



WGBH - Color of Money

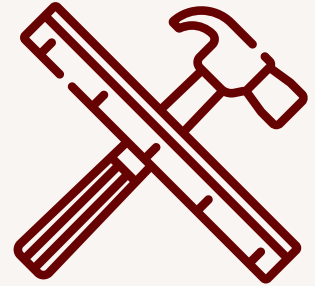


Elisa, Jena, Murt, Richard, Sabrina
CS506 - Spring 2021



Background and Motivation

- Massachusetts construction projects
- Summary of Workforce Utilization Report
- Minorities rate between 2019 and 2020



Goals



Create an universal parser

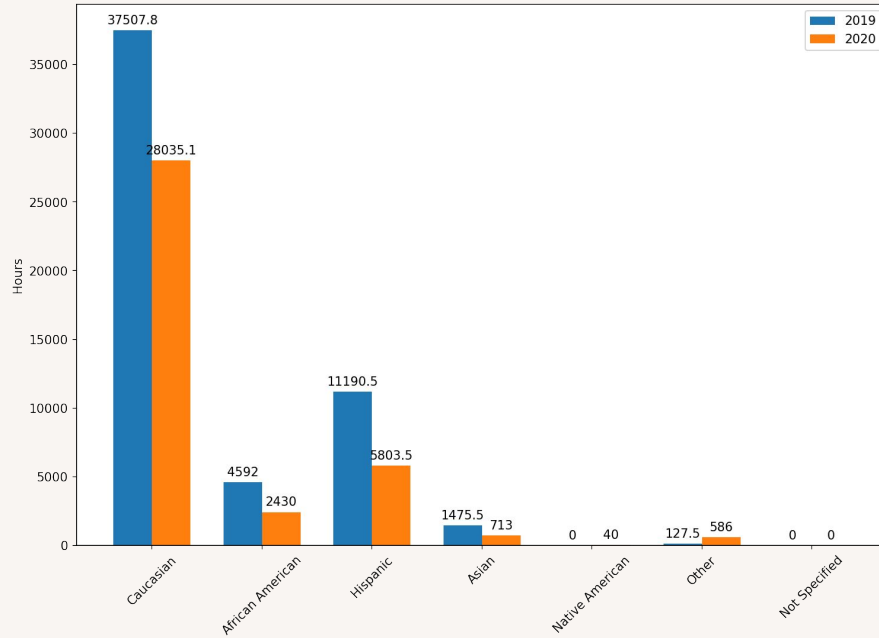


Analyse the minorities rates

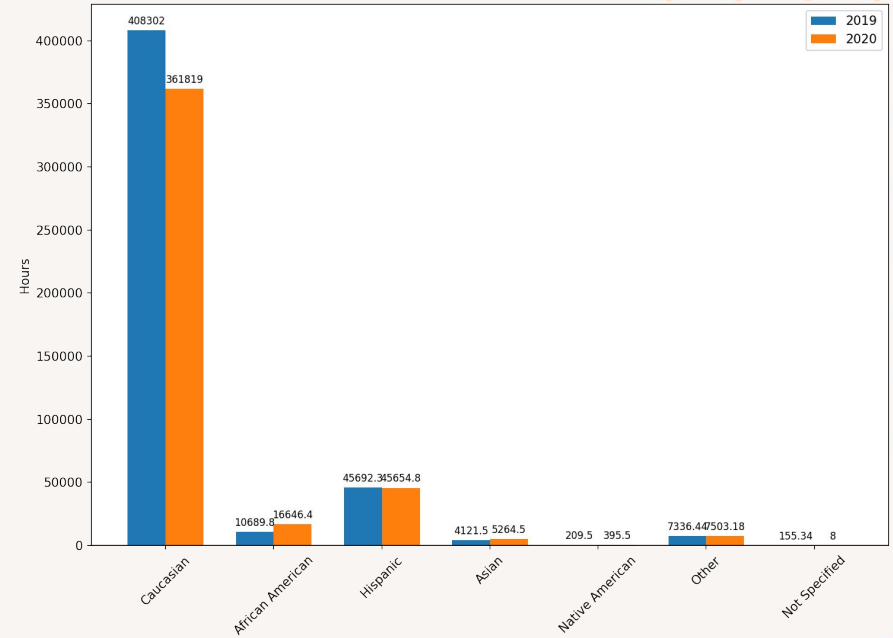
How is racial tension
reflected in construction
trades?

General Trends

Hours of Apprentices by Ethnicity (2019 v. 2020)



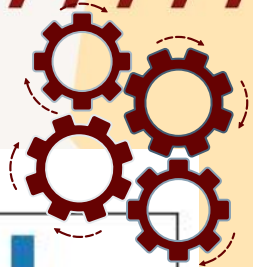
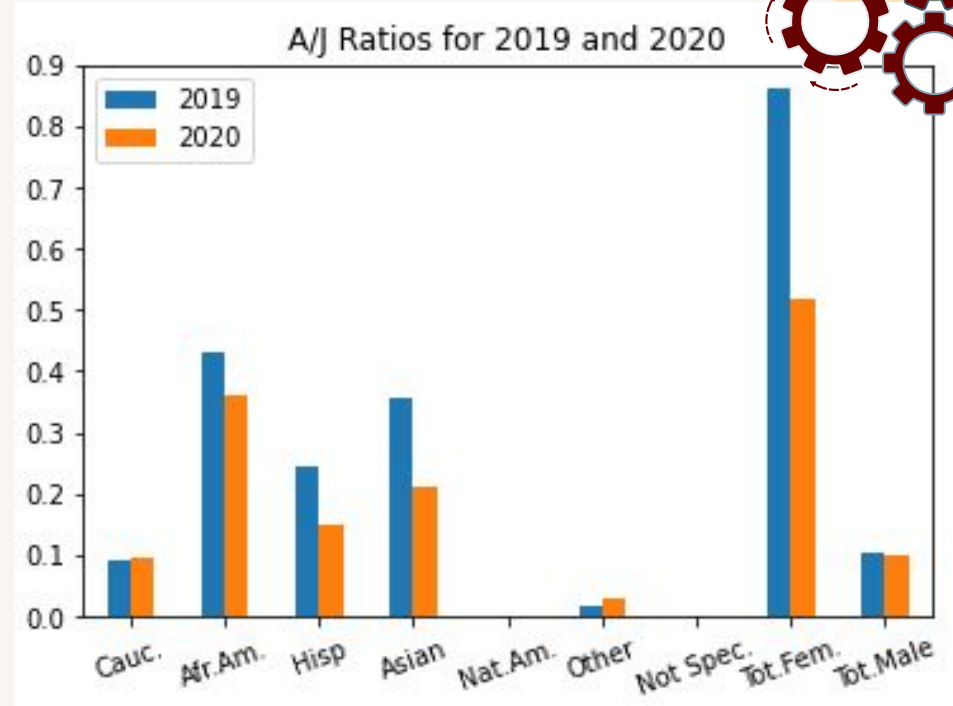
Hours of Journeymen by Ethnicity (2019 v. 2020)



Apprentice to Journeymen Differences

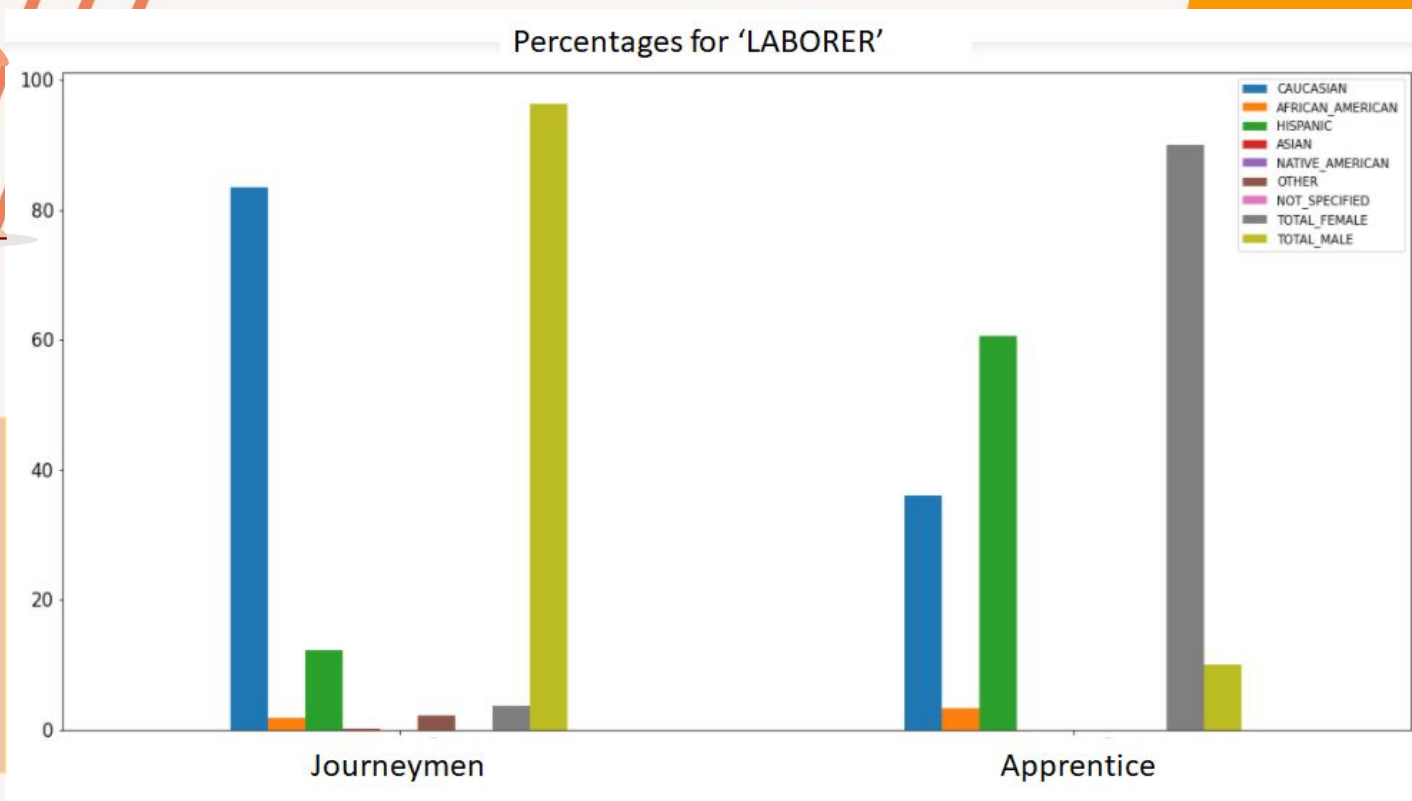
32% of all
JOURNEYMEN hours
have at least 95% going
to **CAUCASIANS (2019)**

7% of all **APPRENTICE**
hours have at least 95%
going to **CAUCASIANS**
(2019)



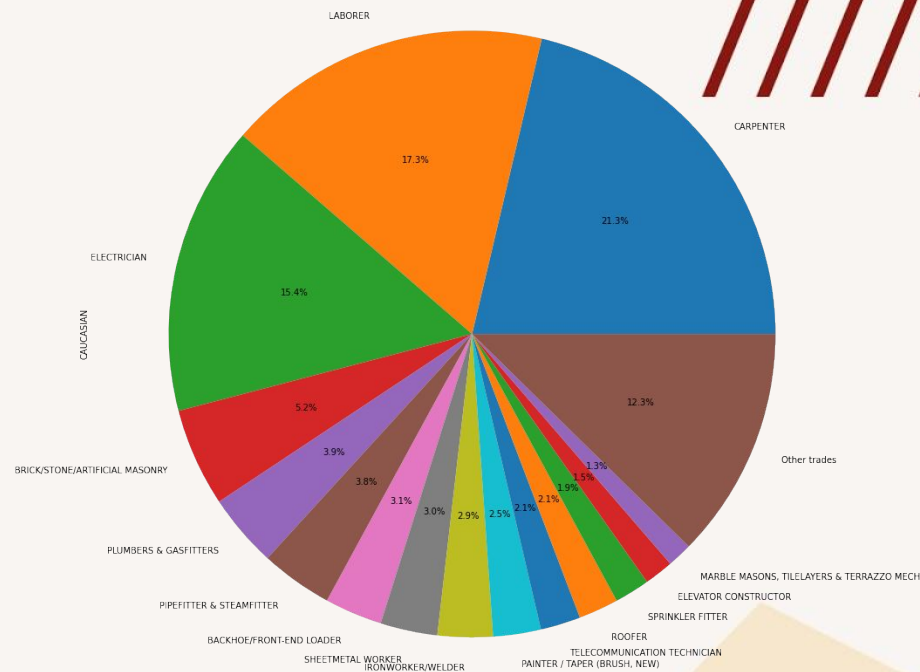
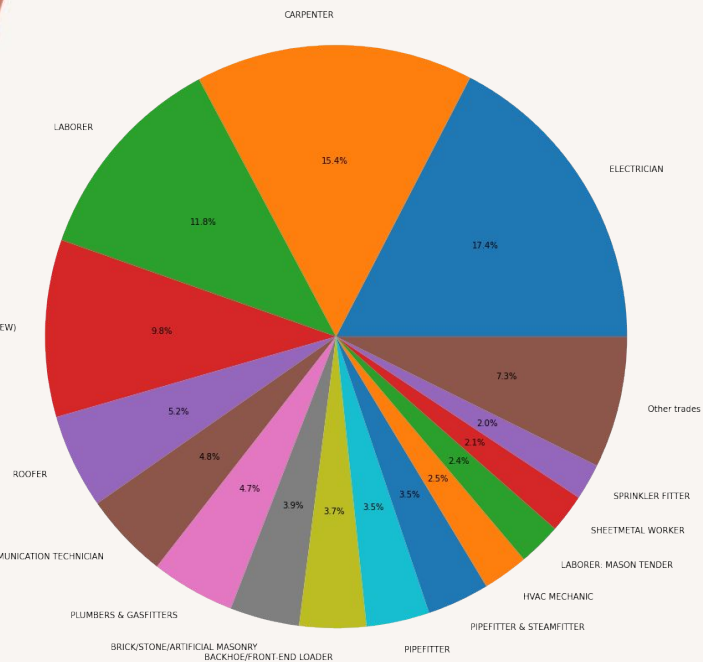


LABORER
ELECTRICIAN
CARPENTER
*PIPEFITTER



*0% Journeymen of any ethnicity •

Distribution of groups over trades



Challenges

PG 1 of 82
for APRIL

Data Format Challenges

DF0

Report Header

Separate DF:
(3 rows & two categories)
Project Information,
Column Header Info

Trade Totals (5 lines):
Journeyman, Apprentice
A/J ratio, New Hire,
Trade SubTotal

Contractor Totals (5 lines):
Journeyman, Apprentice
A/J ratio, New Hire,
Contractor SubTotal

CHENOWETH CM Construction Management Services Chelsea Subtotal Home Community Living Center											
CHENOWETH CM											
Construction Trade	Craft Level	Total Employees	Construction	African American	Hispanic	Asian	Native American	Other	Not Specified	Total Female	Total Male
LABORER	Apprentice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Trades	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	New Hire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPEFITTER & STEAMFITTER	Journey	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00
	Apprentice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Trades	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	New Hire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLUMBERS & GAUPTHERS	Journey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Trades	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	New Hire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total for Contractor	Journey	70.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.00
	Apprentice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Trades	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	New Hire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HAYES INDUSTRIES LTD	Journey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Trades	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	New Hire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABORER	Journey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Trades	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	New Hire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Contractor Header
(1 lines):
Name of Contractor
without any labeling

DF1

CHALLENGES

- Directly read the PDF file into a Pandas DataFrame, each pg .. df
- Manually transformed into CSV
- PyPDF2, Tabula, Camelot, Pandas, PDFplumber, and batch Tabula-CSV
- CUSTOM Parser

```

17.
18.
19.
20.
21.
22.
23.
24.
25.
26.
27.
28.
29.
30.
31.
32.
33.
34.
35.
36.
37.
38.
39.
40.
41.
42.
43.
44.
45.
46.
47.
48.
49.
50.
51.
52.
53.
54.
55.
56.
57.
58.
59.
60.
61.
62.
63.
64.
65.
66.
67.
68.
69.
70.
71.
72.
73.
74.
75.
76.
77.
78.
79.
80.
81.
82.
83.
84.
85.
86.
87.
88.
89.
90.
91.
92.
93.
94.
95.
96.
97.
98.
99.
100.
101.
102.
103.
104.
105.
106.
107.
108.
109.
110.
111.
112.
113.
114.
115.
116.
117.
118.
119.
120.
121.
122.
123.
124.
125.
126.
127.
128.
129.
130.
131.
132.
133.
134.
135.
136.
137.
138.
139.
140.
141.
142.
143.
144.
145.
146.
147.
148.
149.
150.
151.
152.
153.
154.
155.
156.
157.
158.
159.
160.
161.
162.
163.
164.
165.
166.
167.
168.
169.
170.
171.
172.
173.
174.
175.
176.
177.
178.
179.
180.
181.
182.
183.
184.
185.
186.
187.
188.
189.
190.
191.
192.
193.
194.
195.
196.
197.
198.
199.
200.
201.
202.
203.
204.
205.
206.
207.
208.
209.
210.
211.
212.
213.
214.
215.
216.
217.
218.
219.
220.
221.
222.
223.
224.
225.
226.
227.
228.
229.
230.
231.
232.
233.
234.
235.
236.
237.
238.
239.
240.
241.
242.
243.
244.
245.
246.
247.
248.
249.
250.
251.
252.
253.
254.
255.
256.
257.
258.
259.
260.
261.
262.
263.
264.
265.
266.
267.
268.
269.
270.
271.
272.
273.
274.
275.
276.
277.
278.
279.
280.
281.
282.
283.
284.
285.
286.
287.
288.
289.
290.
291.
292.
293.
294.
295.
296.
297.
298.
299.
300.
301.
302.
303.
304.
305.
306.
307.
308.
309.
310.
311.
312.
313.
314.
315.
316.
317.
318.
319.
320.
321.
322.
323.
324.
325.
326.
327.
328.
329.
330.
331.
332.
333.
334.
335.
336.
337.
338.
339.
340.
341.
342.
343.
344.
345.
346.
347.
348.
349.
350.
351.
352.
353.
354.
355.
356.
357.
358.
359.
360.
361.
362.
363.
364.
365.
366.
367.
368.
369.
370.
371.
372.
373.
374.
375.
376.
377.
378.
379.
380.
381.
382.
383.
384.
385.
386.
387.
388.
389.
390.
391.
392.
393.
394.
395.
396.
397.
398.
399.
400.
401.
402.
403.
404.
405.
406.
407.
408.
409.
410.
411.
412.
413.
414.
415.
416.
417.
418.
419.
420.
421.
422.
423.
424.
425.
426.
427.
428.
429.
430.
431.
432.
433.
434.
435.
436.
437.
438.
439.
440.
441.
442.
443.
444.
445.
446.
447.
448.
449.
450.
451.
452.
453.
454.
455.
456.
457.
458.
459.
460.
461.
462.
463.
464.
465.
466.
467.
468.
469.
470.
471.
472.
473.
474.
475.
476.
477.
478.
479.
480.
481.
482.
483.
484.
485.
486.
487.
488.
489.
490.
491.
492.
493.
494.
495.
496.
497.
498.
499.
500.
501.
502.
503.
504.
505.
506.
507.
508.
509.
510.
511.
512.
513.
514.
515.
516.
517.
518.
519.
520.
521.
522.
523.
524.
525.
526.
527.
528.
529.
530.
531.
532.
533.
534.
535.
536.
537.
538.
539.
540.
541.
542.
543.
544.
545.
546.
547.
548.
549.
550.
551.
552.
553.
554.
555.
556.
557.
558.
559.
560.
561.
562.
563.
564.
565.
566.
567.
568.
569.
570.
571.
572.
573.
574.
575.
576.
577.
578.
579.
580.
581.
582.
583.
584.
585.
586.
587.
588.
589.
590.
591.
592.
593.
594.
595.
596.
597.
598.
599.
600.
601.
602.
603.
604.
605.
606.
607.
608.
609.
610.
611.
612.
613.
614.
615.
616.
617.
618.
619.
620.
621.
622.
623.
624.
625.
626.
627.
628.
629.
630.
631.
632.
633.
634.
635.
636.
637.
638.
639.
640.
641.
642.
643.
644.
645.
646.
647.
648.
649.
650.
651.
652.
653.
654.
655.
656.
657.
658.
659.
660.
661.
662.
663.
664.
665.
666.
667.
668.
669.
670.
671.
672.
673.
674.
675.
676.
677.
678.
679.
680.
681.
682.
683.
684.
685.
686.
687.
688.
689.
690.
691.
692.
693.
694.
695.
696.
697.
698.
699.
700.
701.
702.
703.
704.
705.
706.
707.
708.
709.
710.
711.
712.
713.
714.
715.
716.
717.
718.
719.
720.
721.
722.
723.
724.
725.
726.
727.
728.
729.
730.
731.
732.
733.
734.
735.
736.
737.
738.
739.
740.
741.
742.
743.
744.
745.
746.
747.
748.
749.
750.
751.
752.
753.
754.
755.
756.
757.
758.
759.
760.
761.
762.
763.
764.
765.
766.
767.
768.
769.
770.
771.
772.
773.
774.
775.
776.
777.
778.
779.
780.
781.
782.
783.
784.
785.
786.
787.
788.
789.
790.
791.
792.
793.
794.
795.
796.
797.
798.
799.
800.
801.
802.
803.
804.
805.
806.
807.
808.
809.
810.
811.
812.
813.
814.
815.
816.
817.
818.
819.
820.
821.
822.
823.
824.
825.
826.
827.
828.
829.
830.
831.
832.
833.
834.
835.
836.
837.
838.
839.
840.
841.
842.
843.
844.
845.
846.
847.
848.
849.
850.
851.
852.
853.
854.
855.
856.
857.
858.
859.
860.
861.
862.
863.
864.
865.
866.
867.
868.
869.
870.
871.
872.
873.
874.
875.
876.
877.
878.
879.
880.
881.
882.
883.
884.
885.
886.
887.
888.
889.
890.
891.
892.
893.
894.
895.
896.
897.
898.
899.
900.
901.
902.
903.
904.
905.
906.
907.
908.
909.
910.
911.
912.
913.
914.
915.
916.
917.
918.
919.
920.
921.
922.
923.
924.
925.
926.
927.
928.
929.
930.
931.
932.
933.
934.
935.
936.
937.
938.
939.
940.
941.
942.
943.
944.
945.
946.
947.
948.
949.
950.
951.
952.
953.
954.
955.
956.
957.
958.
959.
960.
961.
962.
963.
964.
965.
966.
967.
968.
969.
970.
971.
972.
973.
974.
975.
976.
977.
978.
979.
980.
981.
982.
983.
984.
985.
986.
987.
988.
989.
990.
991.
992.
993.
994.
995.
996.
997.
998.
999.
1000.
1001.
1002.
1003.
1004.
1005.
1006.
1007.
1008.
1009.
1010.
1011.
1012.
1013.
1014.
1015.
1016.
1017.
1018.
1019.
1020.
1021.
1022.
1023.
1024.
1025.
1026.
1027.
1028.
1029.
1030.
1031.
1032.
1033.
1034.
1035.
1036.
1037.
1038.
1039.
1040.
1041.
1042.
1043.
1044.
1045.
1046.
1047.
1048.
1049.
1050.
1051.
1052.
1053.
1054.
1055.
1056.
1057.
1058.
1059.
1060.
1061.
1062.
1063.
1064.
1065.
1066.
1067.
1068.
1069.
1070.
1071.
1072.
1073.
1074.
1075.
1076.
1077.
1078.
1079.
1080.
1081.
1082.
1083.
1084.
1085.
1086.
1087.
1088.
1089.
1090.
1091.
1092.
1093.
1094.
1095.
1096.
1097.
1098.
1099.
1100.
1101.
1102.
1103.
1104.
1105.
1106.
1107.
1108.
1109.
1110.
1111.
1112.
1113.
1114.
1115.
1116.
1117.
1118.
1119.
1120.
1121.
1122.
1123.
1124.
1125.
1126.
1127.
1128.
1129.
1130.
1131.
1132.
1133.
1134.
1135.
1136.
1137.
1138.
1139.
1140.
1141.
1142.
1143.
1144.
1145.
1146.
1147.
1148.
1149.
1150.
1151.
1152.
1153.
1154.
1155.
1156.
1157.
1158.
1159.
1160.
1161.
1162.
1163.
1164.
1165.
1166.
1167.
1168.
1169.
1170.
1171.
1172.
1173.
1174.
1175.
1176.
1177.
1178.
1179.
1180.
1181.
1182.
1183.
1184.
1185.
1186.
1187.
1188.
1189.
1190.
1191.
1192.
1193.
1194.
1195.
1196.
1197.
1198.
1199.
1200.
1201.
1202.
1203.
1204.
1205.
1206.
1207.
1208.
1209.
1210.
1211.
1212.
1213.
1214.
1215.
1216.
1217.
1218.
1219.
1220.
1221.
1222.
1223.
1224.
1225.
1226.
1227.
1228.
1229.
1230.
1231.
1232.
1233.
1234.
1235.
1236.
1237.
1238.
1239.
1240.
1241.
1242.
1243.
1244.
1245.
1246.
1247.
1248.
1249.
1250.
1251.
1252.
1253.
1254.
1255.
1256.
1257.
1258.
1259.
1260.
1261.
1262.
1263.
1264.
1265.
1266.
1267.
1268.
1269.
1270.
1271.
1272.
1273.
1274.
1275.
1276.
1277.
1278.
1279.
1280.
1281.
1282.
1283.
1284.
1285.
1286.
1287.
1288.
1289.
1290.
1291.
1292.
1293.
1294.
1295.
1296.
1297.
1298.
1299.
1300.
1301.
1302.
1303.
1304.
1305.
1306.
1307.
1308.
1309.
1310.
1311.
1312.
1313.
1314.
1315.
1316.
1317.
1318.
1319.
1320.
1321.
1322.
1323.
1324.
1325.
1326.
1327.
1328.
1329.
1330.
1331.
1332.
1333.
1334.
1335.
1336.
1337.
1338.
1339.
1340.
1341.
1342.
1343.
1344.
1345.
1346.
1347.
1348.
1349.
1350.
1351.
1352.
1353.
1354.
1355.
1356.
1357.
1358.
1359.
1360.
1361.
1362.
1363.
1364.
1365.
1366.
1367.
1368.
1369.
1370.
1371.
1372.
1373.
1374.
1375.
1376.
1377.
1378.
1379.
1380.
1381.
1382.
1383.
1384.
1385.
1386.
1387.
1388.
1389.
1390.
1391.
1392.
1393.
1394.
1395.
1396.
1397.
1398.
1399.
1400.
1401.
1402.
1403.
1404.
1405.
1406.
1407.
1408.
1409.
1410.
1411.
1412.
1413.
1414.
1415.
1416.
1417.
1418.
1419.
1420.
1421.
1422.
1423.
1424.
1425.
1426.
1427.
1428.
1429.
1430.
1431.
1432.
1433.
1434.
1435.
1436.
1437.
1438.
1439.
1440.
1441.
1442.
1443.
1444.
1445.
1446.
1447.
1448.
1449.
1450.
1451.
1452.
1453.
1454.
1455.
1456.
1457.
1458.
1459.
1460.
1461.
1462.
1463.
1464.
1465.
1466.
1467.
1468.
1469.
1470.
1471.
1472.
1473.
1474.
1475.
1476.
1477.
1478.
1479.
1480.
1481.
1482.
1483.
1484.
1485.
1486.
1487.
1488.
1489.
1490.
1491.
1492.
1493.
1494.
1495.
1496.
1497.
1498.
1499.
1500.
1501.
1502.
1503.
1504.
1505.
1506.
1507.
1508.
1509.
1510.
1511.
1512.
1513.
1514.
1515.
1516.
1517.
1518.
1519.
1520.
1521.
1522.
1523.
1524.
1525.
1526.
1527.
1528.
1529.
1530.
1531.
1532.
1533.
1534.
1535.
1536.
1537.
1538.
1539.
1540.
1541.
1542.
1543.
1544.
1545.
1546.
1547.
1548.
1549.
1550.
1551.
1552.
1553.
1554.
1555.
1556.
1557.
1558.
1559.
1560.
1561.
1562.
1563.
1564.
1565.
1566.
1567.
1568.
1569.
1570.
1571.
1572.
1573.
1574.
1575.
1576.
1577.
1578.
1579.
1580.
1581.
1582.
1583.
1584.
1585.
1586.
1587.
1588.
1589.
1590.
1591.
1592.
1593.
1594.
1595.
1596.
1597.
1598.
1599.
1600.
1601.
1602.
1603.
1604.
1605.
1606.
1607.
1608.
1609.
1610.
1611.
1612.
1613.
1614.
1615.
1616.
1617.
1618.
1619.
1620.
1621.
1622.
1623.
1624.
1625.
1626.
1
```


News Stories

FYI, proof.txt is 115,304 lines long.

Elisa, Jena, Murt, Richard, Sabrina
CS506 - Spring 2021



```

10      # Starting page 1
11      # Project Name:VSPHERE HTS C Utility Simple
12      # Project Number:0
13      # Construction Type:
14      # Construction Cost:
15      # Construction Cost/Cr:
16      # Construction Cost/Total:
17      # Construction Cost/Total:
18      # Construction Cost/Total:
19      # Construction Cost/Total:
20      # Construction Cost/Total:
21      # Construction Cost/Total:
22      # Construction Cost/Total:
23      # Construction Cost/Total:
24      # Construction Cost/Total:
25      # Construction Cost/Total:
26      # Construction Cost/Total:
27      # Construction Cost/Total:
28      # Construction Cost/Total:
29      # Construction Cost/Total:
30      # Construction Cost/Total:
31      # Construction Cost/Total:
32      # Construction Cost/Total:
33      # Construction Cost/Total:
34      # Construction Cost/Total:
35      # Construction Cost/Total:
36      # Construction Cost/Total:
37      # Construction Cost/Total:
38      # Construction Cost/Total:
39      # Construction Cost/Total:
40      # Construction Cost/Total:
41      # Construction Cost/Total:
42      # Construction Cost/Total:
43      # Construction Cost/Total:
44      # Construction Cost/Total:
45      # Construction Cost/Total:
46      # Construction Cost/Total:
47      # Construction Cost/Total:
48      # Construction Cost/Total:
49      # Construction Cost/Total:
50      # Construction Cost/Total:
51      # Construction Cost/Total:
52      # Construction Cost/Total:
53      # Construction Cost/Total:
54      # Construction Cost/Total:
55      # Construction Cost/Total:
56      # Construction Cost/Total:
57      # Construction Cost/Total:
58      # Construction Cost/Total:
59      # Construction Cost/Total:
60      # Construction Cost/Total:
61      # Construction Cost/Total:
62      # Construction Cost/Total:
63      # Construction Cost/Total:
64      # Construction Cost/Total:
65      # Construction Cost/Total:
66      # Construction Cost/Total:
67      # Construction Cost/Total:
68      # Construction Cost/Total:
69      # Construction Cost/Total:
70      # Construction Cost/Total:
71      # Construction Cost/Total:
72      # Construction Cost/Total:
73      # Construction Cost/Total:
74      # Construction Cost/Total:
75      # Construction Cost/Total:
76      # Construction Cost/Total:
77      # Construction Cost/Total:
78      # Construction Cost/Total:
79      # Construction Cost/Total:
80      # Construction Cost/Total:
81      # Construction Cost/Total:
82      # Construction Cost/Total:
83      # Construction Cost/Total:
84      # Construction Cost/Total:
85      # Construction Cost/Total:
86      # Construction Cost/Total:
87      # Construction Cost/Total:
88      # Construction Cost/Total:
89      # Construction Cost/Total:
90      # Construction Cost/Total:
91      # Construction Cost/Total:
92      # Construction Cost/Total:
93      # Construction Cost/Total:
94      # Construction Cost/Total:
95      # Construction Cost/Total:
96      # Construction Cost/Total:
97      # Construction Cost/Total:
98      # Construction Cost/Total:
99      # Construction Cost/Total:
100     # Construction Cost/Total:

```

[illegible]

Limitations: Did You Know This?

Census Data

Black or African American alone, percent (a)	9.0%
Female persons, percent	51.5%
Race and Hispanic Origin	
White alone, percent	80.6%
Black or African American alone, percent (a)	9.0%
American Indian and Alaska Native alone, percent (a)	0.5%
Asian alone, percent (a)	7.2%
Native Hawaiian and Other Pacific Islander alone, percent (a)	0.1%
Two or More Races, percent	2.6%
Hispanic or Latino, percent (b)	12.4%
Hispanic or Latino alone, percent (b)	71.1%

Labor Force Statistics from the Current Population Survey

See also [PDF](#) and [XLSX](#) versions of this table.

HOUSEHOLD DATA
ANNUAL AVERAGES
18. Employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity
(Numbers in thousands)

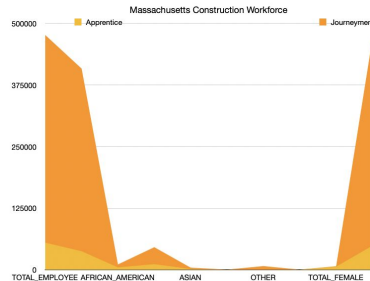
Industry	Total employed	2020 Percent of total employed				
		Women	White	Black or African American	Asian	Hispanic or Latino
Total, 16 years and over	147,795	46.8	78.0	12.1	6.4	17.6
Agriculture, forestry, fishing, and hunting	2,349	27.7	92.4	2.8	1.2	24.2
Crop production	1,186	28.9	92.7	2.2	1.7	30.3
Animal production and aquaculture	832	28.1	92.9	3.3	0.4	17.9
Support activities for agriculture and forestry	145	33.9	90.4	5.7	0.4	26.0
Forestry, except logging	53	25.5	97.8	0.0	0.5	9.9
Logging	88	7.3	89.9	3.8	2.0	13.1
Fishing, hunting, and trapping	45	-	-	-	-	-
Mining, quarrying, and oil and gas extraction	684	14.5	87.2	4.6	4.2	17.8
Oil and gas extraction	97	14.9	80.6	4.1	10.5	13.0
Coal mining	51	10.1	93.1	3.1	0.0	4.2
Metal ore mining	36	-	-	-	-	-
Nonmetallic mineral mining and quarrying	83	10.7	90.4	0.8	2.5	12.7
Not specified type of mining	0	-	-	-	-	-
Support activities for mining	417	15.2	86.5	6.0	3.9	20.7
Construction	10,786	10.9	88.6	6.0	2.0	30.0
Manufacturing	14,550	29.5	79.7	10.3	7.0	17.3
Durable goods manufacturing	9,129	25.4	80.3	9.5	7.4	15.5
Nonmetallic mineral products manufacturing	410	21.3	84.0	8.8	2.4	24.4
Pottery, ceramics, and plumbing fixture manufacturing	17	-	-	-	-	-
Clay building material and refractories manufacturing	38	-	-	-	-	-
Glass and glass product manufacturing	123	22.9	78.9	10.6	4.3	21.8
Cement, concrete, lime, and gypsum product manufacturing	157	12.9	89.3	7.1	2.1	29.8

Next Steps



WorkforceCraftSummaryReport2019

CRAFT_LEVEL	TOTAL_EMPLOYEE	CAUCASIAN	AFRICAN_AMERICAN	HISPANIC	ASIAN	NATIVE_AMERICAN	OTHER	NOT_SPECIFIED	TOTAL_FEMALE	TOTAL_MALE
Apprentice	54893	37508	4592	11191	1476	0	0	128	6110	48784
Journeyman	476507	406302	10690	45692	4122	210	7336	155	7079	469428



INTERESTING OBSERVATIONS

We found interesting patterns in
Apprentice and Journeymen Utilization.

WHY?

How many people of color live in MA?

WHAT IS THE CAUSE?

The contracting office has influence?

The location influences available workforce?

The companies' influence outcomes?

Friendliness of trades to ethnicities and women?

WHAT FACILITATES ANALYSIS?

Additional data source with zip code data.

Resources

Earnings by Occupation

Data series	Wages, 2020			
	Hourly		Annual	
	Median	Mean	Median	Mean
Carpenters	\$23.91	\$26.19	\$49,730	\$54,470
Construction laborers	\$18.38	\$20.92	\$38,220	\$43,520
Construction managers	\$46.09	\$51.02	\$95,870	\$106,120
Electricians	\$26.62	\$29.23	\$55,360	\$60,800
Operating engineers and other construction equipment operators	\$25.04	\$28.11	\$52,090	\$58,470

(Source: [Occupational Employment and Wage Statistics](#))

employment-population ratio



INTRODUCTION AND OVERVIEW OF METHODOLOGY

Tables

List of Reports

Report No. 1 MBE and WBE Payments for Construction Projects FY2020

Report No. 2 MBE and WBE Payments for Design Projects FY2020

Report No. 3 MBE, WBE, and Veteran Prime Payments on DCAMM Projects FY2020

Report No. 4 MBE Payments Distribution in Construction FY2020

Report No. 5 WBE Payments Distribution in Construction FY2020

Report No. 6 MBE Payments Distribution in Design FY2020

Report No. 7 WBE Payments Distribution in Design FY2020

Report No. 8 MBE and WBE Construction Project Awards FY2020

Report No. 9 MBE and WBE Design Project Awards FY2020

Report No. 10 MBE Awards Distribution in Construction Projects FY2020

Report No. 11 WBE Awards Distribution in Construction Projects FY2020

Report No. 12 MBE Awards Distribution in Design Projects FY2020

Report No. 13 WBE Awards Distribution in Design Projects FY2020

Report No. 14 Construction Hours of Employment by ZIP Code FY2020

Report No. 15 Design Hours of Employment by ZIP Code FY2020



Thanks!

WGBH - DCAMM's TEAM

CREDITS: This presentation template was created by Slidesgo,
including icons by Flaticon, and infographics & images by
Freepik.

Please keep this slide for attribution.