

Emergency Medical Services (EMS) Fee Study

CITY OF HUNTINGTON BEACH, CALIFORNIA

FINAL REPORT

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1. Introduction and Executive Summary

The Matrix Consulting Group was retained by the City of Huntington Beach to evaluate its Emergency Medical Services (EMS) Transport-related fees. The following report summarizes the findings and conclusions associated with the City's EMS related current and full cost recovery.

1 Project Background and Overview

The City of Huntington Beach has not changed its EMS fees since 2012. The focus of this analysis was to evaluate the cost recovery associated with providing emergency medical services (transportation and non-transportation) to residents and non-residents. The Matrix Consulting Group analyzed the cost of service relationships that exist between the City and its customers in relation to advanced life support, basic life support, treat no transport, oxygen support, and mileage. The results of this study provide a tool for understanding current service levels, the cost and demand for those services, and what fees for service can be charged.

2 General Project Approach and Methodology

EMS-related services are different than other fees for service due to the interdependent nature of their services, as well as because the services are not imposed. The residents and non-residents of a community do not have to utilize emergency services. Therefore, EMS-related fees can be calculated utilizing a "top-down" methodology. This methodology assumes that all applicable EMS-related costs should be distributed across the different users of the EMS service based upon the utilization of that service. The "full" cost of the service is then driven based upon the number of total transports and treat non transports rather than each individual call for service. This is a widely recognized approach for EMS-related fees as it helps capture not only the time on scene, but any additional time associated with restocking, prepping, and readiness / availability to service the community.

The cost and staffing figures utilized in this analysis are based on FY21 Adopted Budget; while workload and transportation assumptions are based upon averages from the prior fiscal years. The work accomplished by the Matrix Consulting Group in the analysis of the fees for service involved the following steps:

- **Departmental Interviews:** The project team interviewed EMS and Fire staff to obtain a better understanding of how EMS is provided within the City of Huntington Beach.
- **Data Collection:** Along with staffing, budget, and workload information, data regarding appropriate revenue offsets, ambulance and engine staffing, and payor mix were collected, reviewed, and entered into the analytical fee model.

- **Cost Analysis:** The full cost of providing each service included in the analysis was established.
- **Review and Approval of Results with Departmental Staff:** Department management has reviewed and approved these documented results.

A more detailed description of the legal considerations and fee methodology used to calculate the EMS fees is provided in subsequent chapters of this report.

3 Summary of EMS Fee Study

The primary focus of this study is to determine the full cost associated with EMS-related services. The following table compares the city's current fee to the full cost fee calculated through this report, the surplus / (deficit), and the cost recovery level:

Table 1: EMS Fee Study Results – Per Unit Comparison

Category	Current Fee	Full Cost	Surplus / (Deficit)	Cost Recovery %
BLS Rate	\$1,130	\$1,655	(\$525)	68%
ALS Surcharge	\$100	\$174	(\$74)	57%
Non-Resident Surcharge	\$450	\$474	(\$24)	95%
Treat No Transport Fee	\$350	\$366	(\$16)	96%
Mileage	\$16.54	\$15.77	\$0.77	105%
Oxygen	\$81	\$115	(\$34)	70%
ECG	\$60	\$64	(\$4)	93%

Based upon the results of this analysis, the City is under-recovering for all but one of its EMS-related activities. The only over-recovery is associated with mileage services. The fee associated with mileage services would be reduced. The under-recovery ranges from a low of \$4 per ECG use to a high of \$525 for the base transportation rate (BLS). Additionally, through this analysis, the City would eliminate its itemized charges of medical supplies and medications to allow for a more streamlined billing and recording process.

If the City were to implement the full cost fees calculated through this analysis, the City would be projected to generate approximately \$8.2 million in EMS revenue which would be an increase of approximately \$1.2 million and increase cost recovery from 29% to 34% for EMS-related activities. The typical cost recovery for EMS-related activities is between 30-50%.

The cost figures in this report are meant to provide guidance to decision-makers: City Management and City Council regarding the maximum allowable fees that can be charged by the jurisdiction. The following chapters provide greater detail regarding the full cost calculations for EMS services.

2. Legal Framework

A “user fee” is a charge for service provided by a governmental agency to a public citizen or group. In California, several constitutional laws such as Propositions 13, 4, and 218, State Government Codes 66014 and 66016, and more recently Prop 26 and the Attorney General’s Opinion 92-506 set the parameters under which the user fees typically administered by local government are established and administered. Specifically, California State Law, Government Code 66014(a), stipulates that user fees charged by local agencies “...may not exceed the estimated reasonable cost of providing the service for which the fee is charged”.

1 General Principles Regarding User Fees

Local governments are providers of many types of general services to their communities. While all services provided by local government are beneficial to constituents, some services can be classified as globally beneficial to all citizens, while others provide more of a direct benefit to a specific group or individual. The following table provides examples of services provided by local government within a continuum of the degree of community benefit received:

Table 2: Services in Relation to Benefit Received

“Global” Community Benefit	“Global” Benefit and an Individual or Group Benefit	Individual or Group Benefit
<ul style="list-style-type: none"> • Police • Park Maintenance 	<ul style="list-style-type: none"> • Recreation / Community Services • Fire Suppression / Prevention 	<ul style="list-style-type: none"> • Building Permits • Planning and Zoning Approval • Site Plan Review • CUPA • Facility Rentals

Funding for local government is obtained from a myriad of revenue sources such as taxes, fines, grants, special charges, user fees, etc. In recent years, alternative tax revenues, which typically offset subsidies for services provided to the community, have become increasingly limited. These limitations have caused increased attention on user fee activities as a revenue source that can offset costs otherwise subsidized (usually) by the general fund. In Table 2, services in the “global benefit” section tend to be funded primarily through voter approved tax revenues. In the middle of the table, one typically finds a mixture of taxes, user fee, and other funding sources. Finally, in the “individual / group benefit” section of the table, lie the services provided by local government that are typically funded almost entirely by user fee revenue.

The following are two central concepts regarding the establishment of user fees:

- **Fees should be assessed according to the degree of individual or private benefit gained from services.** For example, the processing and approval of a land use or

building permit will generally result in monetary gain to the applicant, whereas Police services and Fire Suppression are examples of services that are essential to the safety of the community at large.

- **A profit-making objective should not be included in the assessment of user fees.** In fact, California laws require that the charges for service be in direct proportion to the costs associated with providing those services. Once a charge for service is assessed at a level higher than the actual cost of providing a service, the term “user fee” no longer applies. The charge then becomes a tax subject to voter approval.

Therefore, it is commonly accepted that user fees are established at a level that will recover up to, and not more than, the cost of providing a particular service.

2 EMS Specific Fees

EMS fees have traditionally been considered under the umbrella of user fees or fees for service. As such, these fees are subject to the same legal rules and regulations as other user fees, i.e., the fee cannot exceed the cost to provide the service. However, EMS fees are unique from other fees for service as the fee payer dictates the rate they will pay, which is often less than the current fee charged for the service. For example, traditionally, if the fee for a water heater permit is \$150, any individual who pulls a water heater permit must pay the \$150. However, in the case of EMS fees, if the fee for transport is \$150, depending upon your insurance provider, the City may get paid \$0, \$50, \$100, or the full \$150. Therefore, the two types of fees are not equal.

Between 2012 and now, the City has attempted to review and adopt new EMS related fees; however, the city has run into the traditional conundrum of not being able to achieve full cost recovery, as the fee rate calculated is not the fee rate paid.

The City Attorney published an internal memo in 2019, which outlined that while EMS fees for service do fall under Prop 26 and Prop 13, as long as the revenue collected by the department for EMS-related services does not exceed the cost of providing EMS services, the fees calculated are in compliance with the legal regulations. The attorney states that under all criteria EMS fees are considered a fee and not a tax, as the EMS fees are only imposed on the patient being treated / transported and that while private insurance payers may pay higher fees, it can be given lesser weight as the Supreme Court has upheld that fees do not need to be finely calibrated to the precise benefit each individual fee payor might derive. Under this umbrella, the City Attorney believes that cost-shifted fees can be adopted at their full cost to ensure that EMS achieves full cost recovery.

As cost shifting is a new concept and could be challenged per the City Attorney, the focus of this analysis is to provide the City with defensible, full cost fees. Department and City management understand that due to payor mix, the City will not be able to recover the full cost of EMS services, but it will be in full compliance with the law, with the fee being charged being directly correlated to the cost of providing that service.

3. EMS Fee Study Results

The City of Huntington Beach provides comprehensive in-house ambulance and emergency medical services to residents and non-residents of the community. The City has a robust EMS program, which includes staffing its fire engines with Firefighter / Paramedics for Advanced Life Safety (ALS) and Basic Life Safety (BLS) calls, as well as several ambulances. The City runs a 24/7 EMS program and is able to transport patients as well as conduct appropriate onsite treatment. The following subsections discuss the current EMS related cost per transport, the full cost calculated for the different types of services (i.e., Non-resident, ALS, BLS, etc.), mileage charge, and oxygen use.

1 EMS Cost Per Transport Calculation

In order to calculate the full cost associated with EMS fees, the project team evaluated the City's direct and indirect costs associated with these activities. The City has three budgetary programs that house EMS-related costs: EMS Administration, Emergency Transport Program, and Fire Suppression. The following table shows the FY21 Adopted budget for each of these three programs, and the proportion of costs for those programs that are EMS related:

Table 3: Total EMS-Related Direct Costs

Fire Division	FY21 Budgeted Cost	EMS Proportion %	Total Cost
EMS Administration	\$929,098	100%	\$929,098
Emergency Transport Program	\$2,141,524 ¹	100%	\$2,141,524
Fire Suppression	\$33,096,610	56% ²	\$18,534,102
TOTAL FIRE EMS-RELATED DIRECT COSTS			\$21,604,723

The total Fire EMS related direct costs are approximately \$21.6 million. The \$21.6 million only represents the direct costs associated with EMS-related activities. There are indirect costs associated with these activities, which includes overhead from the Fire Department, but also Citywide overhead such as Finance, Human Resources, City Manager, etc. The City of Huntington Beach conducted a citywide indirect cost allocation plan in FY14-15, which outlines the total indirect costs associated with fire services. The following table shows the indirect costs associated with the Fire Department compared to its total direct budgeted expenditures for FY14-15 and the resulting indirect cost percentage:

Table 4: Fire Indirect Costs Rate Calculation

Total Fire Indirect Costs (FY14-15)	\$8,017,342 ³	=	17.9%
Total Fire Department Direct Costs (FY14-15)	\$44,890,307		

¹ The Emergency Transport Program budget was reduced by \$16,688 as those medical supply costs have been factored into the ECG Calculation.

² Approximately 56% of weighted Fire Suppression calls over the last three years have been medical calls. The City of Huntington Beach staffs its engines with Firefighter / Paramedics to allow for immediate treatment upon arrival.

³ Excludes costs allocated with Fleet services as those costs have been incorporated as direct costs through the Mileage Calculation.

Based upon the FY14-15 Indirect Cost Allocation Plan, the City's indirect cost rate associated with the Fire Department is 17.9%. The 17.9% is applied to the total EMS direct costs to arrive at the associated indirect costs for EMS-related activities. The following table shows the calculation:

Table 5: Total EMS Direct and Indirect Costs

Category	Total Cost
EMS Direct Costs	\$21,604,723
Indirect Cost Rate	17.90%
EMS Indirect Costs	\$3,867,245
TOTAL EMS DIRECT + INDIRECT COST	\$25,471,969

The total EMS Direct and Indirect costs are approximately \$25.5 million, once indirect costs of \$3.9 million are factored into the calculation.

In addition to reviewing all direct and indirect costs that are associated with EMS-related activities, the project team also evaluated any applicable revenue offsets. For purposes of this analysis, three different revenue offsets were included:

1. **FireMed Revenue:** The City has a subscription program, similar to other southern California jurisdictions, which allows households and businesses to pay a monthly or annual fee to cover the potential portion of patient's responsibility associated with ambulance or medical services. As this program is billed separate from the transport-related bills, it is additional revenue the department is collecting that can be used to offset some of its medical services.
2. **GEMT Reimbursement:** The City's Fire Department participates in a state program known as Ground Emergency Medical Transportation (GEMT) reimbursement. This program was primarily created to help bridge the gap between the payment made by federal insurance programs (Medicare) and what it costs the city to provide transport-related services. Currently, the program is only set to refund 50% of the gap. However, as this revenue source is directly related to transportation activities but not related to revenue from billing activities, it was included as a revenue offset.
3. **QAF Reimbursement:** Similar to the GEMT program, the State of California also provides another reimbursement program to help bridge the gap between insurance paid transports and the cost of the transport itself. Starting in 2017, this program provides quarterly payments to the city based upon the number of eligible transports.

The following table shows the amount associated with the three revenue offsets that were included in the calculation of the total EMS-related costs.

Table 6: EMS Revenue Offsets

Category	FY19-20 Amount
FireMed Revenue	\$937,923
GEMT Reimbursement	\$90,129 ⁴
QAF Reimbursement	\$392,362
TOTAL EMS REVENUE OFFSET	\$1,566,363

The total revenue offsets for all four categories is \$1.6 million. The largest component of the revenue offset is the FireMed Revenue. The following table shows the total EMS costs broken out by direct, indirect, and revenue offsets:

Table 7: Total EMS Costs

Category	Amount
Direct EMS Costs	\$21,604,723
EMS Indirect Costs	\$3,867,245
Revenue Offset	(\$1,566,363)
TOTAL EMS COSTS	\$23,905,606

When accounting for direct, indirect, and applicable revenue offsets the total EMS-related costs are \$23.9 million. The \$23.9 million is the basis upon which the costs per transports were developed. To determine the total cost per transport the project team took the \$23.9 million in EMS costs and divided it by the total number of transports and treat no transports conducted by the City over the past two fiscal years, as shown in the following table:

Table 8: EMS Cost Per Transport

Category	Amount
Total EMS Transport Costs	\$23,905,606
Total # of Transports	12,352
Total Cost Per Transport	\$1,935

Based upon EMS direct and indirect costs of \$24 million and roughly 12,000 annual transports, the City's cost per transport is approximately \$1,935.

2 Non-Resident, ALS, BLS, and TNT Cost Calculation

While \$1,935 is the overall cost per transport, the City of Huntington Beach has two types of transport rates – resident and non-resident. During discussions with department staff, it was determined that non-residents should bear a 10% surcharge, to account for lack of contribution to the City's general fund through property taxes and other sources. Therefore, it was determined that the non-residents should bear 110% of the cost per transport, and the residents should receive that as a discount and bear 90% of the cost

⁴ Due to changes in state regulation, there was no FY19-20 GEMT cost report or reimbursement, as such revenue for GEMT was based on the last cost report submitted in FY16-17 to ensure that those revenues were appropriately accounted for in the calculation.

per transport. The following table shows the updated cost per transport based upon the non-resident surcharge:

Table 9: Cost Per Transport – Resident and Non-Resident

Category	Cost Per Transport	Cost Factor	Updated Cost Per Transport
Resident	\$1,935	110%	\$1,742
Non-Resident	\$1,935	90%	\$2,129

The \$2,129 becomes the total cost per transport associated with non-residents and for residents the total cost per transport is \$1,742. The \$1,742 calculated for residents is converted into three types of fees – Advanced Life Support (ALS), Basic Life Support (BLS), and Treat No Transport (TNT). The typical methodology for converting the overall cost per transport to these three service areas is based upon a factor that can be applied to each depending upon the level of effort. This factor is based upon discussions with staff, as well as to ensure that the overall split of services totals to the overall revenue to be recovered. The following table shows the calculation of the cost for each service area based upon the cost per transport, the effort factor, and the resulting full cost per unit:

Table 10: Cost Calculation Per Unit – ALS, BLS, and Treat No Transport

Category	Cost Per Transport	Effort Factor	Cost Per Unit
ALS	\$1,742	1.05	\$1,829
BLS	\$1,742	0.95	\$1,655
TNT	\$1,742	0.21	\$366

As the table indicates, the total cost per unit ranges from a low of \$366 associated with treat no transports to a high of \$1,829 for advanced life support. The level of effort associated with ALS and BLS is not significantly different, other than additional specialized training, as well as the types of equipment that can be utilized.

The City currently charges the BLS category as a base rate, and the ALS charge and non-resident is included as a surcharge. The Treat No Transport is a separate category. The following table compares the City's current fee, to the full cost calculated through this analysis:

Table 11: Transport Fees – Cost Per Unit Comparison

Category	Current Fee	Full Cost	Surplus / (Deficit)
BLS Fee (Base Fee)	\$1,130	\$1,655	(\$525)
ALS Surcharge	\$100	\$174	(\$74)
Non-Resident Surcharge	\$450	\$474	(\$24)
Treat No Transport	\$350	\$366	(\$16)

The City is under-recovering for all of the categories, with the smaller under-recovery of \$16 associated with treat no transport and the largest under-recovery of \$525 associated with the BLS category. The ALS and Non-Resident surcharge fees were calculated by

taking the difference between the ALS and Non-resident costs and the BLS costs (i.e., \$1,829 (ALS) - \$1,655 (BLS) = \$174).

3 Mileage Calculation

Along with the ability to bill for transportation and treatment related activities, the City can also bill for the mileage that is incurred from the transportation scene to the hospital. The mileage charge is typically meant to account for the maintenance and fuel costs associated with the vehicles, as well as any replacement costs associated with the vehicles and equipment on the ambulances. The following table shows by major category, the average cost incurred, the portion attributable to EMS, and the resulting total EMS cost:

Table 12: EMS Mileage Costs by Category

Category	2 yr Avg Cost	EMS-Related % ⁵	Total EMS-Related Cost
Fuel Costs - Ambulances	\$80,685	100%	\$80,685
Fuel Costs – Engines / Trucks	\$97,601	56%	\$54,657
Maintenance – Ambulances	\$145,432	100%	\$145,432
Maintenance – Engines / Trucks	\$355,317	56%	\$198,978
Depreciation – Ambulance & Medical Equipment	\$388,943	100%	\$388,943
Depreciation – Suppression	\$665,186	56%	\$372,504
TOTAL MILEAGE-RELATED COSTS			\$1,241,199

The total EMS mileage-related costs are approximately \$1.2 million annually. In order to come up with the mileage amount, the project team divided the \$1.2 million by the average number of miles billed for transport-related activities. The following table shows the resulting cost per mile:

Table 13: Cost Per Mile Calculation

Category	Amount
Total EMS Mileage Cost	\$1,241,199
Avg Mileage Billed	78,701.65
Total Cost Per Mile	\$15.77

The total cost per mile is \$16.9. The following table compares the current fee per mile to the full cost per mile:

Table 14: Mileage– Cost Per Unit Comparison

Category	Current Fee	Full Cost	Surplus / (Deficit)
Mileage	\$16.54	\$15.77	\$0.77

⁵ For any suppression-related equipment, the 56% that was utilized for EMS portion for total overall cost was applied here as well. The 56% is based upon a three year average of the total number of weighted calls that were EMS-related compared to overall calls responded to by the Fire Department.

Based upon the cost calculated, the City is over-recovering by approximately \$0.77 per mile or is at a 105% cost recovery level.

4 Oxygen Calculation

Similar to mileage charges, the City is also allowed to bill for oxygen usage. The cost for oxygen usage was calculated based upon the rental and re-filling costs for oxygen and the number of tanks. The following table shows the cost per tank calculation:

Table 15: Cost Per Tank Calculation

Category	Amount
3 yr Oxygen Cost Average	\$9,585
Total # of Oxygen Tanks	20
Cost Per Tank	\$479

The cost per tank through this study was calculated at \$479. However, each trip or use of oxygen does not take up a full tank. The project team calculated the number of trips it takes to utilize a full oxygen tank. This trip calculation was done based upon the average number of transports, the average number of oxygen uses, and the percentage of time the tank is refilled / checked. The following table shows the number of trips calculated per oxygen tank utilization:

Table 16: # of Trips per Oxygen Tank Calculation

Category	Amount
Total # of Transports	12,178
Total # of Oxygen Uses	1,462
# of Trips per Oxygen Tank	8.33
% of Time Tank is Refilled / Check	50%
# of Trips per Oxygen Tank – Utilized	4.16

Even though on average it takes about 8 trips before the oxygen tank would need to be refilled, based upon discussion with staff, the Department does not wait until the oxygen tank is fully depleted before refilling it. As such, the tank is refilled or checked about every 4 trips. The following table takes the total cost per tank and then divides it by the # of trips per oxygen tank utilization to determine the cost per oxygen use:

Table 17: Cost Per Oxygen Use

Category	Amount
Cost Per Tank	\$479
# of Trips per Oxygen Tank – Utilized	4.16
Cost Per Oxygen Use	\$115

The total cost per oxygen use calculated is \$115. The following table compares the City's current fee to the cost calculated and the resulting surplus / deficit:

Table 18: Oxygen – Cost Per Unit Comparison

Category	Current Fee	Full Cost	Surplus / (Deficit)
Oxygen Use	\$81.12	\$115	(\$34)

The City is under-recovering by approximately \$34 per oxygen use or is at a cost recovery level of 70%.

5 ECG and Medical Supplies

The City currently charges all medical supplies on an itemized schedule. This itemized schedule includes items such as bandages, pillows, blankets, medications, and ECG costs. The methodology utilized by the Matrix Consulting Group, has already incorporated these costs into the base cost per transport. This mitigates the need for paramedics to itemize each component utilized for billing purposes. However, in discussion with EMS staff it was determined that the only supply that should continue to be itemized (along with Oxygen), should be the ECG utilization. Therefore, it is being recommended that all itemized fees noted on the City's current Schedule A, should be eliminated, as they have already been captured in the base transport cost.

The current Schedule A includes two different types of ECG Charges – 3 Lead and 12 Lead. While there is some variation in level of effort in administering these charges, it was not deemed significant enough to continue keeping two separate charges. Therefore, for purposes of this analysis, a singular ECG cost was calculated. The cost for the ECG was calculated based upon the total annual costs for supplies and equipment depreciation. The following table shows the total costs associated with ECG:

Table 19: Total ECG Cost

Category	Amount
ECG Annual Supplies	\$16,688
ECG Annual Equipment Depreciation	\$79,920
Total ECG Cost	\$96,608

It costs annually about \$97,000 for ECG use in the City of Huntington Beach. The project team calculated the number of uses for which ECG is utilized on average. The number of uses was based upon the billing for 12-Lead ECG as that utilization drives the need for equipment replacement and new supplies. The following table shows the cost per use for ECG:

Table 20: ECG Cost Per Use

Category	Amount
Total ECG Cost	\$96,608
Average Annual ECG Use	2,498
ECG Cost Per Use	\$38.67

The \$38.67 cost per use, was converted to a cost per transport. The cost per transport is based upon the average use per transport. The average use per transport was calculated by taking the number of total ECG uses (3-Lead and 12-Lead) and dividing it by the total number of transports billed. The following table shows the average ECG use per transport:

Table 21: Average ECG Use Per Transport

Category	Amount
Total # of ECG Use	7,316
Total # of Transports	12,177
Avg Use Per Transport	0.60

The average use per trip was combined with the cost per use to develop the cost per use per trip. The following table takes the total cost per use and then divides it by the # of average usage per trip to determine the cost per ECG use per trip:

Table 22: Cost Per ECG Use Per Transport

Category	Amount
Cost Per ECG Use	\$38.67
Avg Use Per Transport	0.60
Cost Per ECG per Transport	\$64

The total cost per ECG use per transport calculated is \$64. The following table compares the City's current fee to the cost calculated and the resulting surplus / deficit:

Table 23: ECG – Cost Per Unit Comparison

Category	Current Fee	Full Cost	Surplus / (Deficit)
ECG Use	\$60 ⁶	\$64	(\$4)

The City is under-recovering by approximately \$4 per ECG use or is at a cost recovery level of 93%.

⁶ The current fee for a 3-lead is approximately \$2; however, as the fee going forward will be a singular fee, the 12-Lead fee at the higher current fee amount was compared to the full cost calculated.

4. Annual Revenue Impacts

The primary purpose of the EMS fee study and the legal rules is to ensure that overall, the EMS program does not recover more than its costs to provide these services to residents and non-residents. The following subsections presents the fixed fee reimbursements based upon insurance and the payor mix, revenue recovery for EMS based upon the current fee charged, the total cost per transport, and a comparison of the revenue scenarios.

1 Fixed Fee Reimbursement and Payor Mix

One of the unique aspects of EMS fees, as discussed in the legal fees section, is that while all patients get billed the same, the reimbursement amount from the insurances vary. The City currently receives reimbursement from Medicare, Medi-cal, and private insurers (i.e. Private Pay, Other Insurances, Kaiser, etc.). The following table shows by insurance provider the fee billed, and the rate received by the different fee categories:

Table 24: Fee – Reimbursement Amount

Category	Current Fee	Medicare	Medi-Cal	All Others
BLS Rate	\$1,130	\$425.23	\$339.00	\$1,130
ALS Surcharge	\$100	\$83.26	\$0.00	\$100
Non-Resident Surcharge	\$450	\$0.00	\$0.00	\$450
Treat No Transport Fee	\$350	\$0.00	\$0.00	\$350
Mileage	\$16.54	\$7.62	\$3.55	\$16.54
Oxygen	\$81.12	\$0.00	\$9.88	\$81.12
ECG – 3-Lead	\$2	\$0.00	\$16.07	\$2
ECG – 12-Lead	\$60	\$0.00	\$7.43	\$60

As the table indicates, the Medicare and Medi-cal only reimburse a small proportion of the City's current fee and for certain fee categories there is no reimbursement that is provided. The amount of reimbursement received directly impacts the cost recovery, along with the proportion of how many transports or bills are paid by each type of insurance. The following table shows the payor mix based upon the insurance provider:

Table 25: Payor Mix by Insurance Provider

Category	Payor Mix
Medicare	52%
Medi-cal	20%
All Others	28%

Based upon this information, approximately 72% of the City's transports are reimbursed at a fixed rate. Therefore, it is important to note that as the City increases its fees, its impact will only be on approximately 28% of the transports. Those 28% of the transports, are going to be the primary contributors of increased potential revenue for the City.

2 Annual Revenue Recovery – Current Fee

There are two types of annual revenue recoveries that can be calculated for transport fees:

1. **Annual Revenue Collected vs. Annual Revenue Billed:** This shows the amount collected compared to the amount that would have been billed. This is in direct relation to the fixed reimbursement amounts based upon the City's payor mix, as discussed in the previous section.
2. **Annual Revenue Collected vs. Annual Cost:** This shows the amount collected compared to the annual cost associated with those activities.

Based upon the current fee charged by the Fire Department for EMS-related activities and the projected annual average workload the project team calculated that the department could have collected approximately \$10.7 million for transport, mileage, and oxygen services. The following table shows by fee category the annual amount collected, the annual amount billed, and the annual surplus / (deficit):

Table 26: Total Annual Amount Collected vs. Annual Revenue Billed – Current Fee Amount

Category	Annual Amount Collected	Annual Amount Billed	Annual Surplus / (Deficit)
BLS Rate	\$5,812,617	\$13,755,505	(\$7,942,887)
ALS Surcharge	\$356,697	\$594,600	(\$237,903)
Non-Resident Surcharge	\$196,111	\$1,177,200	(\$981,089)
Treat No Transport Fee	\$10,204	\$61,250	(\$51,046)
Mileage	\$584,877	\$1,301,725	(\$716,848)
Oxygen	\$22,665	\$118,679	(\$96,014)
ECG	\$49,580	\$159,516	(\$109,936)
TOTAL ANNUAL EMS REV.	\$7,032,752	\$17,168,474	(\$10,135,722)

Based upon its current fee, the Department billed approximately \$17 million, and received \$7 million. This represents a reimbursement level of 41% and an annual deficit of \$10 million. However, as the current fee is not based upon the total cost of providing the service, the following table compares the total amount collected compared to the full cost of providing the services by major fee category:

Table 27: Total Annual Amount Collected vs. Annual Cost– Current Fee Amount

Category	Annual Amount Collected	Annual Cost	Annual Surplus / (Deficit)
BLS Rate	\$5,812,617	\$20,149,715	(\$14,337,098)
ALS Surcharge	\$356,697	\$1,035,690	(\$678,993)
Non-Resident Surcharge	\$196,111	\$1,240,413	(\$1,044,302)
Treat No Transport Fee	\$10,204	\$64,012	(\$53,808)
Mileage	\$584,877	\$1,241,199	(\$656,322)
Oxygen	\$22,665	\$168,353	(\$145,688)
ECG	\$49,580	\$470,936	(\$421,356)
TOTAL ANNUAL EMS REV.	\$7,032,752	\$24,370,318	(\$16,137,802)

Based upon the cost of providing EMS related services, the department at a \$7 million collection is under-recovering by approximately \$16 million, which represents a cost recovery level of only 29%.

3 Annual Revenue Recovery – Full Cost Fee

Based upon the total cost calculated for EMS-related activities and the projected annual average workload the project team calculated that the department could have collected approximately \$8.1 million for transport, mileage, and oxygen services. The following table shows by fee category the annual amount collected, the annual amount billed, and the annual surplus / (deficit):

Table 28: Total Annual Amount Collected vs. Annual Revenue Billed – Full Cost Fee Amount

Category	Annual Amount at Full Cost	Annual Amount Billed	Annual Surplus / (Deficit)
BLS Rate	\$6,877,837	\$20,149,715	(\$13,271,878)
ALS Surcharge	\$430,179	\$1,035,690	(\$605,511)
Non-Resident Surcharge	\$206,642	\$1,240,413	(\$1,033,771)
Treat No Transport Fee	\$10,664	\$64,012	(\$53,348)
Mileage	\$574,794	\$1,241,199	(\$666,405)
Oxygen	\$30,940	\$168,353	(\$137,413)
ECG	\$101,460	\$470,936	(\$369,476)
TOTAL ANNUAL EMS REV.	\$8,232,516	\$24,370,318	(\$16,137,802)

Even if the city were to implement the total cost calculated through this study as its fees for service, based upon the reimbursement rate and payor mix, the City would only collect roughly \$8 million compared to \$24 million billed. This would represent a cost recovery level of 34%.

4 Comparison of Revenue Recovery

The following table compares the total projected annual revenue to be collected based upon the current fee and the total cost:

Table 29: Comparison of Revenue Collected

Fee Category	Current Fee	Total Cost
Total Revenue Amount	\$7,032,652	\$8,232,516
Cost Recovery Level	29%	34%
\$ Rev. Increase	N / A	\$1,199,764
% Rev. Increase	N / A	17%

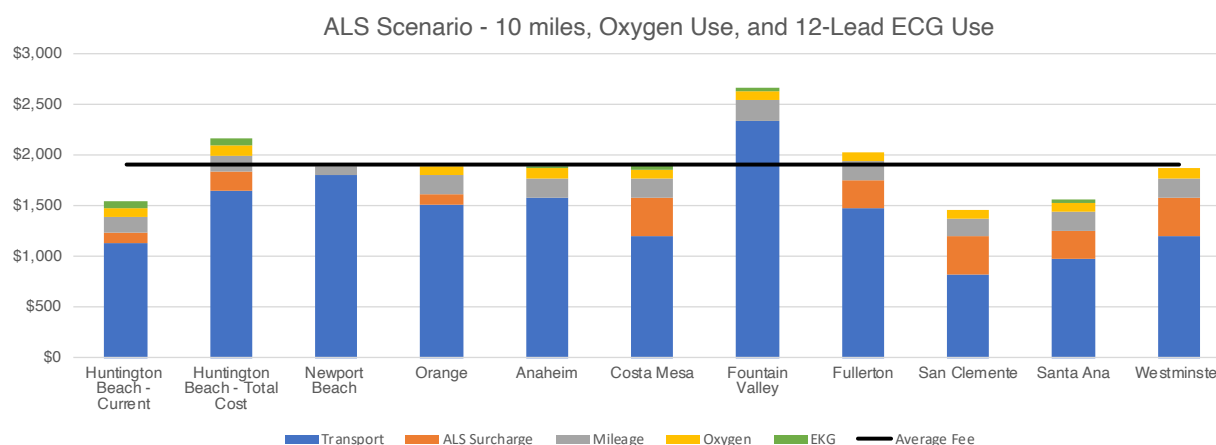
As the table indicates, implementing the total cost will increase the City's overall revenue for EMS-related activities as well as its overall cost recovery. The revenue is expected to increase by approximately \$1.2 million or 17%.

5. Fee Comparisons

As part of this study, the project team compared the City's current fee and total cost to fees charged by other jurisdictions and entities. In order to provide an accurate comparison of the fees, the project team developed fee scenarios through which to compare the City's current fees. The following subsections discuss the scenario and present the results of the comparison in graphical form.

1 ALS Call – Resident – 10 miles, Oxygen Use, 12-Lead ECG

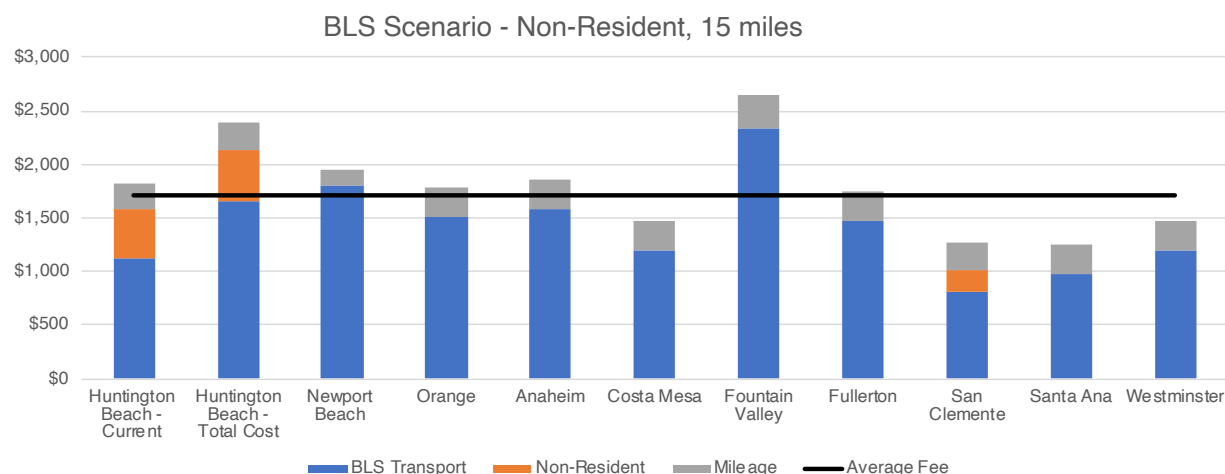
The first scenario for comparison is an Advanced Life Support transport situation traveling 10 miles with oxygen use and 12-Lead ECG Use. The following graph shows how the current fee and the total cost fee compared to the surveyed jurisdictions:



As the chart indicates, the current fee for Huntington Beach (\$1,536) is on the lower end compared to other jurisdictions, whereas the full cost fee (\$2,166) is only slightly above the average fee (\$1,906) charged by other jurisdictions.

2 BLS Call – Non-Resident - 15 miles, No Oxygen Use

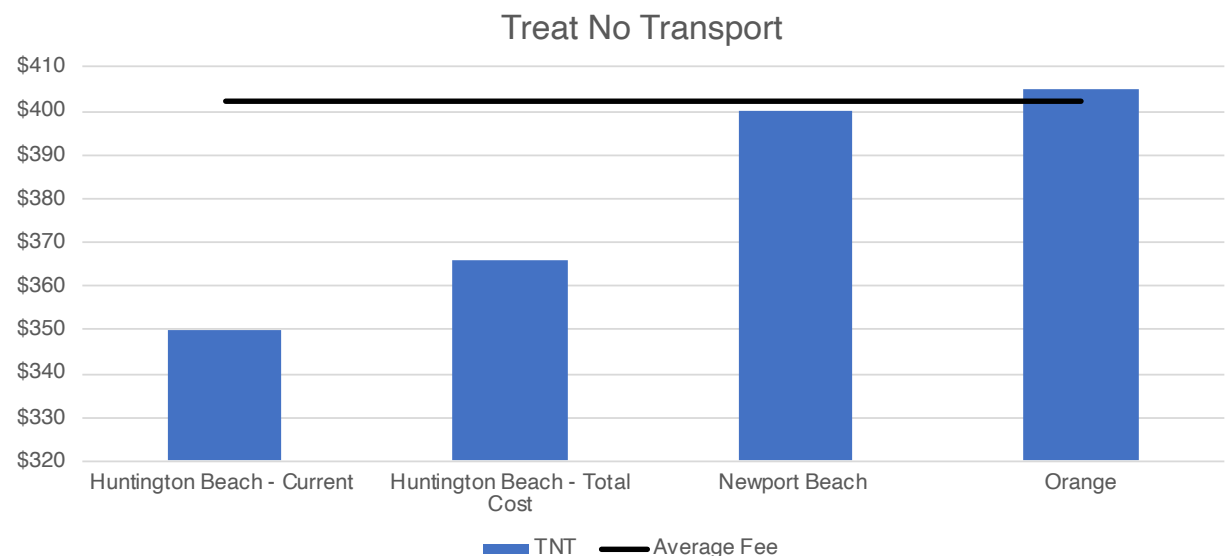
The second scenario for comparison is a Basic Life Support transport situation traveling 10 miles with oxygen use. The following graph shows how the current fee and the total cost compared to the surveyed jurisdictions:



As the chart indicates, as it relates to the BLS scenario, the City's current fee is only slightly above the average. Other than San Clemente, all other surveyed jurisdictions do not charge a non-resident surcharge. The City's full cost fee is higher than the comparable jurisdictions, but still lower than Fountain Valley.

3 Treat No Transport

The third scenario for comparison is a Treat No Transport situation. The following graph shows how the current fee and total cost compare to the surveyed jurisdictions:



As the chart indicates, the City's current and full cost fee is below the average charged by Newport Beach and the City of Orange.