

Attachment 1

NW CORNELL ROAD AT 107TH AVE SANITARY SEWER REIMBURSEMENT DISTRICT PROJECT NO. 6974

FINAL ENGINEERING REPORT

April 7, 2023

Historical Background

During the summer 2018, Washington County (County) began coordinating a Cornell Road Improvement (102nd-113th Avenue) Project with Clean Water Services (CWS). Properties fronting NW Cornell Road between NW 107th Avenue and NW 113th Avenue do not have public sanitary sewer service and are served by onsite septic systems. CWS staff determined that a coordinated project to construct a local sanitary sewer in cooperation with the County roadway project would minimize costs and disruption to the neighborhood and provide an opportunity to decommission aging septic systems.

In September 2018, a neighborhood meeting was held with potentially benefitting property owners (owners) to explain the sanitary sewer project and how the Local Improvement District (LID) or Reimbursement District (RD) program could enable favorable financing to assist the owners with their share of the improvement costs.

While roadway design continued, work commenced to integrate a sanitary sewer design into the roadway project to minimize utility and roadway disruptions that would result from constructing a sewer as a subsequent project. Additionally, this time afforded CWS staff the opportunity to streamline the RD and LID programs and simplify the financing program for the owners. Ordinance 43, adopted on February 2, 2021, will govern the RD cost sharing, cost distribution, financial incentives, and project cost reimbursement from the owners to the CWS.

On March 16, 2021, the CWS Board of Directors held a public hearing and adopted CWS Resolution and Order 21-7 forming the reimbursement district and establishing preliminary reimbursement charges. On January 4, 2022, by Minute Order 22-1, the Washington County Board of Commissioners awarded the Cornell Road Project including the sanitary sewer work to Pacific Excavation.

The contractor completed the sewer construction and a notice of sewer availability was issued to the benefiting owners on July 25, 2022.

Nature of the Service Facilities

The RD boundary and existing and proposed public sanitary sewer infrastructure are depicted in Exhibit A. Two separate phases were conducted to complete the construction. Phase 1 extended an 8-inch diameter sewer main from a manhole located near the southeast corner of 1090 NW 113th Avenue southward across two properties to the Cornell Road right-of-way. Although part of the overall RD project, this portion of sewer is considered off-site. The cost of this portion of

the project is absorbed by CWS. Construction involved crossing an unnamed tributary of Cedar Mill Creek and installing approximately 339 linear feet of 8-inch main by horizontal directional drill to the Cornell Road right-of-way. This portion was constructed by CWS crews during the fall of 2021. This portion crosses an undeveloped, county-owned parcel. The County granted a sanitary sewer easement to CWS in exchange for CWS services to enhance the riparian area adjacent to the nearby water quality facility being utilized for stormwater management for the County roadway project. This agreement is documented in an intergovernmental agreement adopted by Minute Order 20-48 on July 28, 2020.

Phase 2 extended the 8-inch sewer approximately 1,300 linear feet eastward in the Cornell Road right-of-way from 11215 NW Cornell Road to a point 150 feet west of the intersection with 107th Avenue. Two 8-inch mains were constructed crossing Cornell to the south for future sewer extensions on NW 110th Avenue and behind lots on the west side of NW 109th Avenue. CWS contracted sewer design services with the consultant who prepared the roadway widening plans for the County. CWS paid construction and construction management costs in accordance with a separate County/CWS intergovernmental agreement adopted by Minute Order 20-48 on July 28, 2020. The majority of the cost of this portion of the project will be reimbursed by the benefiting property owners through a Reimbursement District governed by Ordinance 43. Together, Phases 1 and 2 include approximately 1,800 linear feet of sewer, 6 manholes, and 13 service laterals. The other two properties were provided with 8-inch sewer main stubs to which they can either connect or extend depending upon their future development plans.

Twenty-two lots and three side streets comprise the frontage of Cornell Road between 113th Avenue and 107th Avenue as shown in Exhibit A. Three lots are publicly owned without sanitary facilities. Three lots near 107th Avenue and one lot at 112th Avenue are currently served by existing sewers running to the south. The RD boundary is composed of the other 15 lots, which constitute 9.29 acres. The area is part of the Cedar Mill Community Plan. Lots on the north side of Cornell Road are zoned R-6 and lots on the south side of the road are zoned R-5. Most lots in the RD are sufficient in size to subdivide or partition.

Final Project Cost

Phase 1 off-site costs totaled \$337,457. Phase 2 costs for the portion in the Cornell Road right-of-way are \$949,990 for a total project cost of \$1,287,447, which is approximately 24% higher than the original estimate. A more detailed breakdown is provided in Exhibit B Table 1.

CWS Cost Share and Connection Incentives

The entire project cost has been distributed among the benefiting properties at \$762.25 per frontage foot as shown in Exhibit B Table 3. Phase 1 of the project is considered off-site and CWS will pay those costs.

Exhibit B documents the Phase 1 off-site cost (Table 1) and the amount credited to each owner (Table 3) at \$199.80 per frontage foot. The Phase 1 work involved costs for environmental permitting, costs to manage stream flows during construction, corridor restoration costs, and easement costs to efficiently access the site. Lots 1N134AC02900 (11165 NW Cornell) and

1N134AC03200 (11215 NW Cornell) are assessed for their Cornell Road frontage, but not the length of their side lot line. Upon connection to the sewer, Lot 1N134AC02900 (11165 NW Cornell) will be required to dedicate easements to serve adjacent uphill properties.

The successful contractor's bid for Phase 2 was more than \$270,000 over the engineer's estimate reflecting recent extraordinary inflationary costs. Staff successfully negotiated an alternative construction methodology with the contractor saving approximately \$60,000. Staff recommends an additional CWS cost share of \$150,000 reflecting extraordinary costs. This share amounts to \$88.81 per foot as shown in Exhibit B Table 3. Together, off-site Phase 1 costs and extraordinary Phase 2 costs total \$487,457 leaving the owner's share at \$799,990 or \$473.65 per foot, which is 9.8% higher than the preliminary estimate.

CWS-incurred project engineering and administration costs of \$144,889 (\$85.78 per foot) associated with Phase 2 of the project are eligible for early connection incentive discounts. With the adoption of Ordinance 43, early connection incentives are now offered on RD projects for any owner who connects to the sewer within one year of sewer availability, (July 21, 2022) or commits to making installment payments within one year for a vacant lot without sanitary facilities. This incentive amount is 22% higher than estimated. If an owner connects to the sewer within the first year, their net cost is \$387.87 per foot which is 7.4% higher than the original estimate.

Owner Cost Apportionment

The benefited lots in this RD are varied in nature and include undeveloped lots, underdeveloped large lots, narrow lots with a single home on the front or back of the property, and mid-size lots containing a single residential structure in the middle of the lot. No simple cost distribution methodology results in reimbursement charges that are equitable to all benefited lots. A hybrid methodology acknowledging lot size, shape, and development status is proposed. A detailed description of the adopted hybrid methodology is included below, and the results of this methodology are tabulated by property in Exhibit B.

A modified front footage proration of the reimbursable amount is proposed to allocate costs to the benefiting properties. The front footage basis, rather than area basis, helps offset higher plumbing costs to serve a structure sitting at the back of a deep and narrow lot. Front footages for 14 of the 15 lots range from 75 feet to 202 feet. With total reimbursable costs of \$799,990, this amounts to \$473.65 per linear foot of frontage with resulting reimbursement charges ranging from \$35,524 to \$95,677.

One flag-shaped lot, (TLID 1N134DA00900, 10960 NW Cornell) has only 10 feet of Cornell Road frontage. This lot will have very high plumbing costs with the structure sitting nearly 350 linear feet from the Cornell Road right-of-way. For equity purposes, staff recommends a minimum RD charge for this lot equal to 50 linear feet frontage. The reimbursement charge for this lot is \$23,682, rather than \$4,736 for 10 feet of frontage.

Six lots have frontage lengths that are less than 100 linear feet and will have reimbursement charges ranging from \$35,524 to \$43,576. Eight lots have frontage lengths ranging from 105 feet

to 202 feet with estimated reimbursement charges ranging from \$49,733 to \$95,677. The three largest lots have the potential to be partitioned, with additional structures developed on newly created lots. Densification on another five lots would require removing the existing structure to create separate buildable lots. Deferral of a portion of the reimbursement charge for lots with more than 100 linear feet of Cornell Road frontage is intended to create an equitable and affordable cost for connection of a single home on properties that may densify in the future. Staff recommends that connection of an existing structure on any lot having more than 100 feet frontage be immediately responsible for the cost of 100 feet of frontage with the option to defer the balance until additional connections are made from the original lot. The reimbursement charge to connect an existing house is \$47,365.

Between the Preliminary Engineering Report and this Final Engineering Report, staff discovered and corrected errors in the property frontages along Cornell Road. The corrected frontages resulted in a reduction of the total chargeable frontage length from 1,713 feet to 1,689 feet. This correction resulted in an increase in the frontage foot cost charged to owners and a slightly different distribution of the costs among owners than documented in the Preliminary Report.

Incentives

RD Ordinance 43 provides a financial incentive for connecting to the sewer system within one year of sewer availability. The amount of the incentive is the engineering and administrative portion of the project cost allocated to the eligible lot. No financial incentives exist for Phase 1 because all costs are already absorbed by CWS due to the off-site designation. Phase 2 engineering and administrative costs are \$144,889 (\$85.78 per foot) or 18.1% of the reimbursement charge. Properties with greater than 100 feet of frontage that connect within the first year and take advantage of the deferral of the reimbursement charge balance will be granted a prorated incentive in the same percentage as the amount of the reimbursement charge paid or financed. Any remaining balance would not be eligible for the early connection incentive when paid. Exhibit B lists both the total estimated eligible incentive amount (Table 2, Column M) and the incentive amount if the partial deferral is exercised (Table 2, Column J).

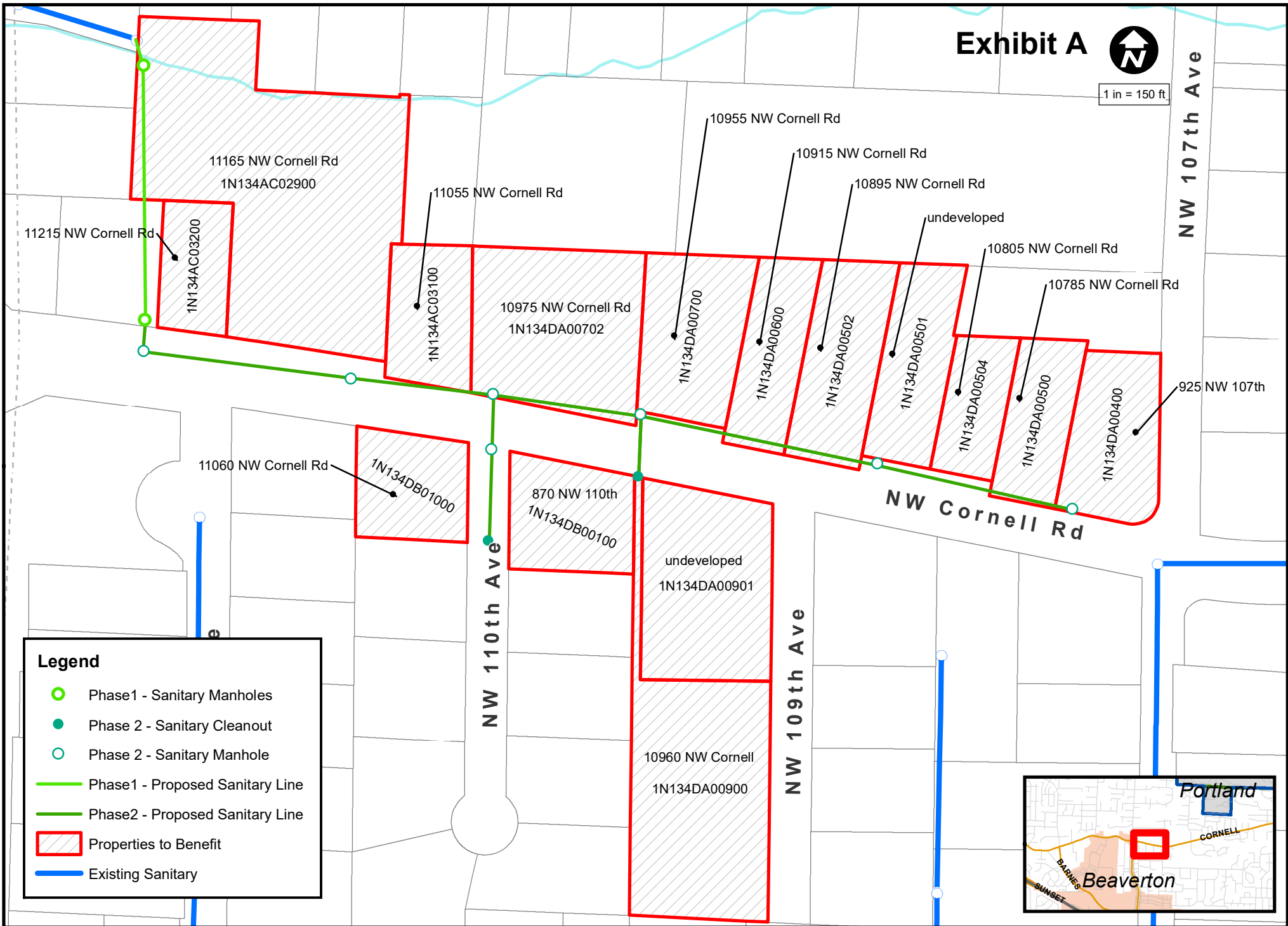
Two of the 15 lots in the RD are undeveloped and generate no wastewater. The early connection incentive will be awarded for these two lots if payment of the reimbursement charge, or entering into an installment agreement to make full payment within 10 years, occurs within one year of sewer availability.

The project interest rate was established at 0.92% which reflects the Oregon Bond Index Rate at the time of the formation of the Reimbursement District. Accrual of interest at 0.92% per annum commences at the time of sewer availability and is effective until the reimbursement charge is paid. When an owner enters into a financing agreement, an additional 2% administrative fee is added to the project interest rate.

Exhibit A

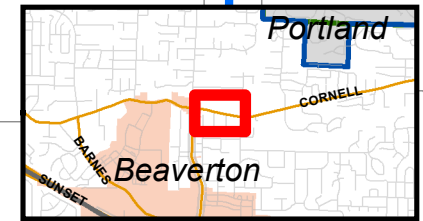


1 in = 150 ft



Legend

- Phase 1 - Sanitary Manholes
- Phase 2 - Sanitary Cleanout
- Phase 2 - Sanitary Manhole
- Phase 1 - Proposed Sanitary Line
- Phase 2 - Proposed Sanitary Line
- Properties to Benefit
- Existing Sanitary



E:\Capital Projects\Projects\6974 NW Cornell at 107th RD-LID10 - GIS\RD Webpage Exhibit A 2021-1-29.mxd 2/3/2021

NW Cornell Rd Sanitary RD, Proj #6974

Washington County, Oregon

**NW Cornell RD Sewer @ 107th Reimbursement District
Project Cost and Reimbursement Charges**

EXHIBIT B

TABLE 1

	Total Project Costs	OFFSITE Costs	Extraordinary Costs (District Cost)	Assessed Costs After District Share Credit	Potential Early Connection Incentive	Assessed Costs After Connection Incentive
Construction	\$ 922,006	\$ 152,510	\$ 150,000	\$ 619,496		\$ 619,496
Engineering & Admin	\$ 191,411	\$ 46,522		\$ 144,889	\$ 144,889	\$ -
Permitting & Survey	\$ 120,780	\$ 85,175		\$ 35,605		\$ 35,605
Easements & Land	\$ 53,250	\$ 53,250		\$ -		\$ -
TOTAL	\$ 1,287,447	\$ 337,457	\$ 150,000	\$ 799,990	\$ 144,889	\$ 655,101

TABLE 2

A	B	C	D	E	F	G	H	I	J	K	L	M
Owner	Taxlot #	Address	Corrected Frontage 4-5-23	Percent Share of Project Cost	Owner Share of Project Cost	Credit for Offsite & Extraordinary Costs	Reimbursement Charge after credits for off-site & extraordinary costs	Charge for Initial Connection (deferral applied)	Incentive Credit if partial deferral used	Cost of initial connection if completed in Year 1	Amount of Reimbursement Charge Deferred	Total Eligible Incentive
					D x W	D x (X+X')	F-G	D x Y for D < 100' 100 x Y for D > 100'	D x Z for D < 100' 100 x Z for D > 100'	I-J	H-I	D x Z
Miller	1N134AC02900	11165 NW Cornell Rd	186	11.01%	141,779	(53,681)	88,098	47,365	(8,578)	38,786	40,734	\$ 15,956
Herreid	1N134AC03200	11215 NW Cornell Rd	84	4.97%	64,029	(24,243)	39,786	39,786	(7,206)	32,581	0	\$ 7,206
Ditrapani	1N134AC03100	11055 NW Cornell Rd	110	6.51%	83,848	(31,747)	52,101	47,365	(8,578)	38,786	4,736	\$ 9,436
Focht	1N134DA00702	10975 NW Cornell Rd	202	11.96%	153,975	(58,299)	95,677	47,365	(8,578)	38,786	48,312	\$ 17,328
Beovich	1N134DA00700	10955 NW Cornell Rd	106	6.28%	80,799	(30,592)	50,207	47,365	(8,578)	38,786	2,842	\$ 9,093
Ly	1N134DA00600	10915 NW Cornell Rd	75	4.44%	57,169	(21,646)	35,524	35,524	(6,434)	29,090	0	\$ 6,434
Shears	1N134DA00502	10895 NW Cornell Rd	92	5.45%	70,127	(26,552)	43,576	43,576	(7,892)	35,683	0	\$ 7,892
Nguyen	1N134DA00501	undeveloped	85	5.03%	64,792	(24,532)	40,260	40,260	(7,292)	32,968	0	\$ 7,292
Gunasekera	1N134DA00504	10805 NW Cornell Rd	75	4.44%	57,169	(21,646)	35,524	35,524	(6,434)	29,090	0	\$ 6,434
Olivares/Valdivia	1N134DA00500	10785 NW Cornell Rd	80	4.74%	60,980	(23,089)	37,892	37,892	(6,863)	31,029	0	\$ 6,863
Mordini	1N134DA00900	10960 NW Cornell Rd	50	2.96%	38,113	(14,430)	23,682	23,682	(4,289)	19,393	0	\$ 4,289
Neyman	1N134DB00100	870 NW 110th Ave	153	9.06%	116,625	(44,157)	72,468	47,365	(8,578)	38,786	25,103	\$ 13,125
Grycko	1N134DB01000	11060 NW Cornell Rd	136	8.05%	103,667	(39,251)	64,416	47,365	(8,578)	38,786	17,051	\$ 11,667
Ismaili	1N134DA00400	925 NW 107th Ave	105	6.22%	80,037	(30,304)	49,733	47,365	(8,578)	38,786	2,368	\$ 9,007
Mordini	1N134DA00901	undeveloped	150	8.88%	114,338	(43,291)	71,047	47,365	(8,578)	38,786	23,682	\$ 12,868
TOTALS			1,689	100%	1,287,447	(487,457)	799,990	635,161	(115,036)	520,125	164,829	144,889

Actual frontage is 10 feet - Owner Reimbursement is based upon 50 feet

TABLE 3

W	Project Cost/ Front Foot	\$ 762.25
X	Offsite Credit & Extraordinary /Front Foot	\$ (199.80)
X'	District Extraordinary Cost	\$ (88.81)
Y	Cost/Front Foot	\$ 473.65
Z	Incentive/Foot	\$ (85.78)