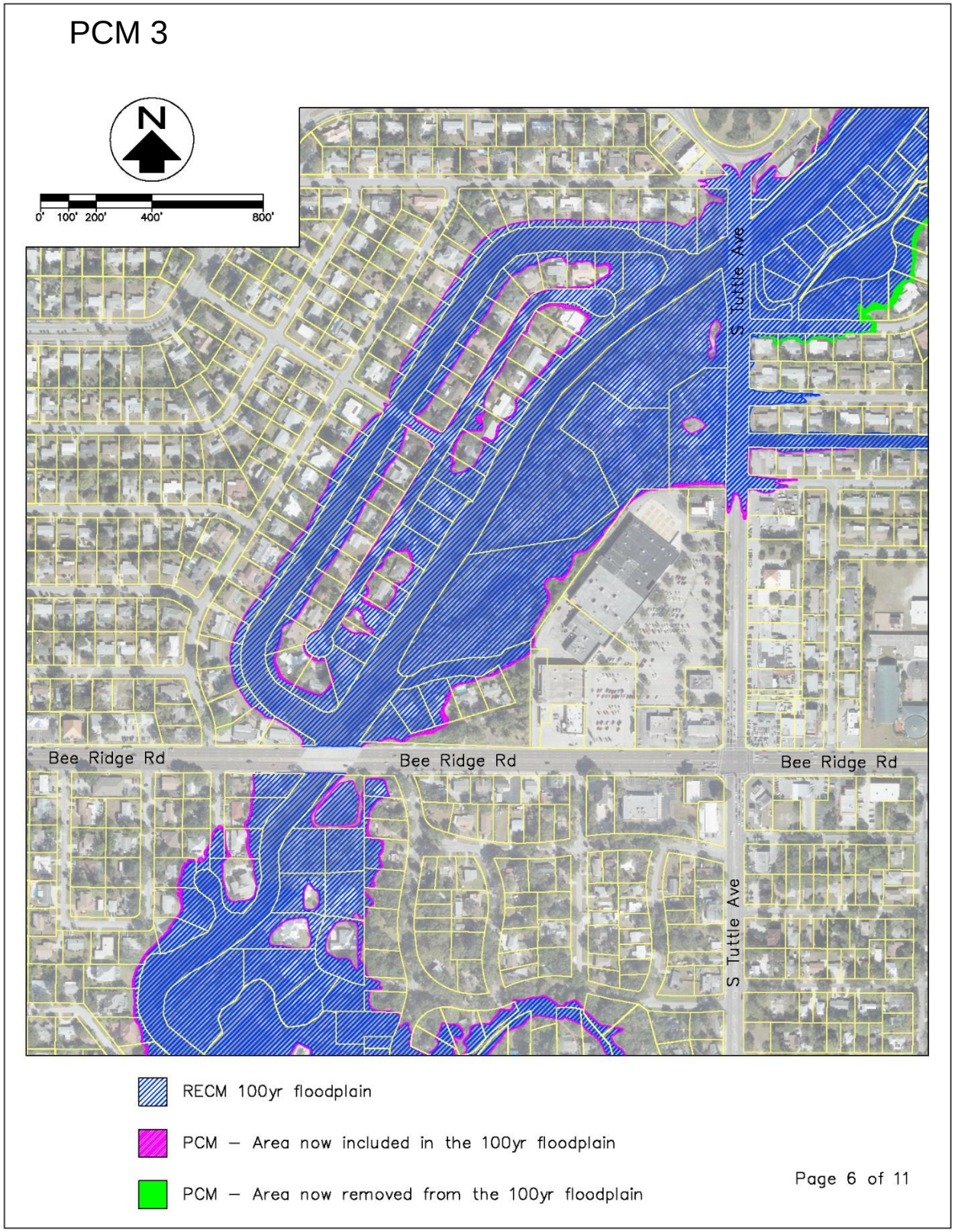
PCM 3
N
0' 100' 200' 400' 800'
S Tuttle Ave
Bee Ridge Rd
Bee Ridge Rd
Bee Ridge Rd
S Tuttle Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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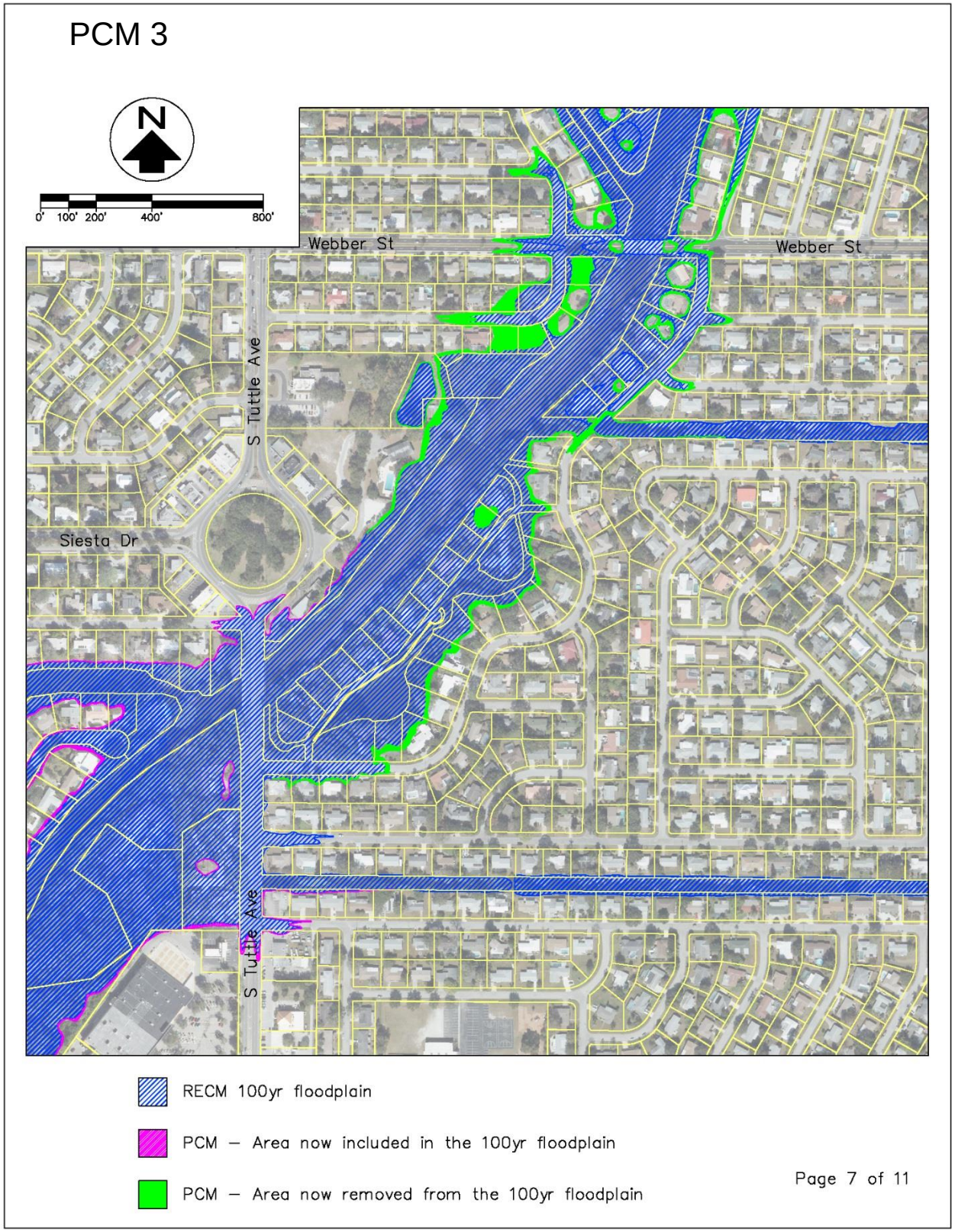
PCM 3
N
0'
100'
200'
400'
800'
Webber St
Webber St
S Tuttle Ave
Siesta Dr
S Tuttle Ave
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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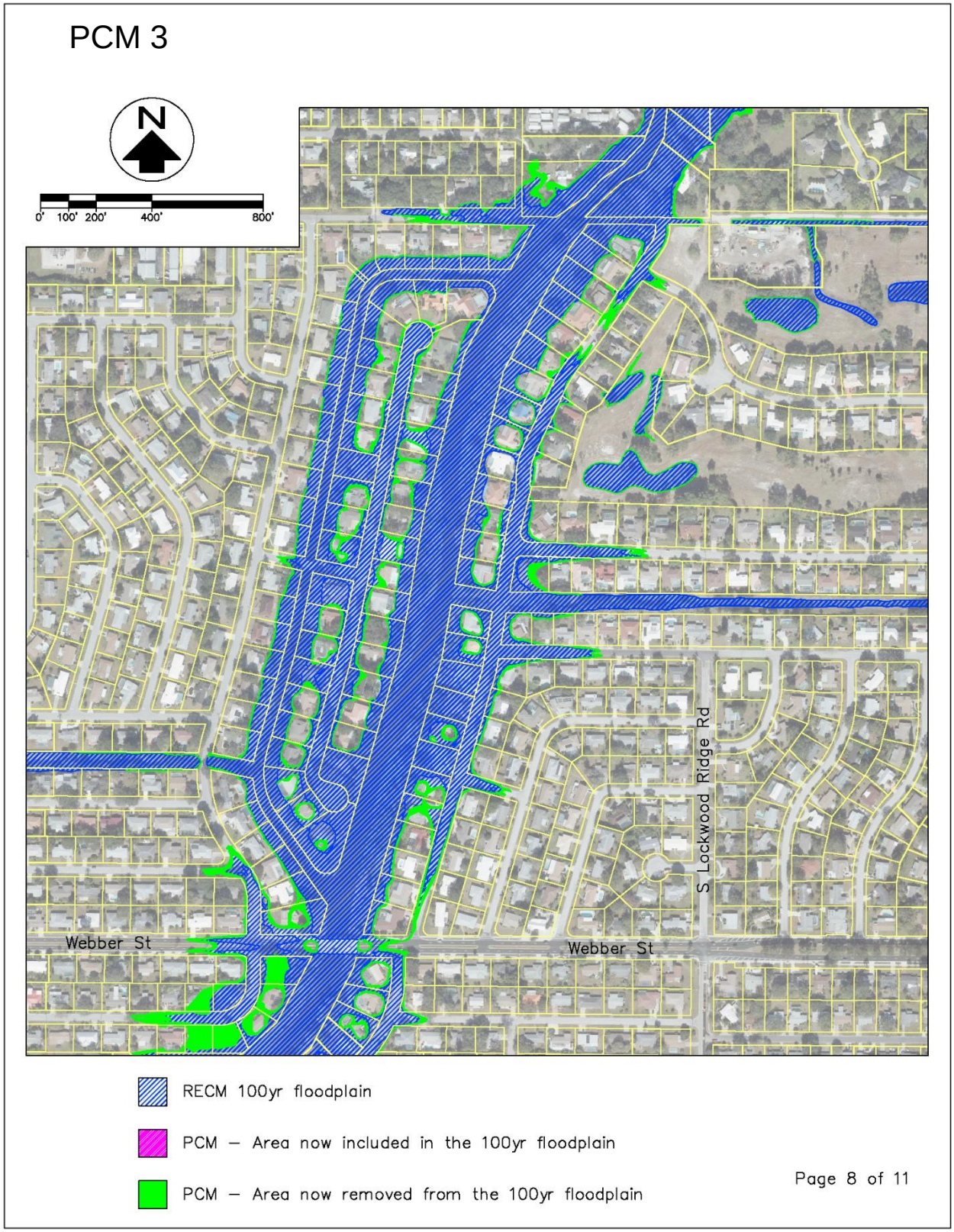
PCM 3
N
0' 100' 200' 400' 800'
Webber St
Webber St
S Lockwood Ridge Rd
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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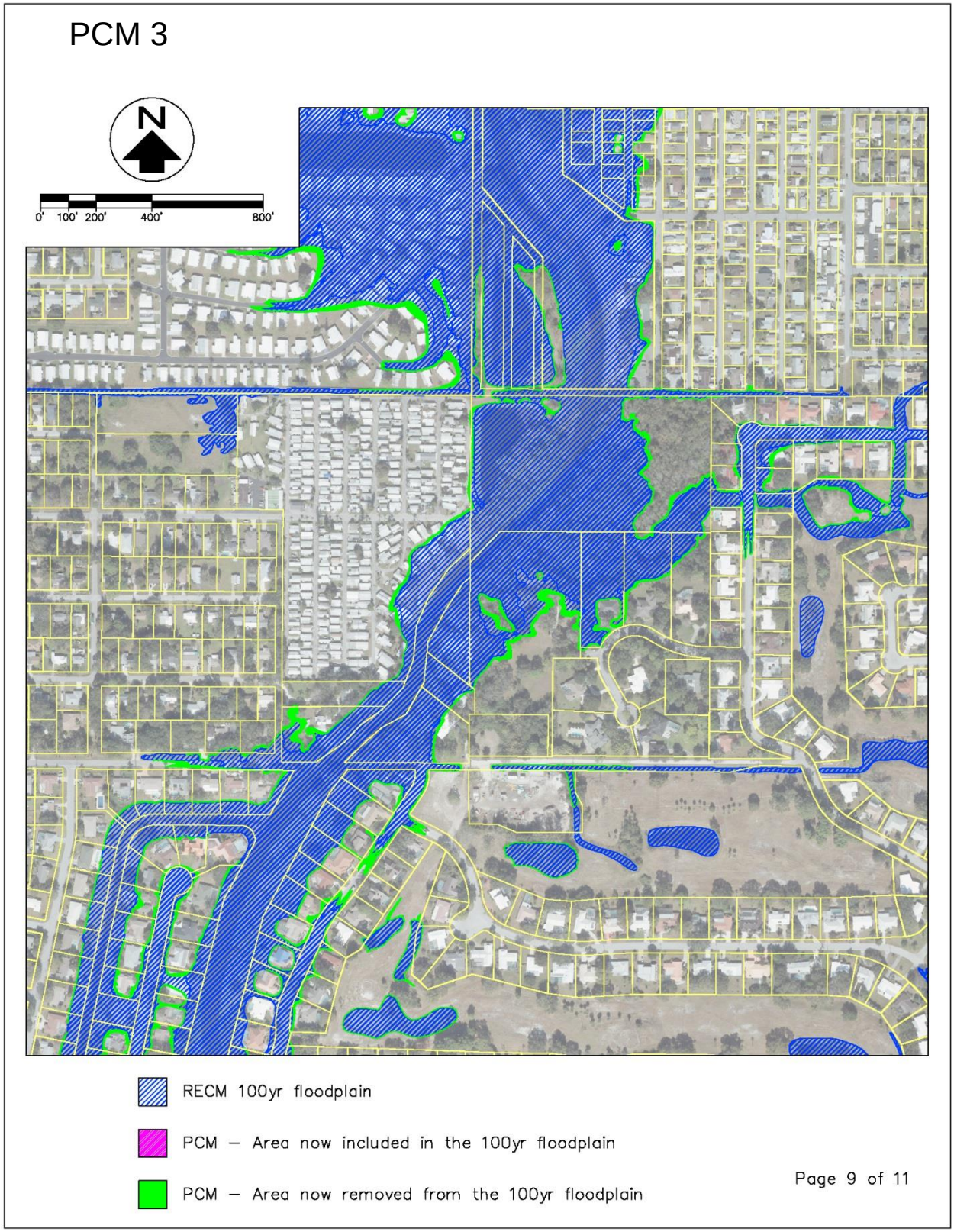
PCM 3
N
0' 100' 200' 400' 800'
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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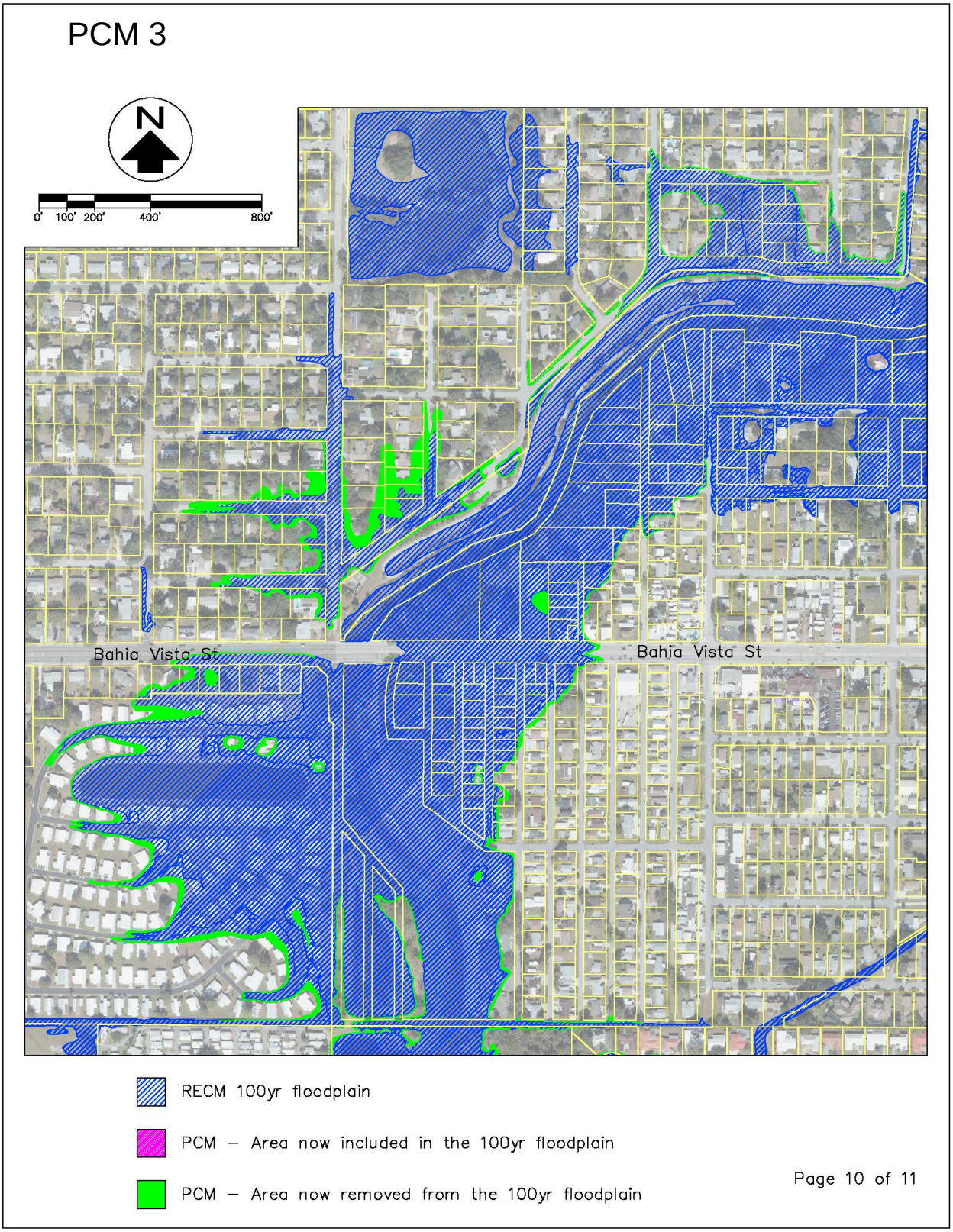
PCM 3
N
0' 100' 200' 400' 800'
Bahia Vista St
Bahia Vista St
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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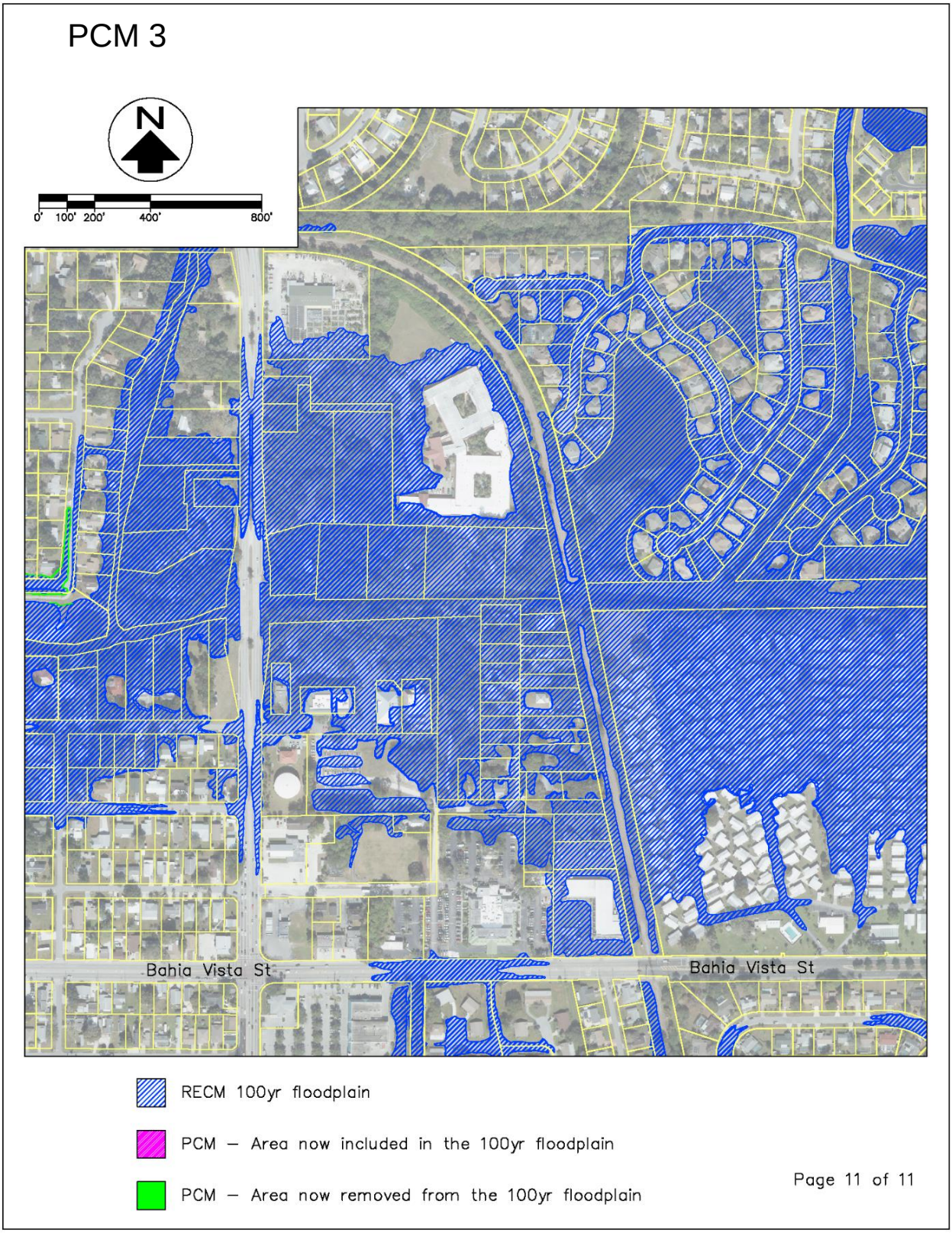
PCM 3
N
0'
100'
200'
400'
800'
Bahia Vista St
Bahia Vista St
RECM 100yr floodplain
PCM – Area now included in the 100yr floodplain
PCM – Area now removed from the 100yr floodplain
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Appendix I: Water Quality Calculations

TSS Reduction Calculation

$$RB3\ contributing\ area = Approx.\ 5850\ ac$$
$$RB5\ contributing\ area = Approx.\ 29120\ ac$$
$$Alternative\ 2\ Sump = Approx.\ 31210\ ac$$

$$RB3\ Sediment\ Removal = 149{,}454\ \frac{lb\ TSS\ removed}{yr}\ ^{1}$$
$$Assumed\ Sediment\ Sump\ efficiency = 80\%$$
$$\frac{149{,}454\ \frac{lb\ TSS\ removed}{yr}}{0.8} = 186{,}818\ \frac{lb\ TSS}{yr}$$
$$186{,}818\ \frac{lb\ TSS}{yr} \div 5850\ ac = 31.93\ \frac{lb\ TSS}{yr * ac}$$

$$31210\ ac * 31.93\ \frac{lb\ TSS}{yr * ac} = 996{,}535\ \frac{lb\ TSS}{yr}$$
$$29120\ ac * 31.93\ \frac{lb\ TSS}{yr * ac} = 929{,}802\ \frac{lb\ TSS}{yr}$$
$$929{,}802\ \frac{lb\ TSS}{yr} - 149{,}454\ \frac{lb\ TSS\ removed}{yr} = 780{,}348\ \frac{lb\ TSS}{yr} = RB5\ influent$$
$$780{,}348\ \frac{lb\ TSS}{yr} * 0.8 = 624{,}278\ \frac{lb\ TSS\ removed}{yr} = RB5\ Sediment\ Removal$$
$$\left(996{,}535\ \frac{lb\ TSS}{yr} - 624{,}278\ \frac{lb\ TSS\ removed}{yr} - 149{,}454\ \frac{lb\ TSS\ removed}{yr}\right) * 0.8 = 178{,}242\ \frac{lb\ TSS\ removed}{yr}$$
$$Alternative\ 2\ Sump\ Removal = 178{,}242\ \frac{lb\ TSS\ removed}{yr}$$

$$\frac{\$1{,}246{,}821}{178{,}242\ \frac{lb\ TSS\ removed}{yr}} = \frac{\$7.00}{\frac{lb\ TSS\ removed}{yr}}$$

TP Reduction Calculation

$$178{,}242\ \frac{lb\ TSS\ removed}{yr} * 0.00036\ \frac{lb\ TP}{lb\ TSS}\ ^{1} = 64\ \frac{lb\ TP\ removed}{yr}$$

TN Reduction Calculation

$$178{,}242\ \frac{lb\ TSS\ removed}{yr} * 0.00090\ \frac{lb\ TN}{lb\ TSS}\ ^{1} = 160\ \frac{lb\ TP\ removed}{yr}$$

[1] Data received from the County