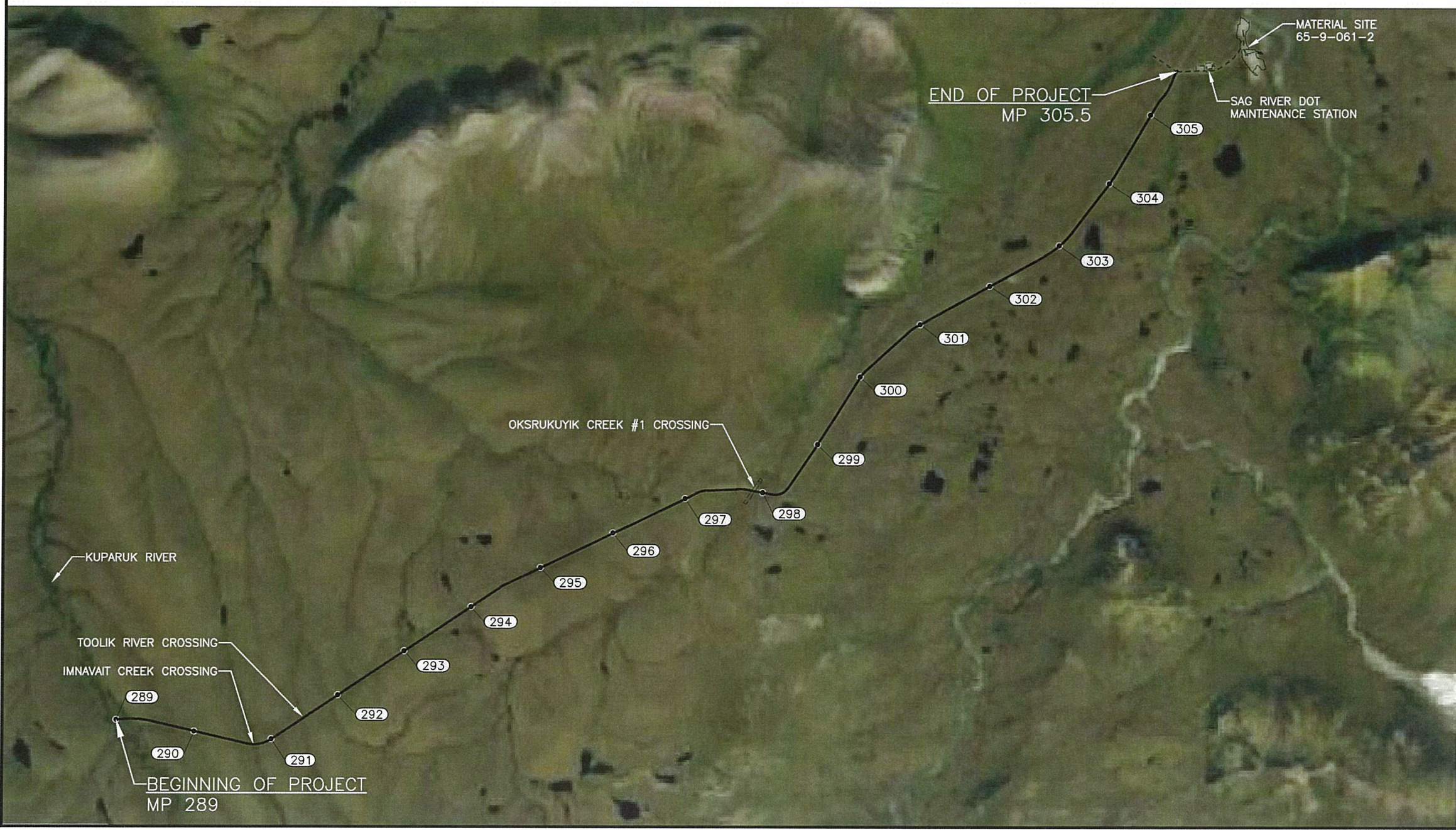


STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
&  
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT  
0656005/Z609130000  
DALTON HIGHWAY MP 289-305 REHABILITATION  
GRADING, DRAINAGE, SURFACING, SIGNING

| NO. | DATE | REVISION | STATE      | PROJECT DESIGNATION | YEAR       | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|------------|---------------------|------------|-----------|--------------|
|     |      |          | ALASKA     | 0656005/Z609130000  | 2020       | A1        | 91           |
|     |      |          | CDS ROUTE: | 150000              | MILEPOINT: | 289 TO    | 305          |

| INDEX OF SHEETS |                                      |
|-----------------|--------------------------------------|
| SHEET NO.       | DESCRIPTION                          |
| A1-A3           | TITLE SHEET, LEGEND, SHEET LAYOUT    |
| B1-B2           | TYPICAL SECTIONS, CULVERT SECTIONS   |
| C1              | ESTIMATE OF QUANTITIES               |
| D1-D3           | CULVERT AND SUPERELEVATION SUMMARIES |
| E1-E3           | DETAILS                              |
| F1-F31          | PLAN & PROFILE                       |
| G1              | APPROACH DETAILS                     |
| H1-H7           | SIGN SUMMARY AND DETAILS             |
| N1-N4           | PIPELINE CROSSING BARRIERS           |
| Q1-Q16          | EROSION AND SEDIMENT CONTROL PLANS   |
| T1              | TRAFFIC CONTROL DEVICES SHEET        |
| V1-V19          | STANDARD PLANS                       |



**CONFORMED COPY**  
THE UNDERSIGNED HEREBY CERTIFIES THAT THIS INSTRUMENT IS AN EXACT AND TRUE COPY OF THE ORIGINAL  
*Stacy McSoley*

THE FOLLOWING STANDARD PLANS APPLY TO THIS PROJECT:  
I-81.00, S-00.12, S-01.02, S-05.02, S-20.10, S-30.05, C-04.12, G-00.05, G-10.20, G14.01, G-20.12, G-32.01, S-31.02, S-32.02.

| DESIGN DESIGNATIONS   |                 |
|-----------------------|-----------------|
| ADT (2017)            | 225             |
| ADT (2050)            | 370             |
| DHV (%)               | 16.5%           |
| PERCENT TRUCKS (T)    | 74%             |
| DIRECTIONAL SPLIT (D) | 40%(SB)/60%(NB) |
| DESIGN SPEED (V)      | 50 MPH          |

| PROJECT SUMMARY       |            |
|-----------------------|------------|
| WIDTH OF TRAVELED WAY | 32 FEET    |
| LENGTH OF PROJECT     | 16.5 MILES |

David K. Fischer, P.E., PROJECT MANAGER

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
&  
PUBLIC FACILITIES

APPROVED BY: *Sarah E. Schacher* DATE 5/7/2021  
Sarah E. Schacher, P.E.  
Preconstruction Engineer, Northern Region

ACCEPTED FOR CONSTRUCTION: *Ryan F. Anderson* DATE 5/7/2021  
Ryan F. Anderson, P.E.  
Regional Director, Northern Region

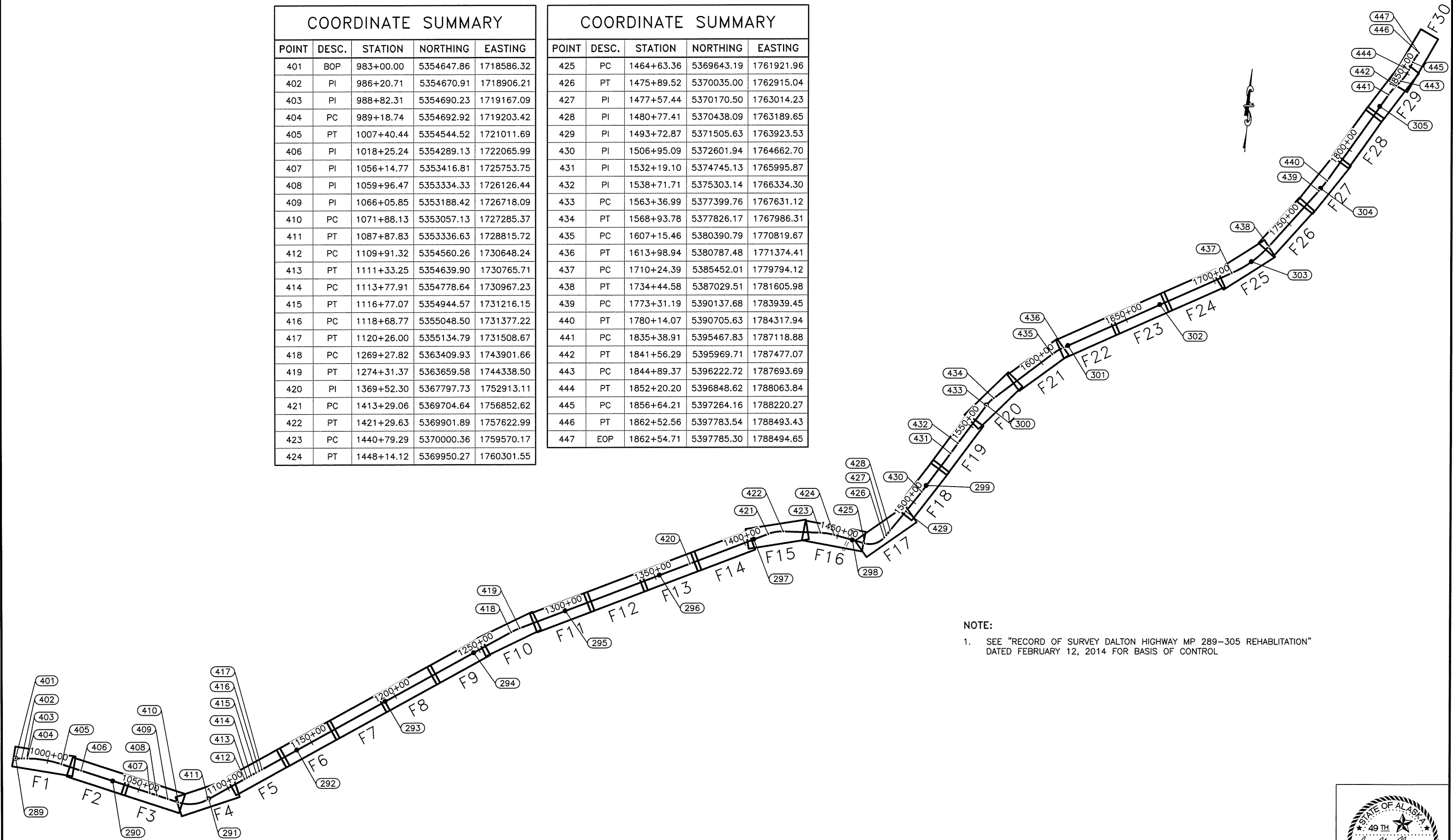
\\pdc.local\dfsinc\Projects\2017\17331\FB-Dalton\MP289-305\C\0000cnsst17331\FB-A1 COVER Tue, Apr/20/21 12:00pm





| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 401                | BOP   | 983+00.00  | 5354647.86 | 1718586.32 |
| 402                | PI    | 986+20.71  | 5354670.91 | 1718906.21 |
| 403                | PI    | 988+82.31  | 5354690.23 | 1719167.09 |
| 404                | PC    | 989+18.74  | 5354692.92 | 1719203.42 |
| 405                | PT    | 1007+40.44 | 5354544.52 | 1721011.69 |
| 406                | PI    | 1018+25.24 | 5354289.13 | 1722065.99 |
| 407                | PI    | 1056+14.77 | 5353416.81 | 1725753.75 |
| 408                | PI    | 1059+96.47 | 5353334.33 | 1726126.44 |
| 409                | PI    | 1066+05.85 | 5353188.42 | 1726718.09 |
| 410                | PC    | 1071+88.13 | 5353057.13 | 1727285.37 |
| 411                | PT    | 1087+87.83 | 5353336.63 | 1728815.72 |
| 412                | PC    | 1109+91.32 | 5354560.26 | 1730648.24 |
| 413                | PT    | 1111+33.25 | 5354639.90 | 1730765.71 |
| 414                | PC    | 1113+77.91 | 5354778.64 | 1730967.23 |
| 415                | PT    | 1116+77.07 | 5354944.57 | 1731216.15 |
| 416                | PC    | 1118+68.77 | 5355048.50 | 1731377.22 |
| 417                | PT    | 1120+26.00 | 5355134.79 | 1731508.67 |
| 418                | PC    | 1269+27.82 | 5363409.93 | 1743901.66 |
| 419                | PT    | 1274+31.37 | 5363659.58 | 1744338.50 |
| 420                | PI    | 1369+52.30 | 5367797.73 | 1752913.11 |
| 421                | PC    | 1413+29.06 | 5369704.64 | 1756852.62 |
| 422                | PT    | 1421+29.63 | 5369901.89 | 1757622.99 |
| 423                | PC    | 1440+79.29 | 5370000.36 | 1759570.17 |
| 424                | PT    | 1448+14.12 | 5369950.27 | 1760301.55 |

| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 425                | PC    | 1464+63.36 | 5369643.19 | 1761921.96 |
| 426                | PT    | 1475+89.52 | 5370035.00 | 1762915.04 |
| 427                | PI    | 1477+57.44 | 5370170.50 | 1763014.23 |
| 428                | PI    | 1480+77.41 | 5370438.09 | 1763189.65 |
| 429                | PI    | 1493+72.87 | 5371505.63 | 1763923.53 |
| 430                | PI    | 1506+95.09 | 5372601.94 | 1764662.70 |
| 431                | PI    | 1532+19.10 | 5374745.13 | 1765995.87 |
| 432                | PI    | 1538+71.71 | 5375303.14 | 1766334.30 |
| 433                | PC    | 1563+36.99 | 5377399.76 | 1767631.12 |
| 434                | PT    | 1568+93.78 | 5377826.17 | 1767986.31 |
| 435                | PC    | 1607+15.46 | 5380390.79 | 1770819.67 |
| 436                | PT    | 1613+98.94 | 5380787.48 | 1771374.41 |
| 437                | PC    | 1710+24.39 | 5385452.01 | 1779794.12 |
| 438                | PT    | 1734+44.58 | 5387029.51 | 1781605.98 |
| 439                | PC    | 1773+31.19 | 5390137.68 | 1783939.45 |
| 440                | PT    | 1780+14.07 | 5390705.63 | 1784317.94 |
| 441                | PC    | 1835+38.91 | 5395467.83 | 1787118.88 |
| 442                | PT    | 1841+56.29 | 5395969.71 | 1787477.07 |
| 443                | PC    | 1844+89.37 | 5396222.72 | 1787693.69 |
| 444                | PT    | 1852+20.20 | 5396848.62 | 1788063.84 |
| 445                | PC    | 1856+64.21 | 5397264.16 | 1788220.27 |
| 446                | PT    | 1862+52.56 | 5397783.54 | 1788493.43 |
| 447                | EOP   | 1862+54.71 | 5397785.30 | 1788494.65 |



NOTE:  
 1. SEE "RECORD OF SURVEY DALTON HIGHWAY MP 289-305 REHABILITATION" DATED FEBRUARY 12, 2014 FOR BASIS OF CONTROL

P:\2017\17331FB-DaltonMP289-305\C00001.dwg 17331FB-A3 SHEET LAYOUT Tue Apr/20/21 10:57am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: ACC6805, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

SHEET LAYOUT



ADDENDUM NO. 2, ATTACHMENT NO. 2

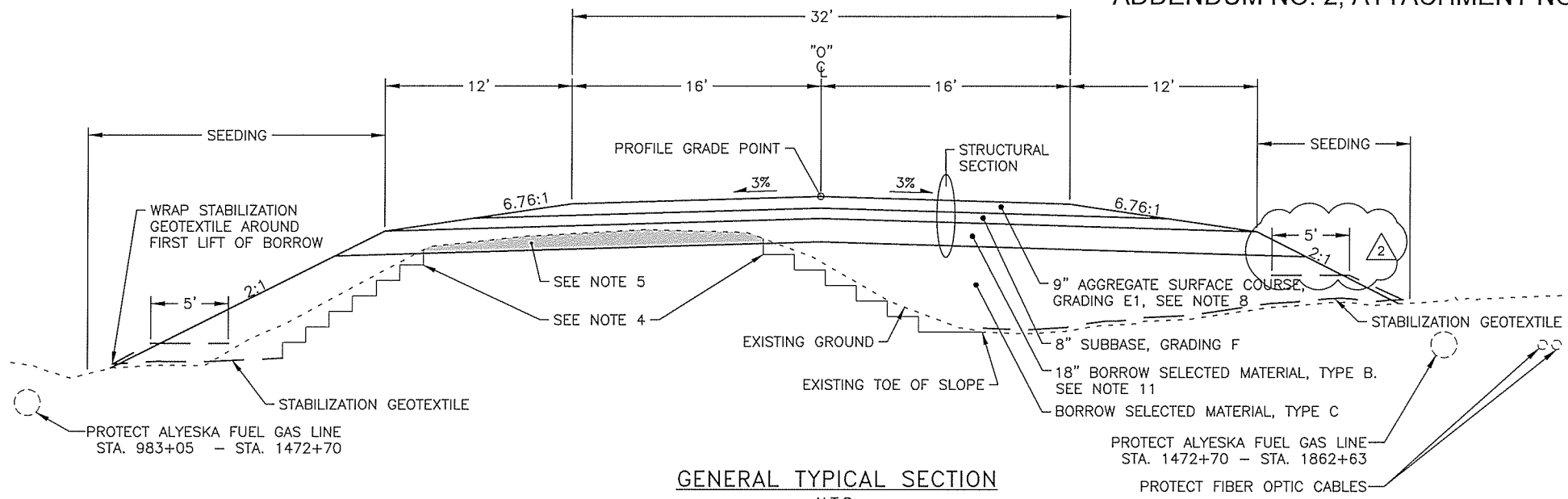
| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 2   | 6/17/21 | ADDENDUM 2 | ALASKA | 0656005/Z609130000  | 2021 | B1        | B2           |

TYPICAL SECTION NOTES:

1. THE DESIGN FORESLOPE IS 2:1, WHERE THE PROPOSED TOE WOULD FALL WITHIN 7 FEET OF THE GAS LINE (SEE SLOPE WARPING SUMMARY TABLE), FLATTEN THE SIDESLOPE SUCH THAT THERE IS AN ADDITIONAL 2 FEET OF FILL MATERIAL OVER THE LOCATION OF THE GAS LINE.
2. TRANSITION EMBANKMENT SLOPES AT WARPING AREAS OVER 20 FEET OR AS DIRECTED BY THE ENGINEER.
3. COMPACTION OVER THE GAS LINE SHALL BE DONE WITH SMALL VIBRATORY PLATES OR VIBRATORY ROLLERS NOT EXCEEDING 10 TONS.
4. BENCH THE EXISTING ROADWAY EMBANKMENT PER SECTION 203-3.03.
5. CUT EXISTING ROAD WHERE NECESSARY TO ALLOW FOR 18 INCHES OF SELECTED MATERIAL, TYPE B. SPREAD EXISTING EMBANKMENT AS REQUIRED TO PROVIDE SPACE FOR STRUCTURAL SECTION.
6. DO NOT STRIP EXISTING VEGETATION. PLACE FILL OVER INTACT VEGETATION IN WIDENED AREAS AND AREAS OF REALIGNMENT.
7. ANY MATERIAL HAUL THAT IS REQUIRED AS A RESULT OF BENCHING AND/OR SPREADING OPERATIONS IS SUBSIDIARY TO ITEM 203.0019.0000 UNCLASSIFIED EXCAVATION.
8. INCREASE AGGREGATE SURFACE COURSE, GRADING E-1 TO 10 INCHES AT MOMENT SLAB. STATION 1006+30.5 TO 1006+95.5.
9. THE ALIGNMENT AND PROFILE ARE SUBJECT TO MINOR REVISIONS AT THE LARGE DIAMETER CULVERT CROSSINGS AT THE ENGINEERS DIRECTION TO MATCH THE FACE OF THE EXISTING CULVERTS.
10. RE-GRADE SECTION FROM BEGIN PROJECT "O" 983+00 TO BEGIN BRIDGE "O" 985+35.69 AND END BRIDGE "O" 986+20.71 TO START TYPICAL FULL SECTION "O" 986+40.
11. OMIT BORROW, TYPE B FROM STATION 1006+30.5 TO 1006+95.5 AT PIPELINE CROSSING, EXCAVATE ONLY TO BOTTOM OF MOMENT SLAB.
12. APPLY CALCIUM CHLORIDE TO SURFACE OF AGGREGATE SURFACE COURSE E-1.
13. PAY ITEM 630.0002.0001 GEOTEXTILE, STABILIZATION CLASS 1 INCLUDES QUANTITY FOR WRAPPING FIRST LIFT OF BORROW. WRAPPING APPLIES TO BOTH PROJECT RIGHT AND LEFT.

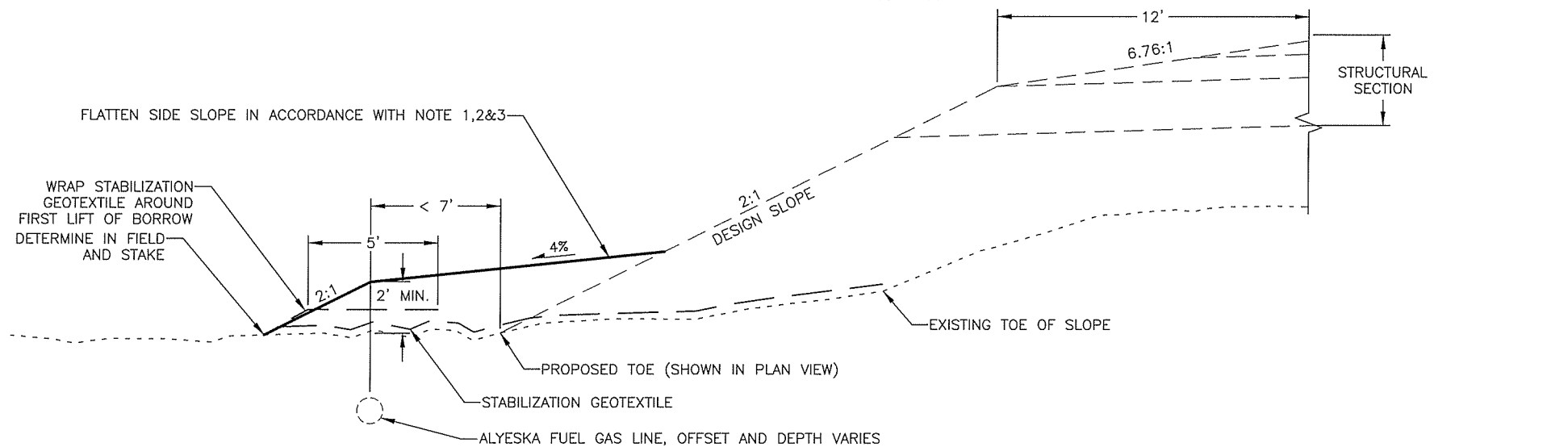
UTILITY NOTES:

1. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE.
2. PRIOR TO GROUND DISTURBING ACTIVITIES THE CONTRACTOR SHALL CONTACT AND COORDINATE WORK ACTIVITIES WITH ALYESKA PIPELINE SERVICE COMPANY.



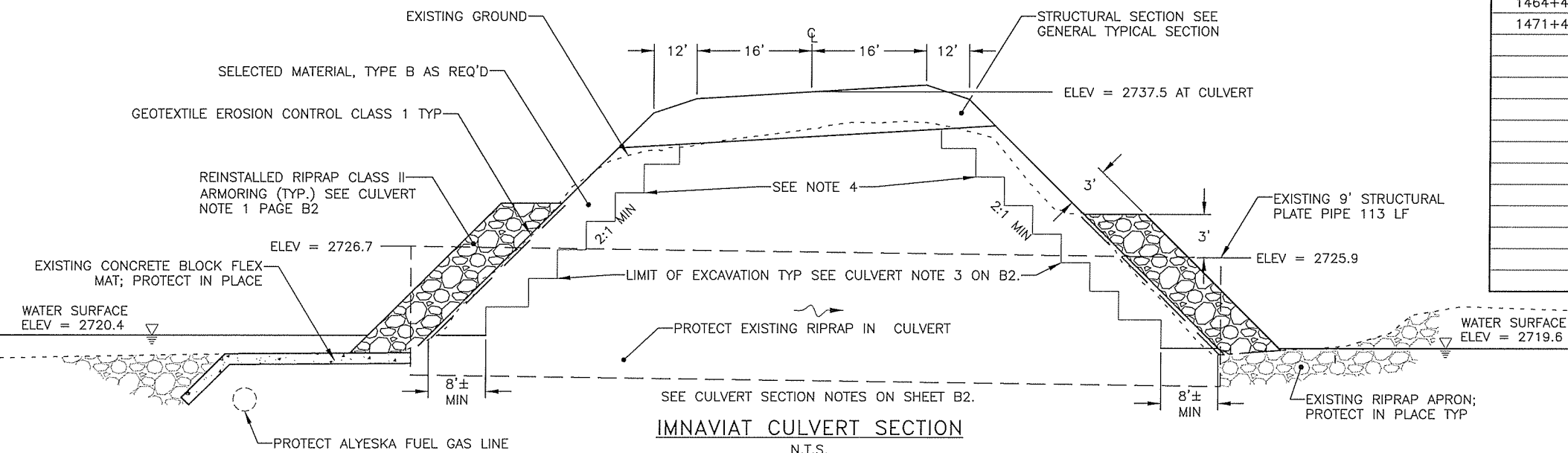
GENERAL TYPICAL SECTION

N.T.S.  
"O" 986+40 - "O" 1857+50



ALYESKA FUEL GASLINE SLOPE WARP DETAIL

N.T.S.



IMNAVIAT CULVERT SECTION

N.T.S.  
"O" 1078+36 - "O" 1078+80

SLOPE WARPING SUMMARY TABLE

| START STATION | END STATION | LENGTH (FT) | RT/LT | START STATION | END STATION | LENGTH (FT) | RT/LT |
|---------------|-------------|-------------|-------|---------------|-------------|-------------|-------|
| 1080+43       | 1083+42     | 299         | LT    | 1472+69       | 1473+00     | 31          | RT    |
| 1108+50       | 1112+25     | 375         | LT    | 1477+00       | 1477+75     | 75          | RT    |
| 1135+75       | 1140+25     | 450         | LT    | 1478+00       | 1479+25     | 125         | RT    |
| 1145+50       | 1148+77     | 327         | LT    | 1481+00       | 1481+75     | 75          | RT    |
| 1215+50       | 1221+25     | 575         | LT    | 1482+00       | 1482+50     | 50          | RT    |
| 1321+75       | 1322+50     | 75          | LT    | 1489+75       | 1490+25     | 50          | RT    |
| 1402+75       | 1403+25     | 50          | LT    | 1491+00       | 1491+75     | 75          | RT    |
| 1404+00       | 1404+50     | 50          | LT    | 1493+25       | 1493+75     | 50          | RT    |
| 1411+75       | 1417+25     | 550         | LT    | 1494+75       | 1496+50     | 175         | RT    |
| 1421+18       | 1424+75     | 357         | LT    | 1499+77       | 1501+00     | 123         | RT    |
| 1445+50       | 1446+13     | 63          | LT    | 1502+25       | 1503+50     | 125         | RT    |
| 1450+75       | 1451+38     | 63          | LT    | 1527+00       | 1530+25     | 325         | RT    |
| 1453+31       | 1454+00     | 69          | LT    | 1586+00       | 1587+50     | 150         | RT    |
| 1455+45       | 1459+80     | 436         | LT    | 1588+00       | 1588+75     | 75          | RT    |
| 1460+40       | 1461+32     | 93          | LT    | 1604+00       | 1607+00     | 300         | RT    |
| 1464+46       | 1465+50     | 104         | LT    | 1664+75       | 1666+25     | 150         | RT    |
| 1471+49       | 1472+08     | 59          | LT    | 1675+50       | 1677+50     | 200         | RT    |
|               | TOTAL LT    | 3,994       |       | 1710+75       | 1711+18     | 43          | RT    |
|               |             |             |       | 1711+50       | 1712+50     | 100         | RT    |
|               |             |             |       | 1713+50       | 1714+25     | 75          | RT    |
|               |             |             |       | 1737+25       | 1739+00     | 175         | RT    |
|               |             |             |       | 1794+75       | 1795+25     | 50          | RT    |
|               |             |             |       | 1796+25       | 1798+25     | 200         | RT    |
|               |             |             |       | 1801+00       | 1803+25     | 225         | RT    |
|               |             |             |       | 1804+50       | 1805+25     | 75          | RT    |
|               |             |             |       | 1831+75       | 1832+18     | 43          | RT    |
|               |             |             |       | 1832+59       | 1835+75     | 316         | RT    |
|               |             |             |       | 1851+25       | 1853+00     | 175         | RT    |
|               |             |             |       | TOTAL RT      |             | 3,599       |       |

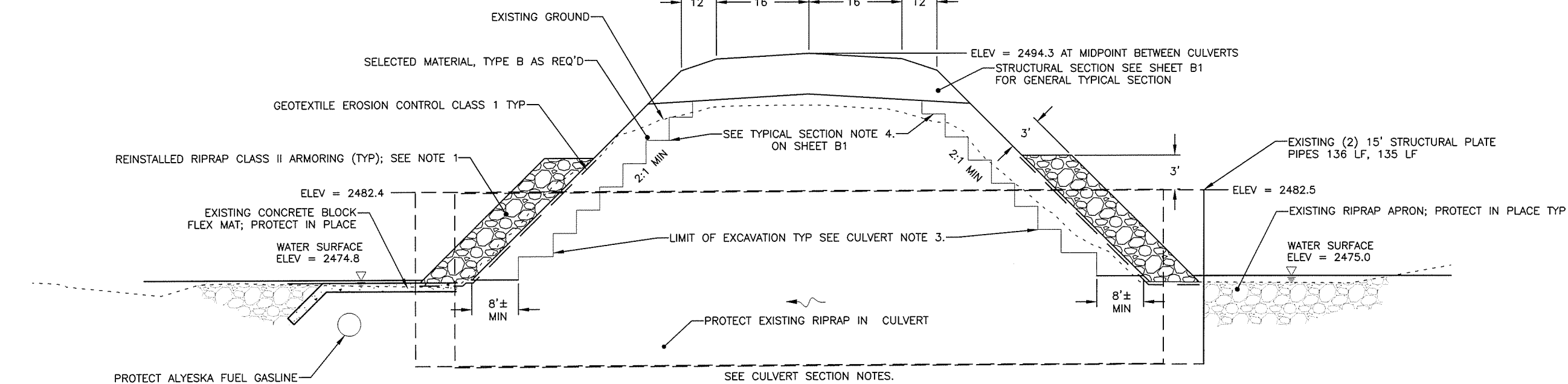
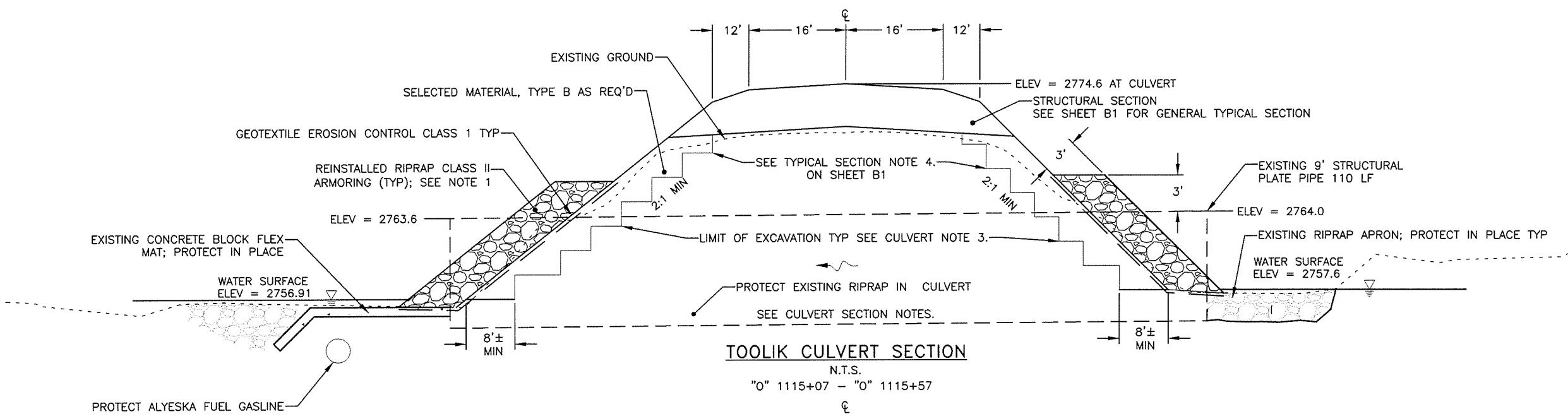
TYPICAL SECTION



P:\2017\17331FB-Dalton\MP289-305\C\3001\cns17331FB-B1 TYPICAL SECTION Thu, Jun/17/21 03:44pm  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | B2        | B2           |



**CULVERT SECTION NOTES:**

1. EXISTING RIPRAP ARMORING ABOVE THE EXISTING RIPRAP APRON SHALL BE REMOVED AND STOCKPILED PRIOR TO EMBANKMENT CONSTRUCTION AND INSTALLATION OF GEOTEXTILE. ADDITIONAL RIPRAP MATERIAL SHALL BE USED IF THE EXISTING MATERIAL IS NOT SUFFICIENT TO MEET THE DIMENSIONS SHOWN.
2. GEOTEXTILE EROSION CONTROL SHALL BE PLACED ALONG THE EMBANKMENT SLOPE AND EXCAVATED SURFACE PRIOR TO THE REINSTALLATION OF RIPRAP ARMORING.
3. EXCAVATION OF EXISTING EMBANKMENT MATERIAL SHALL BE LIMITED TO MATERIAL ABOVE THE EXISTING RIPRAP APRON ELEVATION.
4. PROPOSED EMBANKMENT TOE NOT TO EXTEND PAST THE EXISTING FACE OF CULVERT.
5. WATER SURFACE ELEVATIONS FROM AUGUST 2013 AERIAL MAPPING.

CULVERT SECTIONS



P:\2017\17331FB-DaltonMP289-305\C\3001\cmk17331fb-B2\_CULVERT\_SECTIONS\_Tue\_Apr/20/21\_10:57am PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: ACC0605. 1028 AURORA DRIVE, FAIRBANKS, AK 99709. (907)452-1414

ADDENDUM NO. 3, ATTACHMENT NO. 3

| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 1   | 6/15/21 | ADDENDUM 1 | ALASKA | 0656005/Z609130000  | 2021 | C1        | C1           |
| 2   | 6/18/21 | ADDENDUM 2 |        |                     |      |           |              |
| 3   | 6/21/21 | ADDENDUM 3 |        |                     |      |           |              |

| ESTIMATE OF QUANTITIES |  |                |           |
|------------------------|--|----------------|-----------|
| ITEM NO.               | ITEM DESCRIPTION   | PAY UNIT       | QUANTITY  |
| 202.0017.0000          | REMOVAL OF CULVERT PIPE  | EACH           | 69        |
| 203.0006.0000          | BORROW   | TON            | 1,149,000 |
| 203.0019.0000          | UNCLASSIFIED EXCAVATION  | LUMP SUM       | ALL REQ'D |
| 204.2002.0000          | EMBEDMENT MATERIAL   | CUBIC YARD     | 2,600     |
| 301.0003.00E1          | AGGREGATE SURFACE COURSE, GRADING E-1                          | TON            | 192,500   |
| 304.0001.000F          | SUBBASE, GRADING F   | TON            | 229,000   |
| 501.0001.0000          | CLASS A CONCRETE   | LUMP SUM       | ALL REQ'D |
| 503.0002.0000          | EPOXY-COATED REINFORCING STEEL                                 | LUMP SUM       | ALL REQ'D |
| 507.0001.0002          | STEEL BRIDGE RAILING, 2-TUBE                                   | LINEAR FEET    | 76        |
| 603.0001.0024          | CSP 24 INCH  | LINEAR FEET    | 2,742     |
| 603.0001.0036          | CSP 36 INCH  | LINEAR FEET    | 3,364     |
| 603.0001.0048          | CSP 48 INCH  | LINEAR FEET    | 320       |
| 606.0001.0000          | W-BEAM GUARDRAIL   | LINEAR FEET    | 200       |
| 606.0006.0000          | REMOVING AND DISPOSING OF GUARDRAIL                            | LINEAR FEET    | 593       |
| 606.0013.0000          | PARALLEL GUARDRAIL TERMINAL                                    | EACH           | 4         |
| 606.0016.0000          | TRANSITION RAIL  | EACH           | 4         |
| 611.0001.0001          | RIPRAP, CLASS 1  | CUBIC YARD     | 220       |
| 611.2005.0000          | SALVAGE AND REUSE RIPRAP                                       | LUMP SUM       | ALL REQ'D |
| 613.0002.0000          | CULVERT MARKER POST  | EACH           | 140       |
| 615.0001.0000          | STANDARD SIGN  | SQUARE FEET    | 361       |
| 615.0002.0000          | REMOVE AND RELOCATE SIGN                                       | EACH           | 28        |
| 615.2004.0000          | DELINEATOR, RIGID 2021 WORK                                    | LUMP SUM       | ALL REQ'D |
| 616.0002.0050          | THAW PIPE 1/2 INCH DIAMETER                                    | EACH           | 70        |
| 618.0001.0000          | SEEDING  | ACRE           | 80        |
| 624.0001.0000          | CALCIUM CHLORIDE   | TON            | 283       |
| 630.0002.0001          | GEOTEXTILE, STABILIZATION CLASS 1                              | SQUARE YARD    | 315,600   |
| 631.0002.0001          | GEOTEXTILE, EROSION CONTROL, CLASS 1                           | SQUARE YARD    | 936       |
| 639.2000.0000          | APPROACH   | EACH           | 24        |
| 640.0001.0000          | MOBLIZATION AND DEMOBILIZATION                                 | LUMP SUM       | ALL REQ'D |
| 640.2004.0000          | CONTRACTOR CAMP  | LUMP SUM       | ALL REQ'D |
| 640.2015.0000          | MEALS  | DAY            | 3,000     |
| 640.2004.0002          | LODGING  | DAY            | 3,000     |
| 641.0001.0000          | EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION         | LUMP SUM       | ALL REQ'D |
| 641.0003.0000          | TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL              | LUMP SUM       | ALL REQ'D |
| 641.0005.0000          | TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE | CONTINGENT SUM | ALL REQ'D |
| 641.0006.0000          | WITHOLDINGS  | CONTINGENT SUM | ALL REQ'D |

|               |   |                |           |
|---------------|---|----------------|-----------|
| 641.0007.0000 | SWPPP MANAGER                           | LUMP SUM       | ALL REQ'D |
| 642.0001.0000 | CONSTRUCTION SURVEYING                  | LUMP SUM       | ALL REQ'D |
| 642.0013.0000 | THREE PERSON SURVEY PARTY               | CONTINGENT SUM | ALL REQ'D |
| 643.0002.0000 | TRAFFIC MAINTENANCE                     | LUMP SUM       | ALL REQ'D |
| 643.0025.0000 | TRAFFIC CONTROL                         | CONTINGENT SUM | ALL REQ'D |
| 644.0001.0000 | FIELD OFFICE                            | LUMP SUM       | ALL REQ'D |
| 644.0002.0000 | FIELD LABORATORY                        | LUMP SUM       | ALL REQ'D |
| 644.0006.0000 | VEHICLE                                 | LUMP SUM       | ALL REQ'D |
| 644.0015.0000 | NUCLEAR TESTING EQUIPMENT STORAGE SHED  | EACH           | 1         |
| 644.2002.0000 | FIELD COMMUNICATIONS                    | CONTINGENT SUM | ALL REQ'D |
| 645.0001.0000 | TRAINING PROGRAM, 4 TRANEES/APPRENTICES | LABOR HOUR     | 2,000     |
| 652.0001.0000 | INTERIM WORK PRICE ADJUSTMENT           | CONTINGENT SUM | ALL REQ'D |

| ESTIMATING FACTORS |                                       |                        |
|--------------------|---------------------------------------|------------------------|
| ITEM NUMBER        | ITEM                                  | FACTOR                 |
| 203.0006.0000      | BORROW                                | 2 TONS/CUBIC YARD      |
| 30.0003.00E1       | AGGREGATE SURFACE COURSE, GRADING E-1 | 1.96 TONS/CUBIC YARD   |
| 304.0001.000F      | SUBBASE, GRADING F                    | 2 TONS/CUBIC YARD      |
| 624.0001.0000      | CALCIUM CHLORIDE                      | 1.5 POUNDS/SQUARE YARD |

| ESTIMATED LUMP SUM QUANTITIES |                                   |                    |
|-------------------------------|-----------------------------------|--------------------|
| ITEM NUMBER                   | ITEM                              | FACTOR             |
| 203.0019.0000                 | UNCLASSIFIED EXCAVATION           | 63,335 CUBIC YARDS |
| 611.2005.0004                 | SALVAGE AND REUSE EXISTING RIPRAP | 940 CUBIC YARDS    |
| 615.2004.0000                 | DELINEATOR, RIGID 2021 WORK       | 875 EACH           |

SHEET NOTES:

- DEPARTMENT WILL CONDUCT PRE-CONSTRUCTION SURVEY OF EXISTING ROAD TO DETERMINE AMOUNT OF SETTLEMENT SINCE 2013 LIDAR SURVEY. THE PROPOSED PROFILE MAY BE LOWERED TO ACCOUNT FOR SETTLEMENT AND MATCH PLAN QUANTITIES SHOWING IN ENGINEERS ESTIMATE.

\\pdc.local\dfsamc\Projects\2017\17331FB-DillonMP289-305\C\0002const\17331FB-C1 ESTIMATE OF QUANTITIES Mon, Jun/21/21 09:13am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

ESTIMATE OF QUANTITIES





ADDENDUM NO. 1, ATTACHMENT NO. 3

| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 1   | 6/15/21 | ADDENDUM 1 | ALASKA | 0656005/Z609130000  | 2021 | D1        | D3           |

CULVERT SUMMARY

| PIPE NO.    | STATION | CULVERT REMOVAL | LT/C/RT | DIAMETER |      |     | INVERT  |         | 613.0002.0000<br>CULVERT<br>MARKER POST | 616.0002.0050<br>1/2" CULVERT<br>THAW PIPE | SKEW ANGLE     | AS-BUILT CENTERLINE<br>LOCATION ** |          |                                      | REMARKS |
|-------------|---------|-----------------|---------|----------|------|-----|---------|---------|---|--|----------------|------------------------------------|----------|--------------------------------------|---------|
|             |         |                 |         | 24"      | 36"  | 48" | LEFT    | RIGHT   |   |  |                | STATION                            | LATITUDE | LONGITUDE                            |         |
| 1           | 989+56  | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |                                    |          |                                      |         |
| 2           | 989+63  | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |                                    |          |                                      |         |
| 3           | 990+02  | NO              | C       |          |      | 100 | 2414.53 | 2417.52 | YES                                     | YES  | 30 RT AH       |                                    |          |                                      |         |
| 4           | 993+56  | YES             | C       |          |      | 90  | 2418.48 | 2419.61 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 5           | 993+81  | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  | N/A            |                                    |          |                                      |         |
| 6           | 1003+79 | YES             | C       |          | 152  |     | 2467.74 | 2455.84 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 7           | 1020+64 | YES             | C       | 90       |      |     | 2540.94 | 2544.74 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 8           | 1023+57 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  | N/A            |                                    |          |                                      |         |
| 9           | 1033+46 | YES             | C       |          | 94   |     | 2594.25 | 2591.58 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 10          | 1035+76 | YES             | C       |          | 98   |     | 2609.30 | 2603.71 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 11          | 1065+23 | YES             | RT      | 72       |      |     | 2820.18 | 2816.15 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 12          | 1070+06 | YES             | C       |          | 104  |     | 2774.51 | 2784.56 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 13          | 1078+71 | N/A             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  | N/A            |                                    |          | IMNAVAIT CREEK - 9' ROUND MULTIPLATE |         |
| 14          | 1081+39 | YES             | C       |          | 120  |     | 2728.33 | 2729.04 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 15          | 1097+36 | YES             | C       |          | 76   |     | 2788.55 | 2790.60 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 16          | 1115+30 | N/A             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  | N/A            |                                    |          | TOOLIK RIVER - 9' ROUND MULTIPLATE   |         |
| 17          | 1116+54 | YES             | C       |          | 110  |     | 2758.83 | 2761.38 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 18          | 1137+29 | YES             | C       |          | 130  |     | 2784.83 | 2786.31 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 19          | 1152+80 | YES             | C       | 86       |      |     | 2786.61 | 2790.58 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 20          | 1157+42 | NO              | C       | 66       |      |     | 2782.51 | 2783.37 | YES                                     | YES  | NO SKEW        |                                    |          |                                      |         |
| 21          | 1161+28 | YES             | C       |          | 92   |     | 2778.60 | 2779.92 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 22          | 1164+23 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  | N/A            |                                    |          |                                      |         |
| 23          | 1170+18 | YES             | C       |          | 86   |     | 2761.86 | 2763.27 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 24          | 1174+22 | YES             | C       | 64       |      |     | 2759.08 | 2760.39 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 25          | 1177+96 | YES             | C       |          | 106  |     | 2754.78 | 2756.75 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 26          | 1181+34 | YES             | C       |          | 78   |     | 2752.00 | 2753.49 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 27          | 1202+90 | NO              | C       |          | 82   |     | 2732.63 | 2733.22 | YES                                     | YES  | NO SKEW        |                                    |          |                                      |         |
| 28          | 1219+97 | NO              | C       |          | 114  |     | 2698.65 | 2697.09 | YES                                     | YES  | 18 LT AH       |                                    |          |                                      |         |
| 29          | 1220+12 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  | N/A            |                                    |          |                                      |         |
| 30          | 1229+92 | YES             | C       |          | 120  |     | 2693.21 | 2691.18 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 31          | 1242+44 | YES             | C       |          | 80   |     | 2678.76 | 2678.23 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 32          | 1245+77 | NO              | C       |          | 80   |     | 2680.43 | 2678.80 | YES                                     | YES  | 23 LT AH       |                                    |          |                                      |         |
| 33          | 1291+03 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  | N/A            |                                    |          |                                      |         |
| 34          | 1291+49 | NO              | C       |          | 92   |     | 2696.66 | 2697.74 | YES                                     | YES  | 27 LT AH       |                                    |          |                                      |         |
| 35          | 1298+41 | YES             | C       | 96       |      |     | 2687.19 | 2688.74 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 36          | 1301+98 | YES             | C       |          | 106  |     | 2682.62 | 2681.51 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 37          | 1308+73 | YES             | C       |          | 108  |     | 2670.14 | 2668.55 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 38          | 1316+09 | YES             | C       |          | 98   |     | 2650.57 | 2652.66 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 39          | 1319+92 | YES             | C       |          | 108  |     | 2642.29 | 2644.74 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 40          | 1327+87 | YES             | C       |          | 100  |     | 2632.40 | 2631.86 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 41          | 1331+61 | YES             | C       |          | 88   |     | 2629.25 | 2629.38 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 42          | 1349+70 | YES             | C       |          | 98   |     | 2618.61 | 2618.06 | YES                                     | YES  | MATCH EXISTING |                                    |          |                                      |         |
| 43          | 1355+49 | YES             | C       |          | 90   |     | 2608.29 | 2606.44 | YES                                     | YES  | 34 RT AH       |                                    |          |                                      |         |
| SHEET TOTAL |         | 35              |         | 474      | 2480 | 320 |         |         | 68                                      |  | 34             |                                    |          |                                      |         |

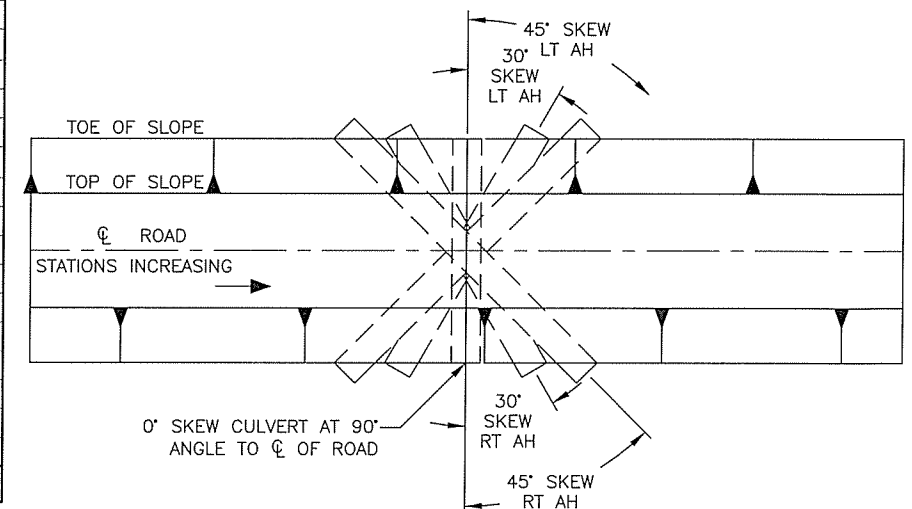
CULVERT NOTES:

- INSTALL THAW PIPES AT LOCATIONS SHOWN IN THE SUMMARY ACCORDING TO DETAILS ON SHEET E2.
- NEW CULVERT MARKER POSTS MUST BE INSTALLED ON CULVERTS AS SHOWN IN THE SUMMARY. ACCORDING TO DETAILS ON SHEET E1.
- REMOVAL OF EXISTING CULVERTS SHALL BE SUBSIDIARY TO 603 PAY ITEMS.
- ALL 36" CSP AND LARGER PIPE SHALL BE 10 GAGE. ALL 24" CSP PIPE SHALL BE 12 GAGE.
- MAINTAIN MINIMUM OF 1 FOOT COVER OVER CULVERT. HUMPING EMBANKMENT OVER CULVERT MAY BE NECESSARY TO MAINTAIN COVER.

DRAINAGE NOTES:

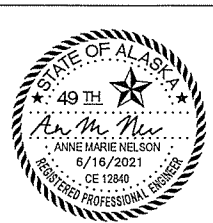
- CULVERT LENGTHS, SKEW, AND LOCATIONS ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. ALL CULVERTS SHALL BE FIELD STAKED BASED UPON FINAL ROADWAY ELEVATION AND WIDTH.
- CULVERT LENGTHS ARE APPROXIMATE. CONTRACTOR MUST FIELD VERIFY LENGTHS AND ADJUST AS NECESSARY AND AS DIRECTED BY THE ENGINEER.
- HAND CLEAR ALL BRUSH AROUND INLETS/OUTLETS AS DIRECTED BY THE ENGINEER. THIS WORK IS SUBSIDIARY TO 603 PAY ITEMS.

\*\* THE CONTRACTOR SHALL ENTER AS-BUILT LOCATIONS FOR ALL CULVERTS IN THE CULVERT SUMMARY TABLE. COORDINATES SHALL BE LOCATED AT THE INTERSECTION OF THE CULVERT AND ROAD CENTERLINE. USE NAD83 DATUM FORMATTED TO DEGREES, MINUTES, SECONDS TO A PRECISION OF 2 DECIMAL PLACES (DDD' MM' SS.SS"). THIS WORK IS SUBSIDIARY TO 603 SERIES PAY ITEMS.



CULVERT SKEW

CULVERT SUMMARY



\\pdc-local\dfs\Projects\2017\17331FB-DaitonMP289-305\C-e4003mst17331fb-D1\_CULVERT SUMMARY Wed Jun/16/21 09:13am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

ADDENDUM NO. 1, ATTACHMENT NO. 4

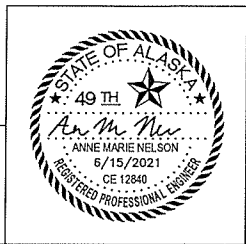
|     |         |            |        |                     |      |           |              |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
| 1   | 6/15/21 | ADDENDUM 1 | ALASKA | 0656005/Z609130000  | 2021 | D2        | D3           |

CULVERT SUMMARY

| PIPE NO.      | STATION | CULVERT REMOVAL | LT/C/RT | DIAMETER |      |     | INVERT  |         | 613.0002.0000<br>CULVERT<br>MARKER POST | 616.0002.0050<br>1/2" CULVERT<br>THAW PIPE | SKEW ANGLE     | AS-BUILT<br>LT<br>CENTE<br>RLINE<br>LOCATI<br>ON ** | LATITUDE | LONGITUDE                             | REMARKS |
|---------------|---------|-----------------|---------|----------|------|-----|---------|---------|---|--|----------------|---|----------|---------------------------------------|---------|
|               |         |                 |         | 24"      | 36"  | 48" | LEFT    | RIGHT   |   |  |                |   |          |                                       |         |
| 44            | 1376+91 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 45            | 1377+21 | NO              | C       |          | 92   |     | 2568.78 | 2568.39 | YES                                     | YES  | 33 RT AH       |   |          |                                       |         |
| 46            | 1380+28 | NO              | C       |          | 88   |     | 2567.70 | 2567.43 | YES                                     | YES  | 3 LT AH        |   |          |                                       |         |
| 47            | 1380+49 | YES             | C       | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 48            | 1384+61 | YES             | C       |          | 82   |     | 2569.64 | 2569.23 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 49            | 1407+84 | YES             | RT      |          | 60   |     | 2645.30 | 2647.50 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 50            | 1430+89 | NO              | LT      |          | 42   |     | 2576.02 | 2573.54 | YES                                     | YES  | 79RT AH        |   |          |                                       |         |
| 51            | 1437+70 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 52            | 1438+12 | NO              | C       |          | 80   |     | 2527.02 | 2524.17 | YES                                     | YES  | 3 RT AH        |   |          |                                       |         |
| 53            | 1438+83 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 54            | 1440+44 | NO              | C       |          | 76   |     | 2520.90 | 2519.02 | YES                                     | YES  | 20 RT AH       |   |          |                                       |         |
| 55            | 1452+37 | N/A             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          | OKSrukuyik Creek - Two 15' Multiplate |         |
| 56            | 1458+82 | YES             | C       |          | 88   |     | 2503.63 | 2512.43 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 57            | 1464+68 | YES             | C       |          | 114  |     | 2521.32 | 2532.31 | YES                                     | YES  | 35 RT AH       |   |          |                                       |         |
| 58            | 1482+47 | YES             | C       |          | 90   |     | 2539.81 | 2535.06 | YES                                     | YES  | 25 RT AH       |   |          |                                       |         |
| 59            | 1503+19 | YES             | C       |          | 90   |     | 2453.65 | 2444.76 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 60            | 1507+76 | NO              | C       |          | 90   |     | 2432.36 | 2424.20 | YES                                     | YES  | 19 RT AH       |   |          |                                       |         |
| 61            | 1508+35 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 62            | 1515+23 | YES             | C       |          | 84   |     | 2405.79 | 2401.05 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 63            | 1530+09 | YES             | C       |          | 92   |     | 2340.36 | 2329.60 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 64            | 1540+47 | YES             | C       |          | 98   |     | 2291.35 | 2280.96 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 65            | 1548+26 | YES             | C       |          | 86   |     | 2265.08 | 2258.43 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 66            | 1555+82 | YES             | C       |          | 80   |     | 2246.70 | 2239.32 | YES                                     | YES  | 23 RT AH       |   |          |                                       |         |
| 67            | 1565+41 | YES             | C       |          | 78   |     | 2232.17 | 2231.77 | YES                                     | YES  | 25 RT AH       |   |          |                                       |         |
| 68            | 1579+69 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 69            | 1579+75 | NO              | C       |          | 92   |     | 2190.40 | 2184.92 | YES                                     | YES  | 9 RT AH        |   |          |                                       |         |
| 70            | 1585+13 | NO              | C       |          | 98   |     | 2184.07 | 2181.27 | YES                                     | YES  | 11 RT AH       |   |          |                                       |         |
| 71            | 1596+09 | YES             | C       |          | 106  |     | 2148.18 | 2143.01 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 72            | 1617+15 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 73            | 1621+01 | YES             | C       |          | 84   |     | 2098.40 | 2094.29 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 74            | 1622+93 | YES             | C       |          | 76   |     | 2092.48 | 2088.53 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 75            | 1632+20 | NO              | C       |          | 74   |     | 2072.99 | 2072.62 | YES                                     | YES  | 15 RT AH       |   |          |                                       |         |
| 76            | 1646+84 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 77            | 1646+93 | NO              | C       |          | 84   |     | 2039.34 | 2039.02 | YES                                     | YES  | 12 LT AH       |   |          |                                       |         |
| 78            | 1689+76 | NO              | C       |          | 98   |     | 1954.68 | 1953.97 | YES                                     | YES  | 40 RT AH       |   |          |                                       |         |
| 79            | 1691+47 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 80            | 1695+28 | YES             | C       |          | 98   |     | 1945.85 | 1942.64 | YES                                     | YES  | 30 RT AH       |   |          |                                       |         |
| 81            | 1706+49 | NO              | C       |          | 90   |     | 1930.42 | 1922.91 | YES                                     | YES  | 32 RT AH       |   |          |                                       |         |
| 82            | 1712+29 | YES             | C       |          | 120  |     | 1919.38 | 1907.61 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 83            | 1730+98 | NO              | C       |          | 98   |     | 1921.40 | 1916.60 | YES                                     | YES  | 15 RT AH       |   |          |                                       |         |
| 84            | 1741+41 | YES             | C       |          | 78   |     | 1873.08 | 1869.68 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 85            | 1767+50 | YES             | C       |          | 74   |     | 1882.32 | 1879.45 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 86            | 1798+14 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 87            | 1804+22 | NO              | C       |          | 88   |     | 1774.37 | 1773.10 | YES                                     | YES  | 3 LT AH        |   |          |                                       |         |
| 88            | 1835+92 | YES             | C       |          | 106  |     | 1693.62 | 1697.93 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 89            | 1844+09 | YES             | N/A     | N/A      | N/A  | N/A | N/A     | N/A     | N/A                                     | N/A  |                |   |          |                                       |         |
| 90            | 1849+35 | YES             | C       |          | 90   |     | 1659.60 | 1657.02 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| 91            | 1850+93 | YES             | C       |          | 88   |     | 1657.50 | 1656.41 | YES                                     | YES  | MATCH EXISTING |   |          |                                       |         |
| SHEET TOTALS  |         | 75              |         | 2268     | 884  | 0   |         |         | 72                                      | 36   |                |   |          |                                       |         |
| SUMAMRY TOTAL |         |                 |         | 2742     | 3364 | 320 |         |         | 140                                     | 70   |                |   |          |                                       |         |

\\pdc\local\dfs\Projects\2017\7331FB-DaltonMP289-305\C\c4003enst17331fb-D2\_CULVERT\_SUMMARY Tue, Jun/15/21 12:51pm  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

CULVERT SUMMARY





| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | D3        | D3           |

### SUPERELEVATIONS SUMMARY

| CURVE P.I. | RADIUS (FT) | BEGIN TRANSITION | TRANSITION LENGTH (FT) | CURVE P.C. | BEGIN FULL SUPERELEVATION | SUPERELEVATION RATE (%) | END FULL SUPERELEVATION | CURVE P.T. | TRANSITION LENGTH (FT) | END TRANSITION |
|------------|-------------|------------------|------------------------|------------|---------------------------|-------------------------|-------------------------|------------|------------------------|----------------|
| 989+37.03  | 5,847       | 988+38.74        | 96.00                  | 989+34.74  | 989+34.74                 | 3.0                     | 1007+24.45              | 1007+40.44 | 96.00                  | 1008+20.45     |
| 1080+35.55 | 1,960       | 1070+45.18       | 178.28                 | 1071+88.13 | 1072+23.46                | 4.4                     | 1087+52.50              | 1087+87.83 | 178.27                 | 1089+30.77     |
| 1271+80.00 | 3,620       | 1268+16.16       | 134.00                 | 1269+27.82 | 1269+50.16                | 3.0                     | 1274+09.04              | 1274+31.37 | 134.00                 | 1275+43.04     |
| 1417+34.78 | 2,000       | 1411+86.12       | 178.27                 | 1413+29.06 | 1413+64.39                | 4.4                     | 1420+94.30              | 1421+29.63 | 178.27                 | 1422+72.57     |
| 1444+48.45 | 3,090       | 1439+52.27       | 154.35                 | 1440+79.29 | 1441+06.62                | 3.4                     | 1447+86.79              | 1448+14.12 | 154.35                 | 1449+41.14     |
| 1470+94.61 | 1,000       | 1462+95.36       | 216.00                 | 1464+63.36 | 1465+11.36                | 6.0                     | 1475+41.52              | 1475+89.52 | 216.00                 | 1477+57.52     |
| 1566+17.23 | 1,980       | 1561+94.04       | 178.28                 | 1563+36.99 | 1563+72.32                | 4.4                     | 1568+58.45              | 1568+93.78 | 178.27                 | 1570+36.72     |
| 1610+58.71 | 2,975       | 1605+88.43       | 154.36                 | 1607+15.46 | 1607+42.79                | 3.4                     | 1613+71.61              | 1613+98.94 | 154.36                 | 1615+25.97     |
| 1722+52.67 | 5,750       | 1709+44.39       | 96.00                  | 1710+24.39 | 1710+40.39                | 3.0                     | 1734+28.58              | 1734+44.58 | 96.00                  | 1735+24.58     |
| 1776+72.99 | 6,080       | 1772+51.19       | 96.00                  | 1773+31.19 | 1773+47.19                | 3.0                     | 1779+98.07              | 1780+14.07 | 96.00                  | 1780+94.07     |
| 1838+48.40 | 3,500       | 1834+18.90       | 144.00                 | 1835+38.91 | 1835+62.90                | 3.0                     | 1841+32.29              | 1841+56.29 | 144.00                 | 1842+76.29     |
| 1848+58.52 | 2,100       | 1843+46.43       | 178.27                 | 1844+89.37 | 1845+24.70                | 4.4                     | 1851+84.87              | 1852+20.20 | 178.28                 | 1853+63.15     |
| 1859+59.91 | 2,370       | 1855+28.21       | 168.00                 | 1856+64.21 | 1856+96.21                | 4.0                     | 1862+20.56              | 1862+52.56 | 168.00                 | 1863+88.56     |

#### SUPERELEVATION NOTES:

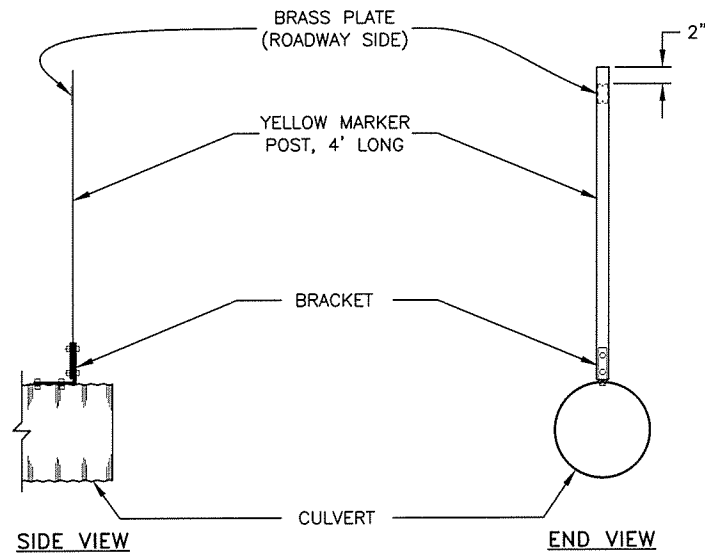
1. THE SUPERELEVATION ROTATION POINT IS CENTERLINE AT PROFILE GRADE.
2. SEE STANDARD PLAN I-81.00 FOR SUPERELEVATION TRANSITION DETAILS. THE TRANSITION LENGTHS GIVEN IN THE SUMMARY DO NOT INCLUDE THE 1/2 VERTICAL CURVE LENGTHS SHOWN ON EACH END OF THE TRANSITION.
3. SUPERELEVATION SHALL BE BUILT INTO THE SUBGRADE AND CARRIED THROUGH THE FULL WIDTH.

P:\2017\17331\FB-Delton\MP289-305\C\c4003\ent17331 fb-03 SUPERELEVATION SUMMARY Tue, Apr/20/21 10:57am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC2605, 102B AURORA DRIVE, FAIRBANKS, AK 99709. (907)452-1414

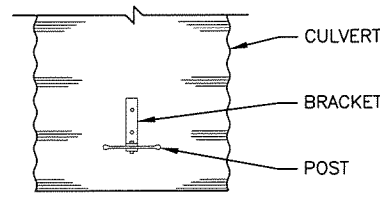
SUPERELEVATION SUMMARY



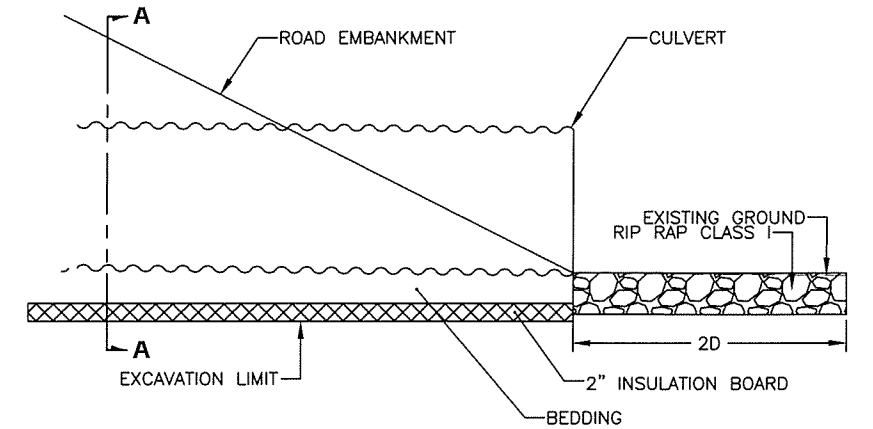
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | E1        | E3           |



**CULVERT MARKER POST DETAIL**  
N.T.S.



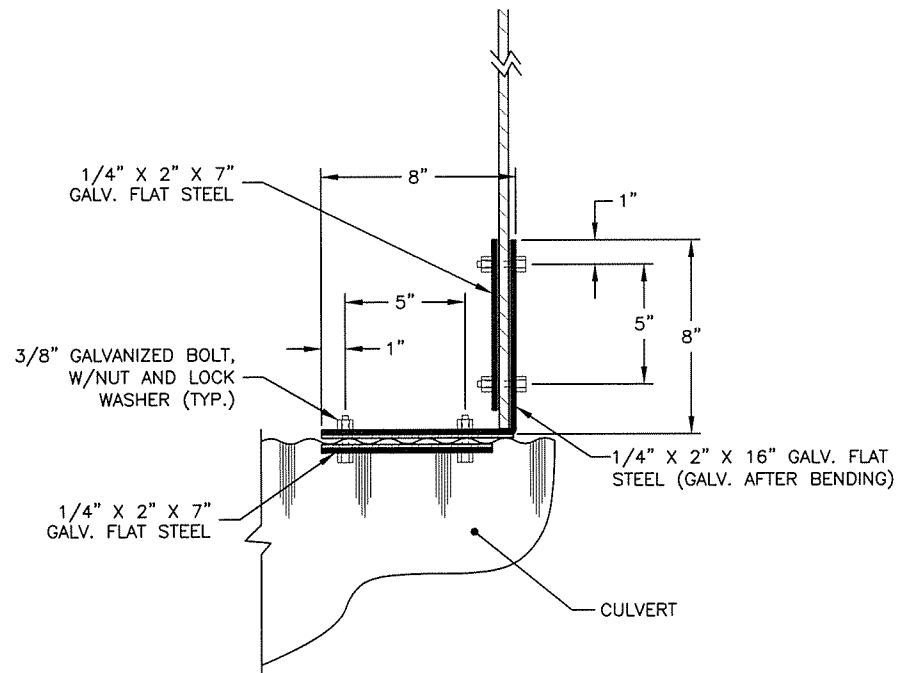
**TOP VIEW**



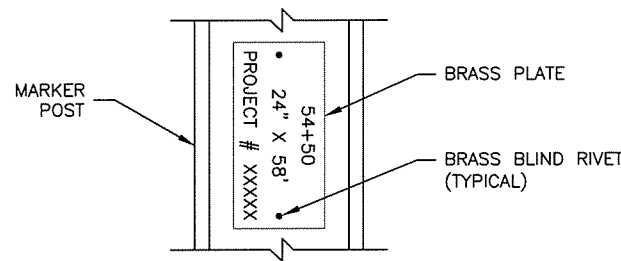
**DETAIL: CULVERT INSTALLATION**  
N.T.S.

**NOTES:**

1. CONSTRUCT APRON TWO CULVERT DIAMETERS WIDE BY TWO CULVERT DIAMETERS LONG AT CULVERT INLET AND OUTLET.

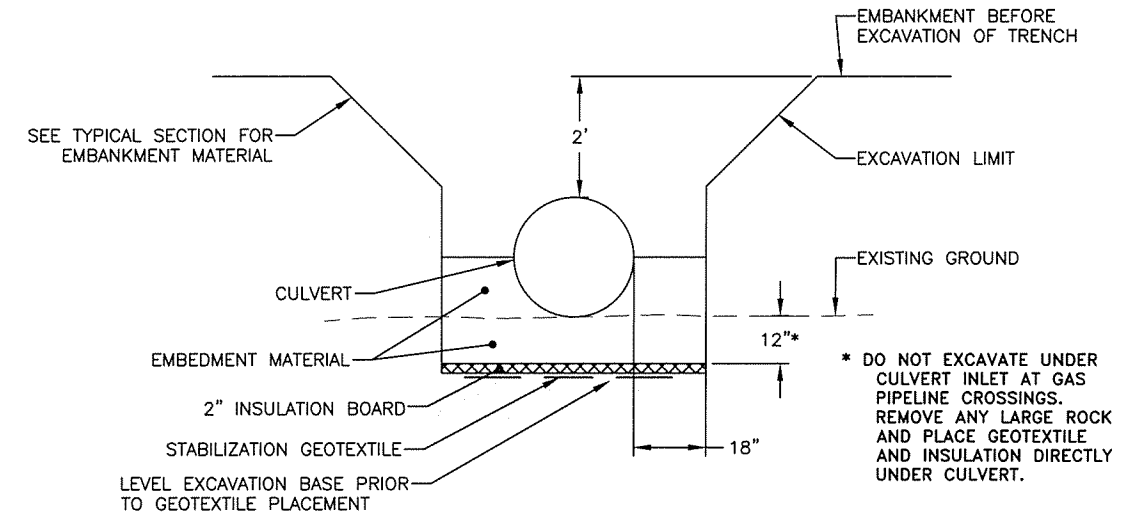


**BRACKET DETAIL**  
N.T.S.



STAMP PROJECT NUMBER, STATION, AND PIPE SIZE, USING 3/8" HIGH MINIMUM LETTERS INTO A 2"x4"x 0.064" THICK BRASS PLATE. FASTEN PLATE TO THE SIDE FACING THE ROADWAY WITH TWO 1/8" BRASS BLIND RIVETS.

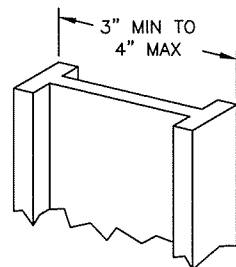
**BRASS PLATE DETAIL**  
N.T.S.



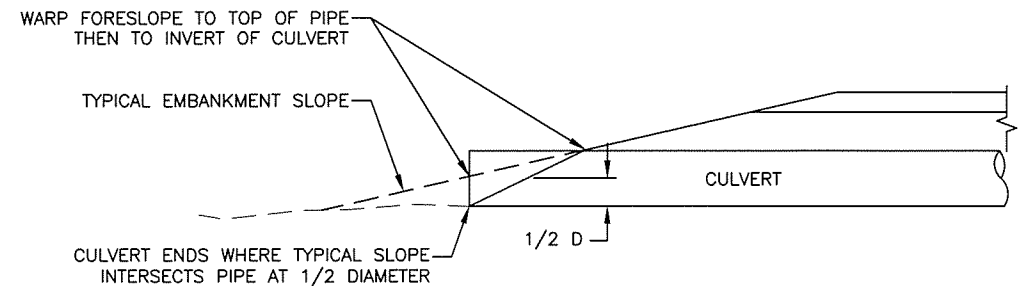
**SECTION A-A CULVERT INSTALLATION**  
N.T.S.

**CULVERT MARKER POSTS NOTES:**

1. MARKER POSTS ARE TO BE INSTALLED ON CROSS CULVERTS ONLY.
2. IF CULVERTS ARE CLOSELY SPACED, MARK ONLY THE FIRST AND LAST CULVERT IN SERIES AS APPROVED BY THE ENGINEER, UNLESS OTHERWISE INDICATED IN CULVERT SUMMARY
3. DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
4. GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.
5. STATION STAMPS ON BRASS PLATES TO BE PER INSTALLED LOCATION AND NOT NECESSARILY THE LOCATION INDICATED ON THE PLANS.



**MARKER POST DETAIL**  
N.T.S.



**CULVERT SLOPE WARPING DETAILS**  
**2:1 OR FLATTER FORESLOPES**  
N.T.S.

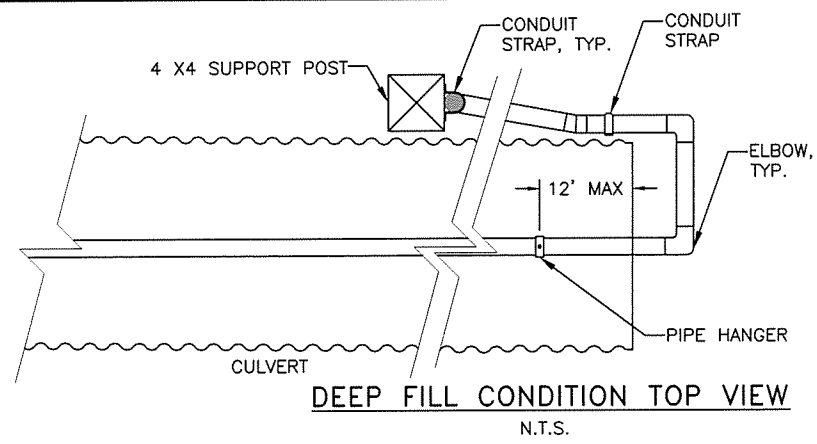
**CULVERT DETAILS**  
(1 OF 2)



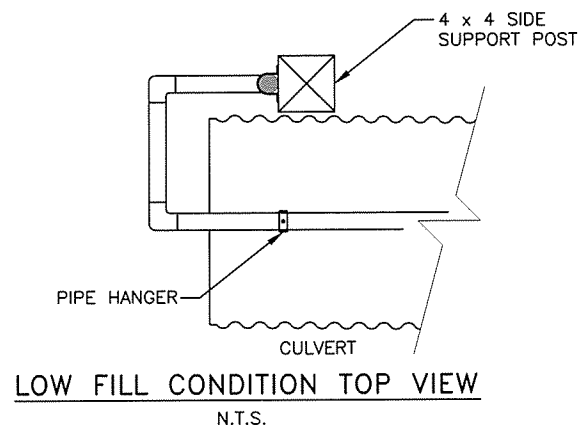
P:\2017\17331FB-DaltonMP289-305\C:\4001\enr17331FB-E1\_CULVERT DETAILS (1 OF 2).Tue, Apr/20/21 10:58am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: ACC6805, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



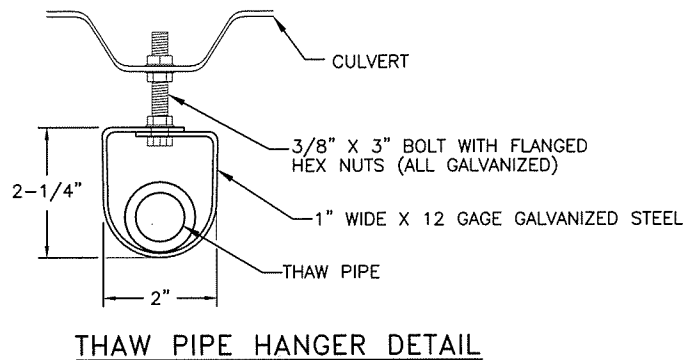
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | E2        | E3           |



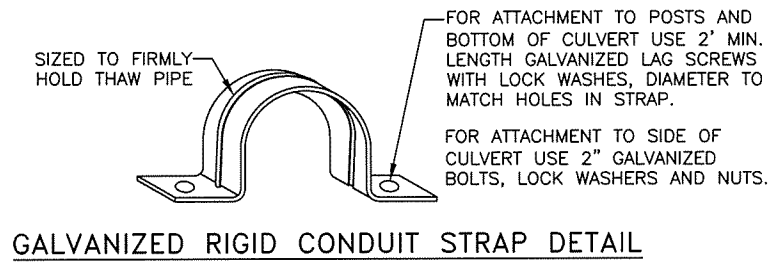
**DEEP FILL CONDITION TOP VIEW**  
N.T.S.



**LOW FILL CONDITION TOP VIEW**  
N.T.S.



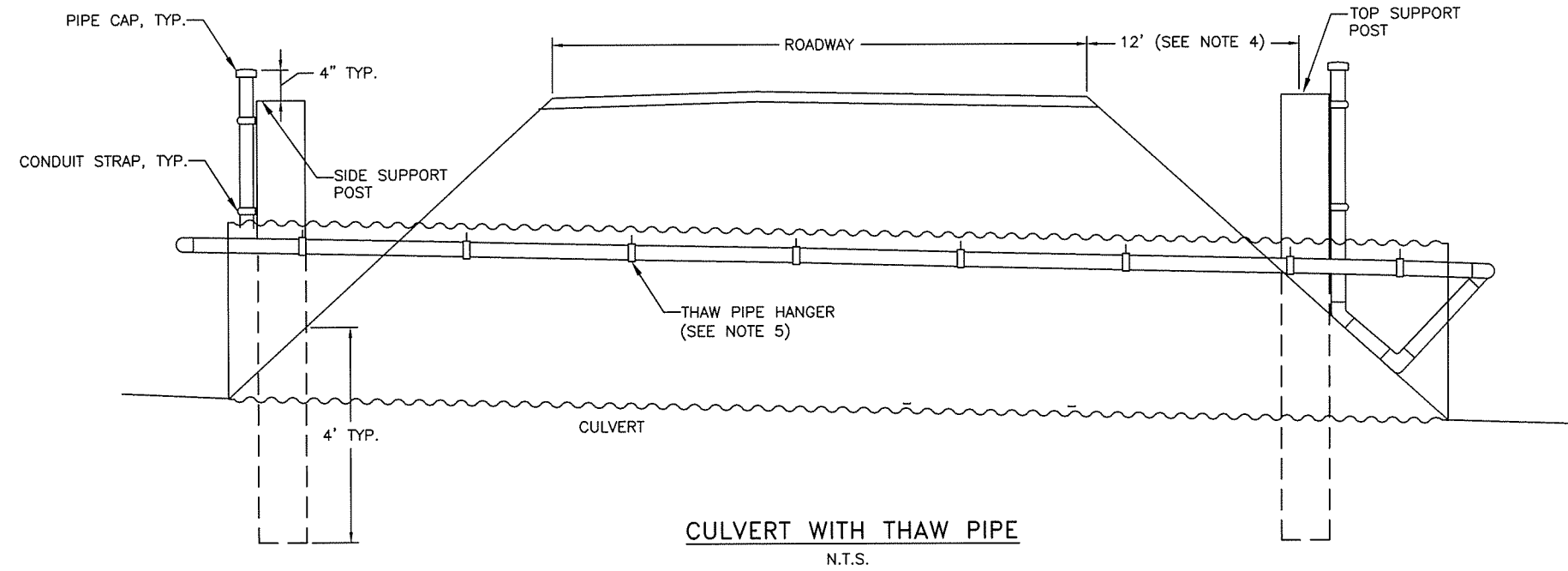
**THAW PIPE HANGER DETAIL**



**GALVANIZED RIGID CONDUIT STRAP DETAIL**

**LOW FILL CONDITION:**  
SIDE SUPPORT POST—ALIGN TOP WITH EDGE OF SHOULDER OR TO A MAXIMUM HEIGHT OF 5', WHICH EVER IS LESS.

**DEEP FILL CONDITION:**  
TOP SUPPORT POST—ALIGN TOP WITH EDGE OF SHOULDER OR TO A MAXIMUM HEIGHT OF 5', WHICH EVER IS LESS.



**CULVERT WITH THAW PIPE**  
N.T.S.

**THAW PIPE NOTES:**

1. REFER TO THE CULVERT SUMMARY ON SHEETS D1 TO D2 FOR THAW PIPE LOCATIONS AND QUANTITIES.
2. THESE THAW PIPES ARE INTENDED FOR USE IN STEAM THAWING.
3. USE 1/2" I.D. ASTM A53 GALVANIZED PIPE AND FITTINGS TO MATCH.
4. WHEN THE HEIGHT OF FILL EXCEEDS 5' LOCATE THE SUPPORT POST ON THE SIDE SLOPE 12' FROM THE SHOULDER.
5. FASTEN THE THAW PIPE TO THE TOP OF THE CULVERT WITH THAW PIPE HANGERS ON 4' CENTERS MAX. THE MAXIMUM DISTANCE FROM END OF CULVERT TO FIRST PIPE HANGER IS 12 INCHES.
6. USE PRESSURE TREATED SUPPORT POSTS OF HEM-FIR, NO. 2 OR BETTER. USE AMMONIACAL COPPER ZINC ARSENATE (ACZA) OR CHROMATED COPPER ARSENATE (CCA) PRESERVATIVES ON SUPPORT POSTS. PRESSURE TREAT IN ACCORDANCE WITH AASHTO M133.
7. FASTEN THAW PIPE TO SUPPORT POSTS WITH GALVANIZED RIGID CONDUIT STRAPS AND 3" LONG GALVANIZED LAG SCREWS AT MAX. 12" CENTERS, IF MORE THAN ONE IS REQUIRED.
8. FILL THAW PIPE WITH A MINUS 50° FAHRENHEIT MIX OF RV ANTIFREEZE OR PROPYLENE GLYCOL AND WATER, THEN CAP.
9. PLACE THAW PIPE AT BOTTOM OF CULVERT FOR 24 INCH CULVERTS.

**CULVERT DETAILS**  
(2 OF 2)



P:\2017\17331FB-Dalton\MP289-305\C\4001\enat17331FB-E2 CULVERT DETAILS Tue Apr/20/21 10:58am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK. 99709. (907)452-1414

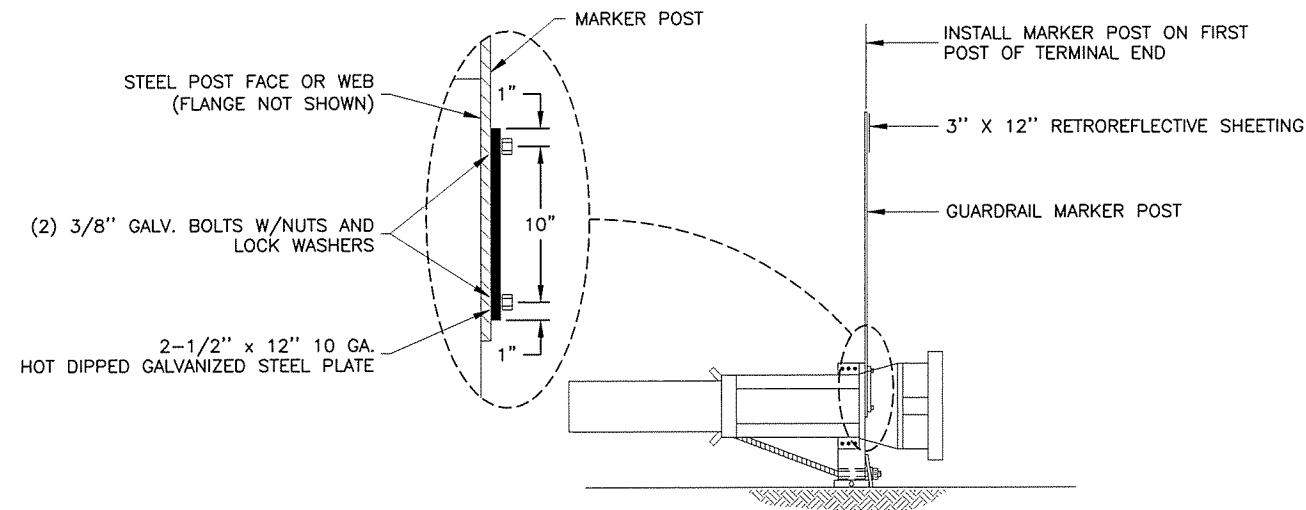
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | E3        | E3           |

### 606 GUARDRAIL SUMMARY

| BEGIN STATION | END STATION | RT/LT           | 606.0013.0000<br>PARALLEL<br>GUARDRAIL<br>TERMINAL (EACH) | 606.0001.0000<br>W-BEAM<br>GUARDRAIL<br>(LINEAR FOOT) | 606.0016.0000<br>TRANSITION RAIL<br>(EACH) | 507.0001.0000<br>STEEL BRIDGE<br>RAILING (LINEAR<br>FOOT) | 606.0006.0000<br>REMOVING AND<br>DISPOSING OF<br>GUARDRAIL (LINEAR<br>FOOT) |
|---------------|-------------|-----------------|---|---|--|---|---|
| 1005+89.5     | 1006+39.5   | LT              | 1   |   |  |   | 303   |
| 1006+39.5     | 1006+39.5   | LT              |   | --  |  |   |   |
| 1006+39.5     | 1006+57.5   | LT              |   |   | 1  |   |   |
| 1006+57.5     | 1006+95.5   | LT              |   |   |  | 38  |   |
| 1006+95.5     | 1007+13.5   | LT              |   |   | 1  |   |   |
| 1007+13.5     | 1008+13.5   | LT              |   | 100   |  |   |   |
| 1008+13.5     | 1008+63.5   | LT              | 1   |   |  |   |   |
|               |             |                 |   |   |  |   |   |
| 1004+62.5     | 1005+12.5   | RT              | 1   |   |  |   | 290   |
| 1005+12.5     | 1006+12.5   | RT              |   | 100   |  |   |   |
| 1006+12.5     | 1006+30.5   | RT              |   |   | 1  |   |   |
| 1006+30.5     | 1006+68.5   | RT              |   |   |  | 38  |   |
| 1006+68.5     | 1006+86.5   | RT              |   |   | 1  |   |   |
| 1006+86.5     | 1006+86.5   | RT              |   | --  |  |   |   |
| 1006+86.5     | 1007+36.5   | RT              | 1   |   |  |   |   |
|               |             | PAY ITEM TOTALS | 4   | 200   | 4  | 76  | 593   |

**NOTES:**

- FOR PARALLEL GUARDRAIL TERMINALS, CONSTRUCT THE GUARDRAIL TERMINAL WIDENING IN ACCORDANCE WITH THE "STANDARD DETAIL" ON STANDARD PLANS G-20.12 THE END OFFSET (X) SHALL BE 2 FEET.



**GUARDRAIL MARKER POST ATTACHMENT DETAIL**  
PARALLEL GUARDRAIL TERMINAL

**GUARDRAIL MARKER NOTES:**

- GUARDRAIL MARKER POSTS SHALL BE YELLOW, 3" MINIMUM TO 4" MAXIMUM WIDTH AND AT LEAST 78" LONG. POSTS SHALL BE CARSONITE CIB-380, TRAFFICWORKS TW-375, DAVIDSON FLEXI-GUIDE FG 500 FLEXIBLE MARKERS, OR APPROVED EQUAL.
- AT THE TOP OF THE MARKER POST, INSTALL 3" X 12" RETROREFLECTIVE SHEETING MEETING ASTM D4956 REQUIREMENTS FOR TYPE VII OR IX, AT THE TOP OF THE GUARDRAIL MARKER POST. ALTERNATIVELY, USE 3M DIAMOND GRADE DG3 OR APPROVED EQUAL. COLOR OF SHEETING SHALL MATCH COLOR OF ADJACENT EDGE LINE STRIPE. PLACE SHEETING ON SIDE OF MARKER POST FACING TRAFFIC IN ADJACENT LANE.
- DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
- ALL WORK AND MATERIAL REQUIRED TO INSTALL GUARDRAIL MARKER POSTS IS SUBSIDIARY TO 606 PAY ITEMS.

**GUARDRAIL SUMMARY  
AND DETAILS**

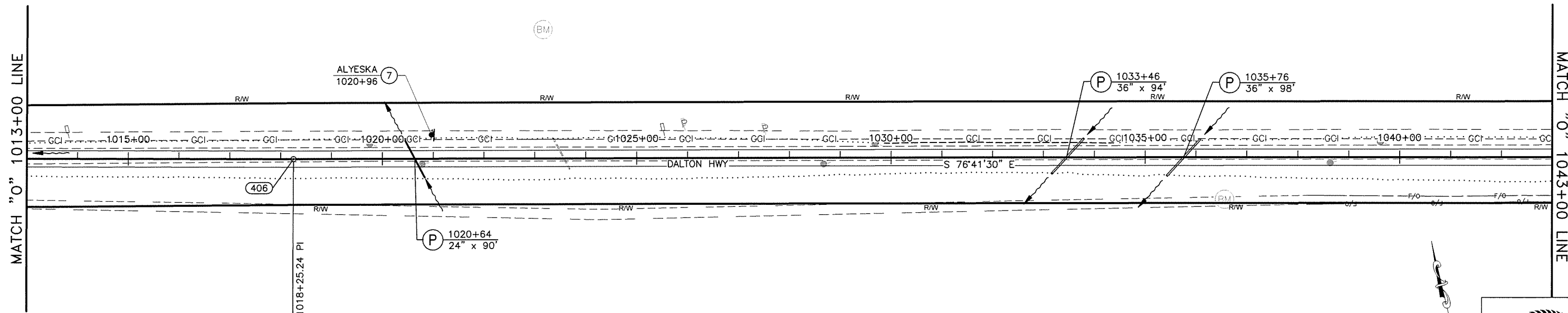


P:\2017\17331FB-Delton\MP289--305\C\C4001\enat17331FB-E3 GUARDRAIL SUMMARY AND DETAILS Tue, Apr/20/21 10:58am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC6605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414





| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F2        | F31          |

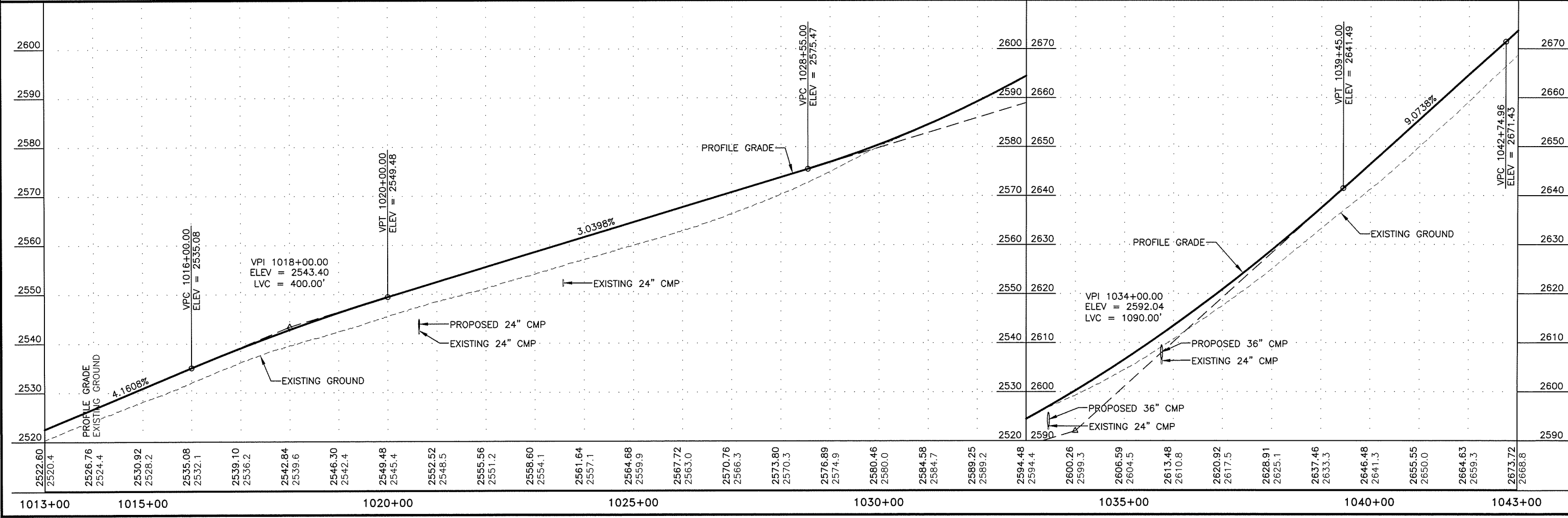


| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 406                | PI    | 1018+25.23 | 5354289.13 | 1722065.98 |

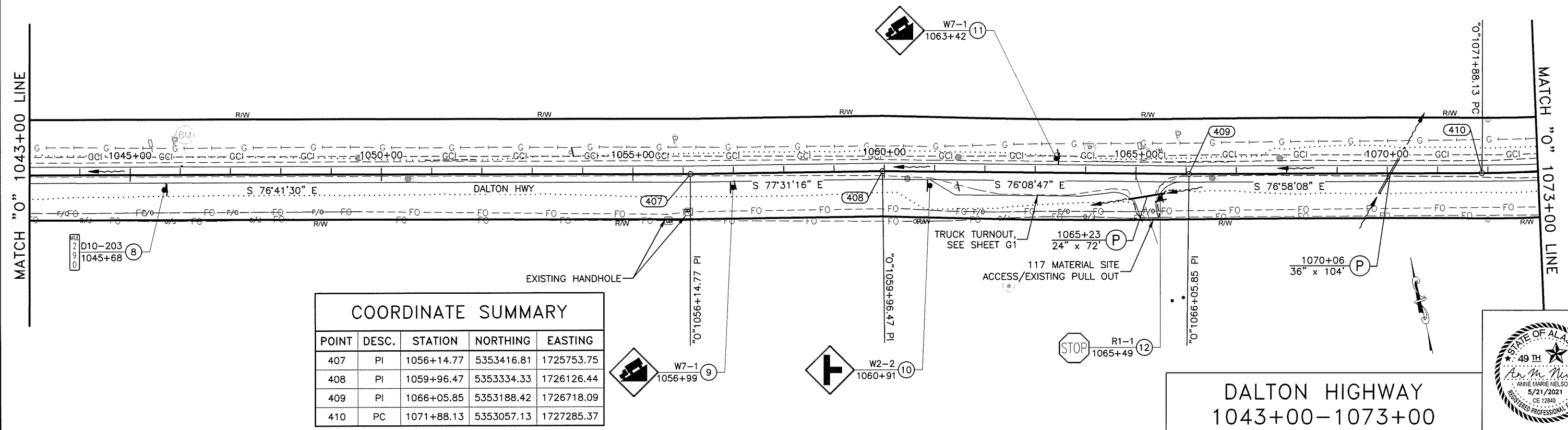
**DALTON HIGHWAY**  
1013+00-1043+00



P:\2017\17331FB-DeltonMP289-305\C\C1001\enat17331FB-F2 1013+00-1043+00 Fri, Apr/30/21 01:14pm  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

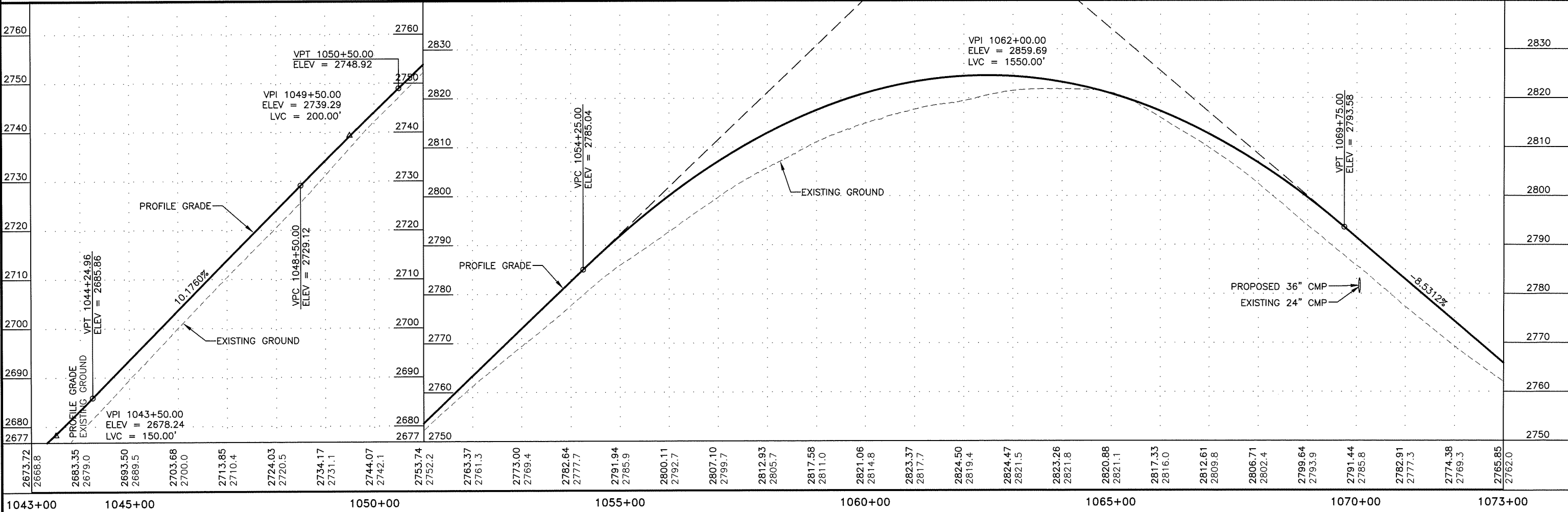


| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2021 | F3        | F31          |



| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 407   | PI    | 1056+14.77 | 5353416.81 | 1725753.75 |
| 408   | PI    | 1059+96.47 | 5353334.33 | 1726126.44 |
| 409   | PI    | 1066+05.85 | 5353188.42 | 1726718.09 |
| 410   | PC    | 1071+88.13 | 5353057.13 | 1727285.37 |

**DALTON HIGHWAY**  
1043+00-1073+00

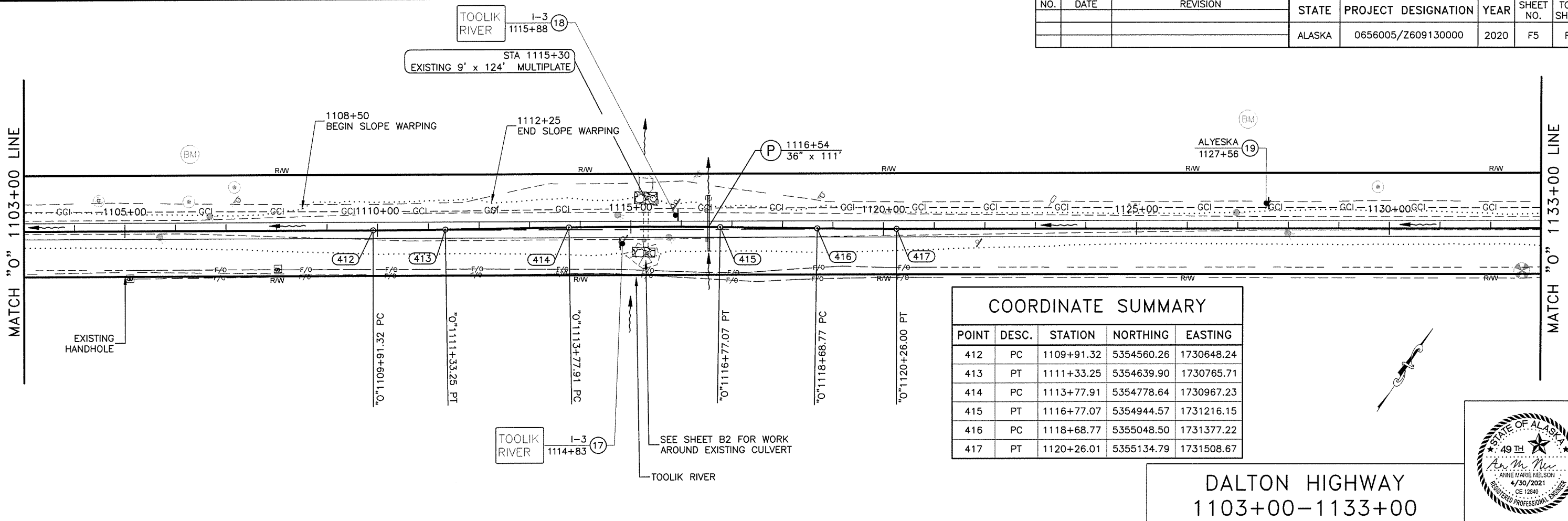


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 PLANS DEVELOPED BY: PIC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC6605, 1028 AURORA DRIVE, FAIRBANKS, AK, 99709, (907)452-1414





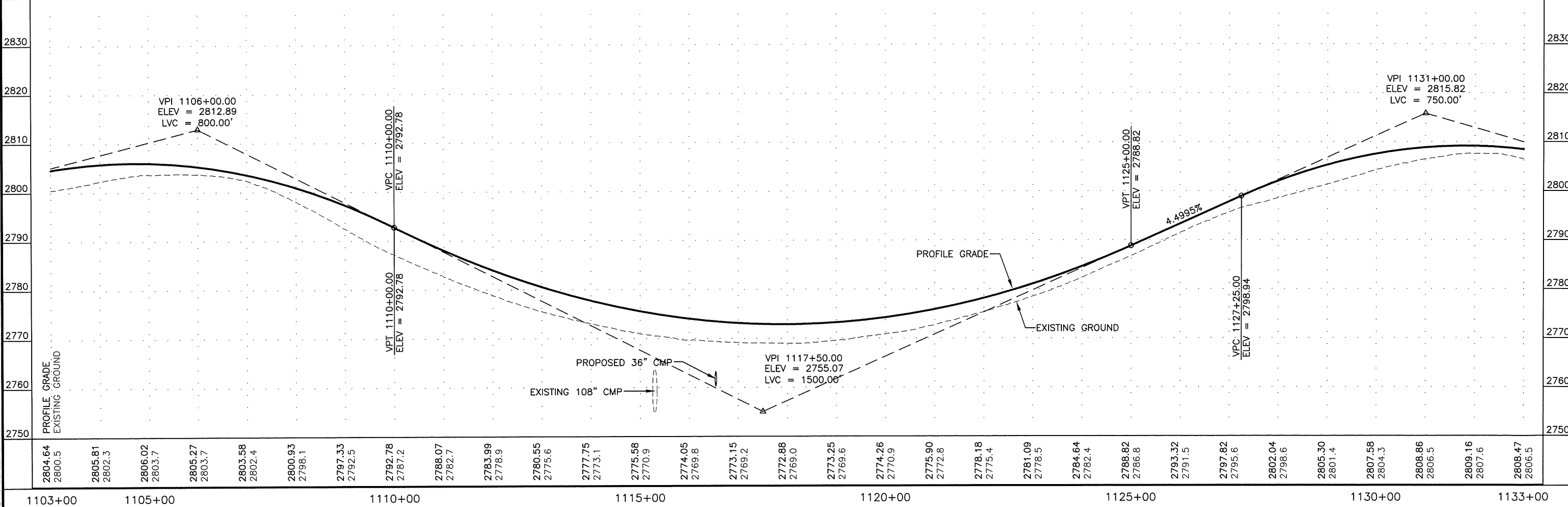
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F5        | F31          |



### COORDINATE SUMMARY

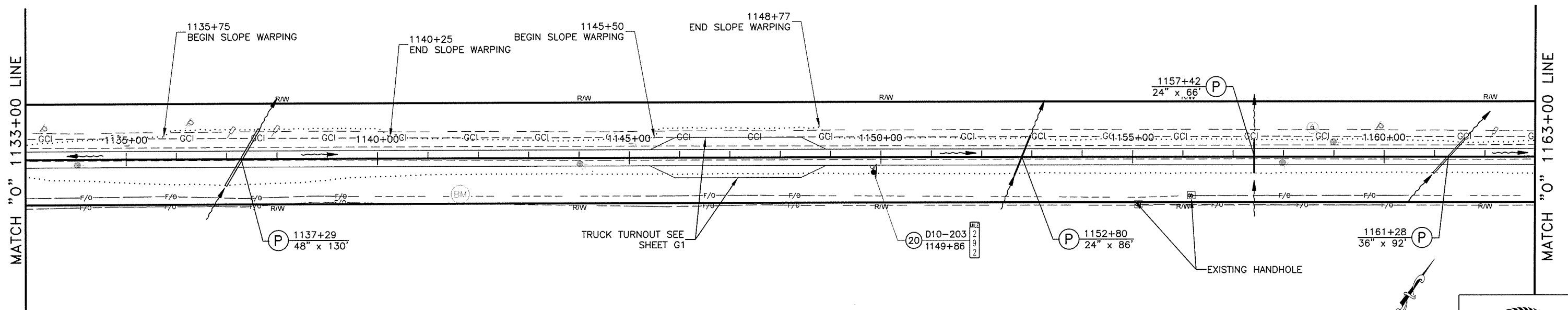
| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 412   | PC    | 1109+91.32 | 5354560.26 | 1730648.24 |
| 413   | PT    | 1111+33.25 | 5354639.90 | 1730765.71 |
| 414   | PC    | 1113+77.91 | 5354778.64 | 1730967.23 |
| 415   | PT    | 1116+77.07 | 5354944.57 | 1731216.15 |
| 416   | PC    | 1118+68.77 | 5355048.50 | 1731377.22 |
| 417   | PT    | 1120+26.01 | 5355134.79 | 1731508.67 |

## DALTON HIGHWAY 1103+00-1133+00

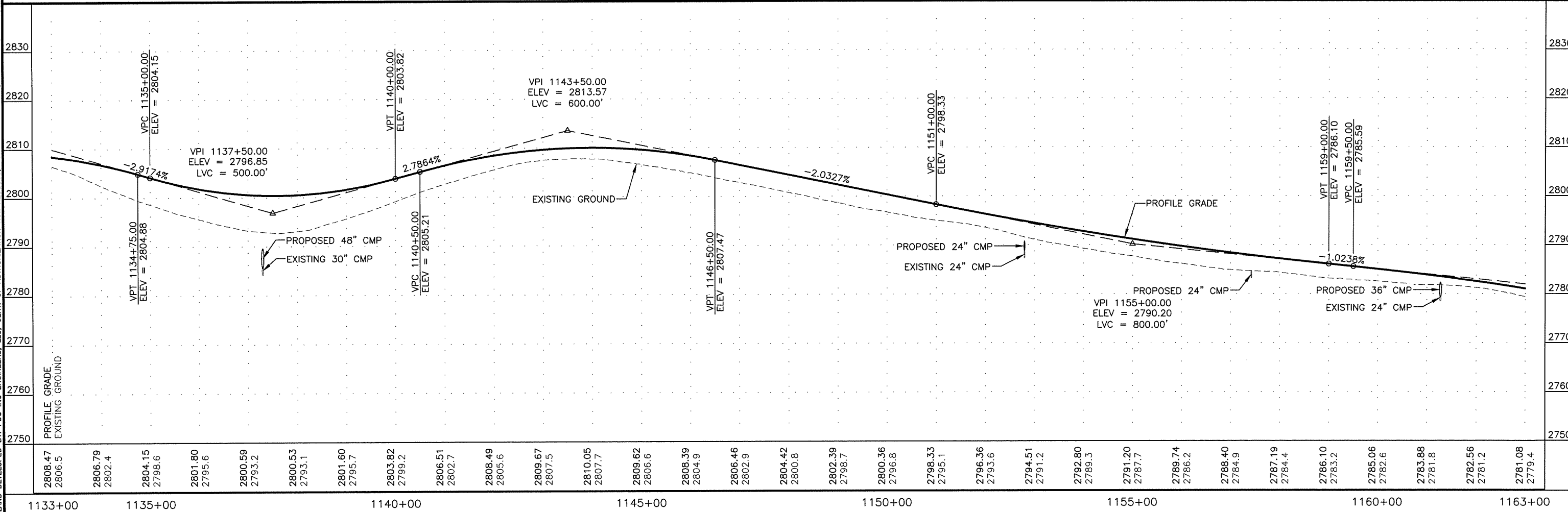


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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: ACC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F6        | F31          |

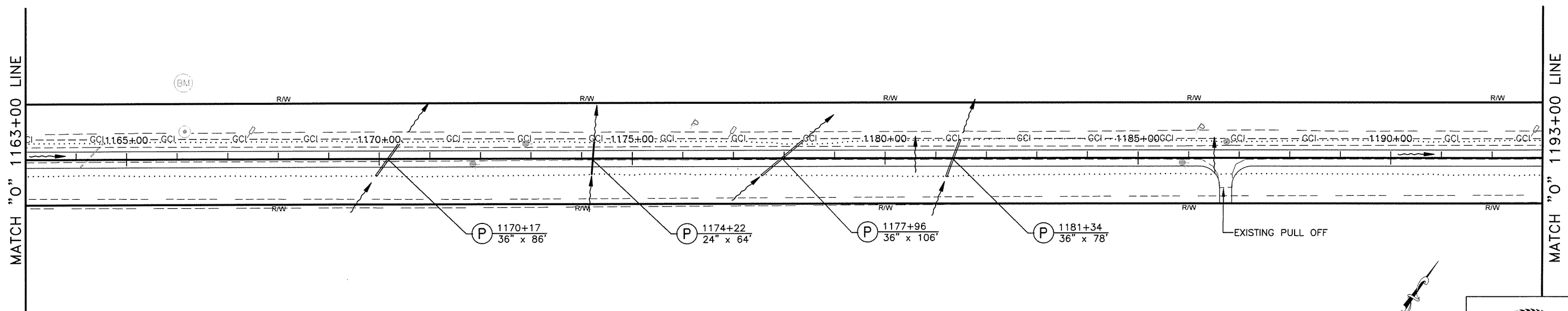


**DALTON HIGHWAY**  
1133+00-1163+00

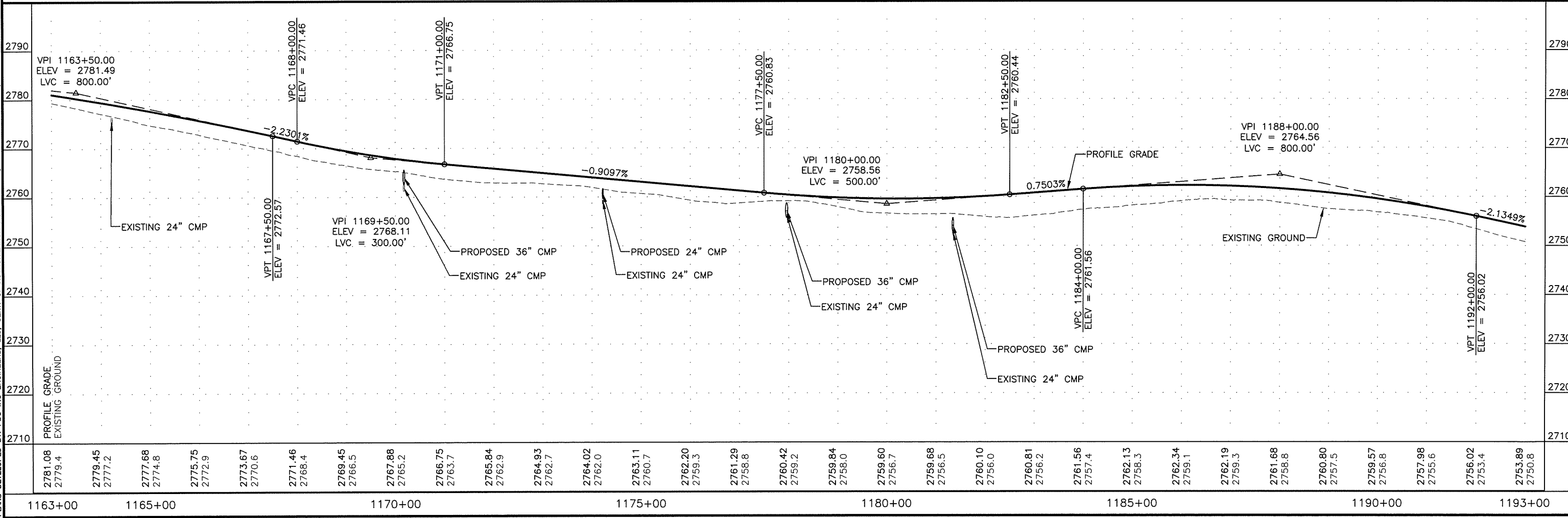


P:\2017\17331FB-Dalton\MP289-305\C\1001\enr17331FB-F6 1133+00-1163+00 Fri, Apr/30/21 01:15pm  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC6605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F7        | F31          |



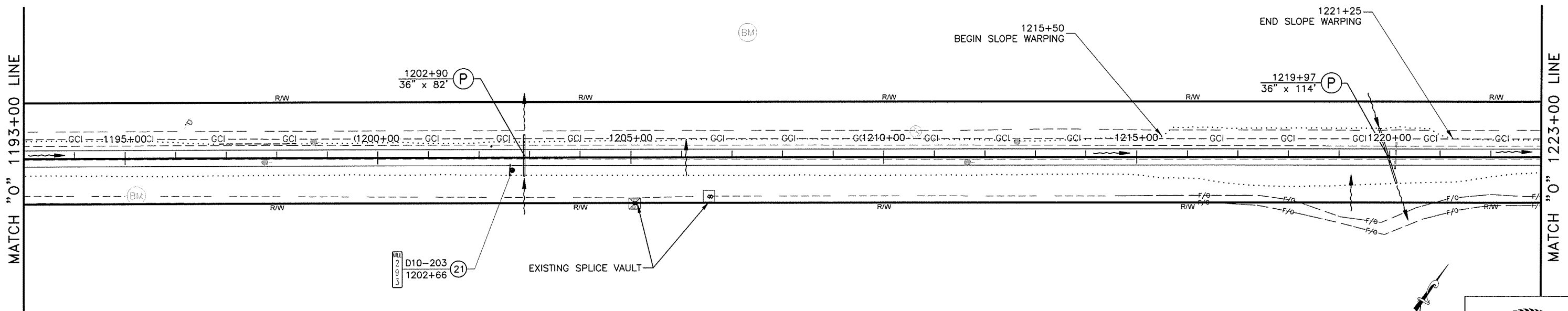
**DALTON HIGHWAY**  
1163+00-1193+00



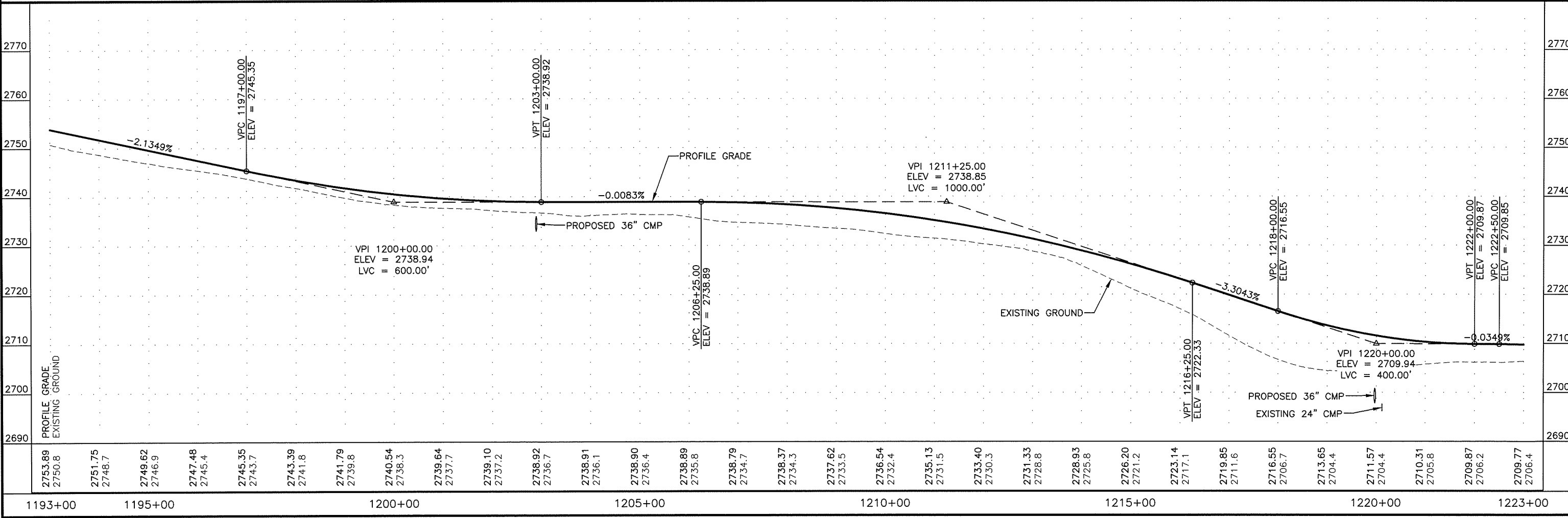
P:\2017\17331FB-DaltonMP289-305\C\1001enst17331FB-F7 1163+00-1193+00 Fri, Apr/30/21 01:15pm  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK, 99709, (907)452-1414



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F8        | F31          |

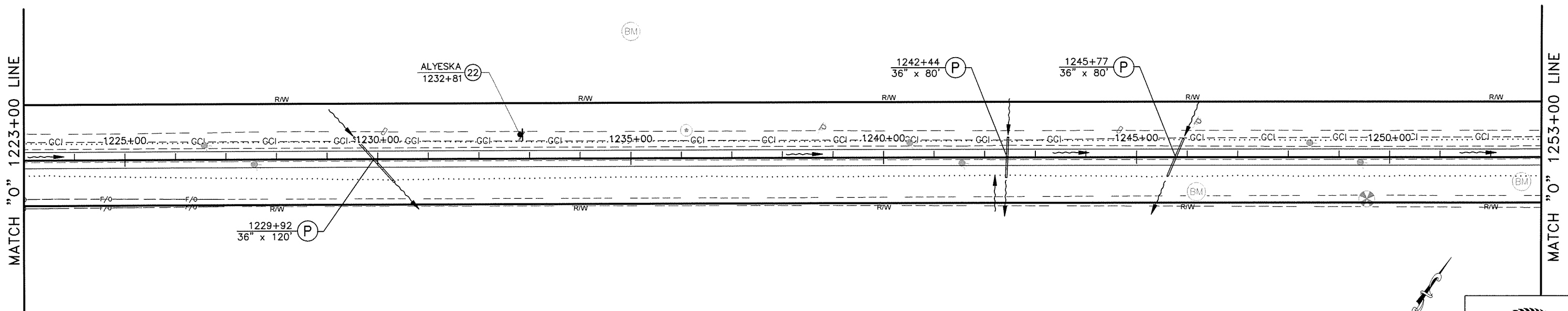


**DALTON HIGHWAY**  
1193+00-1223+00

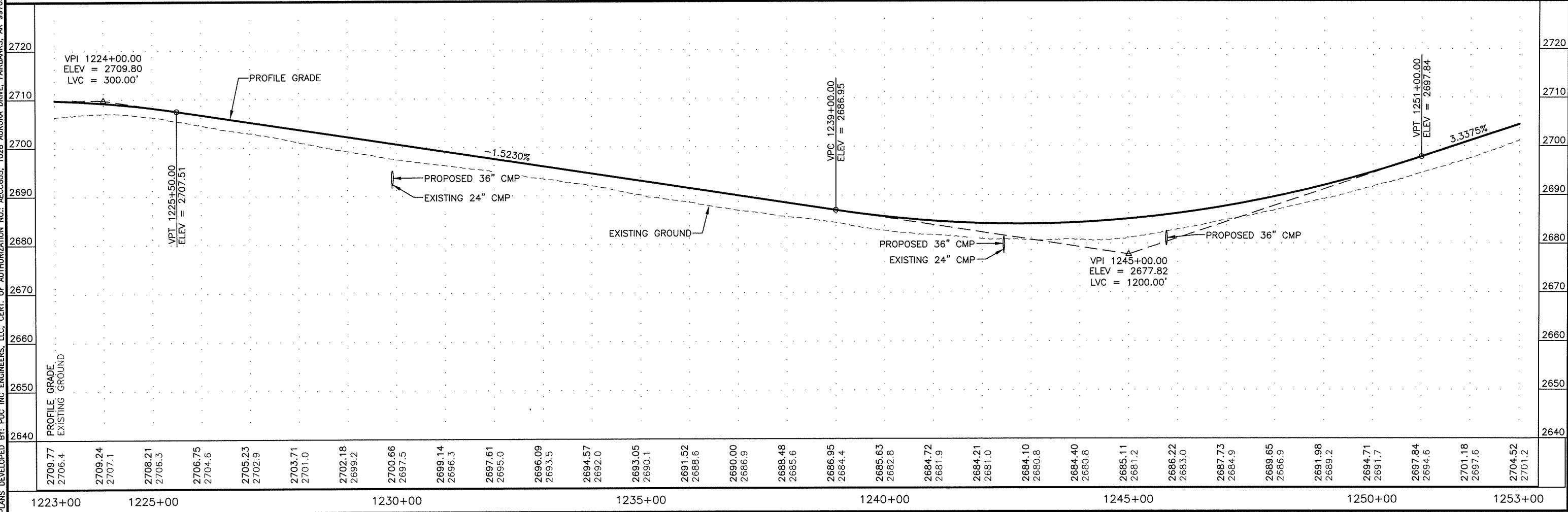


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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC6605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F9        | F31          |

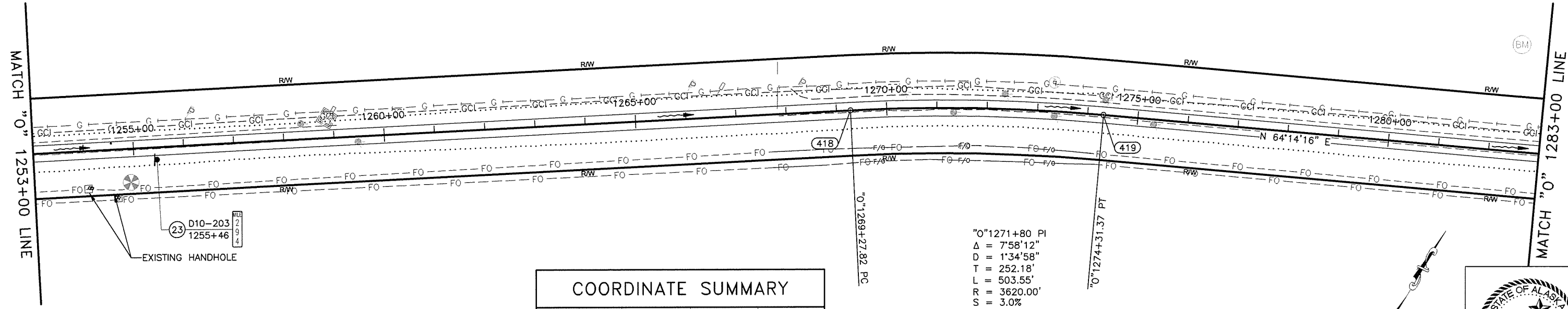


**DALTON HIGHWAY**  
1223+00-1253+00



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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: ACC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2021 | F10       | F31          |



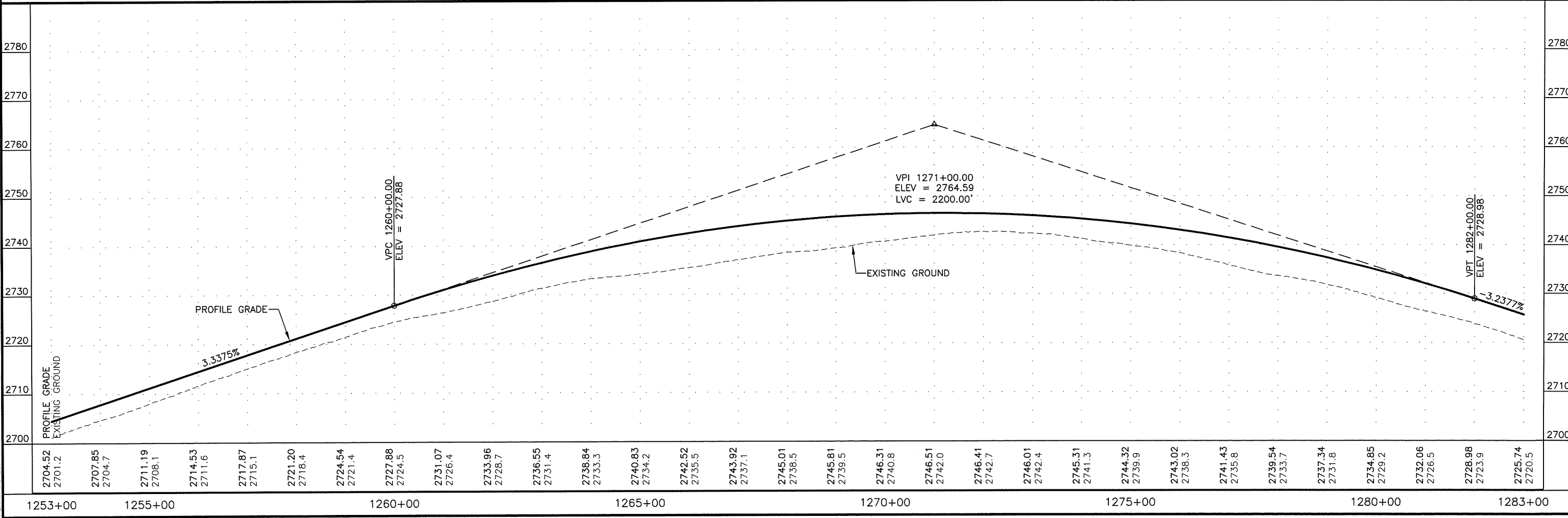
| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 418                | PC    | 1269+27.82 | 5363409.93 | 1743901.66 |
| 419                | PT    | 1274+31.37 | 5363659.58 | 1744338.50 |

"O"1271+80 PI  
 $\Delta = 7'58'12''$   
 $D = 1'34'58''$   
 $T = 252.18'$   
 $L = 503.55'$   
 $R = 3620.00'$   
 $S = 3.0\%$

**DALTON HIGHWAY**  
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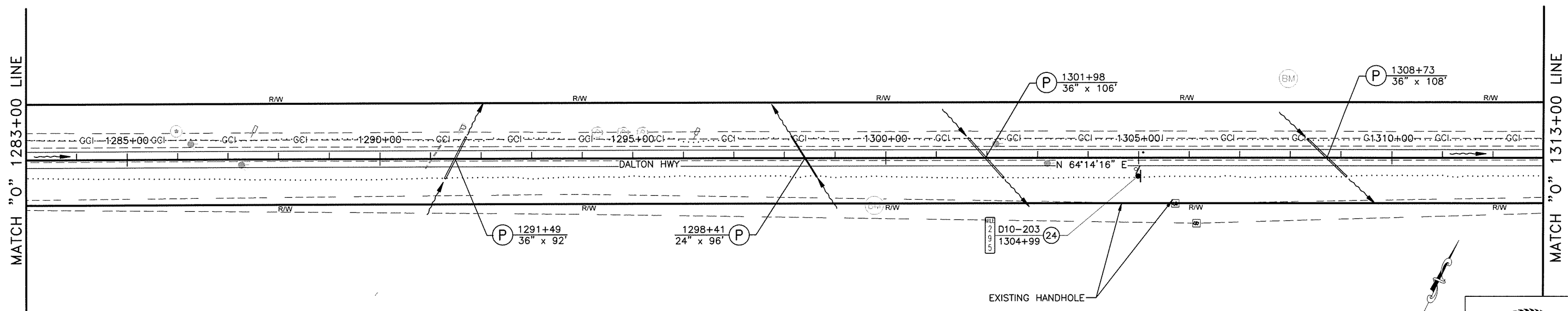


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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: ACC6605, 1028 AURORA DRIVE, FAIRBANKS, AK. 99709, (907)452-1414

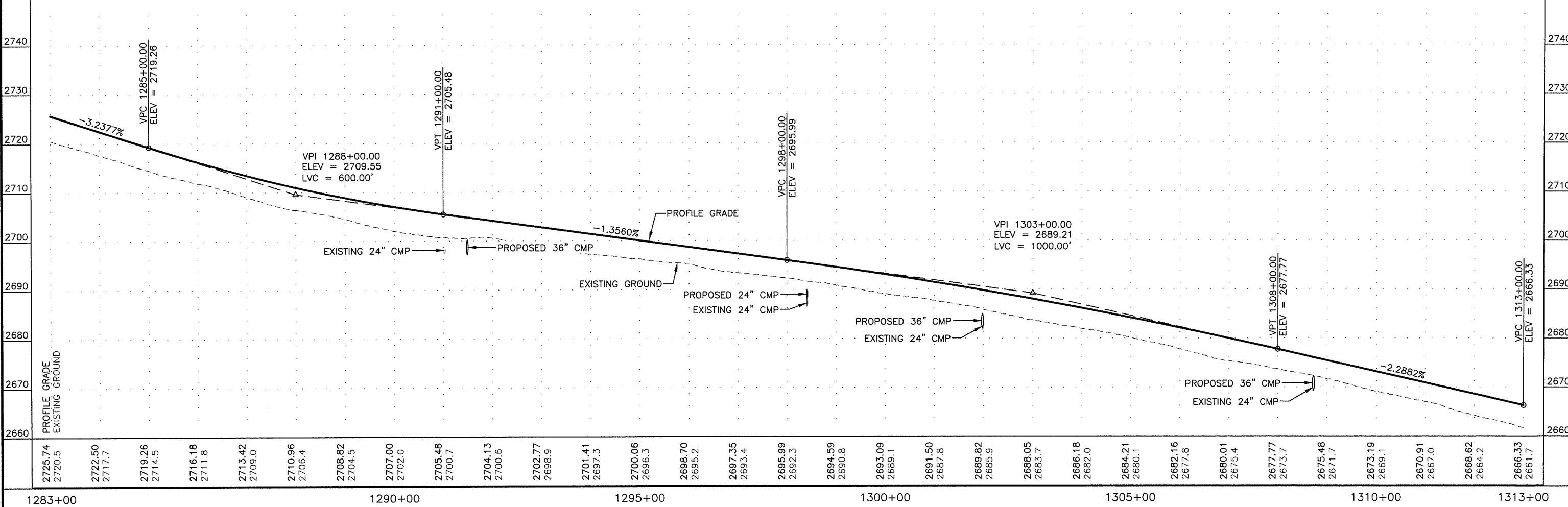




| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F11       | F31          |

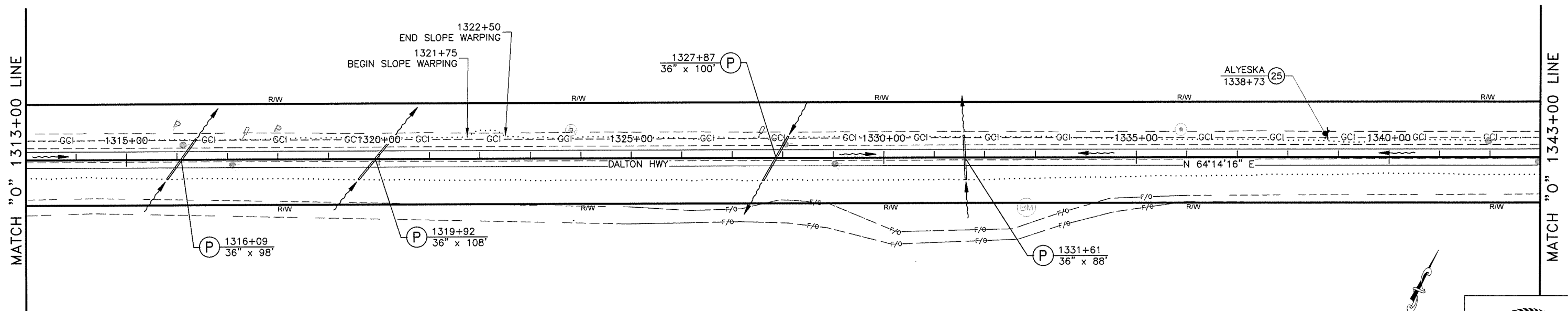


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1283+00-1313+00



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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

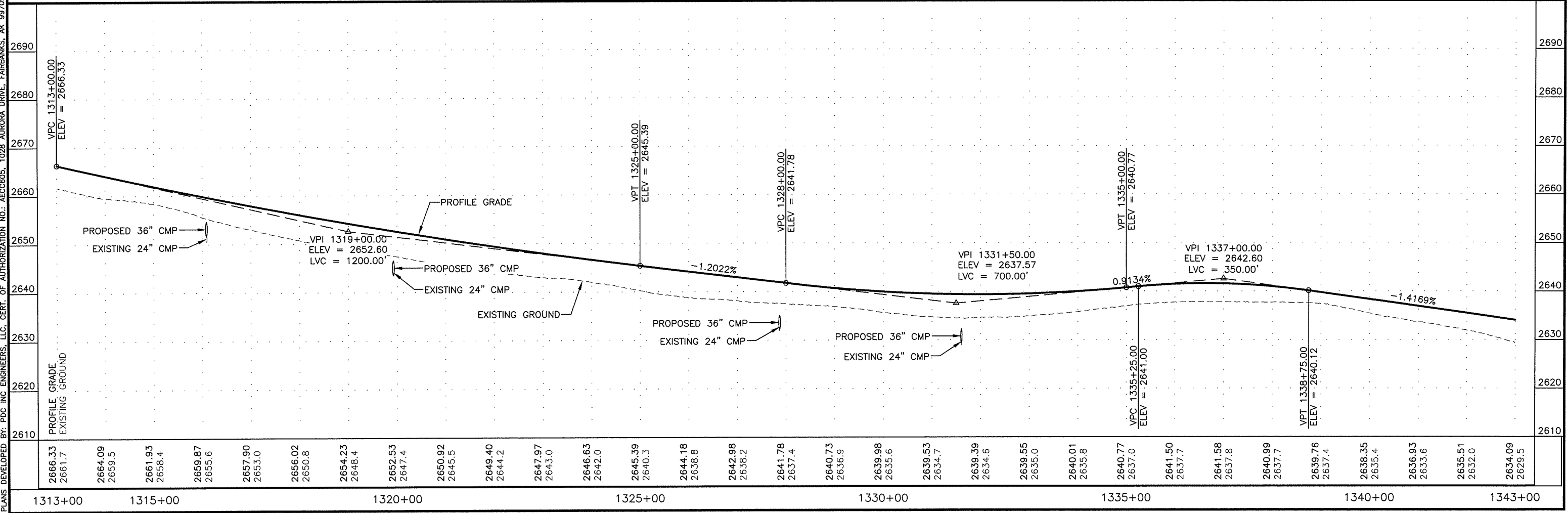
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F12       | F31          |



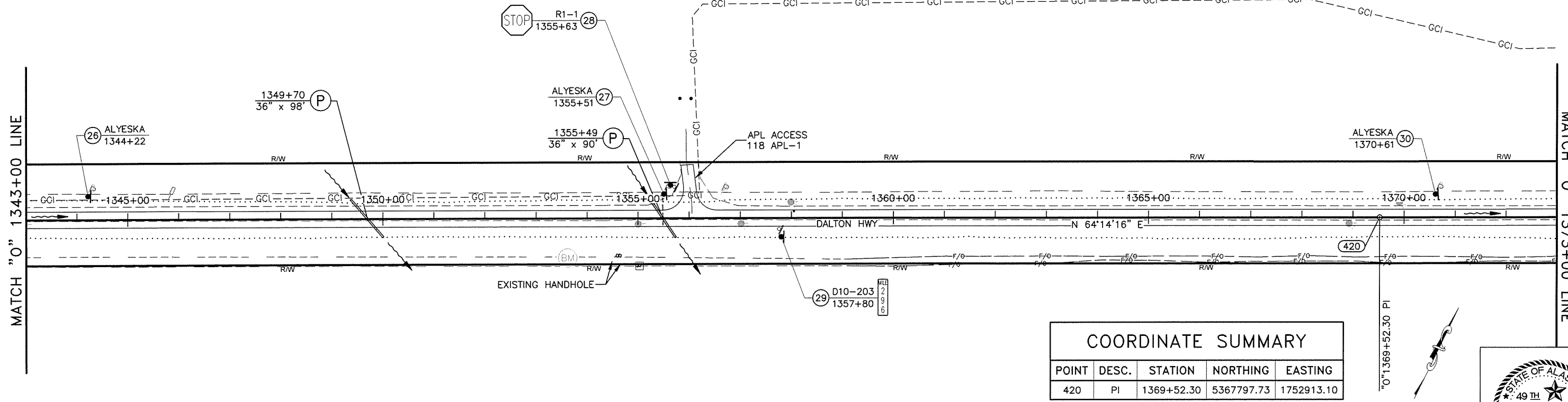
**DALTON HIGHWAY**  
1313+00-1343+00



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PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

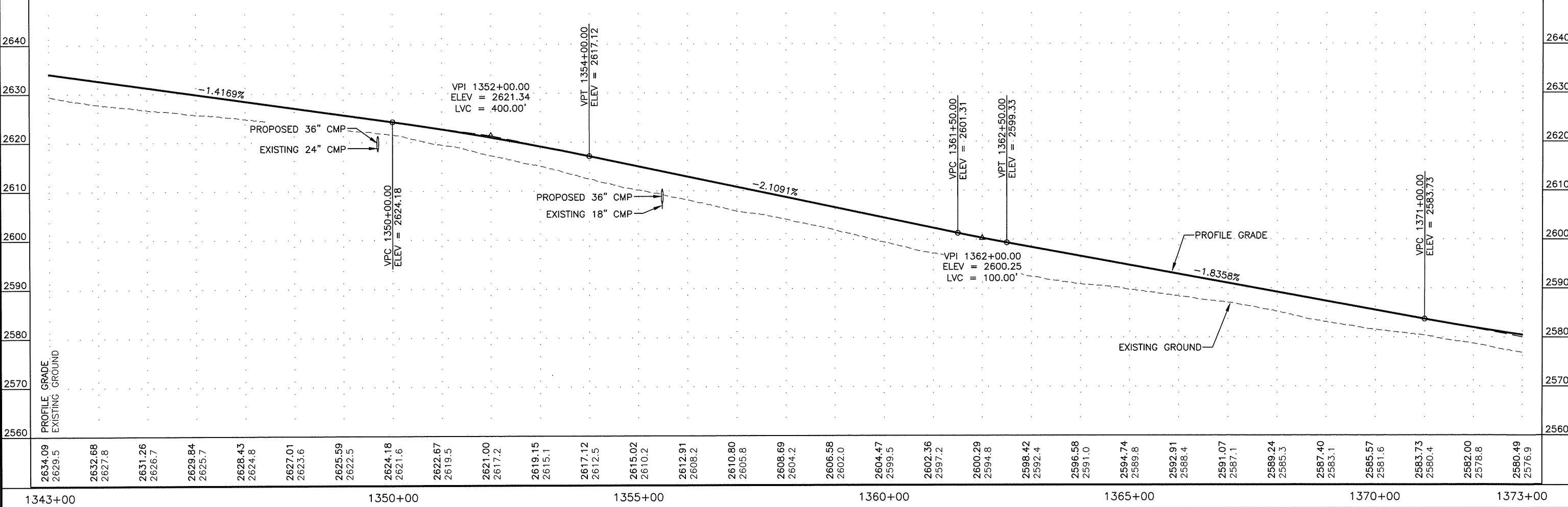


| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F13       | F31          |



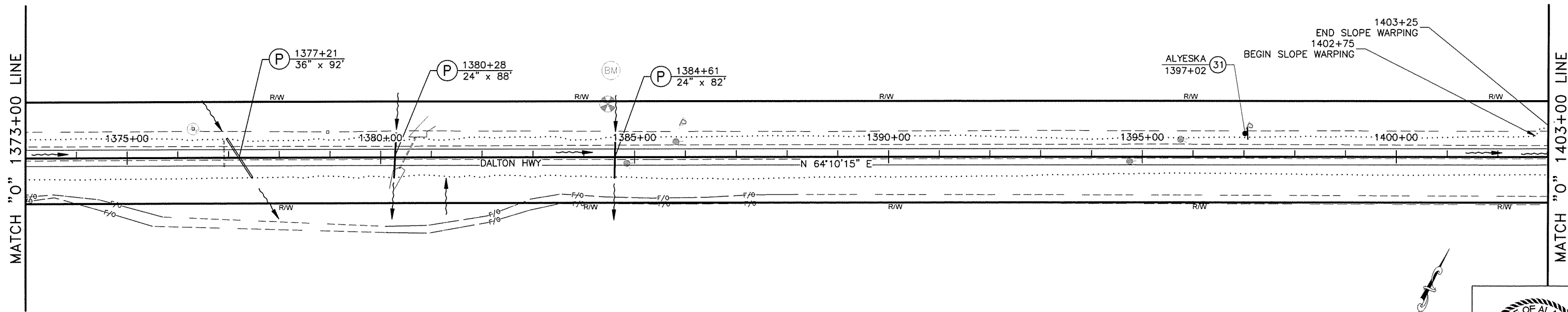
| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 420                | PI    | 1369+52.30 | 5367797.73 | 1752913.10 |

**DALTON HIGHWAY**  
1343+00-1373+00

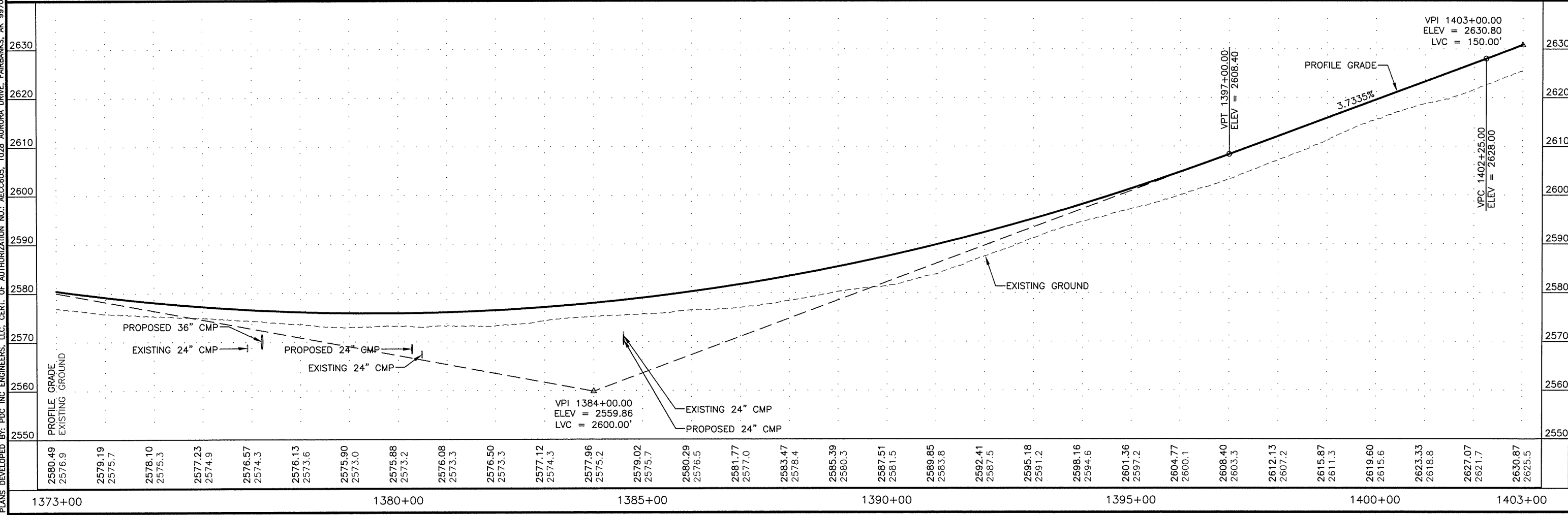


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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F14       | F31          |



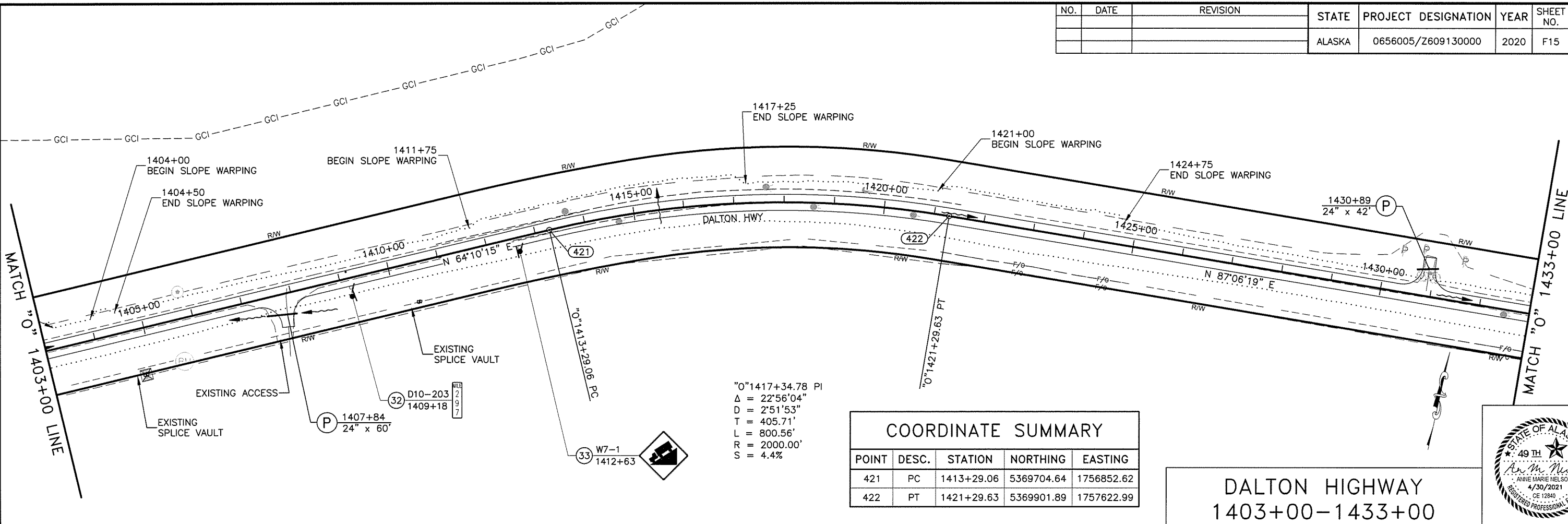
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1373+00-1403+00



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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F15       | F31          |

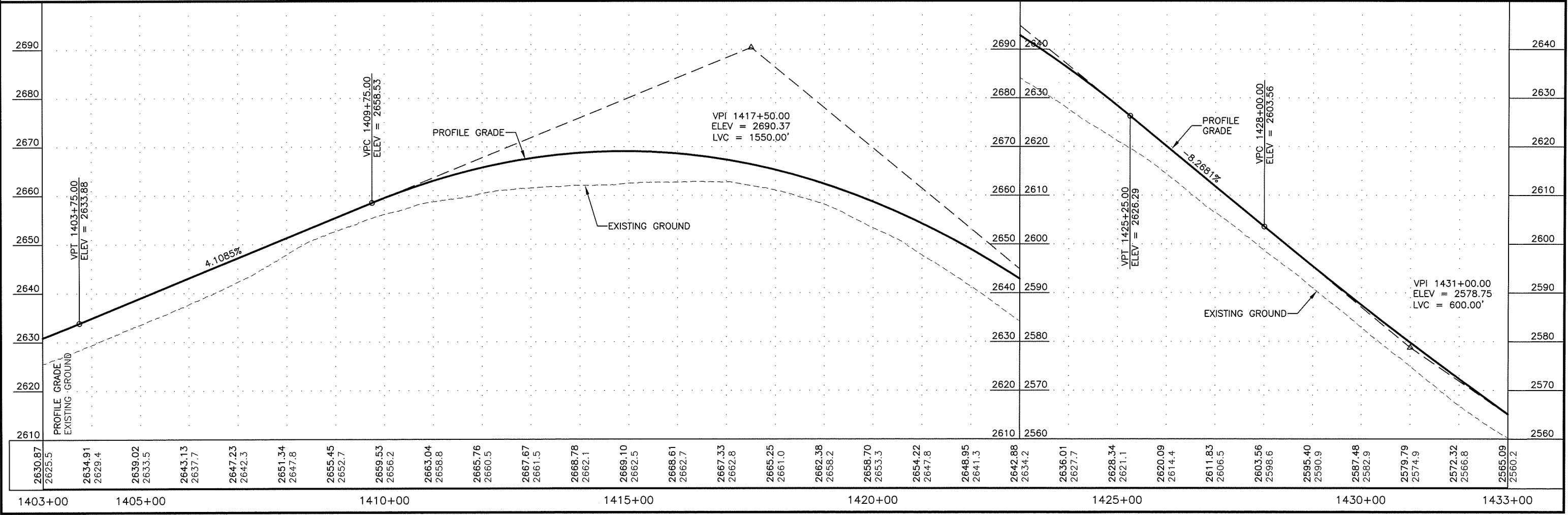


### COORDINATE SUMMARY

| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 421   | PC    | 1413+29.06 | 5369704.64 | 1756852.62 |
| 422   | PT    | 1421+29.63 | 5369901.89 | 1757622.99 |

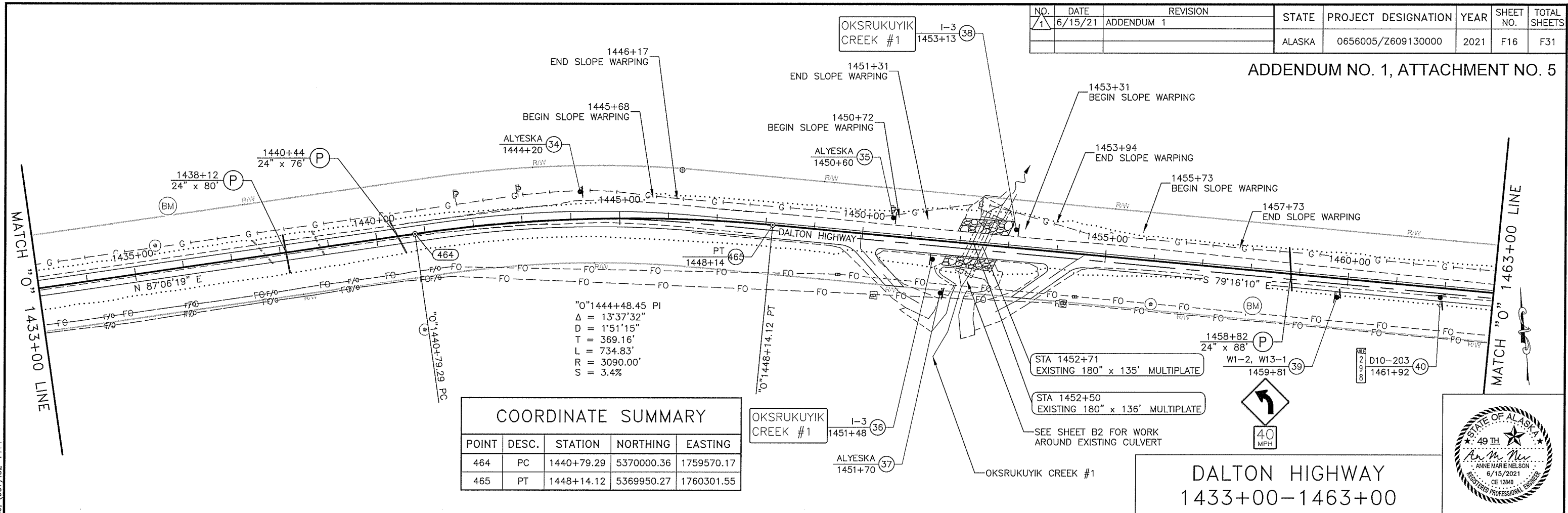


**DALTON HIGHWAY**  
1403+00-1433+00



| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 1   | 6/15/21 | ADDENDUM 1 | ALASKA | 0656005/Z609130000  | 2021 | F16       | F31          |

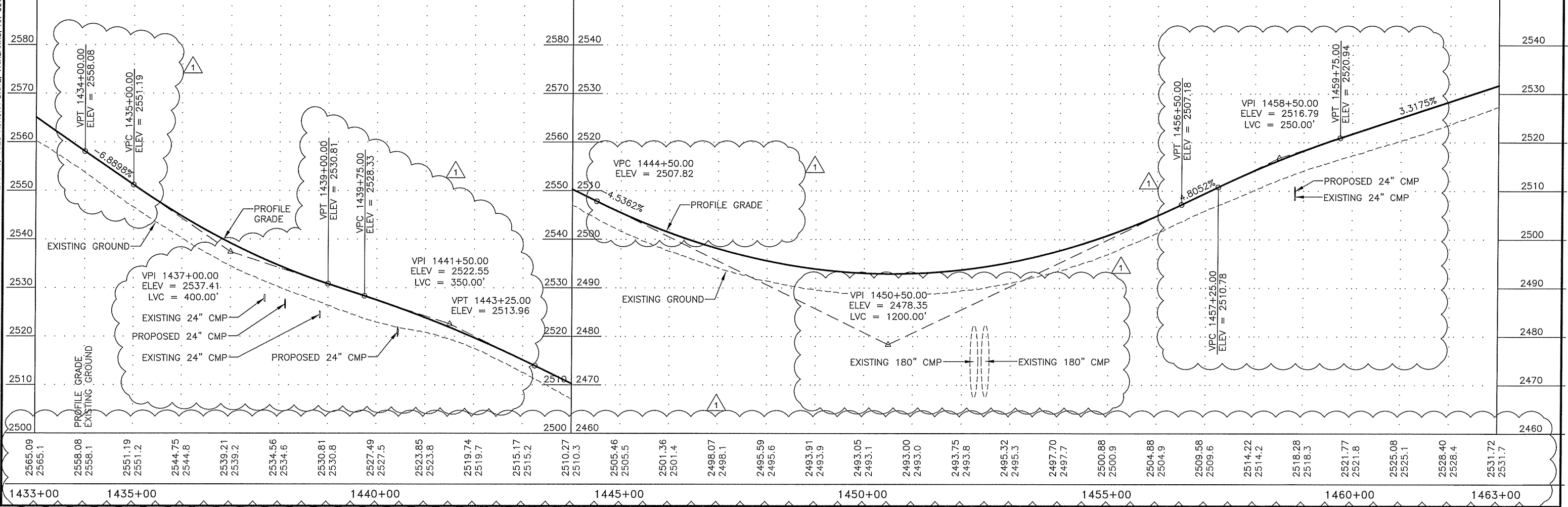
ADDENDUM NO. 1, ATTACHMENT NO. 5



**COORDINATE SUMMARY**

| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 464   | PC    | 1440+79.29 | 5370000.36 | 1759570.17 |
| 465   | PT    | 1448+14.12 | 5369950.27 | 1760301.55 |

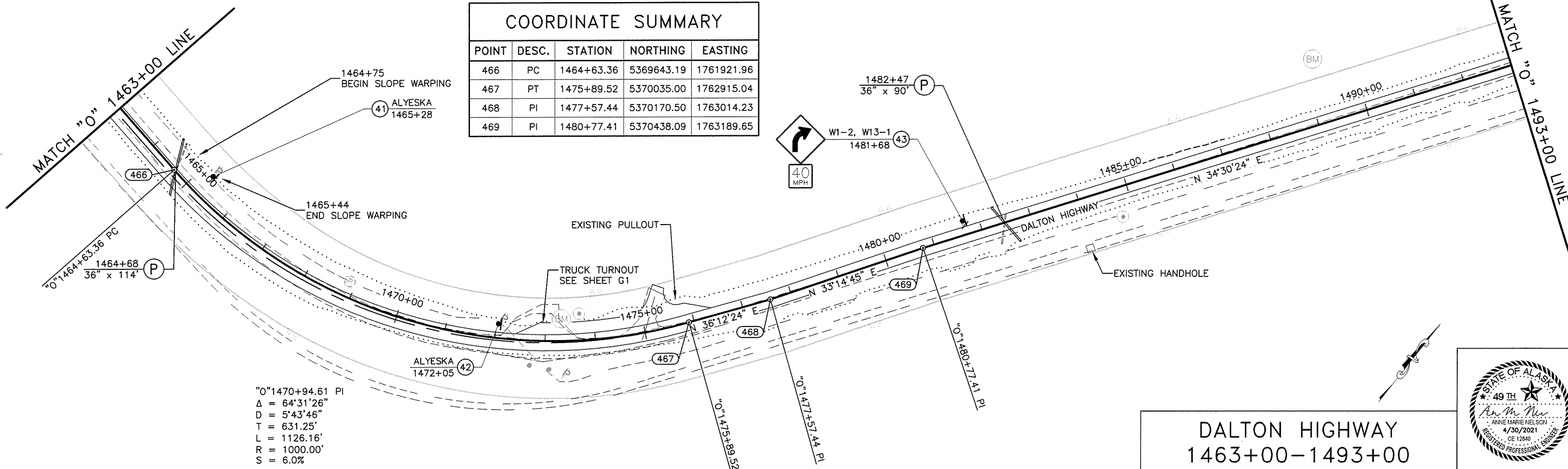
**DALTON HIGHWAY**  
1433+00-1463+00



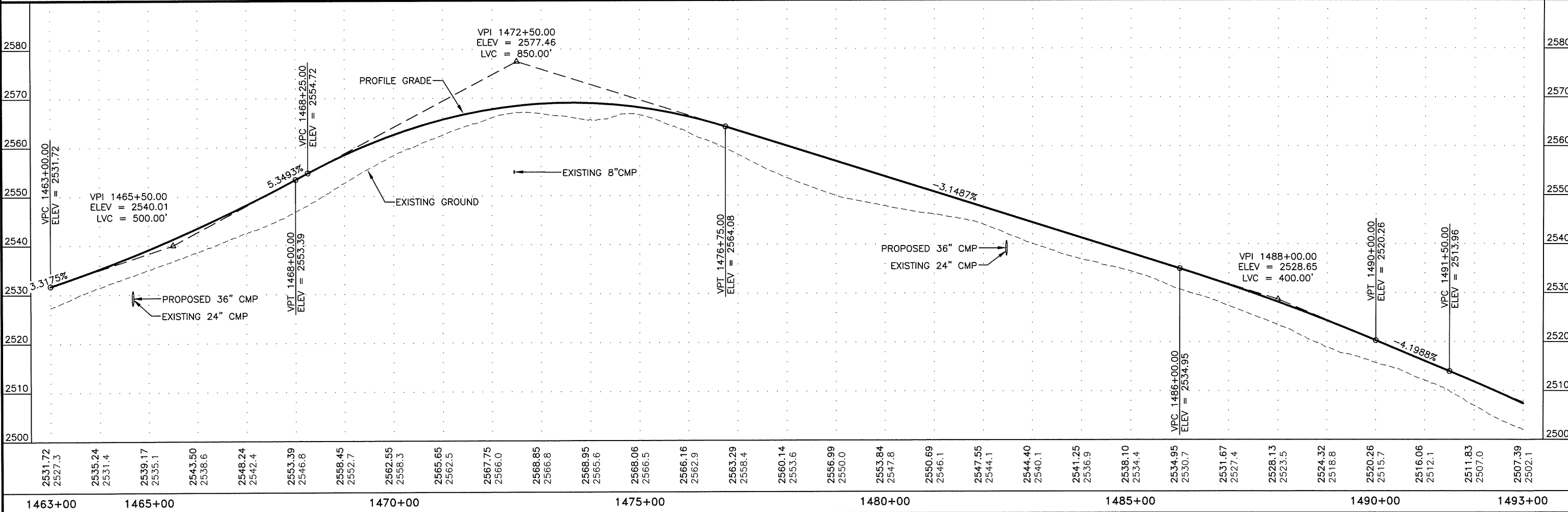
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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F17       | F31          |

| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 466                | PC    | 1464+63.36 | 5369643.19 | 1761921.96 |
| 467                | PT    | 1475+89.52 | 5370035.00 | 1762915.04 |
| 468                | PI    | 1477+57.44 | 5370170.50 | 1763014.23 |
| 469                | PI    | 1480+77.41 | 5370438.09 | 1763189.65 |

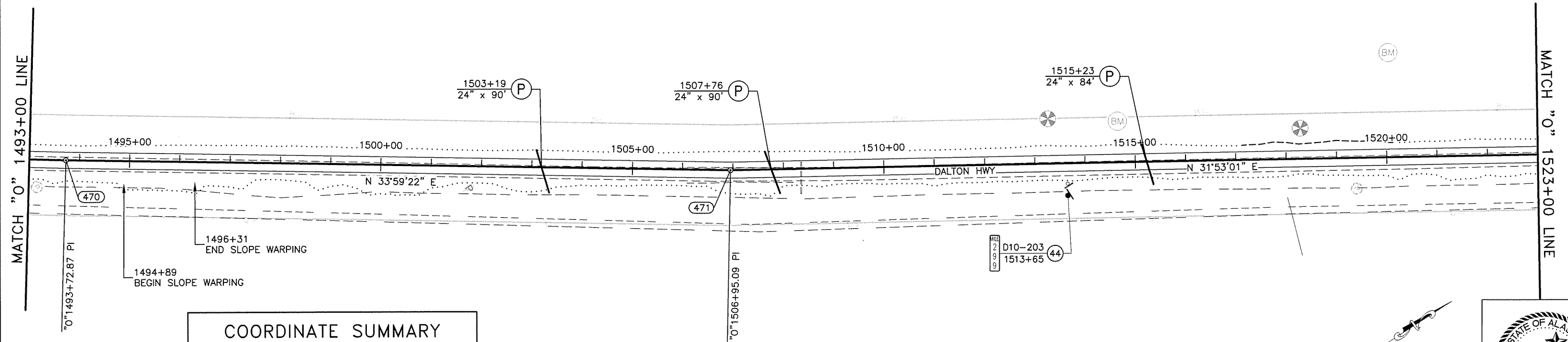


**DALTON HIGHWAY**  
1463+00-1493+00



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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F18       | F31          |

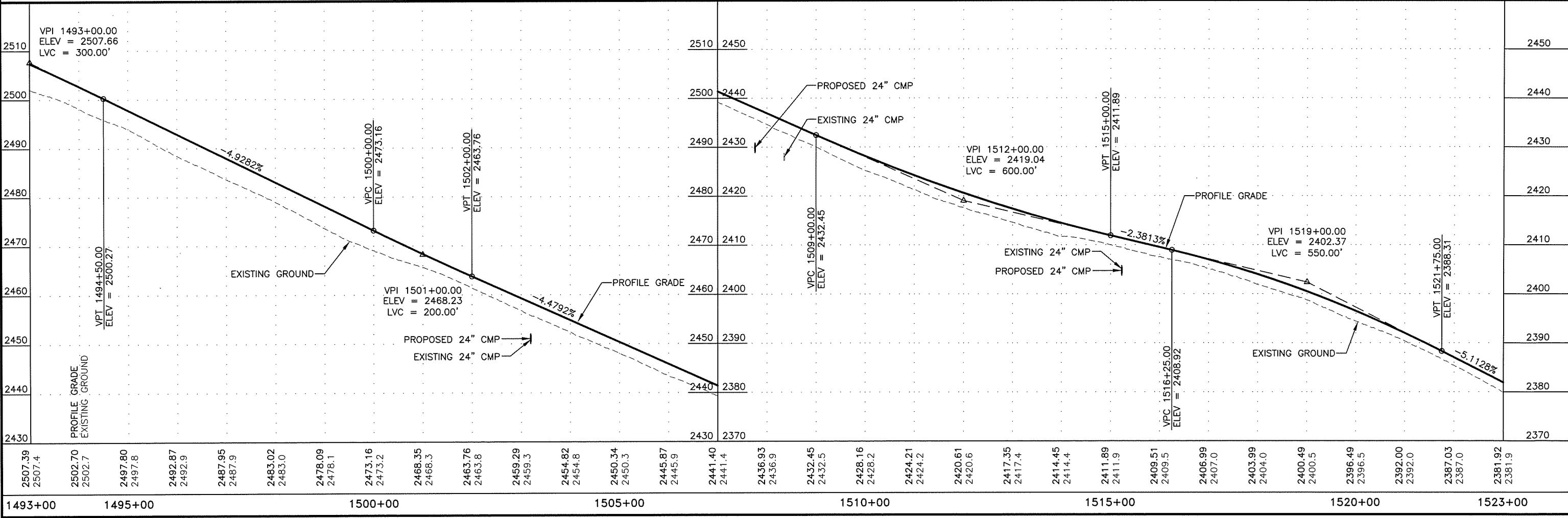


| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 470   | PI    | 1493+72.87 | 5371505.63 | 1763923.53 |
| 471   | PI    | 1506+95.09 | 5372601.94 | 1764662.70 |

**DALTON HIGHWAY**  
1493+00-1523+00

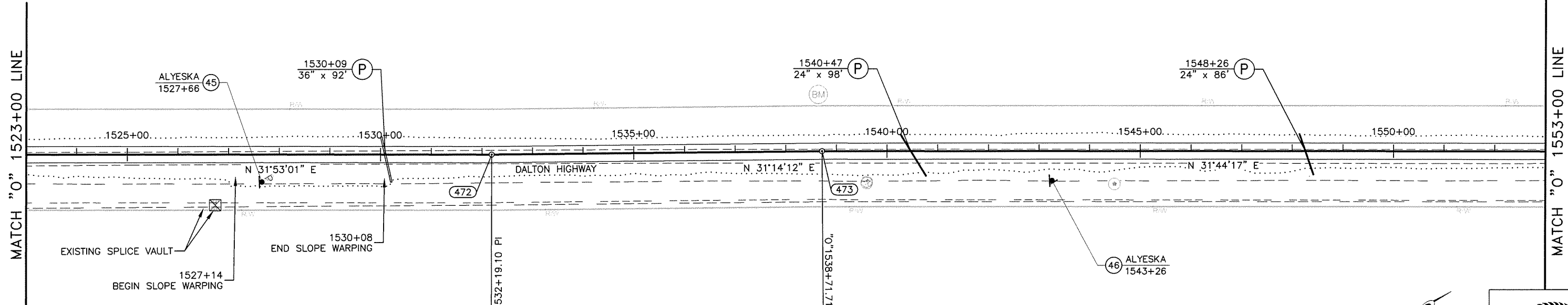


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PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC6605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709. (907)452-1414



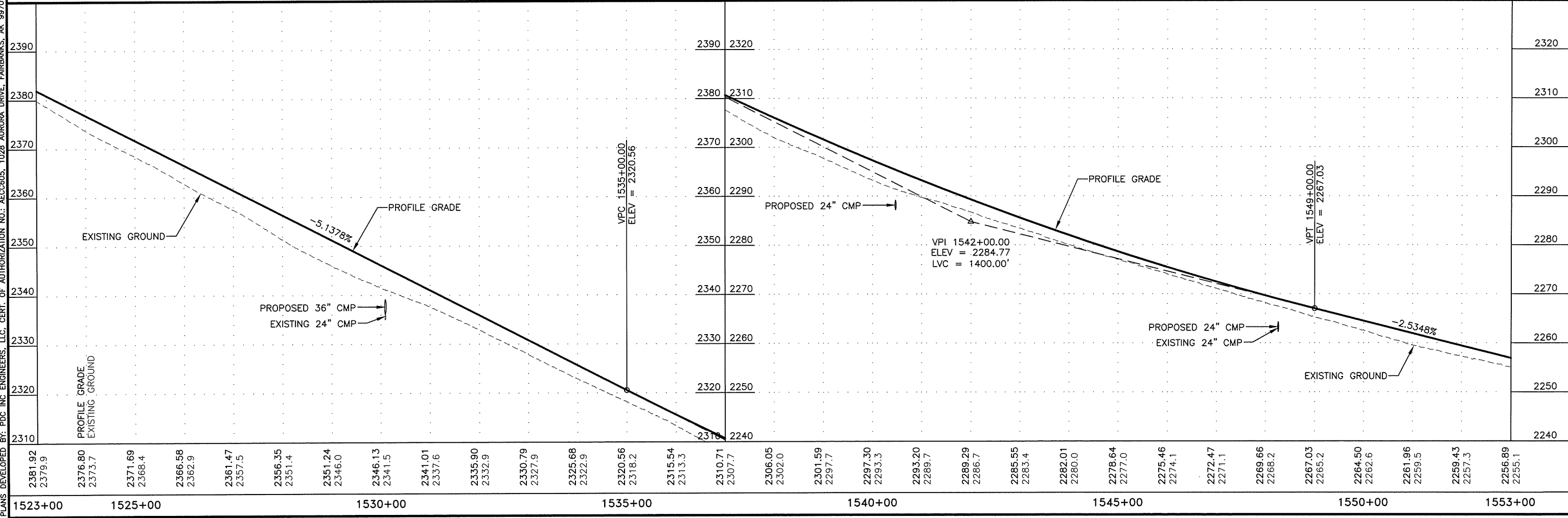


| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F19       | F31          |



| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 472   | PI    | 1532+19.10 | 5374745.13 | 1765995.87 |
| 473   | PI    | 1538+71.71 | 5375303.14 | 1766334.30 |

**DALTON HIGHWAY**  
1523+00-1553+00

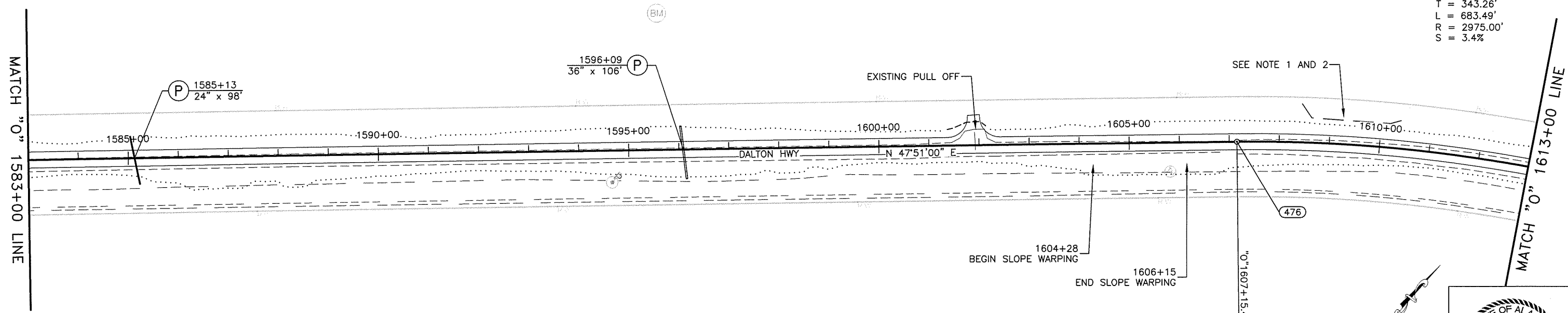


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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F21       | F31          |

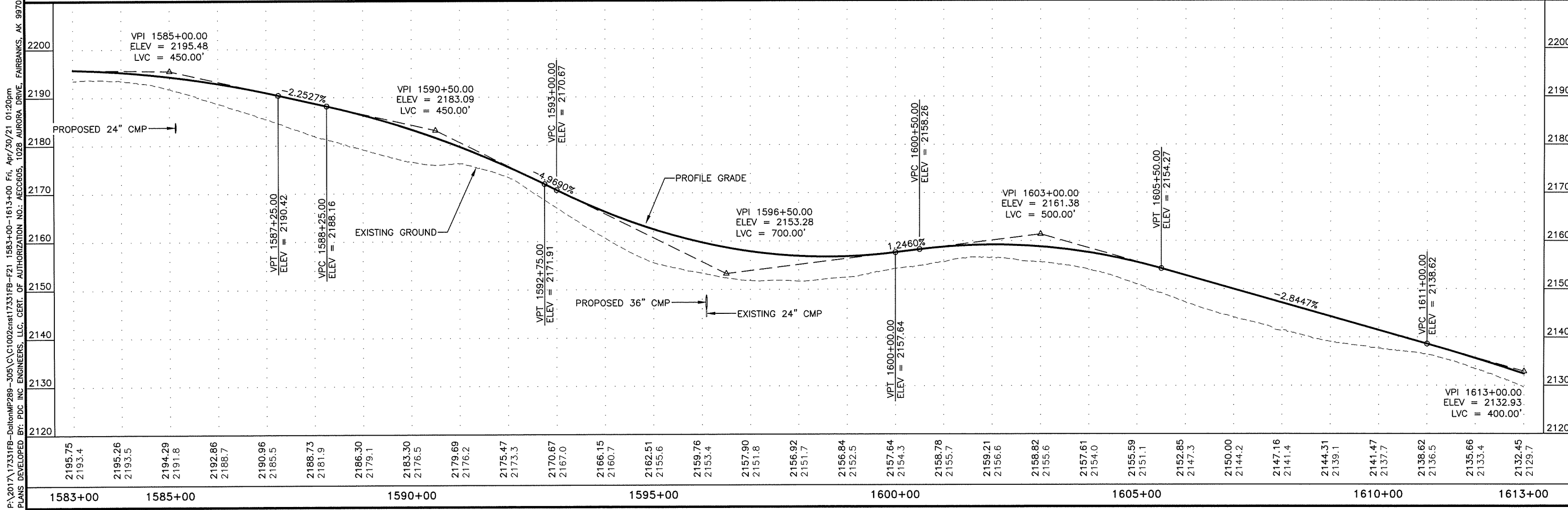
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 $L = 683.49'$   
 $R = 2975.00'$   
 $S = 3.4\%$



- NOTES:
- INSTALL ORANGE PROTECTION FENCING FROM STA 1608+50 TO STA 1610+20 AT 50 FOOT OFFSET FROM CENTERLINE. FLAIR ENDS OF FENCING TO ROW OVER 25 FEET. REMOVE AFTER CONSTRUCTION.
  - ARCHAEOLOGICAL MONITORING IS REQUIRED DURING FENCE INSTALLATION AND CONTRACTOR IS WORKING WITHIN 20 FEET OF THE FENCE.

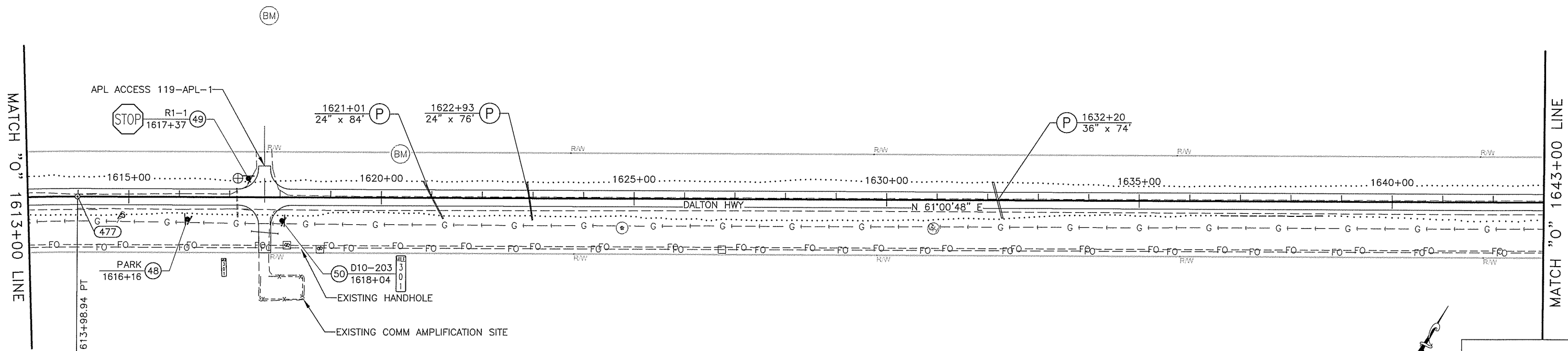
| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 476                | PC    | 1607+15.46 | 5380390.79 | 1770819.67 |

**DALTON HIGHWAY**  
 1583+00-1613+00



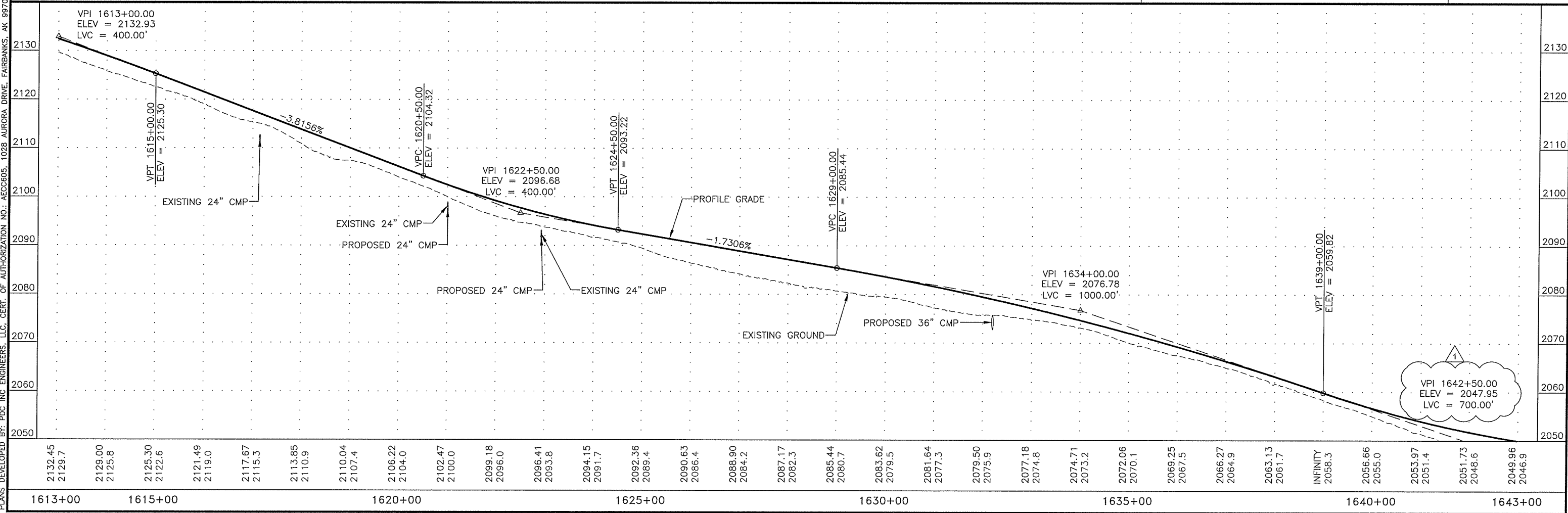
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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 1   | 6/15/21 | ADDENDUM 1 | ALASKA | 0656005/Z609130000  | 2021 | F22       | F31          |



| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 477   | PT    | 1613+98.94 | 5380787.48 | 1771374.42 |

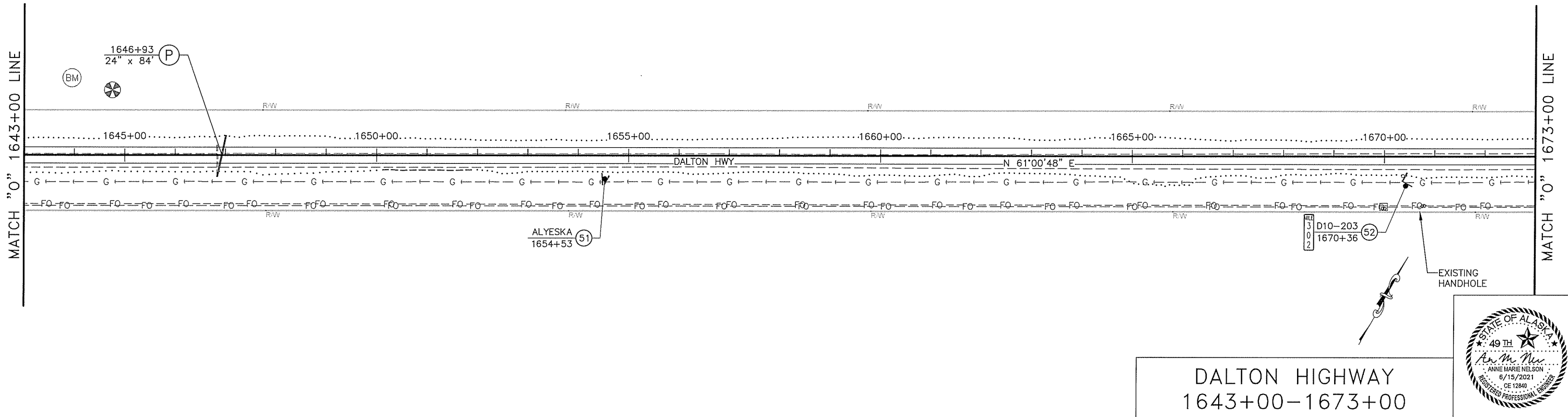
DALTON HIGHWAY  
1613+00-1643+00



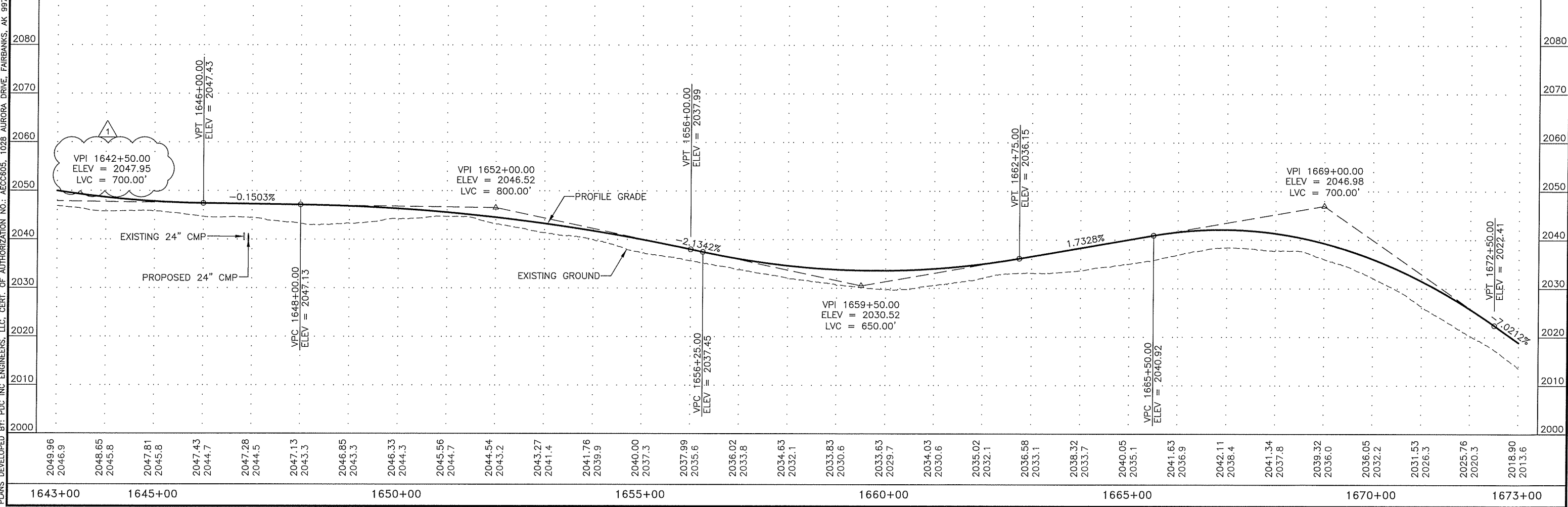
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ADDENDUM NO. 1, ATTACHMENT NO. 7

| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 1   | 6/15/21 | ADDENDUM 1 | ALASKA | 0656005/Z609130000  | 2021 | F23       | F31          |



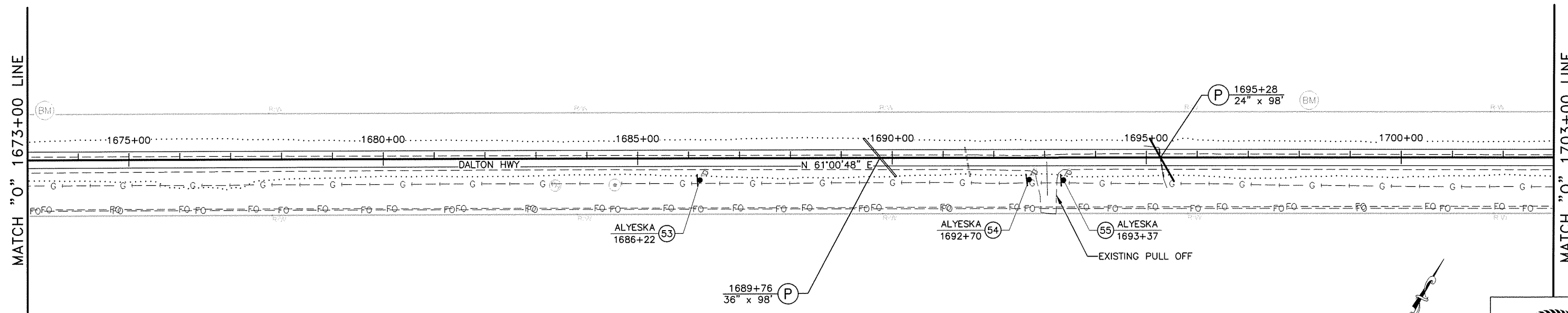
DALTON HIGHWAY  
1643+00-1673+00



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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



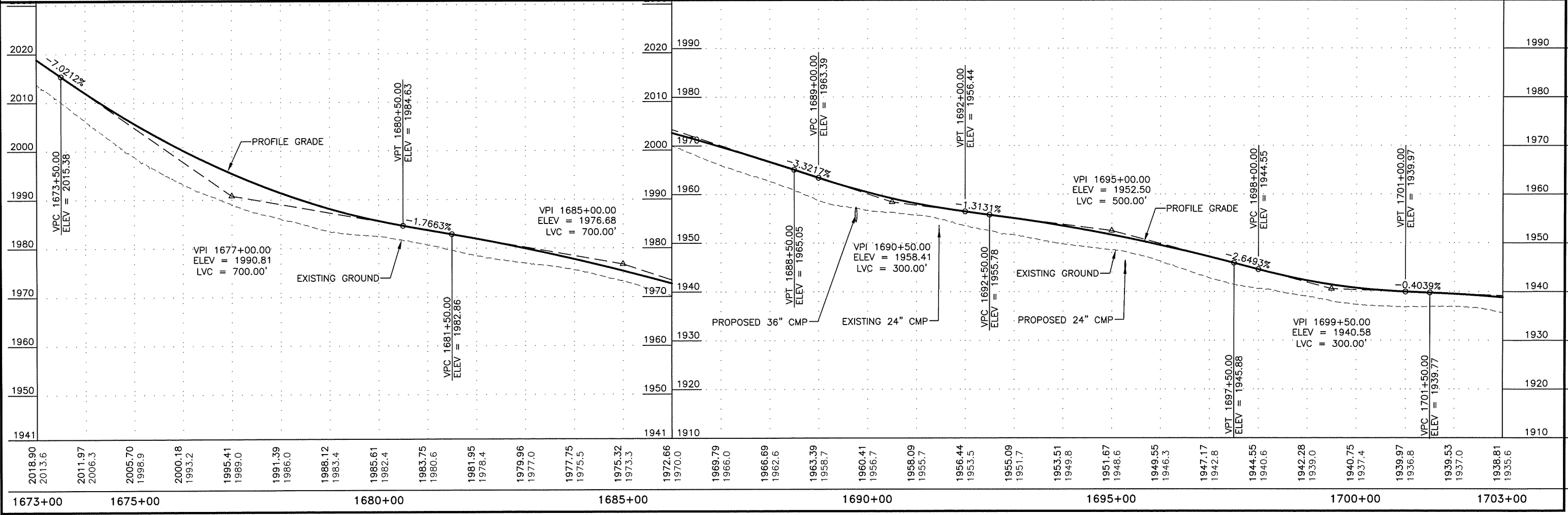
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2021 | F24       | F31          |



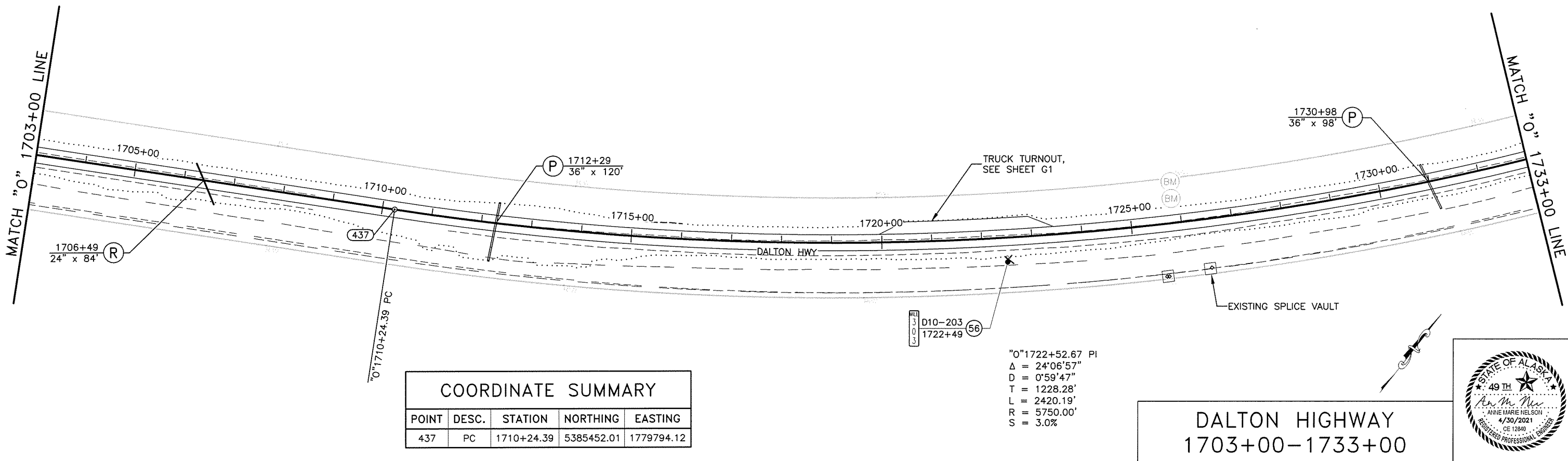
**DALTON HIGHWAY**  
1673+00-1703+00



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PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CENT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F25       | F31          |

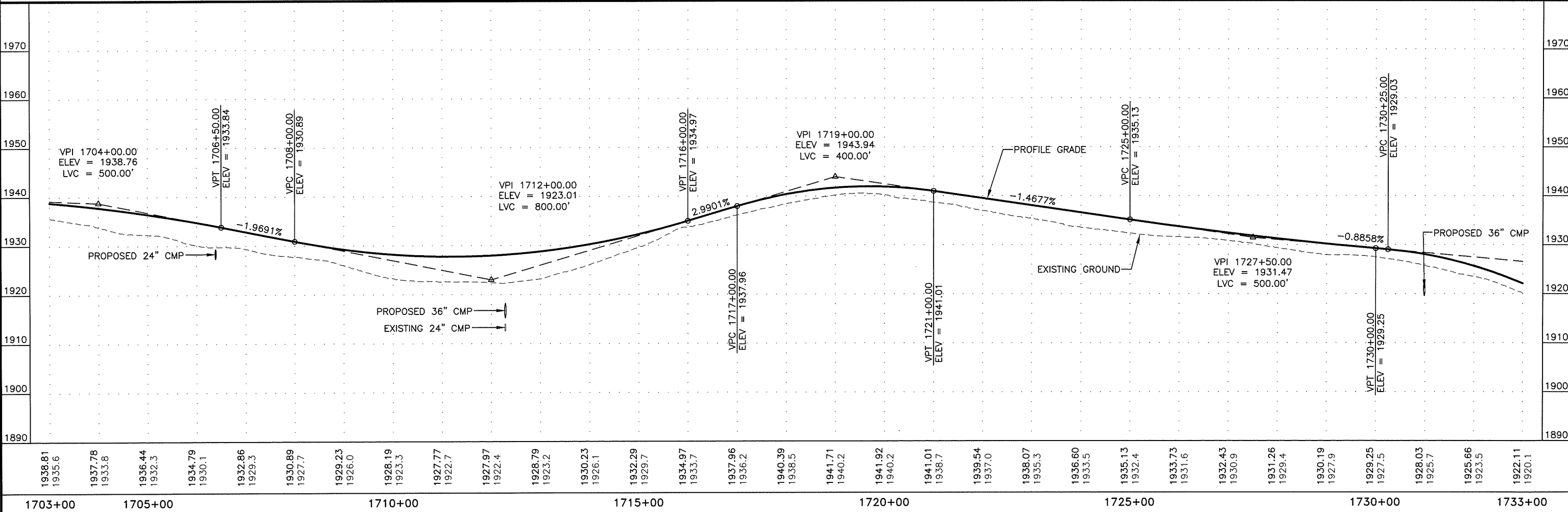


**COORDINATE SUMMARY**

| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 437   | PC    | 1710+24.39 | 5385452.01 | 1779794.12 |

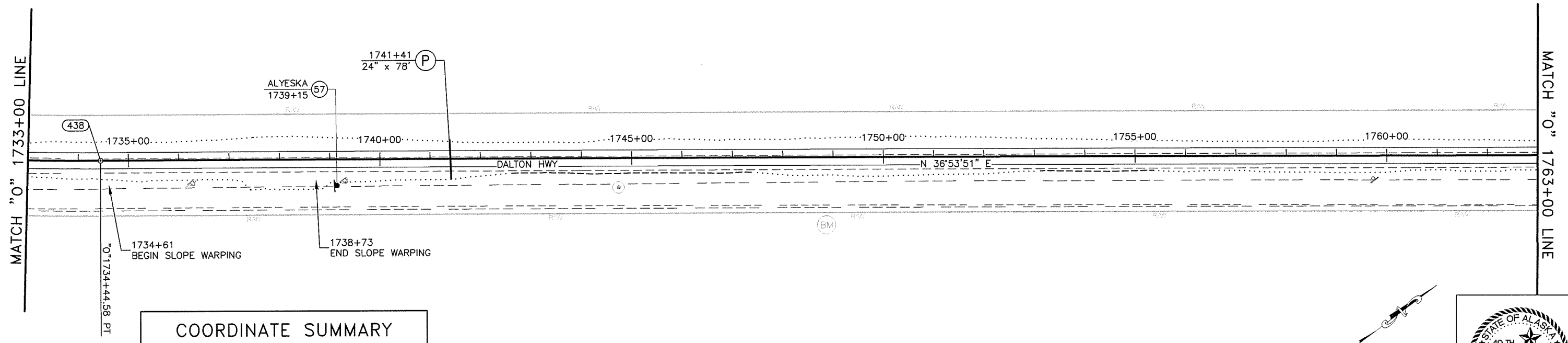
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 $D = 0'59'47"$   
 $T = 1228.28'$   
 $L = 2420.19'$   
 $R = 5750.00'$   
 $S = 3.0\%$

**DALTON HIGHWAY  
1703+00-1733+00**



P:\2017\1733\FB-Dalton\FB-305\C:\1002\enat1733\FB-F25 1703+00-1733+00 Fr. Apr/30/21 01:21pm  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F26       | F31          |



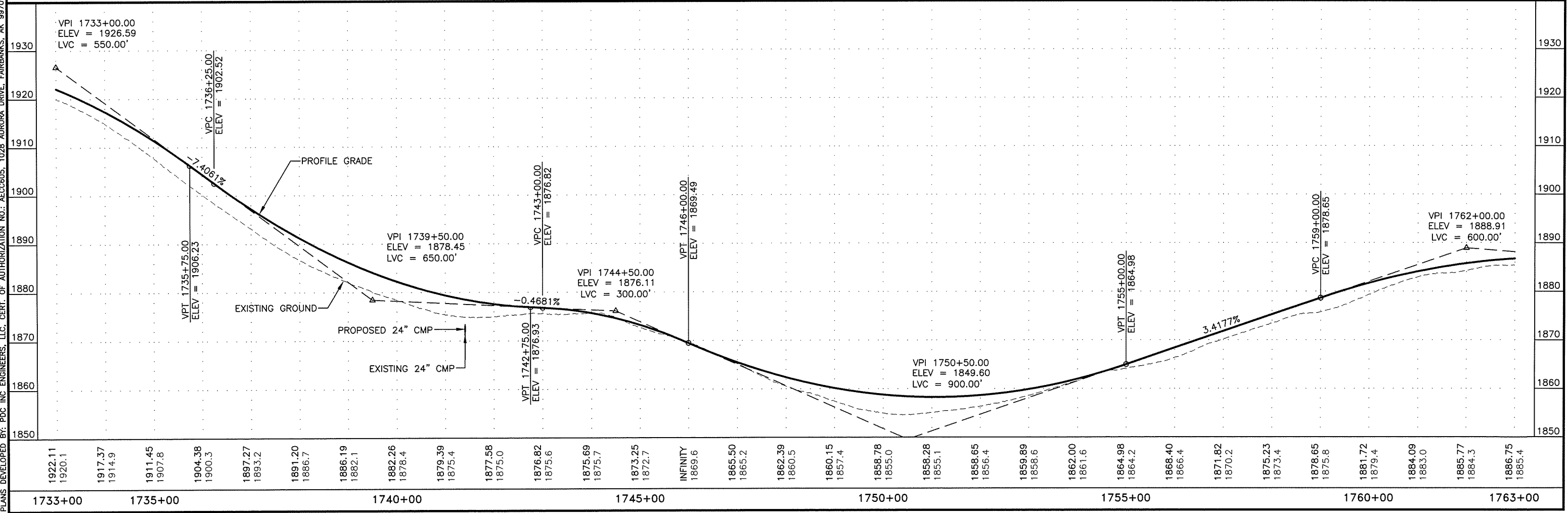
**COORDINATE SUMMARY**

| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 438   | PT    | 1734+44.58 | 5387029.51 | 1781605.98 |

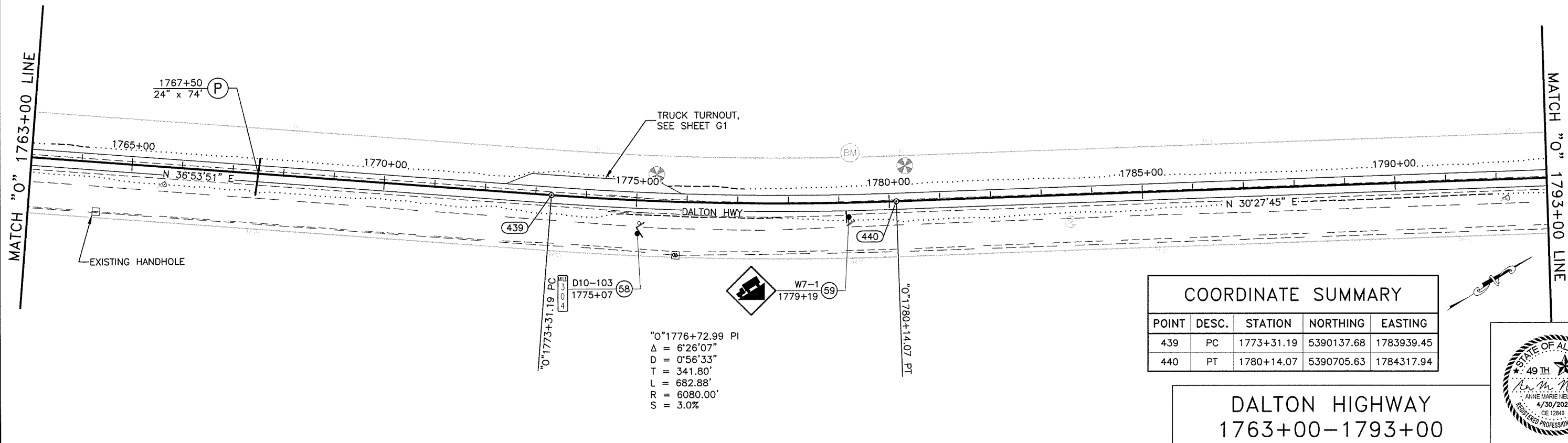
**DALTON HIGHWAY  
1733+00-1763+00**



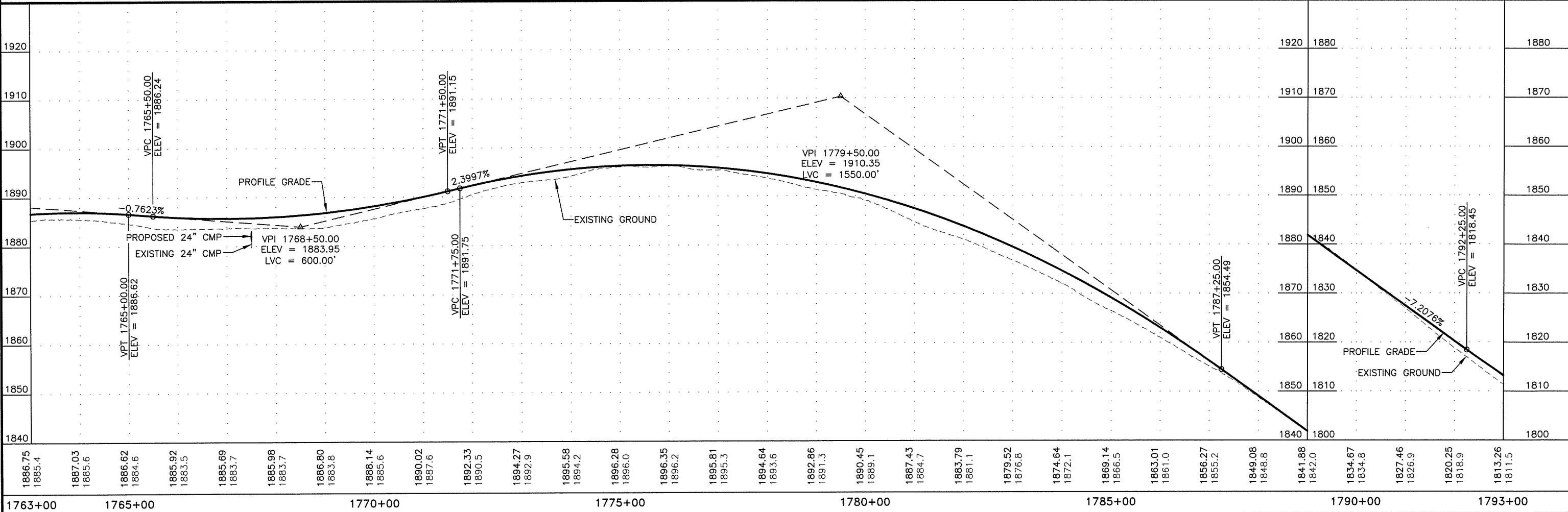
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PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F27       | F31          |

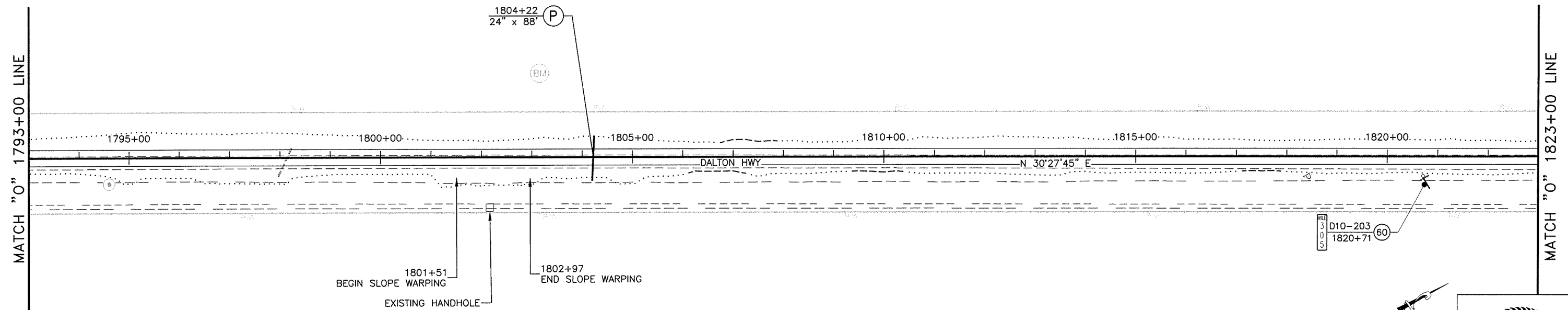


**DALTON HIGHWAY**  
1763+00-1793+00

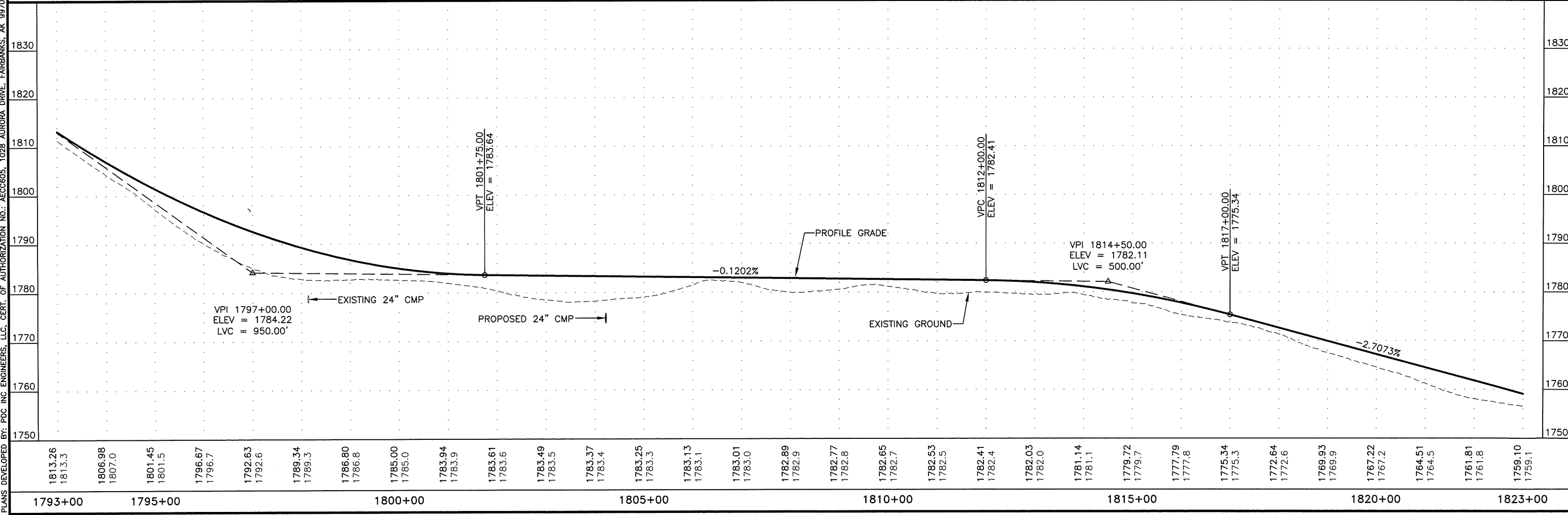


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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: ACC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99708, (907)452-1414

| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F28       | F31          |



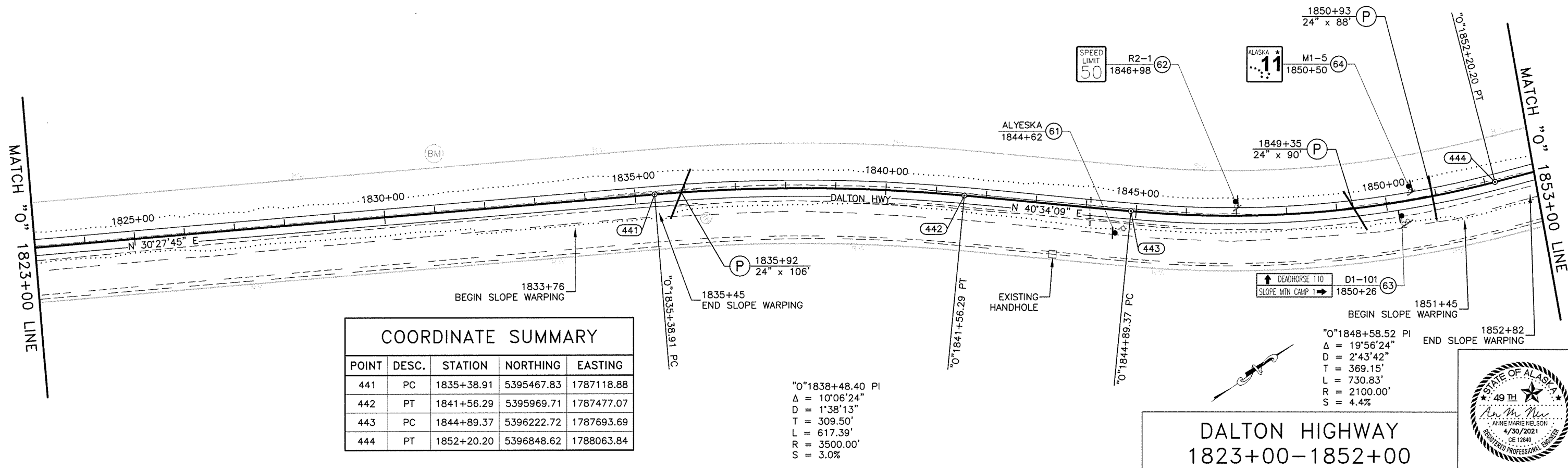
**DALTON HIGHWAY**  
1793+00-1823+00



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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CENT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | F29       | F31          |

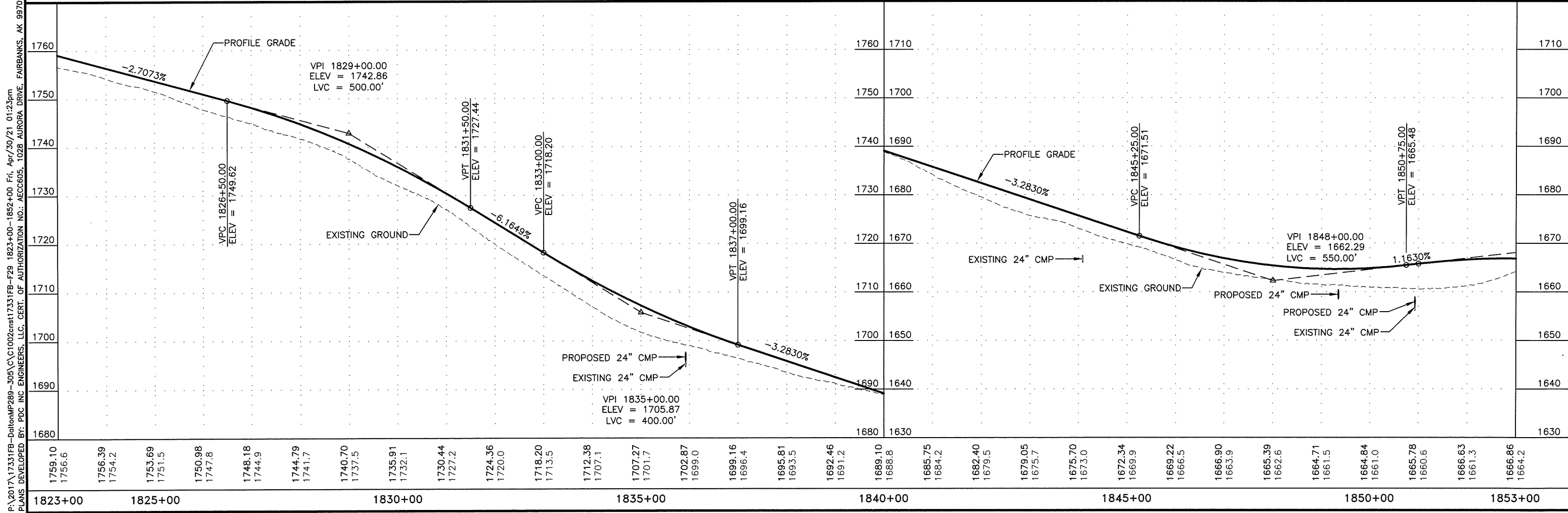


| POINT | DESC. | STATION    | NORTHING   | EASTING    |
|-------|-------|------------|------------|------------|
| 441   | PC    | 1835+38.91 | 5395467.83 | 1787118.88 |
| 442   | PT    | 1841+56.29 | 5395969.71 | 1787477.07 |
| 443   | PC    | 1844+89.37 | 5396222.72 | 1787693.69 |
| 444   | PT    | 1852+20.20 | 5396848.62 | 1788063.84 |

"O"1838+48.40 PI  
 $\Delta = 10^{\circ}06'24''$   
 $D = 1^{\circ}38'13''$   
 $T = 309.50'$   
 $L = 617.39'$   
 $R = 3500.00'$   
 $S = 3.0\%$

"O"1848+58.52 PI  
 $\Delta = 19^{\circ}56'24''$   
 $D = 2^{\circ}43'42''$   
 $T = 369.15'$   
 $L = 730.83'$   
 $R = 2100.00'$   
 $S = 4.4\%$

**DALTON HIGHWAY**  
 1823+00-1852+00

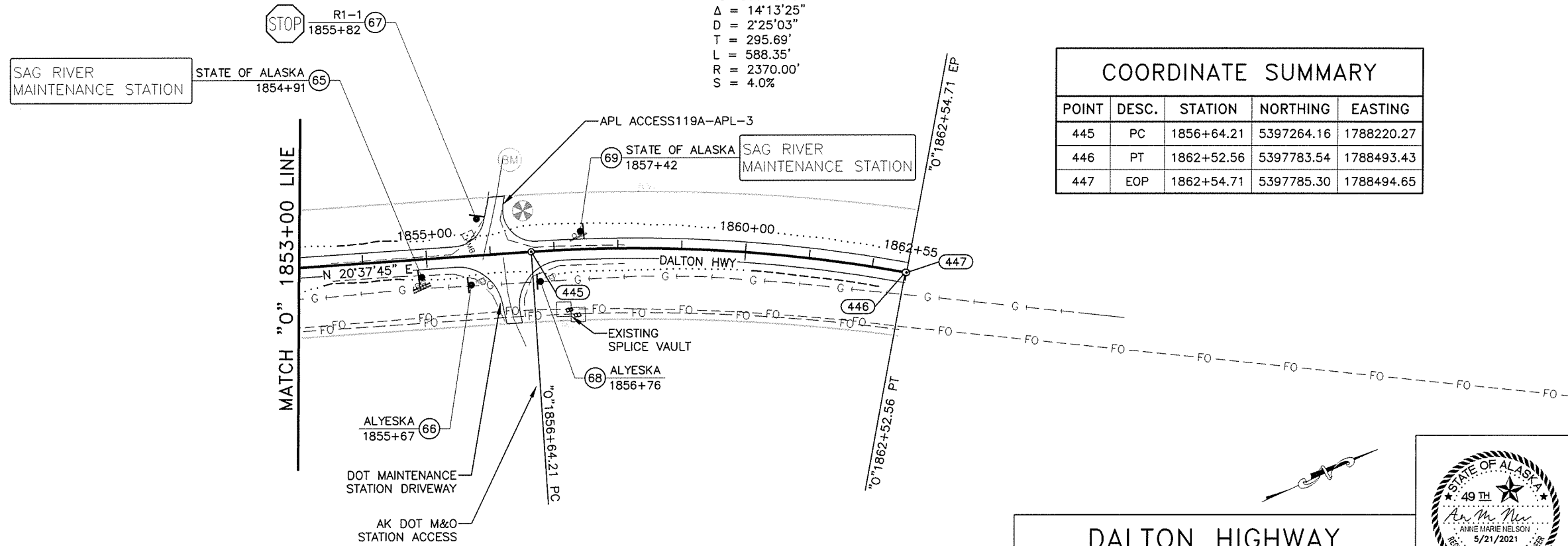


P:\2017\17331FB-DaltonMP289-305\C\1002ent17331FB-F29 1823+00-1852+00.Fri, Apr/30/21 01:23pm  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: ACC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

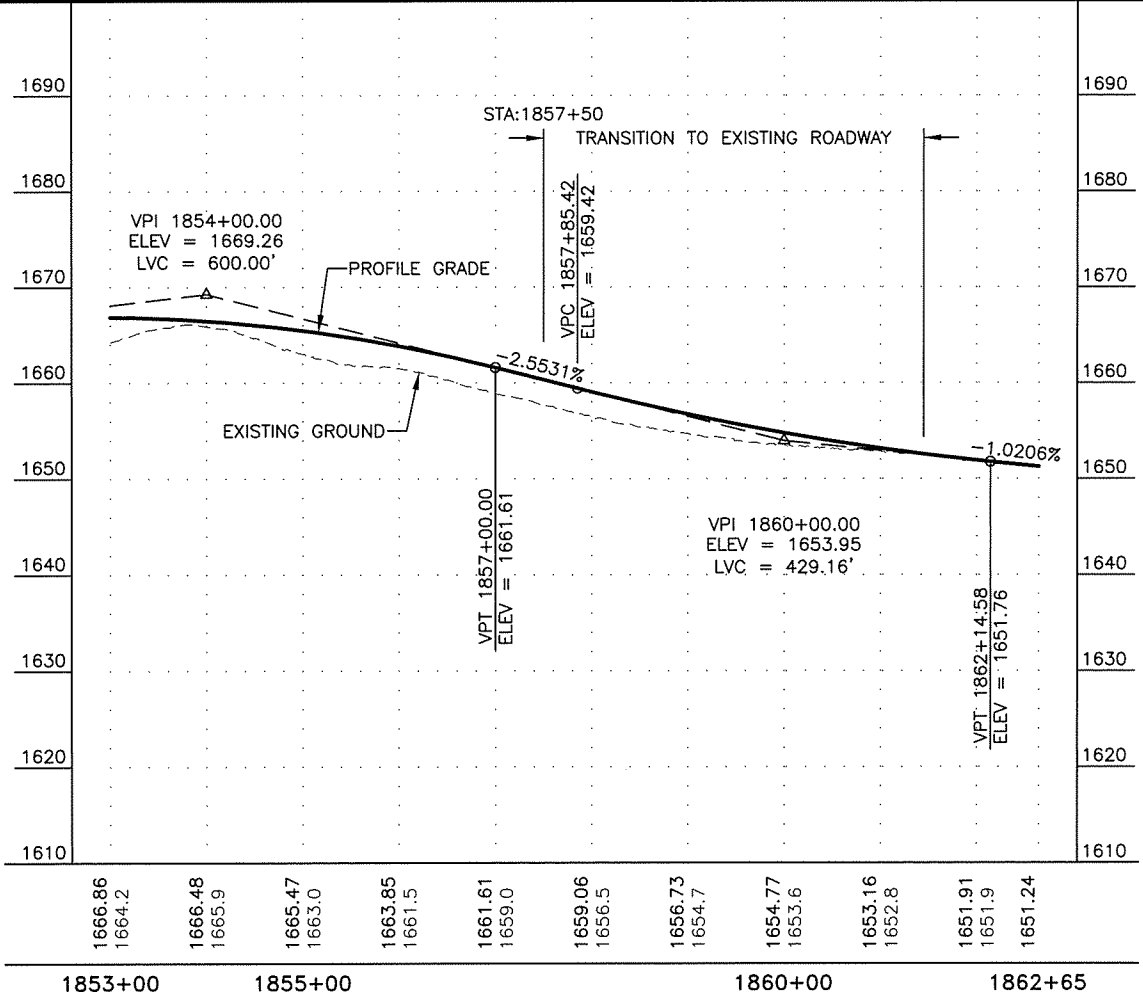
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2021 | F30       | F31          |

"O"1859+59.91 PI  
 $\Delta = 14'13'25"$   
 $D = 2'25'03"$   
 $T = 295.69'$   
 $L = 588.35'$   
 $R = 2370.00'$   
 $S = 4.0\%$

| COORDINATE SUMMARY |       |            |            |            |
|--------------------|-------|------------|------------|------------|
| POINT              | DESC. | STATION    | NORTHING   | EASTING    |
| 445                | PC    | 1856+64.21 | 5397264.16 | 1788220.27 |
| 446                | PT    | 1862+52.56 | 5397783.54 | 1788493.43 |
| 447                | EOP   | 1862+54.71 | 5397785.30 | 1788494.65 |



**DALTON HIGHWAY**  
**1852+00-1862+65**



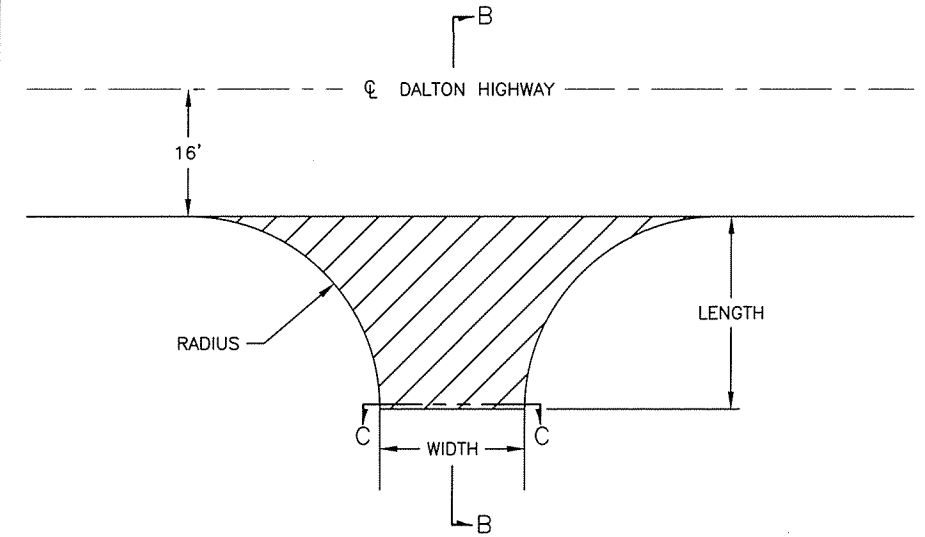
P:\2017\17331FB-Delton\MP289-305\C\1002cnet\17331FB-F30\_1852+00-1862+65\_Fr., May/21/21 10:45am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CENT. OF AUTHORIZATION NO.: AEC6605, 102B AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



## APPROACH SUMMARY

| SHEET | "O" PI STATION | OFFSET | WIDTH (FT) | LANDING LENGTH (FT) | TOTAL LENGTH (FT) | DESIGN RADIUS | SKEW ANGLE | REMARKS                     |
|-------|----------------|--------|------------|---------------------|-------------------|---------------|------------|-----------------------------|
| F1    | 984+15.42      | RT     | 24         | 30                  | 85                | 40 RT, 10 LT  | 9          | APL ACCESS                  |
| F1    | 987+73.42      | RT     | 24         | 40                  | 102               | 20 RT, 50 LT  | 60         | EXISTING PULL OFF           |
| F1    | 1003+27.94     | LT     | 24         | 40                  | 81                | 40            | 0          | PRIVATE BUILDING            |
| F1    | 1009+13.45     | RT     | 24         | 40                  | 84                | 20 RT, 50 LT  | 43         | APL ACCESS                  |
| F1    | 1009+28.18     | LT     | 24         | 30                  | 155               | 50 RT, 20 LT  | 30         | APL ACCESS                  |
| F3    | 1064+98.72     | RT     | 34         | 40                  | 50                | 50            | 17         | 117 MATERIAL SITE 117-AMS-1 |
| F7    | 1186+73.40     | RT     | 24         | 40                  | 75                | 40            | 0          | EXISTING PULL OFF           |
| F13   | 1356+05.45     | LT     | 24         | 40                  | 90                | 40            | 6          | APL ACCESS 118-APL-1        |
| F15   | 1407+91.58     | RT     | 24         | 40                  | 50                | 40            | 9          | APL ACCESS                  |
| F15   | 1430+90.88     | LT     | 24         | 40                  | 62                | 40            | 1          | EXISTING PULL OFF           |
| F16   | 1449+65.16     | RT     | 26         | 30                  | 125               | 10            | 47         | DOT OKS #1 CREEK ACCESS     |
| F16   | 1454+59.36     | RT     | 26         | 40                  | 133               | 10 LT, 50 RT  | 52         | DOT OKS #1 CREEK ACCESS     |
| F17   | 1474+98.77     | LT     | 24         | 30                  | 85                | 25 RT, 50 LT  | 29         | ABANDONED APL ACCESS        |
| F20   | 1576+20.58     | RT     | 24         | 30                  | 94                | 40            | 1          | FIBER OPTIC BOOSTER         |
| F21   | 1601+92.53     | LT     | 24         | 40                  | 44                | 40            | 3          | EXISTING PULL OFF           |
| F22   | 1617+69.62     | LT     | 24         | 40                  | 40                | 40            | 0          | APL ACCESS 119-APL-1        |
| F22   | 1617+69.62     | RT     | 24         | 30                  | 94                | 40            | 0          | FIBER OPTIC BOOSTER         |
| F30   | 1855+90.38     | LT     | 24         | 20                  | 77                | 50            | 17         | APL ACCESS 119A-APL-3       |
| F30   | 1856+19.75     | RT     | 24         | 40                  | 95                | 70            | 3          | DOT CAMP ACCESS             |

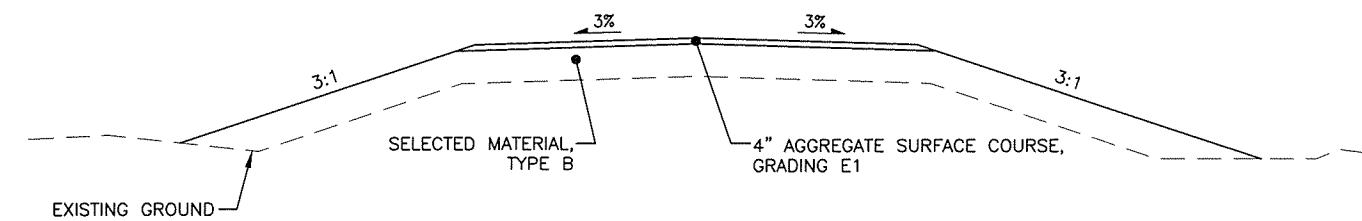
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2021 | G1        | G1           |



**DETAIL: APPROACH**  
N.T.S.

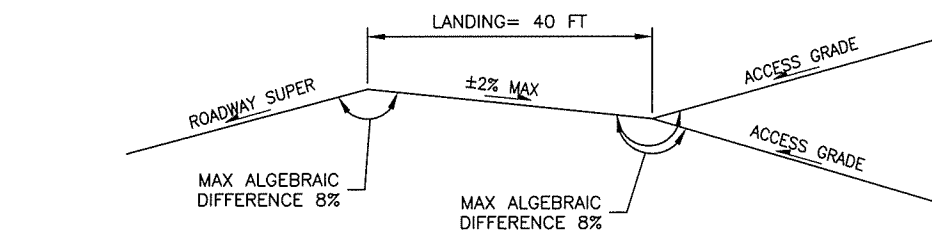
### APPROACH NOTES:

1. APPROACH LANDING LENGTHS MAY BE ADJUSTED AS APPROVED BY THE ENGINEER.
2. CONSTRUCT, GRADE AND SURFACE APPROACH LANDINGS WITH THE SAME TYPE AND DEPTH OF MATERIAL AS SPECIFIED IN THE ROADWAY TYPICAL SECTION.
3. WIDTHS AND RADII SHOWN ARE MINIMUMS. CONSTRUCT TO EXISTING WIDTHS AND RADII IF LARGER.
4. REMOVING AND REPLACING EXISTING GATES IS SUBSIDIARY TO PAY ITEM 693.2000.0000.

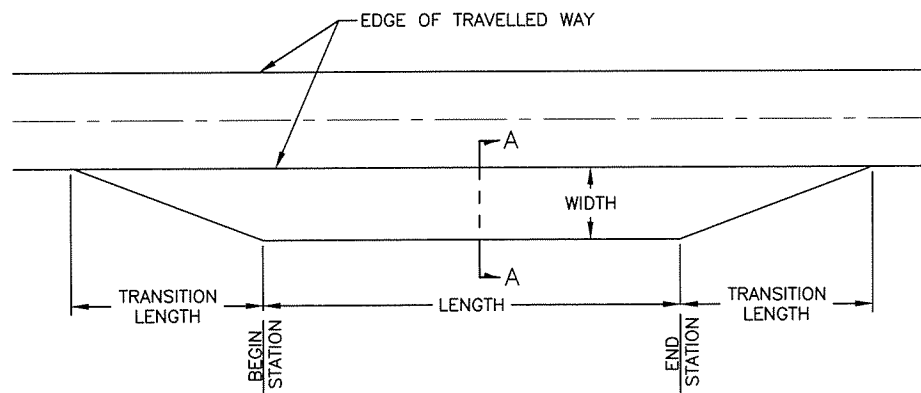


**SECTION C-C**

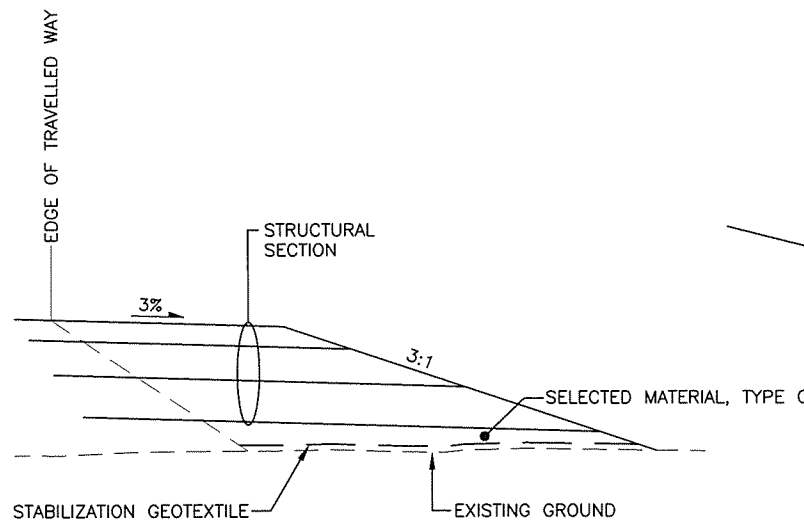
| TRUCK TURNOUT TABLE |             |          |       |             |            |                 |         |
|---------------------|-------------|----------|-------|-------------|------------|-----------------|---------|
| BEGIN STATION       | END STATION | LOCATION |       | LENGTH (FT) | WIDTH (FT) | TRANSITION (FT) | REMARKS |
|                     |             | LEFT     | RIGHT |             |            |                 |         |
| 1061+41             | 1063+91     |          | X     | 250         | 30         | 50              |         |
| 1145+95             | 1148+45     | X        | X     | 250         | 24         | 50              |         |
| 1473+00             | 1476+00     | X        |       | 300         | 24         | 50              |         |
| 1720+55             | 1723+05     | X        |       | 250         | 24         | 50              |         |
| 1773+00             | 1775+50     | X        |       | 250         | 24         | 50              |         |



**SECTION B-B**



**DETAIL: TRUCK TURNOUT**  
N.T.S.



**SECTION A-A**  
N.T.S.

**APPROACH DETAILS**



ADDENDUM NO. 3, ATTACHMENT NO. 4

| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 1   | 6/11/21 | ADDENDUM 1 |        |                     |      |           |              |
| 3   | 6/17/21 | ADDENDUM 3 | ALASKA | 0656005/Z609130000  | 2021 | H1        | H7           |

DALTON HIGHWAY SIGNING SUMMARY

| LOC. NO. | STATION | LOCATION |     | ASDS CODE | LEGEND                    | SIZE H X V (INCHES) | BRACING/FRAMING |        | AREA (SQ.FT.) | MTG. HGT. (FT.) | DIR. | POST |               |     | REMARKS                            |
|----------|---------|----------|-----|-----------|---------------------------|---------------------|-----------------|--------|---------------|-----------------|------|------|---------------|-----|------------------------------------|
|          |         | LT.      | RT. |           |                           |                     | BRACED          | FRAMED |               |                 |      | TYPE | SIZE (INCHES) | NO. |                                    |
| 1        | 985+05  |          | X   | I-3       | KUPARUK RIVER             | 54X36               |                 | X      | 13.5          |                 | W    | PST  | 2.5"x2.5"     | 2   |                                    |
| 2        | 986+51  | X        |     | I-3       | KUPARUK RIVER             | 54X36               |                 | X      | 13.5          |                 | E    | PST  | 2.5"x2.5"     | 2   |                                    |
| 3        | 991+28  |          | X   | D10-203   | 289                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 8        | 1045+68 |          | X   | D10-203   | 290                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 9        | 1056+99 |          | X   | W7-1      | DOWNGRADE (Symbol)        | 36x36               |                 | X      | 9             |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 10       | 1060+91 |          | X   | W2-2      | SIDE ROAD (Symbol)        | 36x36               |                 | X      | 9             |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 11       | 1063+42 | X        |     | W7-1      | DOWNGRADE (Symbol)        | 36x36               |                 | X      | 9             |                 | E    | PST  | 2.5"x2.5"     | 1   |                                    |
| 12       | 1065+49 |          | X   | R1-1      | STOP                      | 24X24               |                 |        | 4             |                 | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE AND REUSE ON NEW SIGN POST |
| 13       | 1078+23 |          | X   | I-3       | IMNAVAIT CREEK            | 54X36               |                 | X      | 13.5          |                 | W    | PST  | 2.5"x2.5"     | 2   |                                    |
| 14       | 1079+26 | X        |     | I-3       | IMNAVAIT CREEK            | 54X36               |                 | X      | 13.5          |                 | E    | PST  | 2.5"x2.5"     | 2   |                                    |
| 16       | 1097+90 |          | X   | D10-203   | 291                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 17       | 1114+83 |          | X   | I-3       | TOOLIK RIVER              | 42X36               |                 | X      | 10.5          |                 | W    | PST  | 2.5"x2.5"     | 2   |                                    |
| 18       | 1115+88 | X        |     | I-3       | TOOLIK RIVER              | 42X36               |                 | X      | 10.5          |                 | E    | PST  | 2.5"x2.5"     | 2   |                                    |
| 20       | 1149+86 |          | X   | D10-203   | 292                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 21       | 1202+66 |          | X   | D10-203   | 293                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 23       | 1255+46 |          | X   | D10-203   | 294                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 24       | 1304+99 |          | X   | D10-203   | 295                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 28       | 1355+63 | X        |     | R1-1      | STOP                      | 24X24               |                 |        | 4             |                 | N    | PST  | 2.5"x2.5"     | 1   | SALVAGE AND REUSE ON NEW SIGN POST |
| 29       | 1357+80 |          | X   | D10-203   | 296                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 32       | 1409+18 |          | X   | D10-203   | 297                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 33       | 1412+63 |          | X   | W7-1      | DOWNGRADE (Symbol)        | 36x36               |                 | X      | 9             |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 36       | 1451+48 |          | X   | I-3       | OKSRUKUYIK CREEK          | 66X36               |                 | X      | 16.5          |                 | W    | PST  | 2.5"x2.5"     | 2   |                                    |
| 38       | 1453+13 | X        |     | I-3       | OKSRUKUYIK CREEK          | 66X36               |                 | X      | 16.5          |                 | E    | PST  | 2.5"x2.5"     | 2   |                                    |
| 39       | 1459+81 |          | X   | W1-2      | CURVE WARNING (Symbol)    | 36X36               |                 | X      | 9             |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
|          |         |          |     | W13-1     | 40 MPH                    | 24X24               |                 |        | 4             |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 40       | 1461+92 |          | X   | D10-203   | 298                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 43       | 1481+68 | X        |     | W1-2      | CURVE WARNING (Symbol)    | 36X36               |                 | X      | 9             |                 | N    | PST  | 2.5"x2.5"     | 1   |                                    |
|          |         |          |     | W13-1     | 40 MPH                    | 24X24               |                 |        | 4             |                 | N    | PST  | 2.5"x2.5"     | 1   |                                    |
| 44       | 1513+65 |          | X   | D10-203   | 299                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 47       | 1560+82 |          | X   | D10-203   | 300                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 48       | 1616+16 |          | X   | SPECIAL 1 | HUNTING REGULATIONS APPLY | 42X30               |                 | X      | 6.25          |                 | S    | PST  | 2.5"x2.5"     | 1   |                                    |
|          |         |          |     | SPECIAL 2 | ENTERING PUBLIC LANDS     | 18X24               |                 |        | 3             |                 | N    |      |               |     |                                    |
| 49       | 1617+37 | X        |     | R1-1      | STOP                      | 24X24               |                 |        | 4             |                 | N    | PST  | 2.5"x2.5"     | 1   | SALVAGE AND REUSE ON NEW SIGN POST |
| 50       | 1618+04 |          | X   | D10-203   | 301                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
| 52       | 1670+36 |          | X   | D10-203   | 302                       | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |                                    |
|          |         |          |     |           | SUBTOTAL                  |                     |                 |        | 240.25        |                 |      |      |               |     |                                    |

- SIGNING NOTES:**
- REMOVE AND SALVAGE ALL EXISTING SIGNS AND SIGN FOUNDATIONS WITHIN THE PROJECT LIMITS, EXCEPT THOSE DESIGNATED FOR REINSTALLATION, SALVAGE, OR OTHERWISE NOTED.
  - SIGNS LISTED AS PRIVATELY OWNED IN THE SUMMARY TABLE ARE OWNED AND MAINTAINED BY ALYESKA PIPELINE SERVICE COMPANY, SIGNS NOTED FOR REMOVAL AND REUSE ARE TO BE REINSTALLED USING EXISTING SIGN(S) WITH NEW SOIL EMBEDMENT SLEEVE(S). REINSTALL LOCATION TO BE DIRECTED BY THE ENGINEER. THIS WORK IS SUBSIDIARY TO 615 SERIES ITEMS.
  - MOUNTING HEIGHTS ARE PER STANDARD PLANS S-05.02 UNLESS OTHERWISE NOTED.
  - DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
  - INSTALL PST SIGN POSTS WITH SOIL EMBEDDED FOUNDATIONS PER STANDARD PLANS S-30.05. ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHERS AND TWO FLAT WASHERS.
  - INSTALL "TUBE POST SIGN BRACING" AS SHOWN ON STANDARD PLANS S-01.02 ON ALL SIGNS MOUNTED ON A SINGLE PST POST AND HAVING A HORIZONTAL DIMENSION OF 30 INCHES OR GREATER, EXCEPT D3-100 SERIES SIGNS. INSTEAD OF THE 3/8" GALVANIZED BOLTS AND NYLON LOCKING NUTS SHOWN ON STANDARD PLANS S-01.02, USE GALVANIZED 3/8" BOLT, SPLIT LOCK WASHERS AND NUTS. STAINLESS STEEL FASTENER HARDWARE MAY BE USED INSTEAD OF GALVANIZED. 1/4" X 1 1/2" ALUMINUM ALLOY 6061-T6 BAR MAY ALSO BE USED TO FABRICATE SIGN BRACES.
  - ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PST POSTS WITH ALUMINUM DRIVE RIVETS. WIND WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
  - ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" ON SHEET H6.
  - STOP (R1-1) SIGN LOCATIONS, ESPECIALLY THOSE AT LARGE RADIUS INTERSECTIONS, MAY NEED ADJUSTMENT IN THE FIELD. THE ENGINEER WILL APPROVE FINAL LOCATIONS.
  - MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
  - ALL LETTERING THAT INCLUDES UPPER AND LOWER CASE LETTERS SHALL BE SERIES E-MODIFIED AS NOTED IN APPENDIX C OF THE ASDS, EXCEPT FOR D3-100 AND D3-1 SIGNS WHICH ARE SERIES 2000 LETTERS.
  - LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
  - DELIVER ALL SALVAGED SIGNS TO THE SAG RIVER MAINTENANCE CAMP.
  - CLEARING MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF SIGNS, THIS WORK IS SUBSIDIARY TO PAY ITEM 615.0001.0000.
  - THE 4" MOUNTING AREA ON MILEPOST SIGNS (D10-100 SERIES) SHALL BE BARE ALUMINUM. THIS ELIMINATES THE OPTION OF INSTALLING GREEN REFLECTIVE SHEETING IN THIS AREA AS NOTED IN THE ASDS.
  - FIELD LOCATE ALL BURIED EXISTING UTILITIES PRIOR TO INSTALLATION OF SIGN BASES. ADJUST SIGN LOCATION TO AVOID UTILITIES.

**POST TYPE LEGEND:**

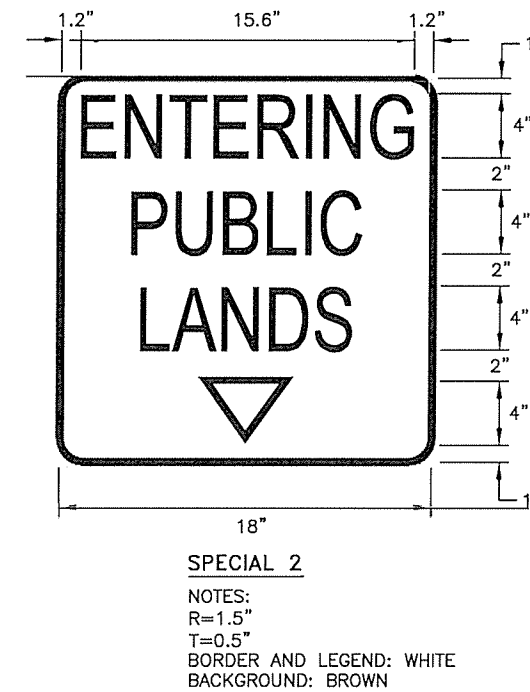
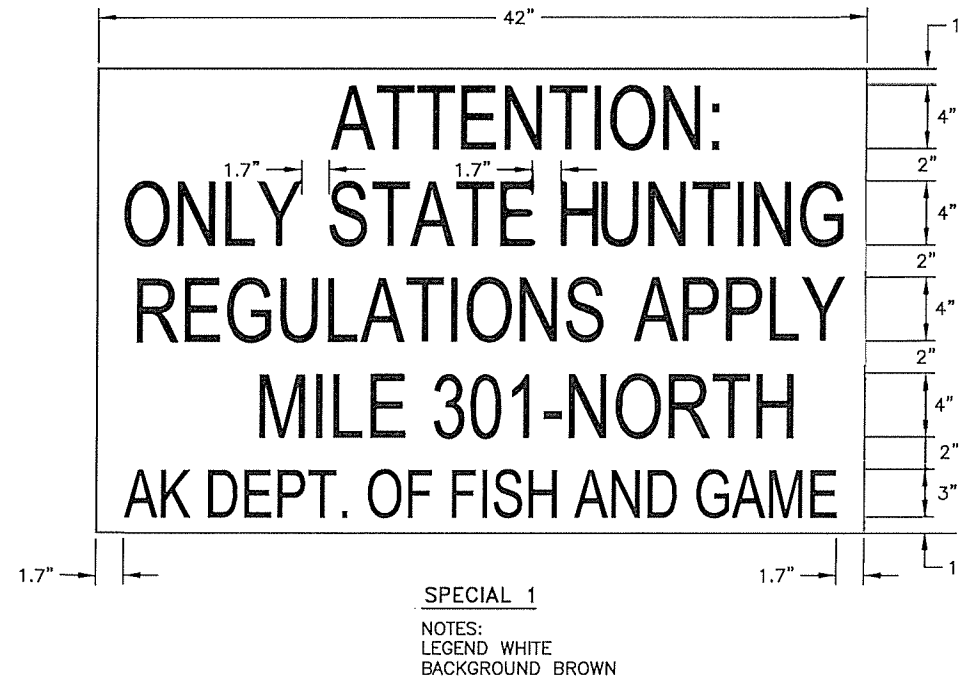
PST = PERFORATED STEEL TUBE  
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)  
 W\_X\_ = WIDE FLANGE

SIGN SUMMARY



| NO. | DATE    | REVISION   | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|---------|------------|--------|---------------------|------|-----------|--------------|
| 1   | 6/11/21 | ADDENDUM 1 |        |                     |      |           |              |
| 3   | 6/21/21 | ADDENDUM 3 | ALASKA | 0656005/Z609130000  | 2021 | H2        | H7           |

| DALTON HIGHWAY SIGNING SUMMARY |         |          |     |           |   |                     |                 |        |               |                 |      |      |               |     |         |
|--------------------------------|---------|----------|-----|-----------|---|---------------------|-----------------|--------|---------------|-----------------|------|------|---------------|-----|---------|
| LOC. NO.                       | STATION | LOCATION |     | ASDS CODE | LEGEND  | SIZE H X V (INCHES) | BRACING/FRAMING |        | AREA (SQ.FT.) | MTG. HGT. (FT.) | DIR. | POST |               |     | REMARKS |
|                                |         | LT.      | RT. |           |   |                     | BRACED          | FRAMED |               |                 |      | TYPE | SIZE (INCHES) | NO. |         |
| 56                             | 1722+49 |          | X   | D10-203   | 303   | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |         |
| 58                             | 1775+07 |          | X   | D10-203   | 304   | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |         |
| 59                             | 1779+19 |          | X   | W7-1      | DOWNGRADE (Symbol)                            | 36x36               | X               |        | 9             |                 | W    | PST  | 2.5"x2.5"     | 1   |         |
| 60                             | 1820+71 |          | X   | D10-203   | 305   | 14x36               |                 |        | 3.5           |                 | W    | PST  | 2.5"x2.5"     | 1   |         |
| 62                             | 1846+98 | X        |     | R2-1      | SPEED LIMIT 50                                | 36x48               | X               |        | 12            |                 | E    | PST  | 2.5"x2.5"     | 1   |         |
| 63                             | 1850+26 |          | X   | D1-201    | DEADHORSE 110 SLOPE MT. CAMP 1                | 162x42              |                 | X      | 47.25         |                 | W    | TS   | 4"x4"         | 2   |         |
| 64                             | 1850+50 | X        |     | M1-5      | HIGHWAY 11                                    | 36x36               | X               |        | 9             |                 | E    | PST  | 2.5"x2.5"     | 1   |         |
| 65                             | 1854+91 |          | X   |           | STATE OF ALASKA SAG RIVER MAINTENANCE STATION | 66x36               |                 | X      | 16.5          |                 | W    | PST  | 2.5"x2.5"     | 2   |         |
| 69                             | 1857+42 | X        |     |           | STATE OF ALASKA SAG RIVER MAINTENANCE STATION | 66x36               |                 | X      | 16.5          |                 | E    | PST  | 2.5"x2.5"     | 2   |         |
|                                |         |          |     |           |   | TOTAL AREA          |                 |        | 361           |                 |      |      |               |     |         |



SIGN SUMMARY





| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | H3        | H7           |

**PRIVATELY OWNED SIGNING SUMMARY**

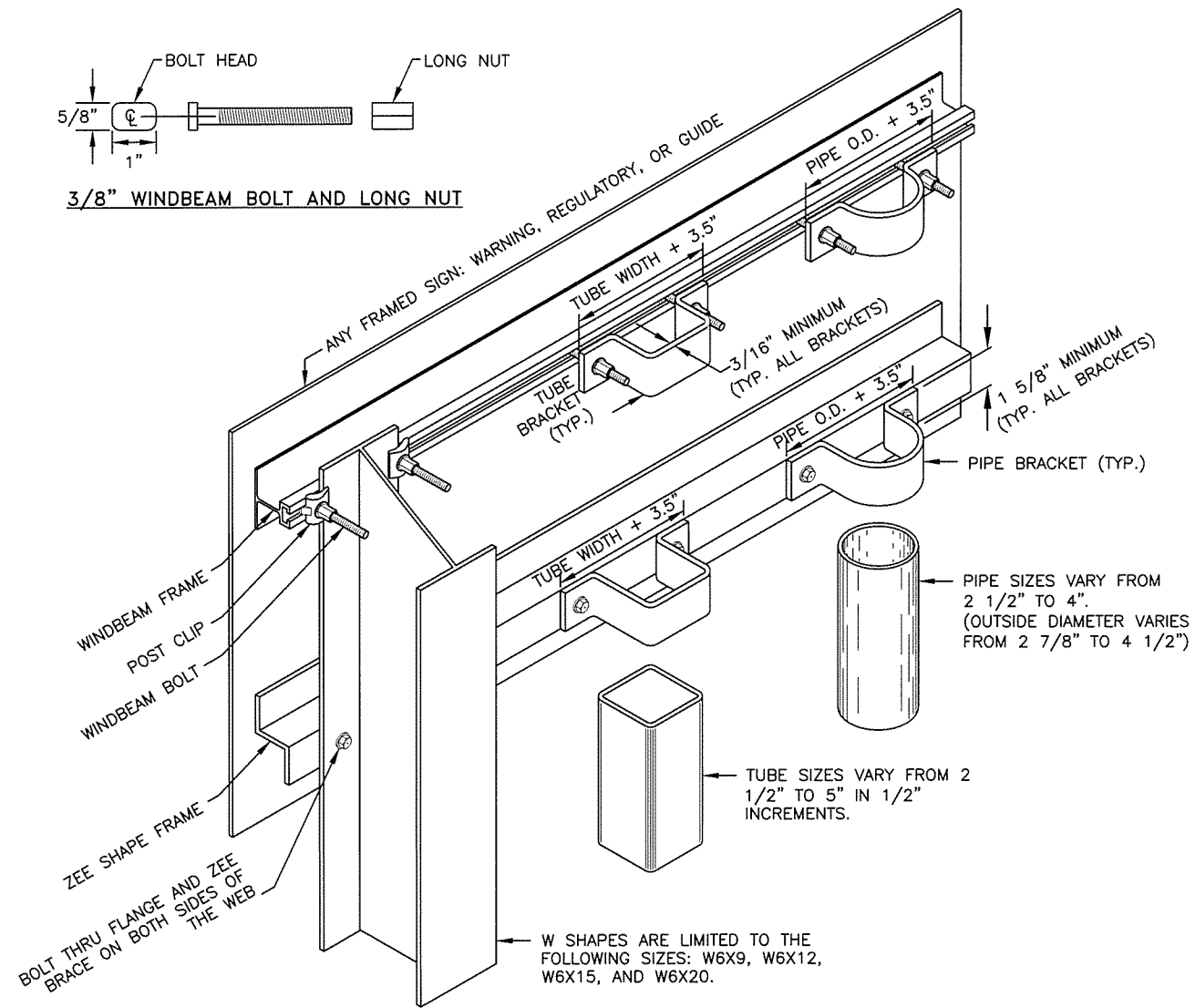
| LOC. NO. | STATION | LOCATION |     | ASDS CODE | LEGEND | POST |      |               |     | REMARKS                                   |
|----------|---------|----------|-----|-----------|--------|------|------|---------------|-----|---|
|          |         | LT.      | RT. |           |        | DIR. | TYPE | SIZE (INCHES) | NO. |   |
| 4        | 1005+38 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 5        | 1008+25 | X        |     | ALYESKA   |        | E    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 6        | 1009+96 | X        |     | ALYESKA   |        | E    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 7        | 1020+96 | X        |     | ALYESKA   |        | E/W  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 15       | 1088+61 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 19       | 1127+56 | X        |     | ALYESKA   |        | E/W  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 22       | 1232+81 | X        |     | ALYESKA   |        | E/W  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 25       | 1338+73 | X        |     | ALYESKA   |        | E/W  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 26       | 1344+22 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 27       | 1355+51 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 30       | 1370+61 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 31       | 1397+02 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 34       | 1444+20 | X        |     | ALYESKA   |        | N/S  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 35       | 1450+60 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 37       | 1451+70 |          | X   | ALYESKA   |        | W/E  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 41       | 1465+28 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 42       | 1472+05 | X        |     | ALYESKA   |        | S    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 45       | 1527+66 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 46       | 1543+26 |          | X   | ALYESKA   |        | N/S  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 51       | 1654+53 |          | X   | ALYESKA   |        | N/S  | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 53       | 1686+22 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 54       | 1692+70 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 55       | 1693+37 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 57       | 1739+15 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 61       | 1844+62 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 66       | 1855+67 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |
| 67       | 1855+82 | X        |     | ALYESKA   |        | N    | PST  | 2.5"x2.5"     | 1   | SALVAGE AND REUSE ON NEW SIGN POST        |
| 68       | 1856+76 |          | X   | ALYESKA   |        | W    | PST  | 2.5"x2.5"     | 1   | SALVAGE ALYESKA SIGN, INSTALL ON NEW POST |

P:\2017\17331FB-Dalton\MP289-305\C:\e4002\cst17331fb-h3 SUMMARY TABLES Tue, Apr/20/21 11:04am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

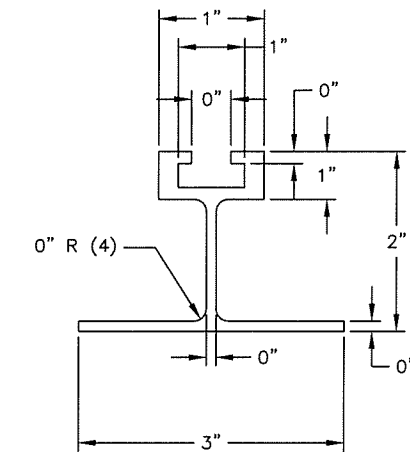
SUMMARY TABLES



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | H4        | H7           |



**FRAMED SIGN ATTACHMENT BRACKETS**



**EXTRUDED ALUMINUM WINDBEAM**

**FRAMED SIGN NOTES:**

1. ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W-SHAPE POSTS, A U-SHAPED BRACKET ON PIPES OR A BRACKET WITH SQUARE CORNERS ON TUBES.
2. THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
3. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.

**NOTES**

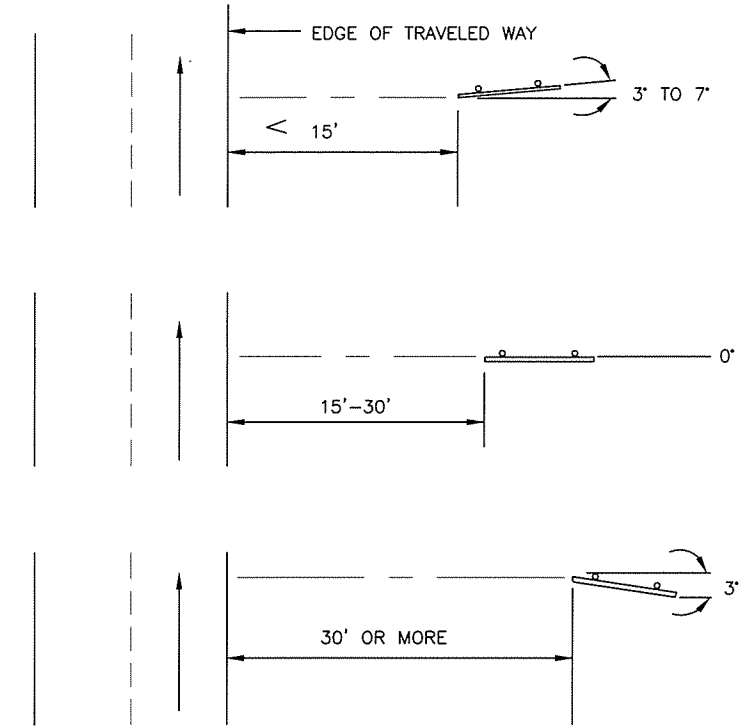
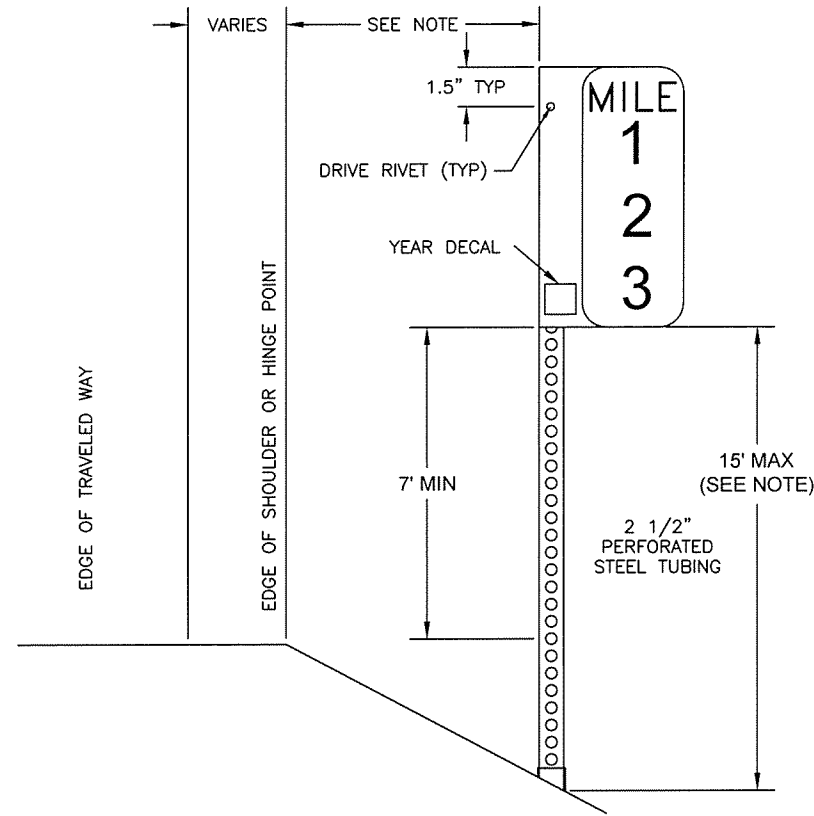
1. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGN TO WINDBEAM WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

**SIGN DETAILS**

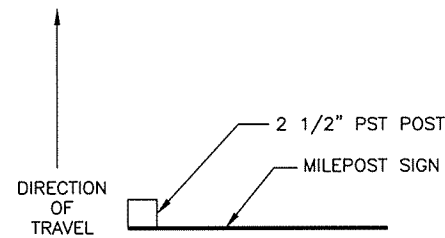


P:\2017\17331FB-DeltonMP289--305\C\c4002enat17331fb-H4\_SIGN\_DETAILS Tue, Apr/20/21 11:04am  
PLANS DEVELOPED BY: PDC, INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

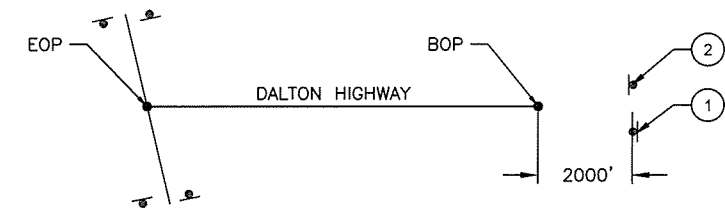
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | H5        | H7           |



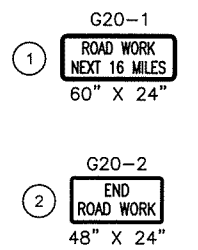
SIGN INSTALLATION ANGLES



MILEPOST MOUNTING DETAILS



PERMANENT CONSTRUCTION SIGNS



SIGN LEGEND

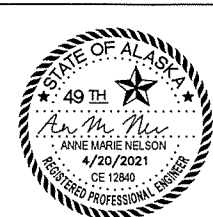
**NOTES:**

1. INSTALL MILEPOST SIGNS (D10 SERIES) WITH A 20 FOOT OFFSET. ADJUST THE OFFSET AS NECESSARY SO THE BOTTOM OF THE SIGN IS NO MORE THAN 15 FEET ABOVE THE GROUND. THE SIGN OFFSET SHALL NOT BE LESS THAN THE OFFSETS SHOWN ON STANDARD PLAN S-05.02 OR GREATER THAN 30 FEET.

**NOTE:**

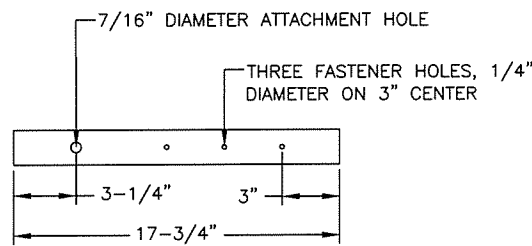
INSTALL ALL PERMANENT CONSTRUCTION SIGNS ON WOOD POSTS.

SIGN DETAILS

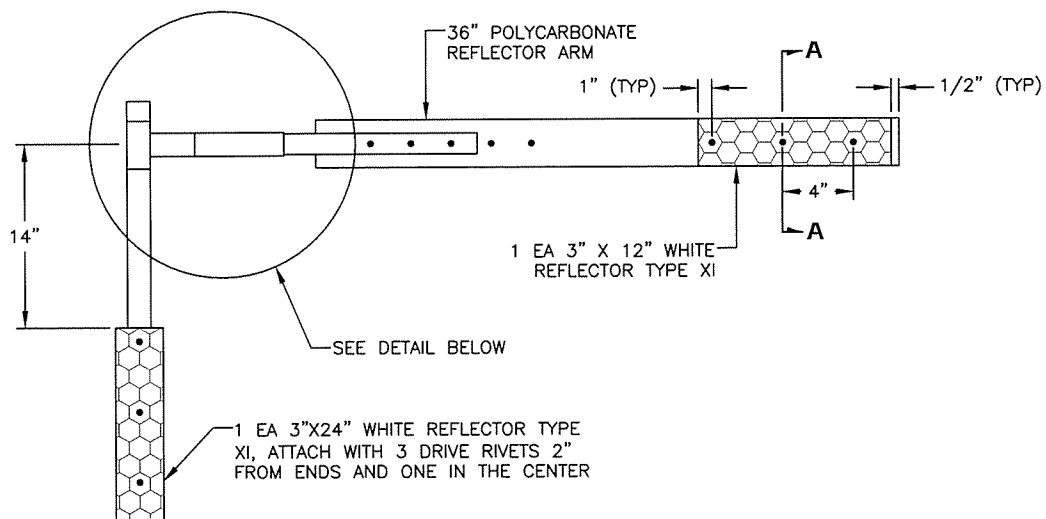


| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | H6        | H7           |

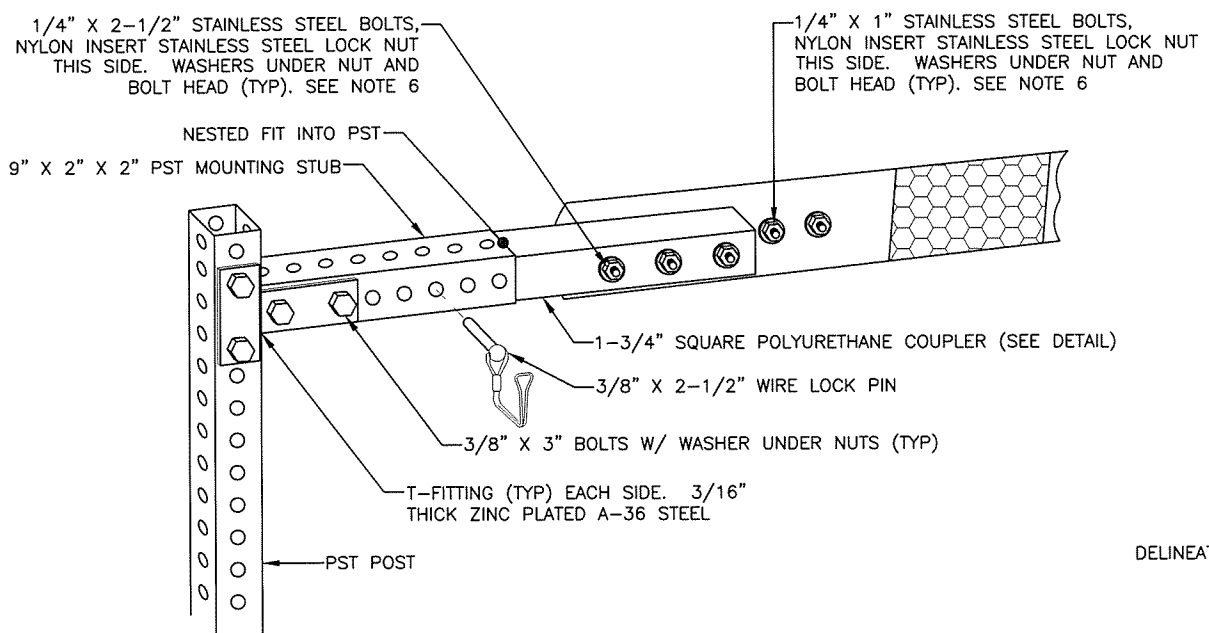
| FASTENER SPECIFICATION TABLE |            |                 |
|------------------------------|------------|-----------------|
| FASTENERS                    | STEEL      | STAINLESS STEEL |
| BOLTS                        | ASTM A 307 | ASTM F 593      |
| NUTS                         | ASTM A 563 | ASTM F 594      |
| WASHERS                      | ASTM F 844 | ASTM A 480      |



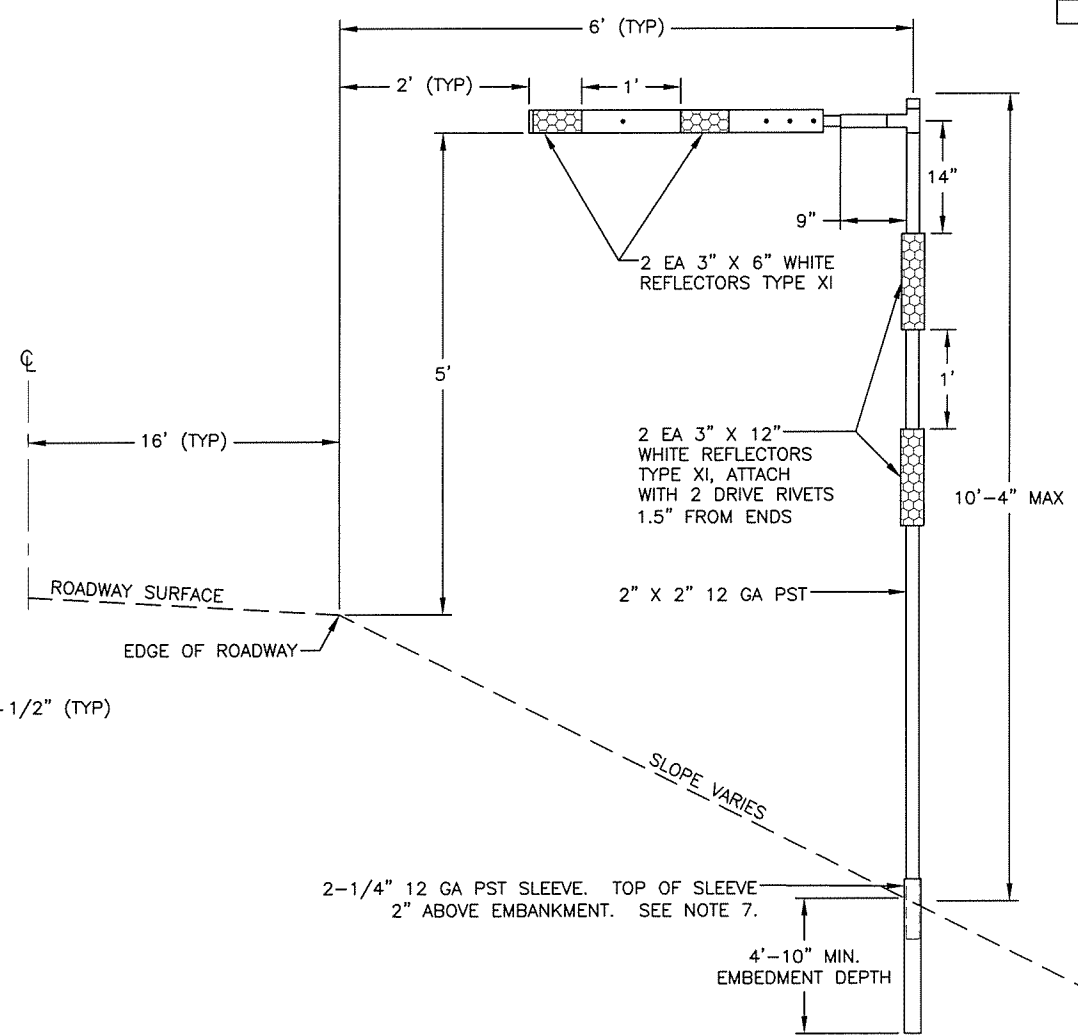
**COUPLER DETAIL**  
N.T.S.



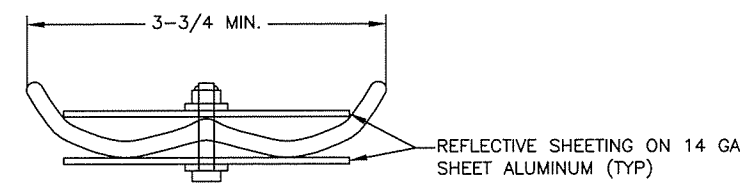
**DELINEATOR DETAILS-OPPOSING LANE**  
BACK OF DELINEATOR



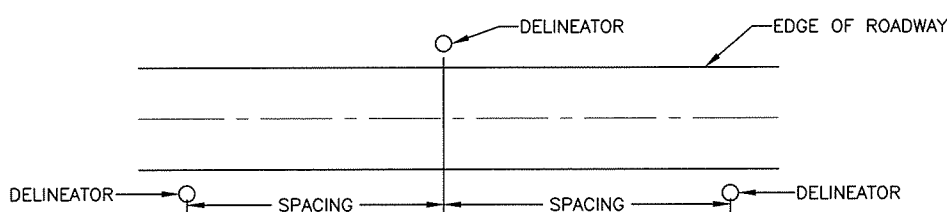
**DETAIL**  
N.T.S.



**DELINEATOR DETAILS-ADJACENT LANE**  
FRONT OF DELINEATOR



**REFLECTOR DETAIL**  
SECTION A-A



**LAYOUT DETAIL**  
N.T.S.

**NOTES:**

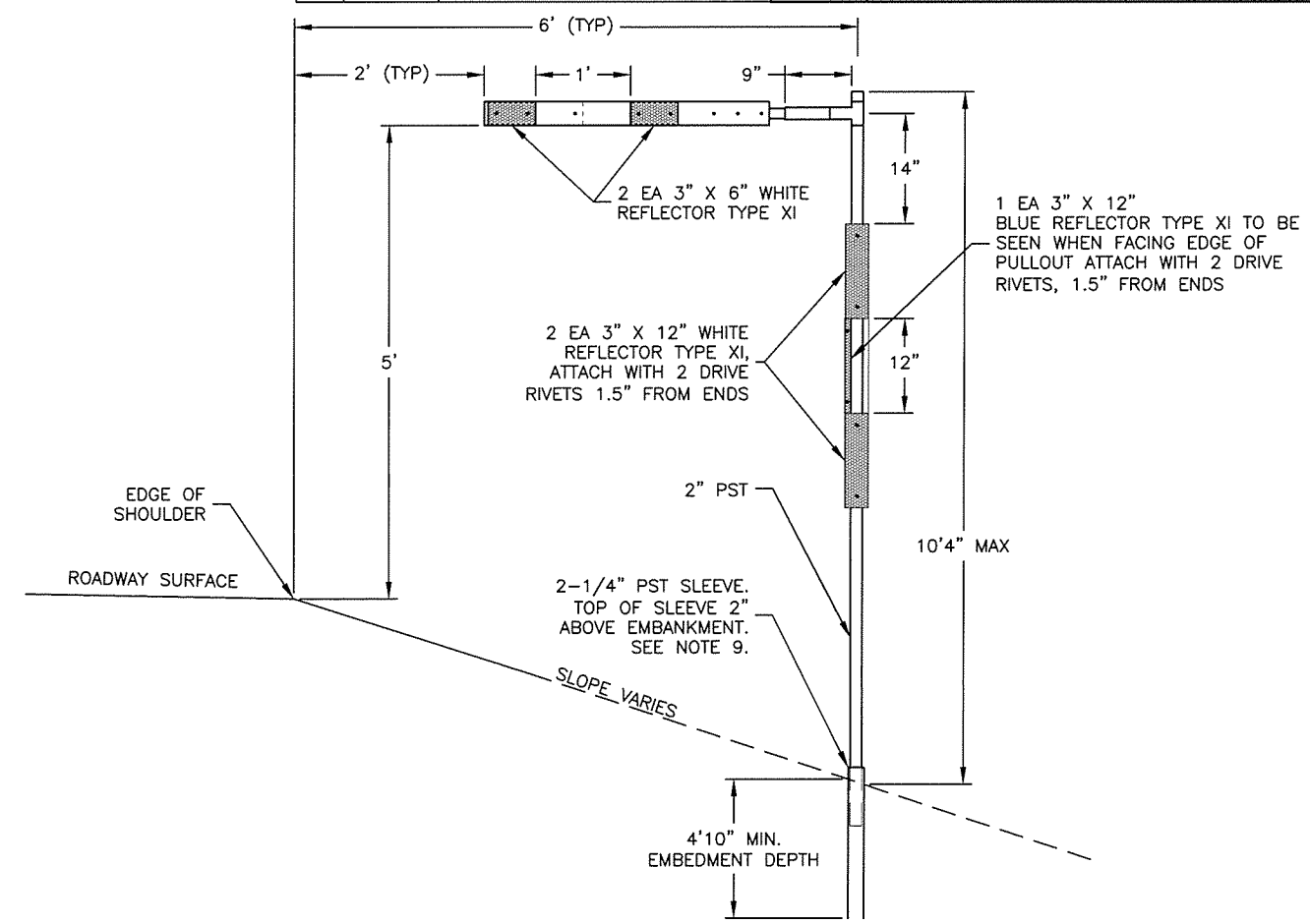
1. REMOVE AND SALVAGE EXISTING DELINEATORS ALONG THE PROJECT. DAMAGE RESULTING FROM THE REMOVAL IS THE RESPONSIBILITY OF THE CONTRACTOR. DELIVER SALVAGED DELINEATORS TO THE SAG RIVER M&O CAMP.
2. DELINEATOR SPACING SHALL BE 100' ON TANGENT SECTIONS AND 50 FEET ON CURVES WITH LENGTH OF 500' OR GREATER. MAKE ADJUSTMENTS TO THE SPACING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN AT LEAST 7' HORIZONTAL DISTANCE TO ANY OTHER VERTICAL SUPPORTS SUCH AS SIGNS, MILE MARKERS, ETC.
4. IT IS EXPECTED THAT PRE-DRILLING WILL BE REQUIRED. THIS IS SUBSIDIARY TO ITEM 615.0004.0000 DELINEATOR.
5. WHERE POSTS ARE PLACED IN PRE-DRILLED HOLES, BACKFILL IS SUBSIDIARY TO ITEM 615.0004.0000 DELINEATOR AND WILL NOT BE MEASURED FOR PAYMENT.
6. WHERE WASHERS ARE IN CONTACT WITH THE POLYCARBONATE ARM, USE RUBBER BACKED METAL OR PLAIN METAL WASHERS WITH INSIDE DIAMETER OF 1/4", MINIMUM OUTSIDE DIAMETER OF 1" AND MINIMUM THICKNESS OF 1/16".
7. ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHER AND TWO FLAT WASHERS.
8. REFLECTOR ARMS SHALL BE GREEN ON PROJECT LEFT AND BROWN ON PROJECT RIGHT.
9. MINOR ADJUSTMENTS HORIZONTALLY AND VERTICALLY MAY BE NECESSARY TO MATCH DIMENSIONS SHOWN ON THIS SHEET.

P:\2017\17331FB-Delton\MP289-305\C\C4001\enat17331FB-H6 DELINEATOR DETAILS (1 OF 2) Tue, Apr/20/21 11:05am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 102B AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

**DELINEATOR DETAILS**  
(1 OF 2)



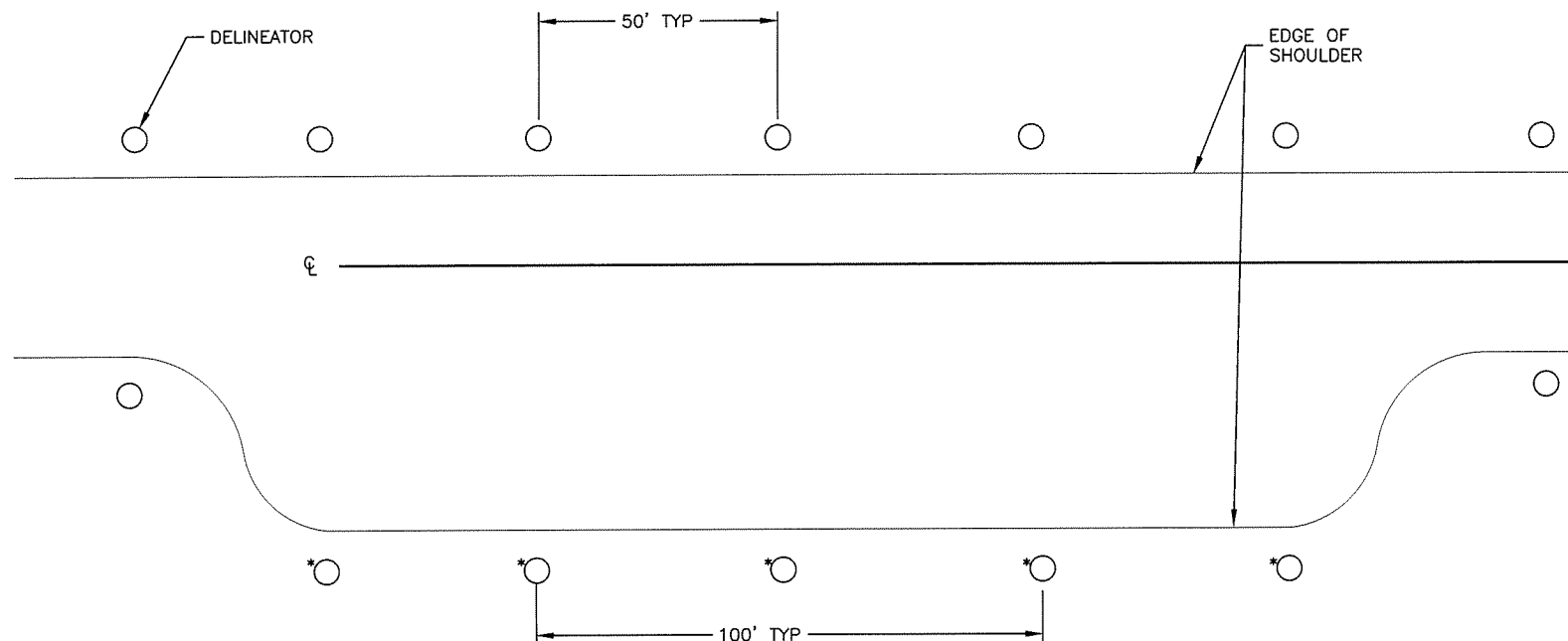
| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2020 | H7        | H7           |



**DELINEATOR DETAILS – PULLOUT**  
FRONT OF DELINEATOR

**NOTES:**

1. SALVAGE ALL EXISTING DELINEATOR HORIZONTAL ARMS AND DELIVER TO SAG RIVER M&O MAINTENANCE STATION LOCATED AT DALTON HIGHWAY MP 305.5. HORIZONTAL ARM CONSISTS OF SQUARE POLYURETHANE COUPLER, REFLECTOR ARM, REFLECTOR, WIRE LOCK PINS AND STAINLESS STEEL FASTNERS. OBTAIN THE STATION MANAGER'S APPROVAL OF THE LOCATION FOR STOCKPILING SALVAGED DELINEATOR ARMS. REMOVAL AND SALVAGE IS SUBSIDIARY TO ITEM 615.2002.0000 AND WILL NOT BE MEASURED FOR PAYMENT.
2. MAINTAIN AT LEAST 7' HORIZONTAL DISTANCE TO ANY OTHER VERTICAL SUPPORTS SUCH AS SIGNS.
3. IT IS EXPECTED THAT PRE-DRILLING WILL BE REQUIRED. THIS IS SUBSIDIARY TO ITEM 615.2002.0000
4. WHERE POSTS ARE PLACED IN PRE-DRILLED HOLES, BACKFILL MATERIAL IS SUBSIDIARY TO ITEM 615.2002.0000 AND WILL NOT BE MEASURED FOR PAYMENT.
5. WHERE WASHERS ARE IN CONTACT WITH THE REFLECTOR ARM, USE STAINLESS STEEL WASHERS WITH INSIDE DIAMETER OF 1/4", MINIMUM OUTSIDE DIAMETER OF 1" AND MINIMUM THICKNESS OF 1/16".
6. REFLECTOR ARMS SHALL BE GREEN ON PROJECT LEFT AND BROWN ON PROJECT RIGHT.
7. ALL FASTENERS SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" ON SHEET H6.
8. ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHER AND TWO FLAT WASHERS.
9. MINOR ADJUSTMENTS HORIZONTALLY AND VERTICALLY MAY BE NECESSARY TO MATCH DIMENSIONS SHOWN ON THIS SHEET.
10. INSTALL NEW DELINEATORS AT ALL PULLOUT LOCATIONS PER DELINEATOR DETAILS ON THIS SHEET. ALL EXISTING DELINEATORS SHALL REMAIN IN PLACE AND BE MODIFIED TO MATCH DETAILS PROVIDED.



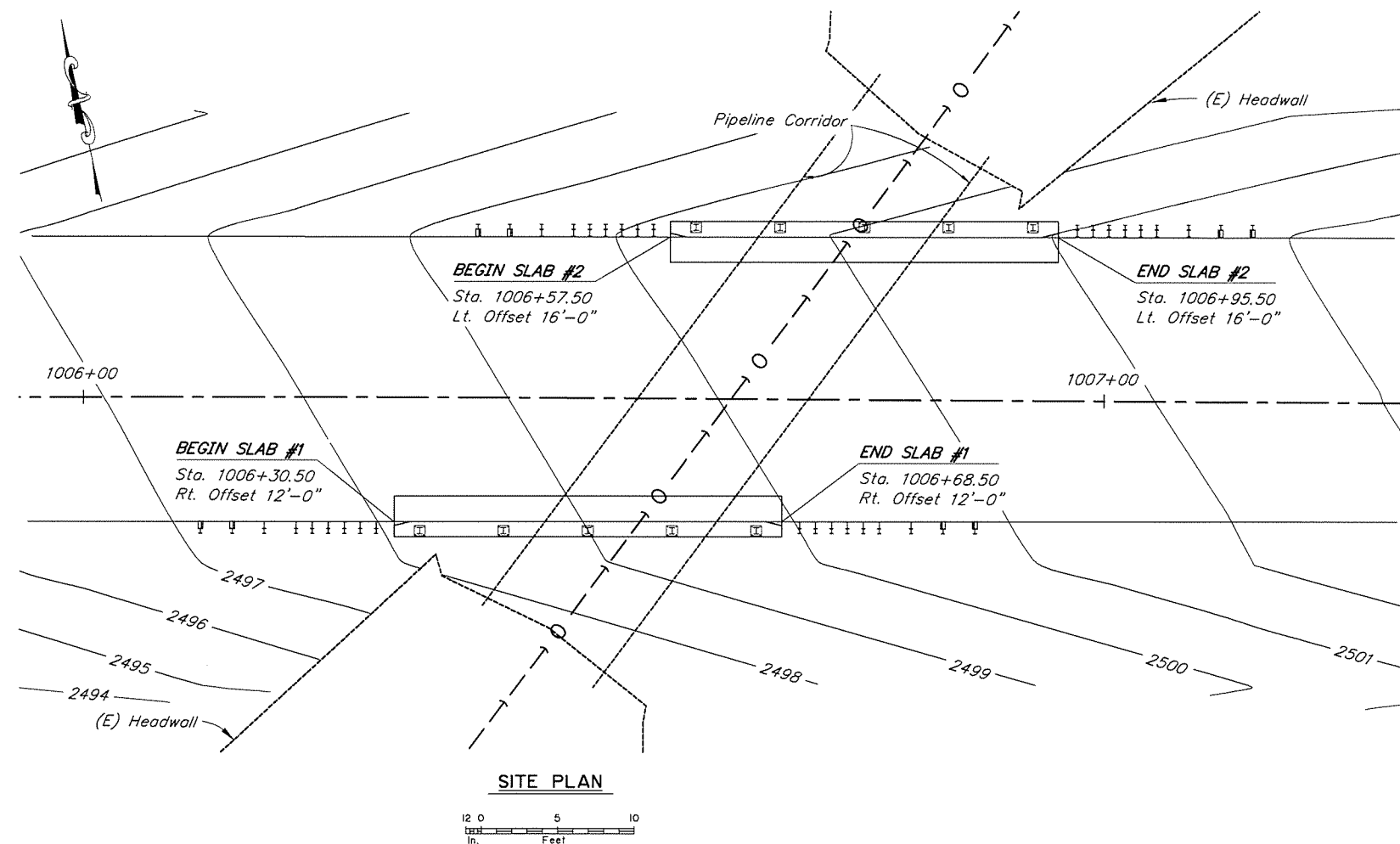
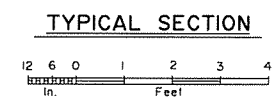
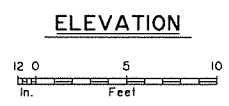
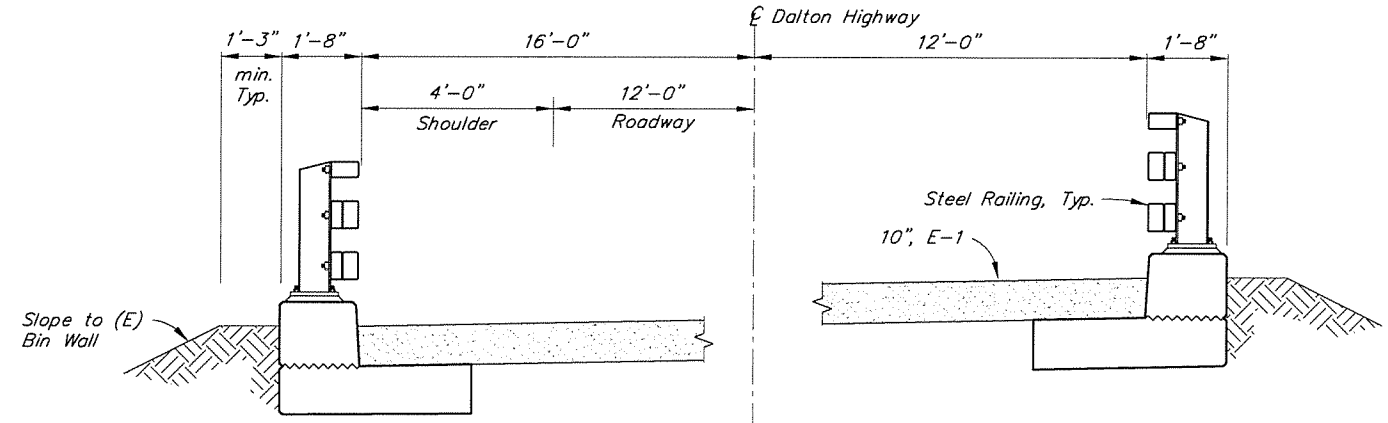
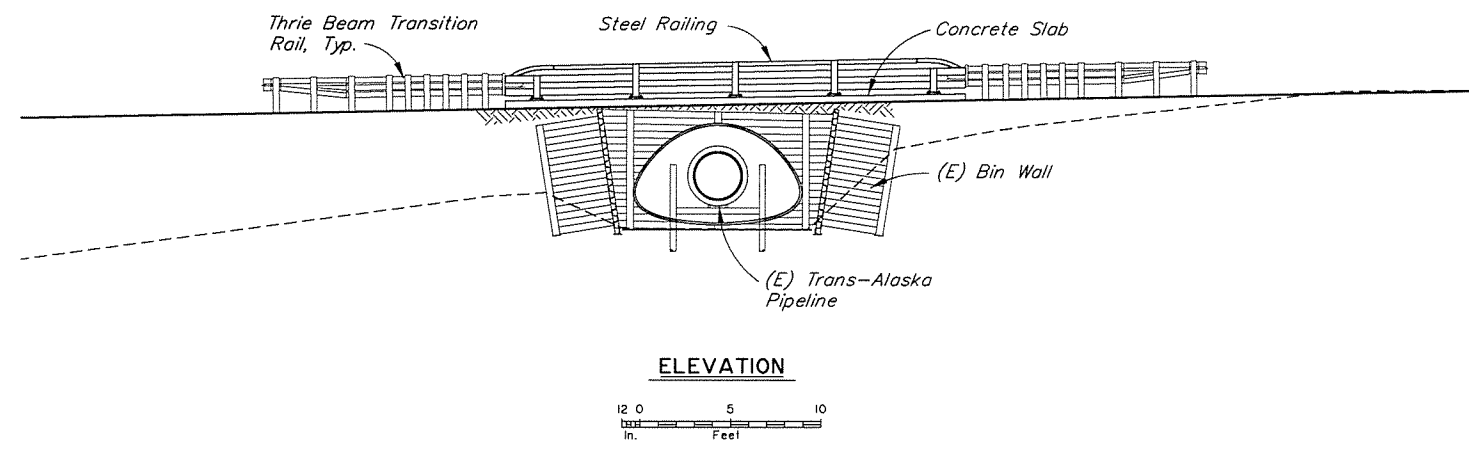
**DELINEATOR DETAILS – PULLOUTS**  
LAYOUT DETAIL

**DELINEATOR DETAILS**  
(2 OF 2)



P:\2017\17331FB-DeltonMP289-305\C\4001\enr\17331FB-H7 DELINEATOR DETAILS (2 OF 2) Tue, Apr/20/21 11:05am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

|        |                     |      |           |              |
|--------|---------------------|------|-----------|--------------|
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
| ALASKA | Z609130000          | 2021 | N1        | N4           |



**GENERAL NOTES**

DESIGN:..... AASHTO LRFD Bridge Design Specifications, 2020 Edition, with latest interim specifications.  
 NCHRP Report 663, 2010  
 DESIGN LOAD:..... AASHTO Mash TL-4  
 REINFORCEMENT:..... ASTM A706, Grade 60, Fy = 60,000 psi  
 Space reinforcement evenly unless otherwise noted.  
 CONCRETE:..... Class A Concrete unless otherwise noted, f'c = 4,000 psi

**DRAWING INDEX**

| TITLE                    | DWG. NO. |
|--------------------------|----------|
| GENERAL LAYOUT - MP289.6 | 1        |
| CONCRETE SLAB            | 2        |
| STEEL RAILING, 3-TUBE    | 3        |
| TRANSITION RAIL, 3-TUBE  | 4        |

**ABBREVIATIONS:**

|                             |                                   |
|-----------------------------|-----------------------------------|
| ℄ = centerline              | H.S. = high strength              |
| ℘ = plate                   | ksf = 1000 pounds per square foot |
| & = and                     | LB = pound                        |
| @ = at                      | LF = linear foot                  |
| ∅ = diameter                | LS = lump sum                     |
| Approx. ± = approximate     | Lt. = left                        |
| bot. = bottom               | max. = maximum                    |
| Br. = bridge                | min. = minimum                    |
| btwn. = between             | No. = number                      |
| C.I.P. = cast in place      | o.c. = on center                  |
| Clr. = clear, clearance     | → 0 ← = oil pipeline              |
| CMP = corrugated metal pipe | Rt. = right                       |
| CY = cubic yard             | spc. = space, spaces              |
| Dwg. = drawing              | Sta. = station                    |
| (E) = existing              | Std. = standard                   |
| EA = each                   | SF = square feet                  |
| Elev. = elevation           | Symm. = symmetric                 |
| Hwy. = highway              | Typ. = typical                    |

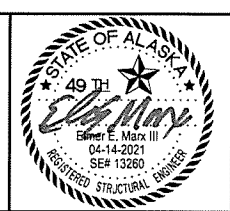
| ITEM NO.      | ITEM                           | PAY UNIT | ESTIMATING UNIT | SUBST. | SUPERST. | TOTAL QUANTITY |
|---------------|--------------------------------|----------|-----------------|--------|----------|----------------|
| 501.0001.0000 | Class A Concrete               | LS       | CY              | ---    | 17.5     | 17.5           |
| 503.0002.0000 | Epoxy-Coated Reinforcing Steel | LS       | LBS             | ---    | 3,980    | 3,980          |
| 507.0001.0003 | Steel Bridge Railing, 3-Tube   | LF       | LF              | ---    | 76       | 76             |
| 606.0016.0000 | Transition Rail                | EA       | EA              | ---    | 4        | 4              |

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

R:\vauld\misc\Work\Dalton Slab MP289-305 site-GENERAL\_Wed, Apr/14/21 10:27am

|                           |                          |                                     |                                |
|---------------------------|--------------------------|-------------------------------------|--------------------------------|
| DESIGNED BY: Elmer Marx   | CHECKED BY: Sara Manning | LAYOUT BY: Elmer Marx               | CHECKED BY: Sara Manning       |
| DRAWN BY: Sam Sallee Jr.  | CHECKED BY: Elmer Marx   | SPECIFICATIONS BY: Elmer Marx       | P S & E COMPARED: Sara Manning |
| QUANTITIES BY: Elmer Marx | CHECKED BY: Sara Manning | APPROVAL RECOMMENDED BY: Rich Pratt |                                |

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION  
 3132 Channel Drive  
 Juneau, Alaska 99801  
 907-465-2975



**PIPELINE CROSSING BARRIERS**  
 DALTON HIGHWAY  
 GENERAL LAYOUT - MP289.6



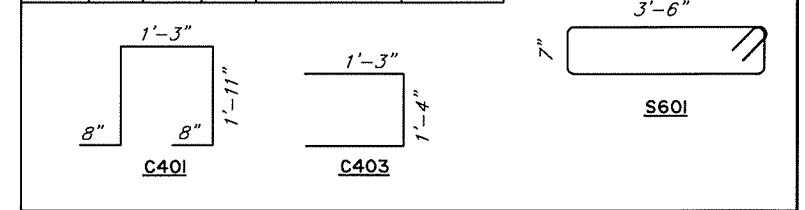
DWG. NO. 1



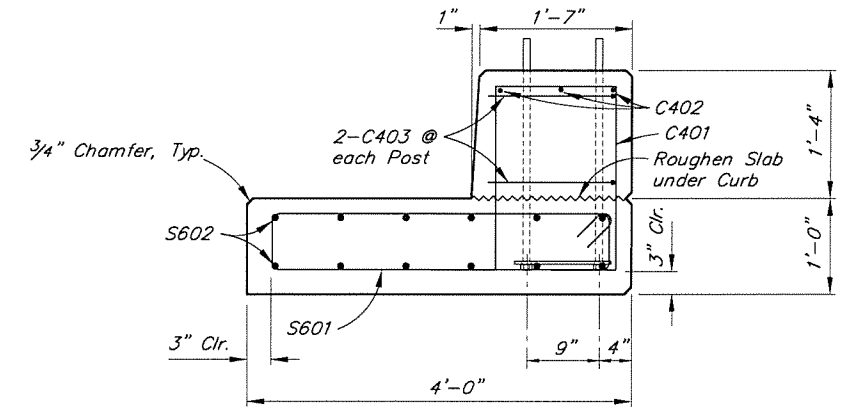
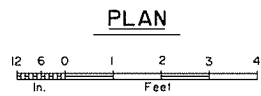
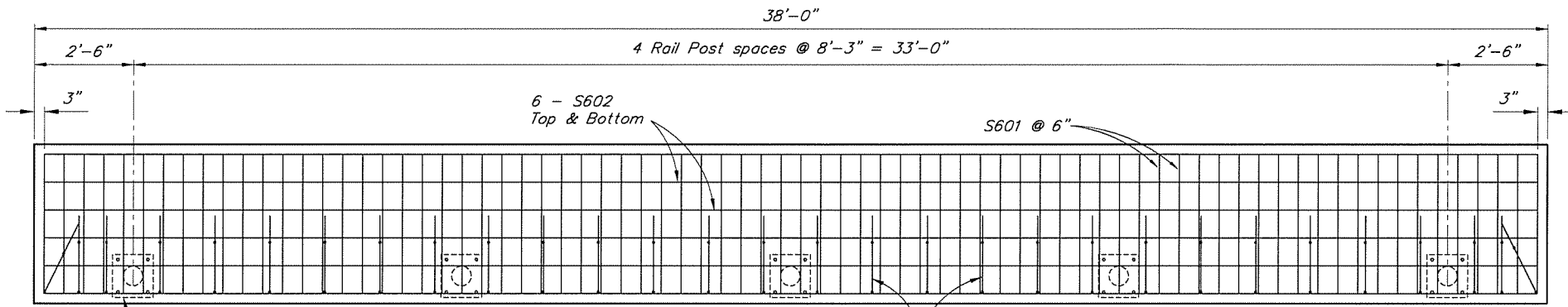
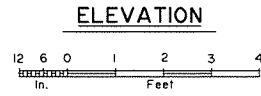
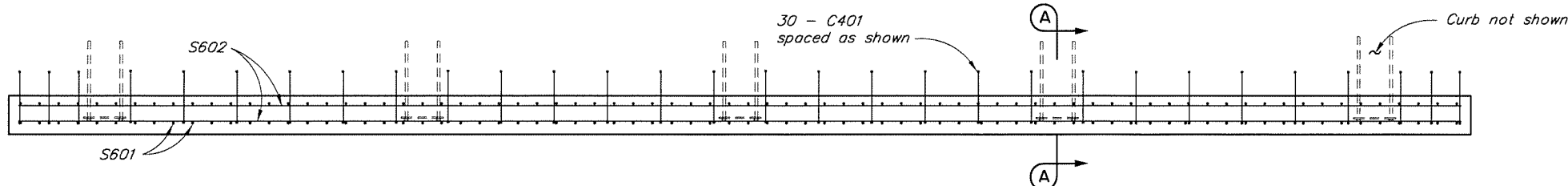
|        |                     |      |           |              |
|--------|---------------------|------|-----------|--------------|
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
| ALASKA | Z609130000          | 2021 | N2        | N4           |

**REINFORCING STEEL - ONE SLAB**

| MARK | NOTE | SIZE | NO. | LENGTH | TYPE | BENDING DIAGRAM |
|------|------|------|-----|--------|------|-----------------|
| C401 | E    | 4    | 30  | 6'-5"  | BENT |                 |
| C402 | E    | 4    | 3   | 37'-6" | ---  |                 |
| C403 | E    | 4    | 10  | 3'-10" | BENT |                 |
| S601 | E    | 6    | 76  | 9'-6"  | BENT |                 |
| S602 | E    | 6    | 12  | 37'-6" | ---  |                 |
|      |      |      |     |        |      |                 |



E - Epoxy-Coated



**SECTION A-A**



R:\evault\misc\workment\Slabs\Dalton Slab MP289-305 site-SLAB Wed. Apr/14/21 10:27am

|                                     |                                 |
|-------------------------------------|---------------------------------|
| DESIGNED BY:<br><i>Elmer Marx</i>   | CHECKED:<br><i>Sara Manning</i> |
| DRAWN BY:<br><i>Sam Solie</i>       | CHECKED:<br><i>Elmer Marx</i>   |
| QUANTITIES BY:<br><i>Elmer Marx</i> | CHECKED:<br><i>Sara Manning</i> |

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
BRIDGE SECTION  
3132 Channel Drive  
Juneau, Alaska 99801  
907-465-2975

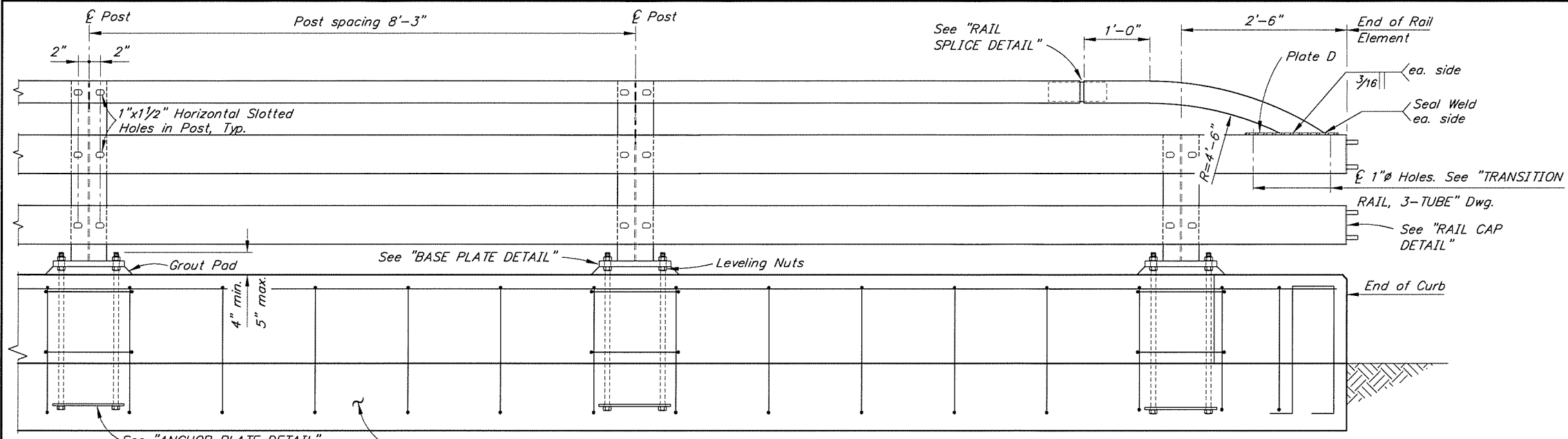


**PIPELINE CROSSING BARRIERS**  
DALTON HIGHWAY  
**CONCRETE SLAB**



DWG. NO. 2

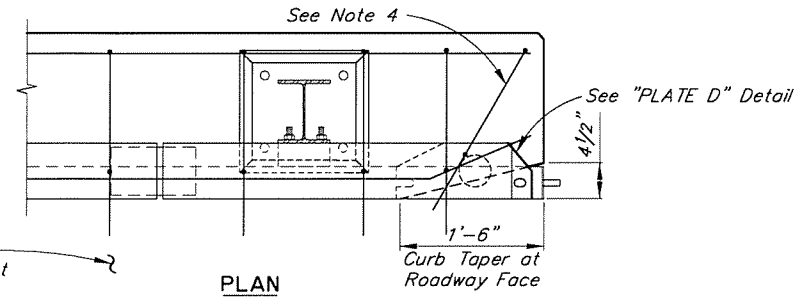
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | Z609130000          | 2021 | N3        | N4           |



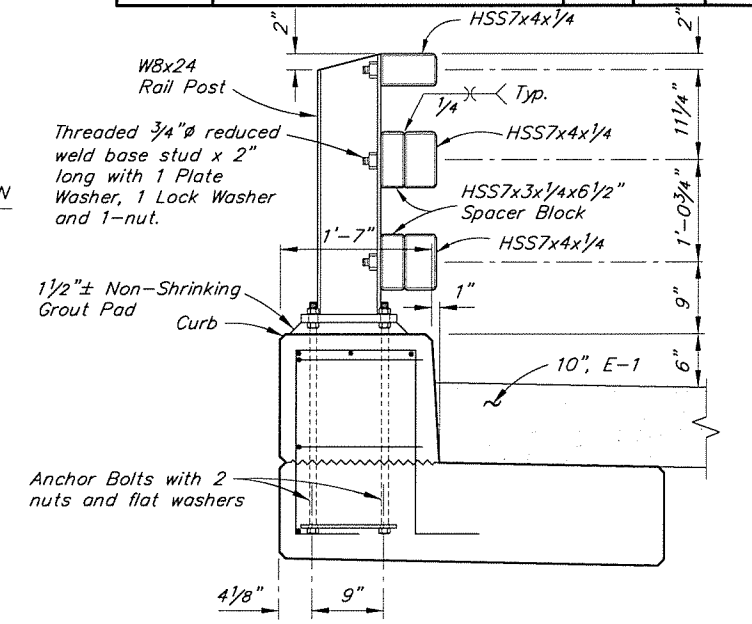
**TYPICAL POST ELEVATION**



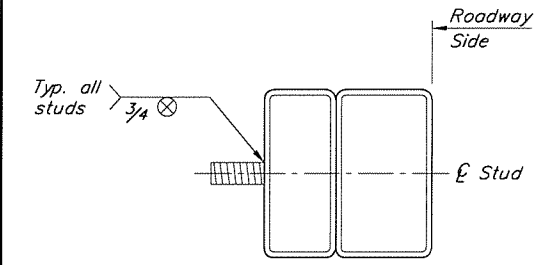
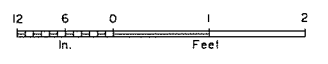
**END POST - ELEVATION**



**PLAN**

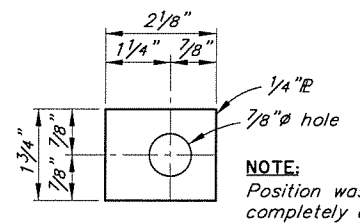


**TYPICAL SECTION**



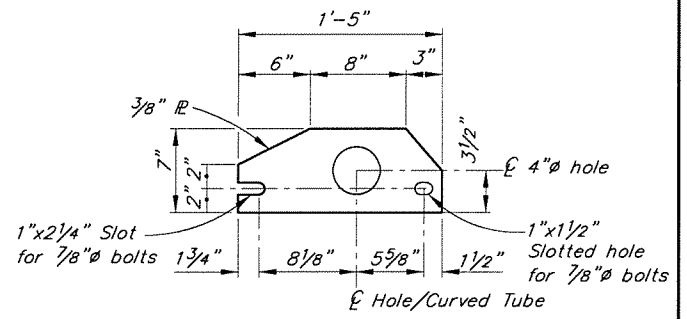
**RAILING STUD DETAIL**

(Lower rail shown, upper rail similar)  
No Scale

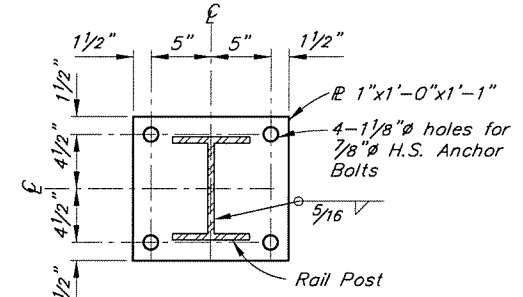
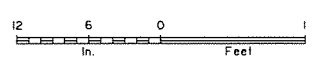


**PLATE WASHER**

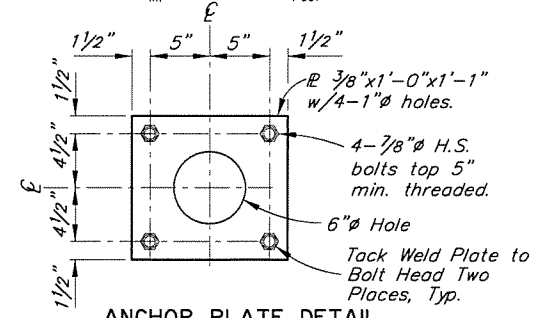
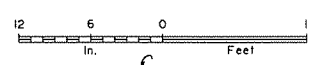
No Scale



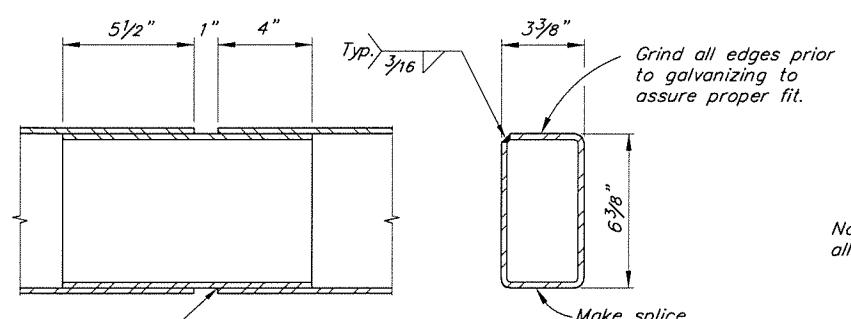
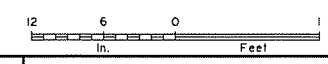
**PLATE D**



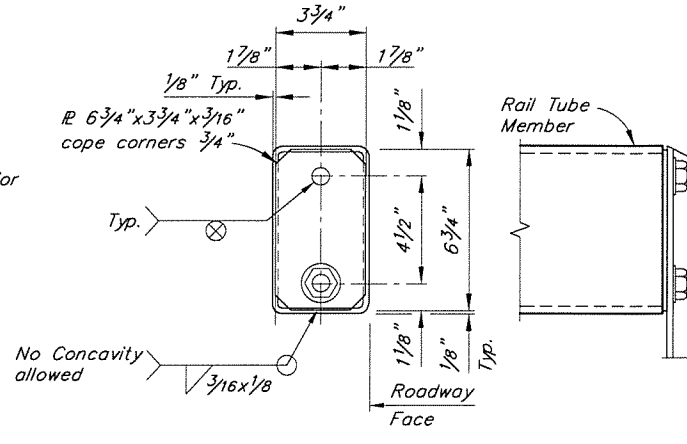
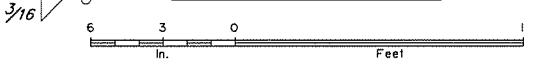
**BASE PLATE DETAIL**



**ANCHOR PLATE DETAIL**



**RAIL SPLICE DETAIL**



**RAIL CAP DETAIL**



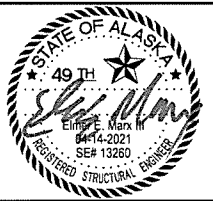
**NOTES:**

1. Use grout with a minimum 24-hour f'c of 3,000 psi in single placement.
2. See "CONCRETE SLAB" Dwg. for rail post spacing.
3. Install bridge rail posts plumb.
4. Adjust reinforcing to accommodate curb taper.

R:\evault\misc\Workment\Stabbs\Dalton\Stab MP289-305 site-RAIL Wed, Apr/14/21 10:28am

|                                     |                                 |
|-------------------------------------|---------------------------------|
| DESIGNED BY<br><i>Elmer Marx</i>    | CHECKED:<br><i>Sara Manning</i> |
| DRAWN BY:<br><i>Sam Solie</i>       | CHECKED:<br><i>Elmer Marx</i>   |
| QUANTITIES BY:<br><i>Elmer Marx</i> | CHECKED:<br><i>Sara Manning</i> |

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
BRIDGE SECTION  
3132 Channel Drive  
Juneau, Alaska 99801  
907-465-2975

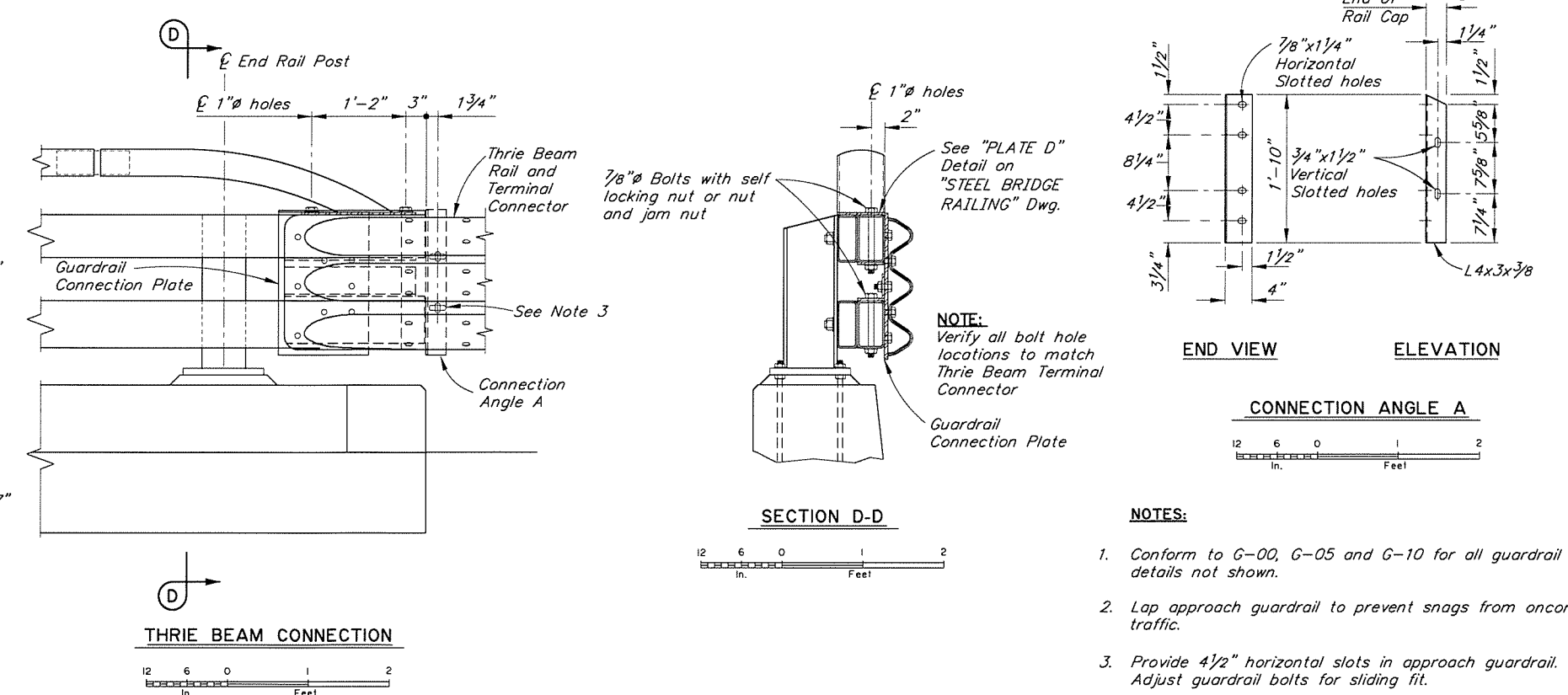
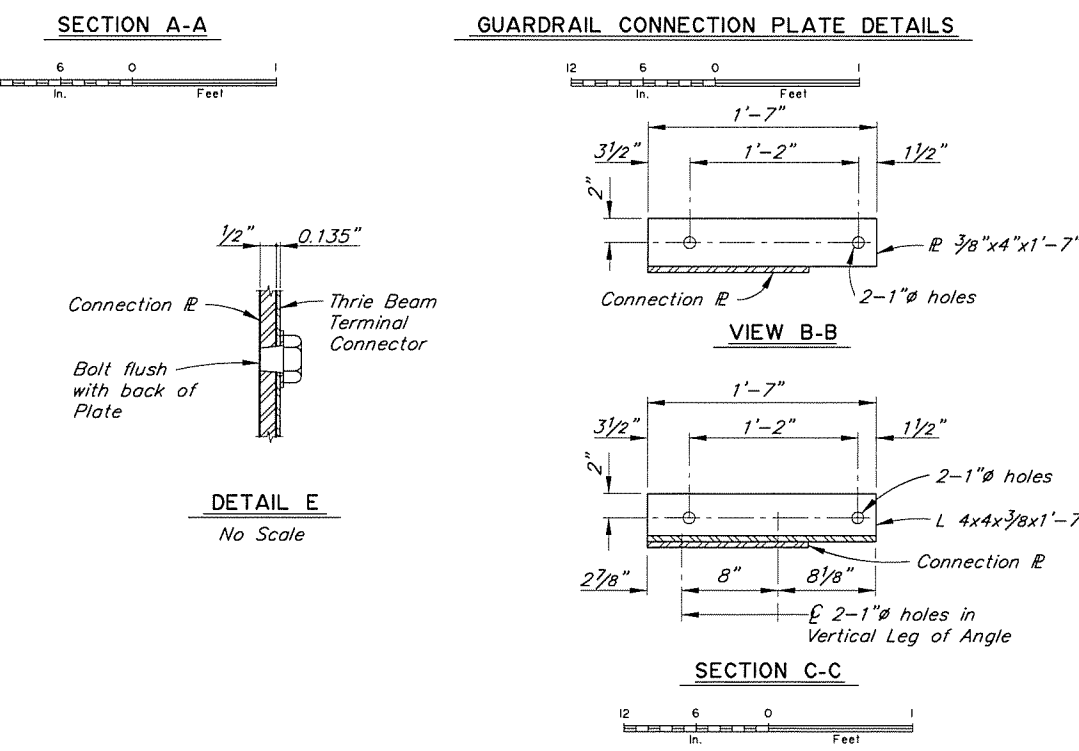
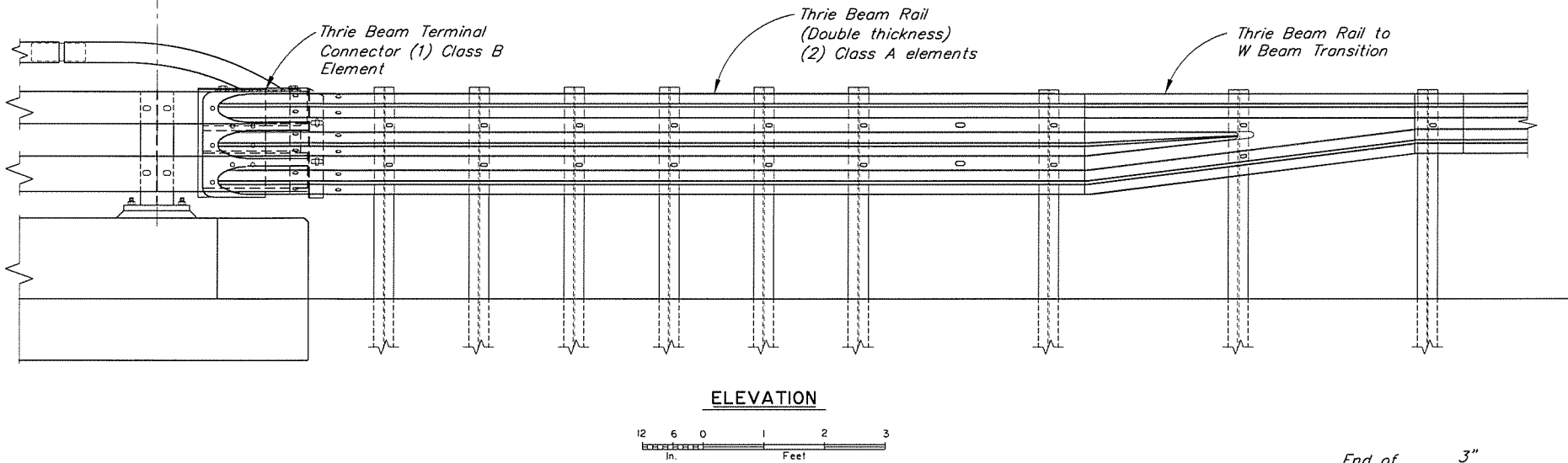
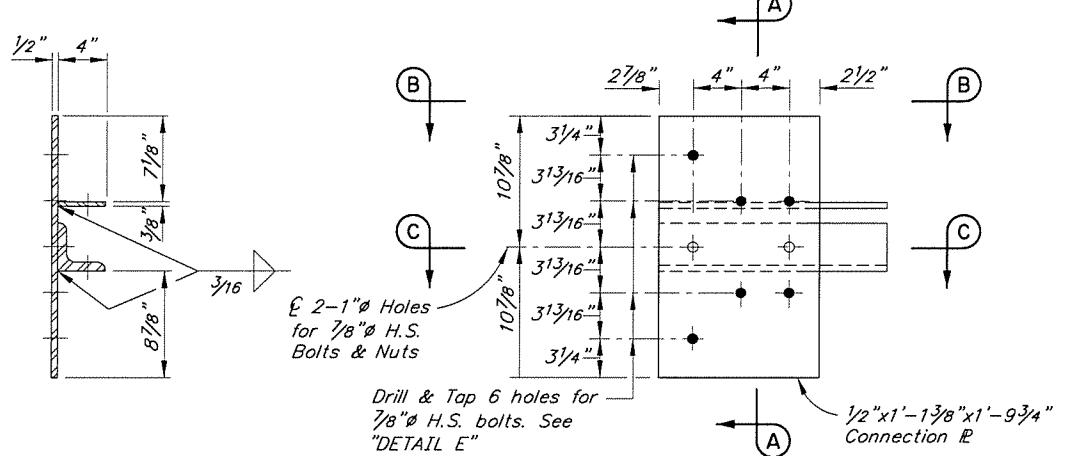
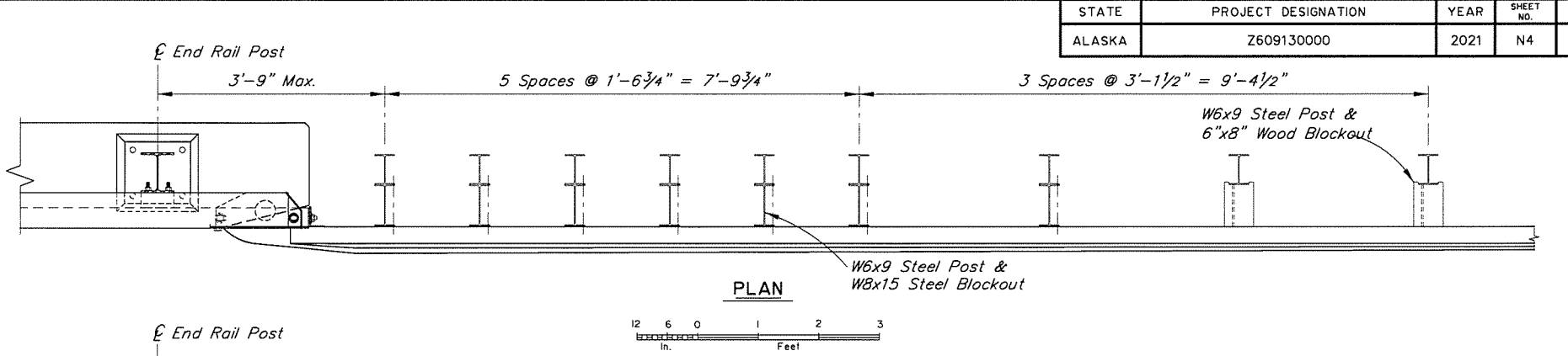
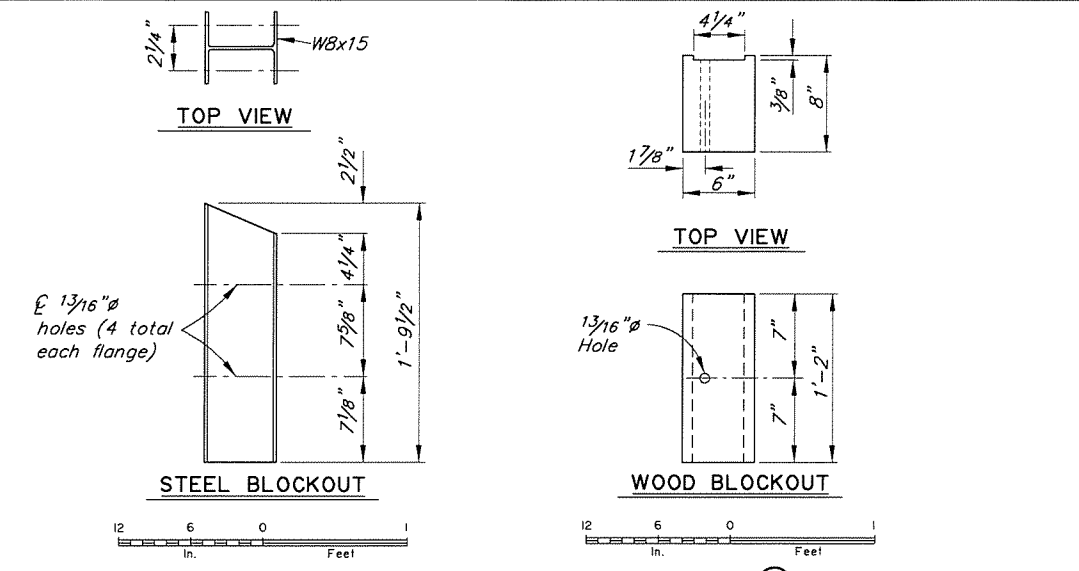


**PIPELINE CROSSING BARRIERS**  
DALTON HIGHWAY  
**STEEL RAILING, 3-TUBE**



DWG. NO. 3

| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | Z609130000          | 2021 | N4        | N4           |



- NOTES:**
1. Conform to G-00, G-05 and G-10 for all guardrail details not shown.
  2. Lap approach guardrail to prevent snags from oncoming traffic.
  3. Provide 4 1/2 inch horizontal slots in approach guardrail. Adjust guardrail bolts for sliding fit.

R:\evault\misc\Moment Slabs\Dalton Slab MP289-305 site-Transition Wed, Apr/14/21 10:28am

|                           |                       |
|---------------------------|-----------------------|
| DESIGNED BY: Elmer Marx   | CHECKED: Sara Manning |
| DRAWN BY: Sam Sollie      | CHECKED: Elmer Marx   |
| QUANTITIES BY: Elmer Marx | CHECKED: Sara Manning |

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION  
 3132 Channel Drive  
 Juneau, Alaska 99801  
 907-465-2975



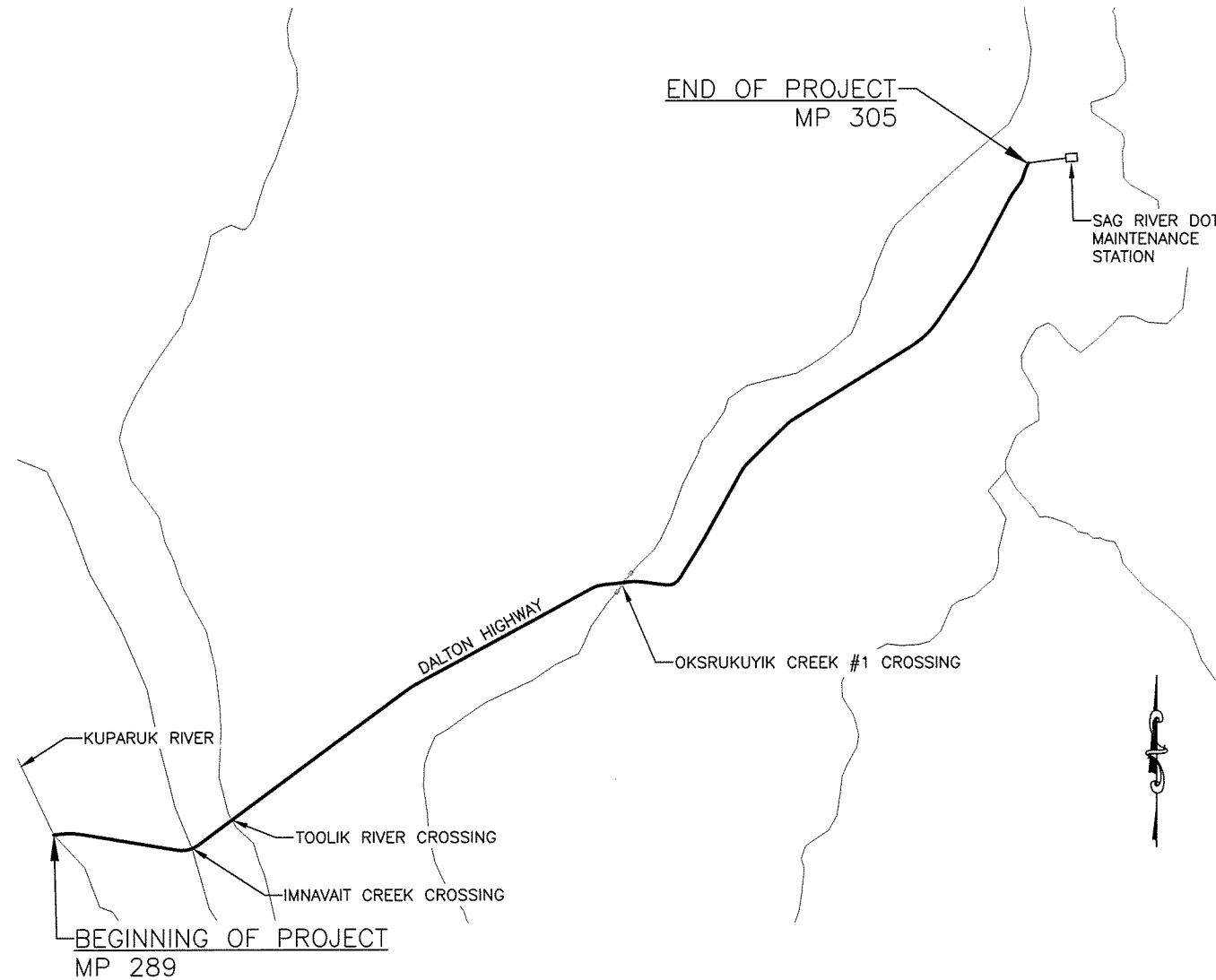
**PIPELINE CROSSING BARRIERS**  
 DALTON HIGHWAY  
 TRANSITION RAIL, 3-TUBE



| NO. | DATE | REVISION | STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|-----|------|----------|--------|---------------------|------|-----------|--------------|
|     |      |          | ALASKA | 0656005/Z609130000  | 2021 | Q1        | Q16          |

**GENERAL NOTES:**

1. READ AND COMPLY WITH THE CONSTRUCTION GENERAL PERMIT (CGP) AND SECTION 641 OF THE PROJECT SPECIFICATIONS.
2. EROSION AND SEDIMENT CONTROL FEATURES BASED ON THE DOT&PF MANUAL ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE (MARCH 2017 OR LATEST VERSION) AND LATEST BMPs.
3. INITIATE EROSION AND SEDIMENT CONTROLS PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
4. STOCKPILE AND STAGING LOCATIONS MUST BE RECLAIMED TO THEIR ORIGINAL CONDITION. STOCKPILES AND/OR STAGING AREAS ARE NOT ALLOWED IN WETLANDS.
5. ENSURE LOADS ARE STABLE OR COVERED SO THAT NO MATERIAL ESCAPES DURING HAULING ACTIVITIES.
6. CONTRACTOR WILL WATER EXPOSED SOILS TO MITIGATE FUGITIVE DUST AS NECESSARY.
7. VEGETATIVE BUFFER IS THE PREFERRED PERIMETER PROTECTION FOR THIS PROJECT. SEE APPENDIX A FOR COE PERMIT, FOR USING WETLANDS AS A VEGETATIVE BUFFER. IF STANDING WATER OR EMERGENT WETLANDS ARE IN THE 10 FT WORK AREA OR 25 FT VEGETATIVE BUFFER CONTRACTOR TO INSTALL PERIMETER CONTROL BMPs.
8. NOTIFICATION TO PUBLIC WATER SYSTEM (PWS) OPERATORS IS REQUIRED WHEN POLLUTION, INCLUDING SITE EROSION RESULTS FROM A PROJECT AND OCCURS WITHIN THE SYSTEM DRINKING WATER PROTECTION AREA (DWPA).
9. IF EXCAVATION DEWATERING WILL OCCUR ON THE PROJECT, THE CONTRACTOR MUST COMPLY WITH THE EXCAVATION DEWATERING GENERAL PERMIT AKG0020000 AND SUBMIT A NOI AND A CERTIFIED BMP PLAN TO ADEC FOR APPROVAL BEFORE DEWATERING CAN BEGIN.
10. AVOID CLEARING FROM JUNE 1ST – JULY 31TH.
11. REFER TO APPENDIX C OF THE CONTRACT FOR THE ESCP TEMPLATE.



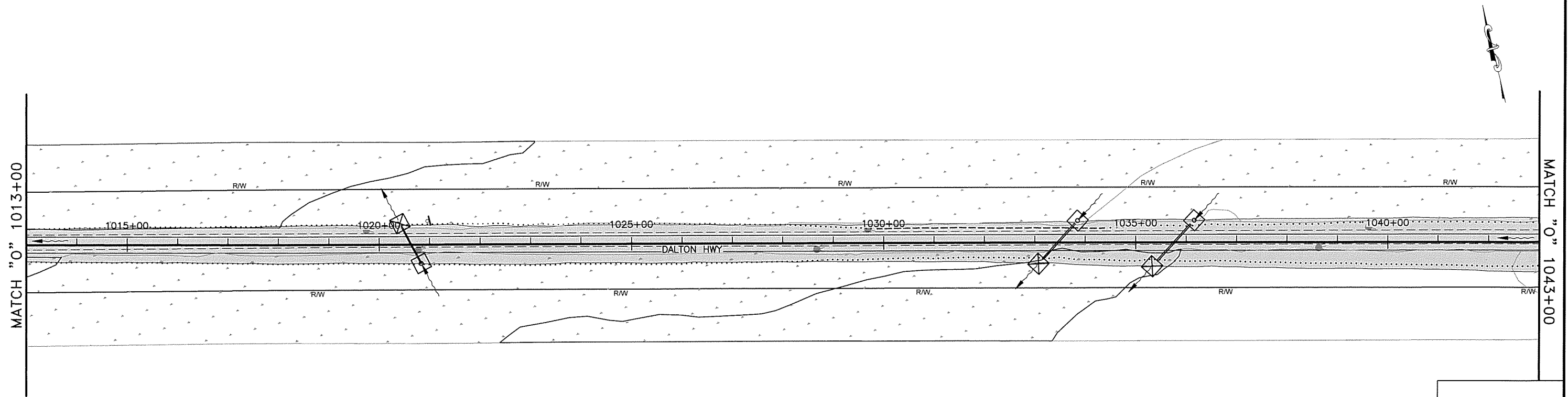
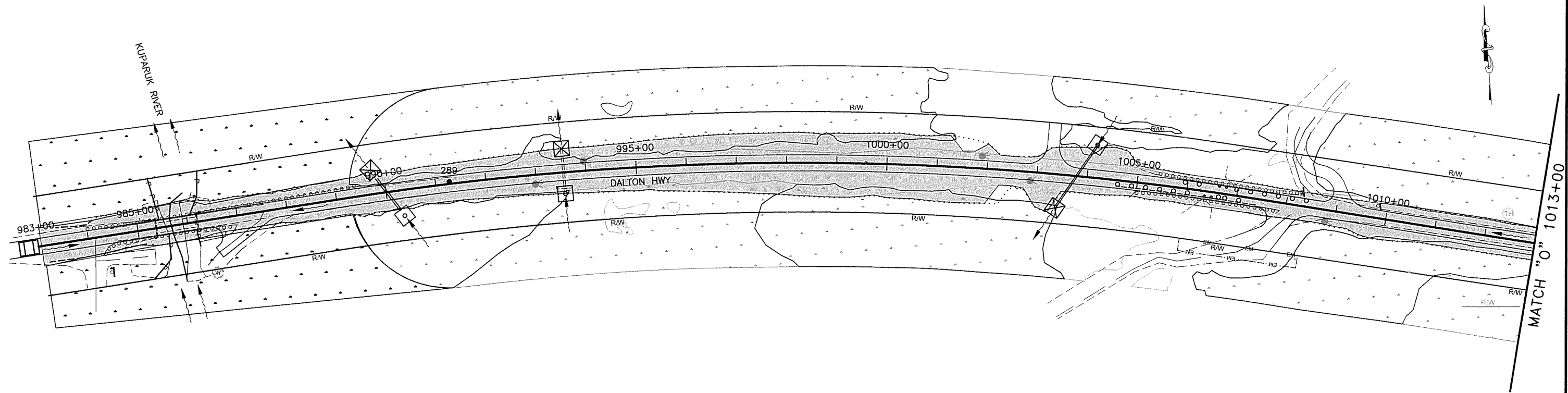
**PROJECT LOCATION**

**ESCP LEGEND:**

- RIGHT OF WAY
- SURFACE WATER FLOW DIRECTION
- TEMPORARY PERIMETER CONTROL – FIBER FILLED TUBE BERMS (SEE BMP 10.00, DOT&PF SWPPP GUIDE) OR FUNCTIONAL EQUIVALENT TO MANUFACTURER'S SPECIFICATIONS
- OUTLET PROTECTION
- CULVERT INLET PROTECTION (SEE BMP 08.00 DOT&PF SWPPP GUIDE)
- VEHICLE TRACKING ENTRANCE/EXIT
- WETLANDS
- DITCH LINE
- FILL LINE

**ESCP LEGEND AND  
GENERAL NOTES**

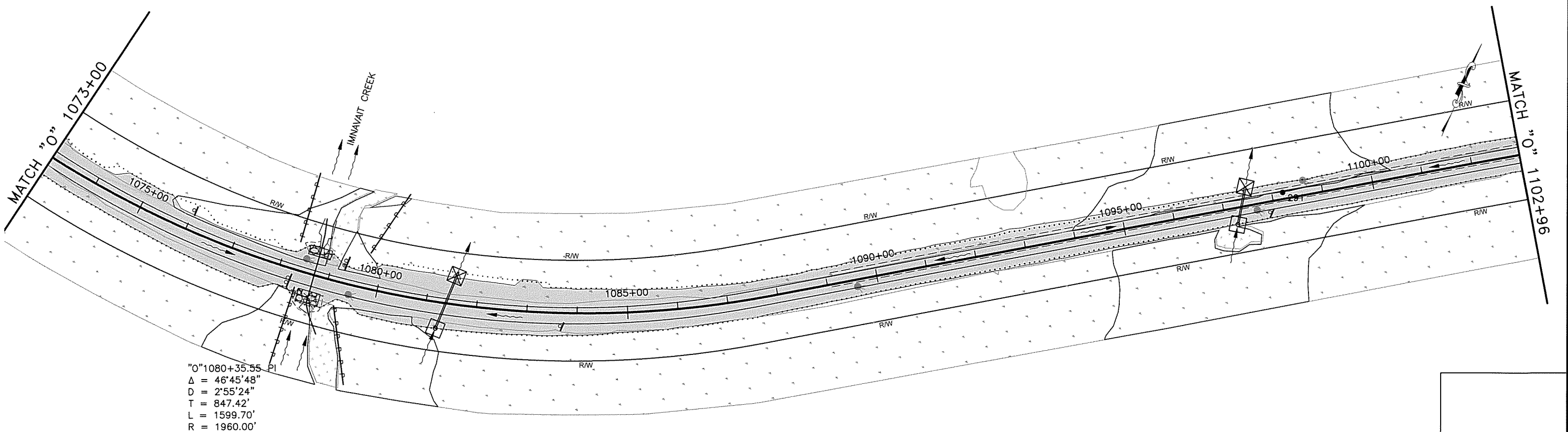
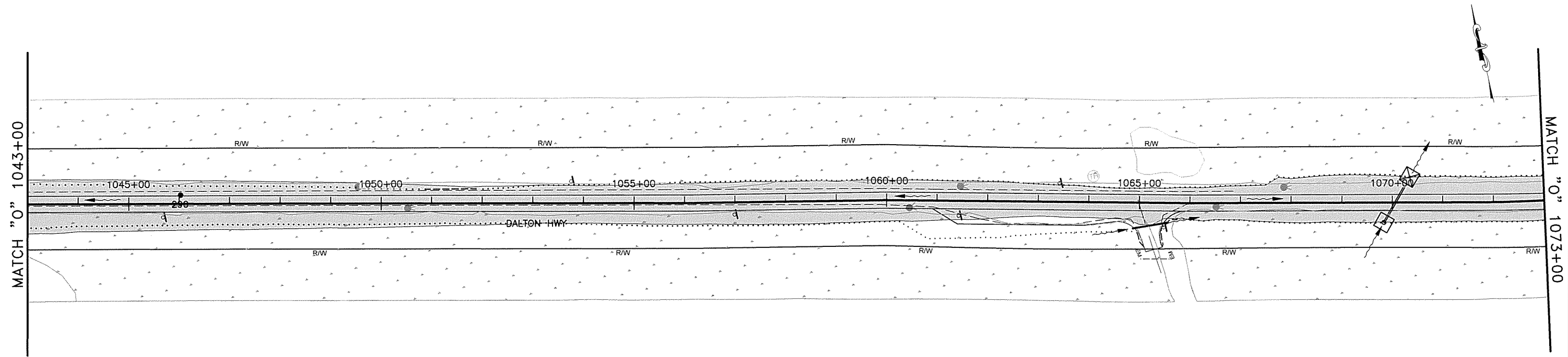
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q2        | Q16          |



EROSION & SEDIMENT CONTROL PLAN (1 of 15)

P:\2017\17331FB-DaltonMP289-305\C68001enst17331FB-Q2 EROSION & SEDIMENT CONTROL PLAN (1 of 15) Fri, May/07/21 08:45am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q3        | Q16          |



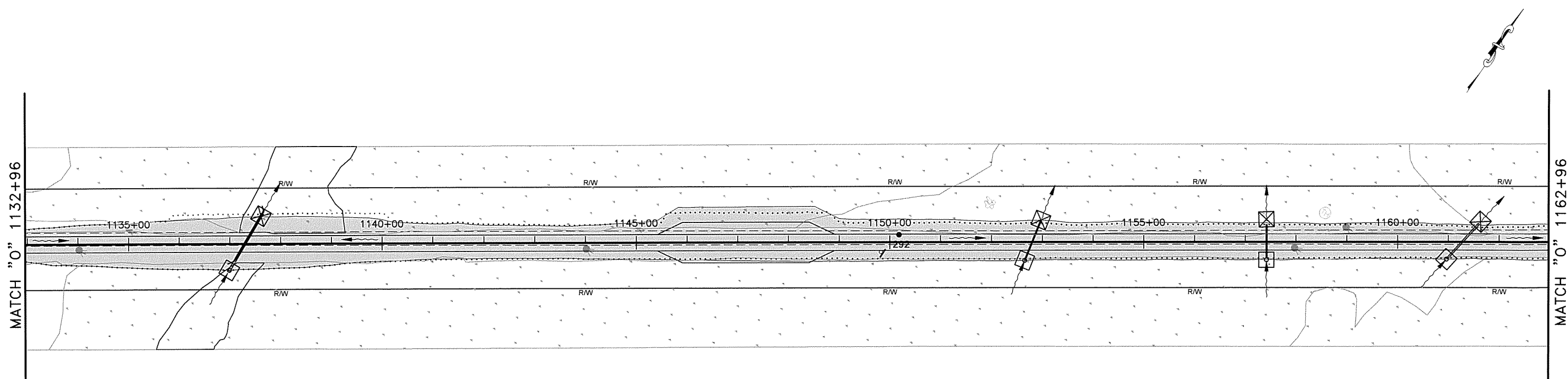
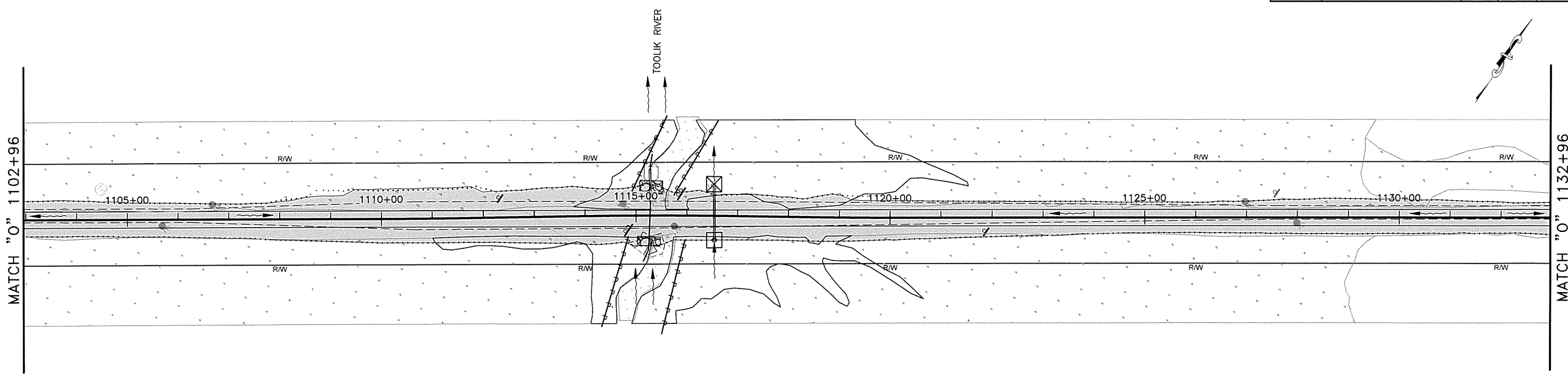
"O"1080+35.55 PI  
 $\Delta = 46^{\circ}45'48''$   
 $D = 2^{\circ}55'24''$   
 $T = 847.42'$   
 $L = 1599.70'$   
 $R = 1960.00'$

EROSION & SEDIMENT  
CONTROL PLAN (2 of 15)

P:\2017\17331FB-Dalton\MP289-305\C\6001\enst17331FB-Q3 EROSION & SEDIMENT CONTROL PLAN (2 of 15) Fri, May/07/21 08:46am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 102B AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



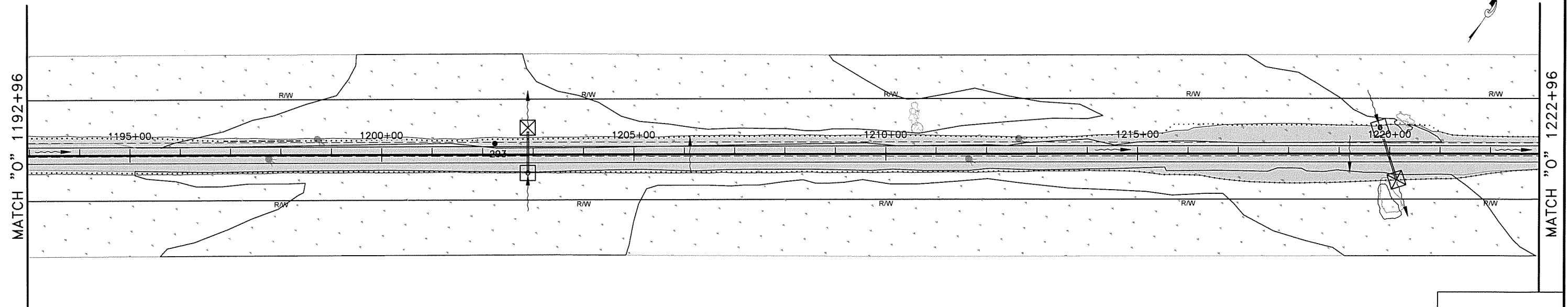
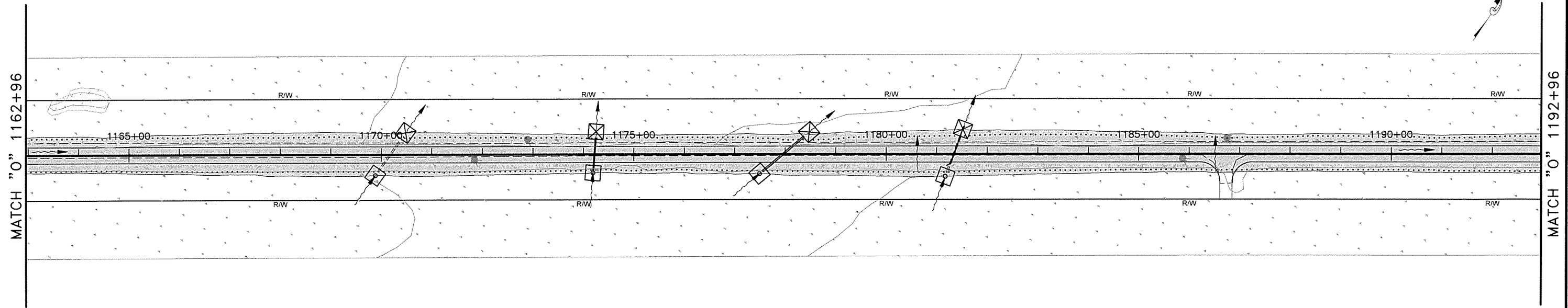
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q4        | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (3 of 15)

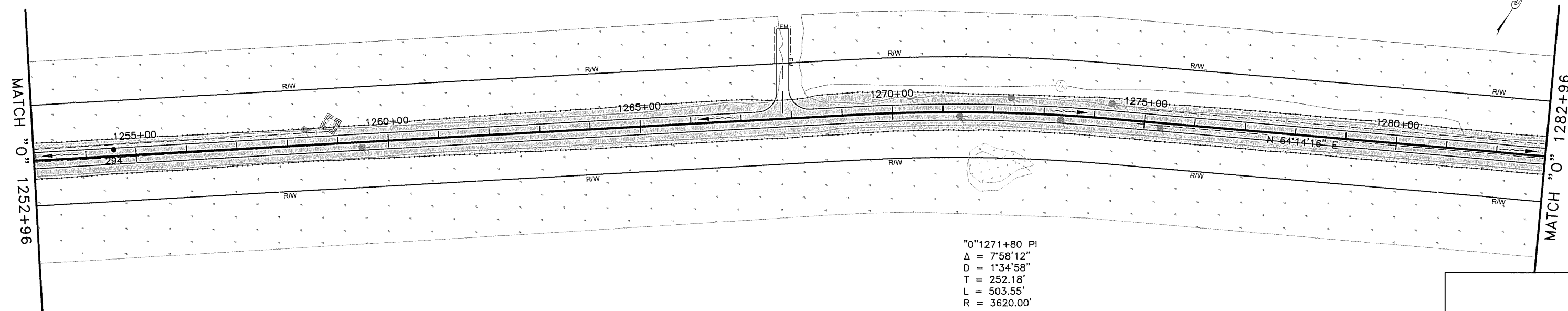
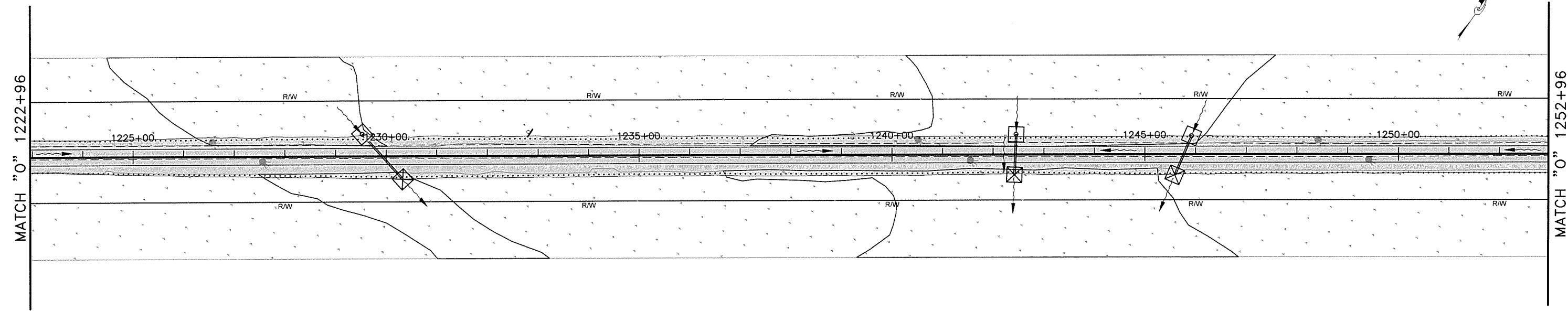
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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q5        | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (4 of 15)

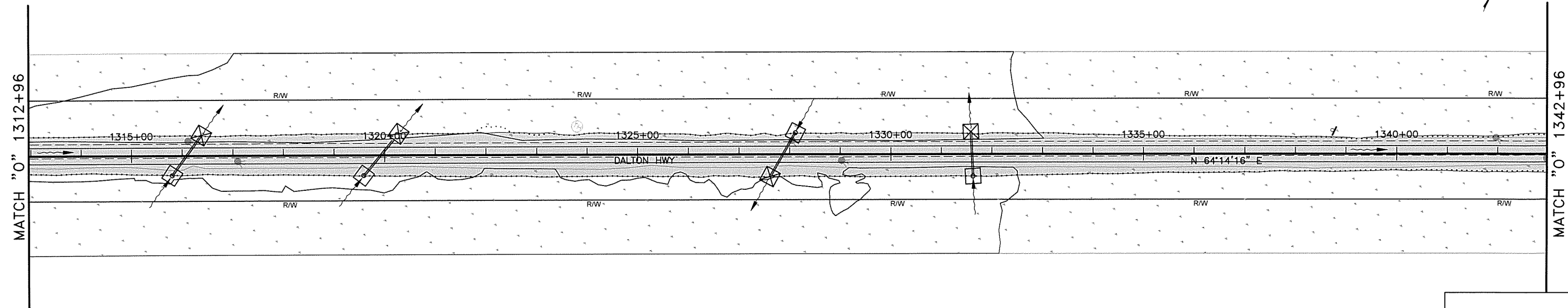
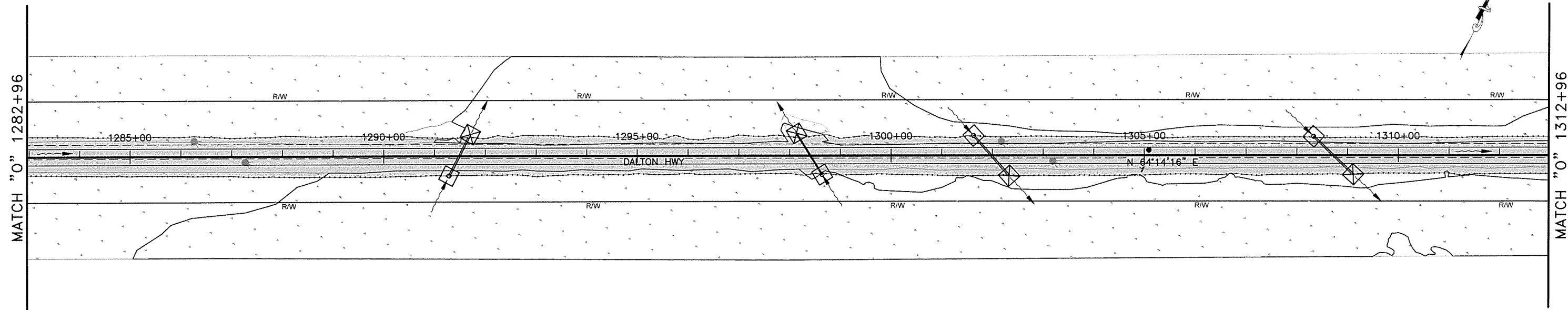
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|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q6        | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (5 OF 15)

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 PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

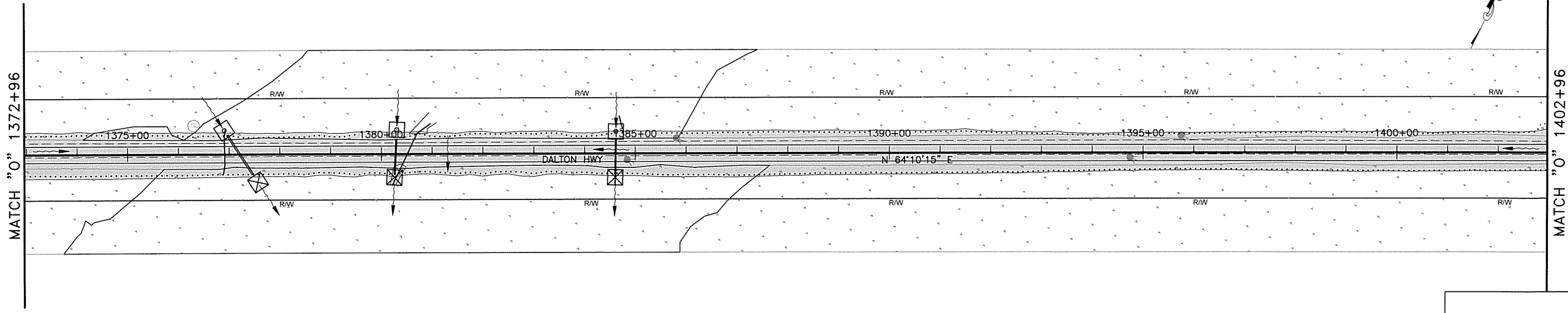
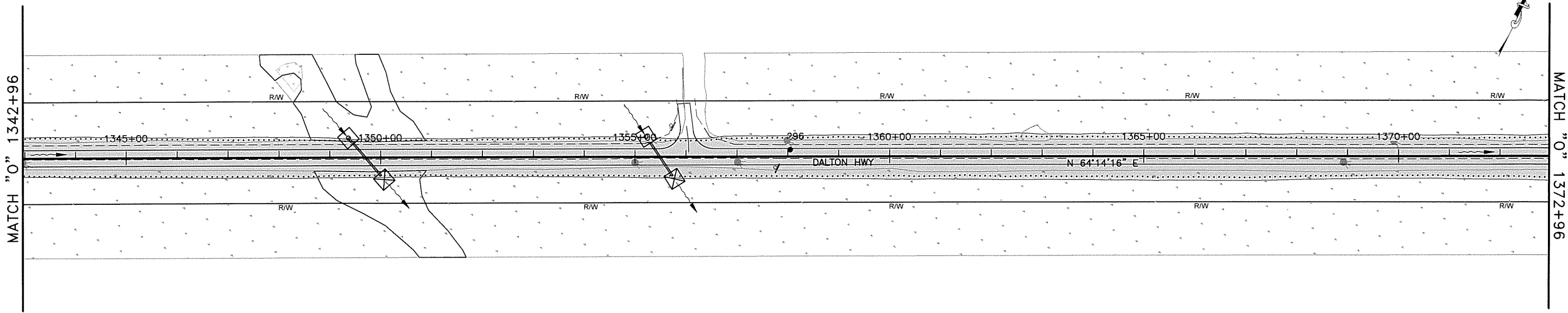
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q7        | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (6 OF 15)

P:\2017\17331FB-DaltonMP289-305\C\6001\enst17331FB-07 EROSION & SEDIMENT CONTROL PLAN (6 OF 15) Fri, May/07/21 08:46am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 102B AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

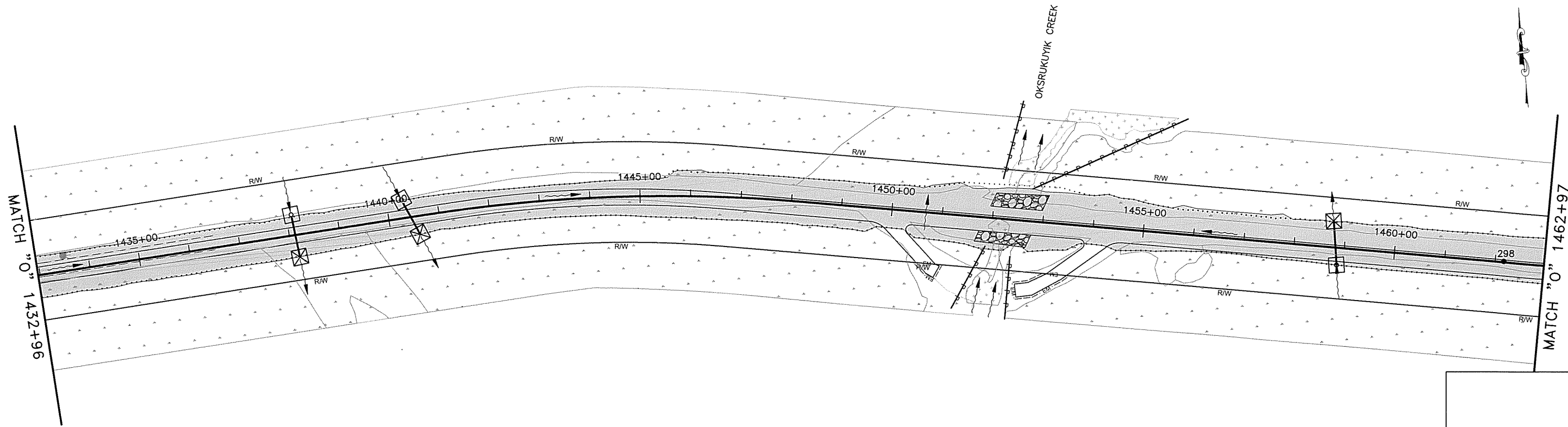
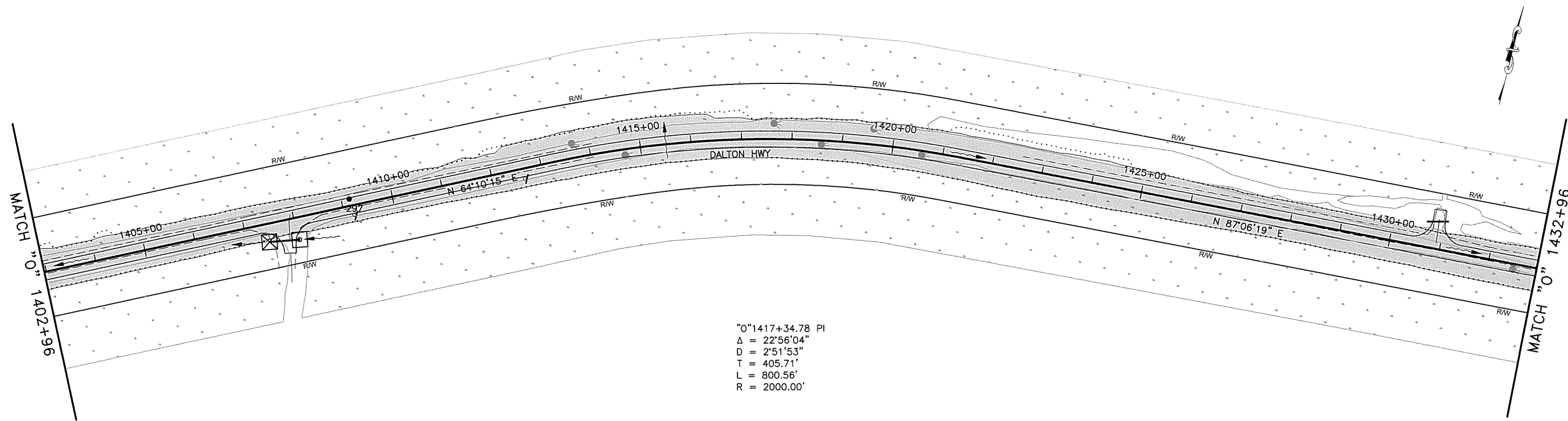
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q8        | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (7 OF 15)

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PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q9        | Q16          |

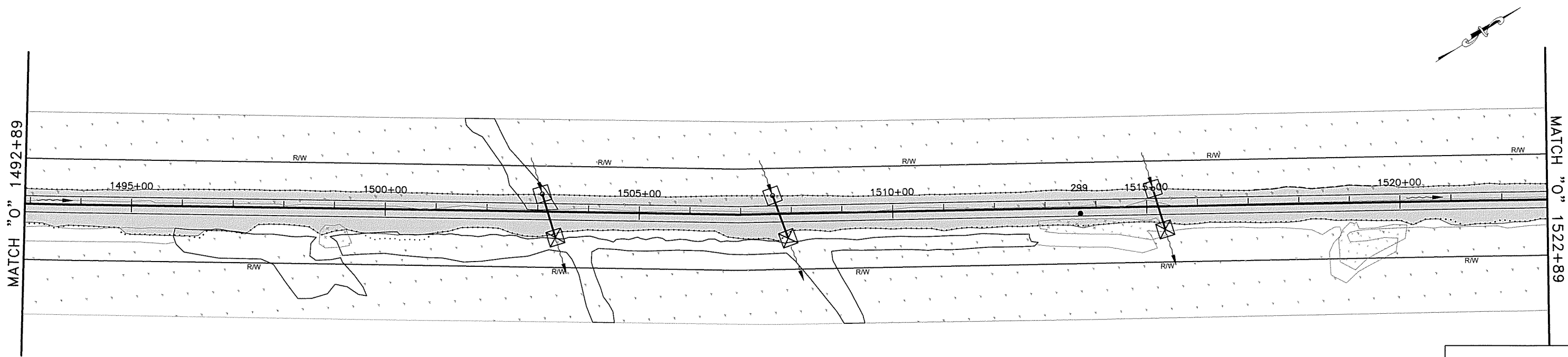
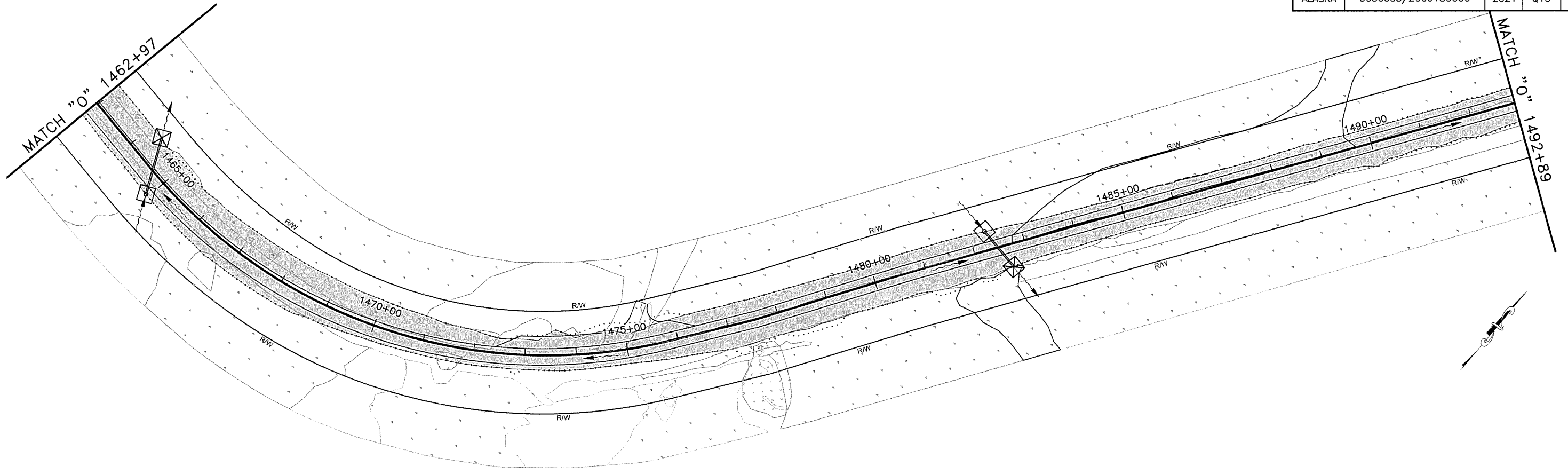


EROSION & SEDIMENT  
CONTROL PLAN (8 OF 15)

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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC005, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414



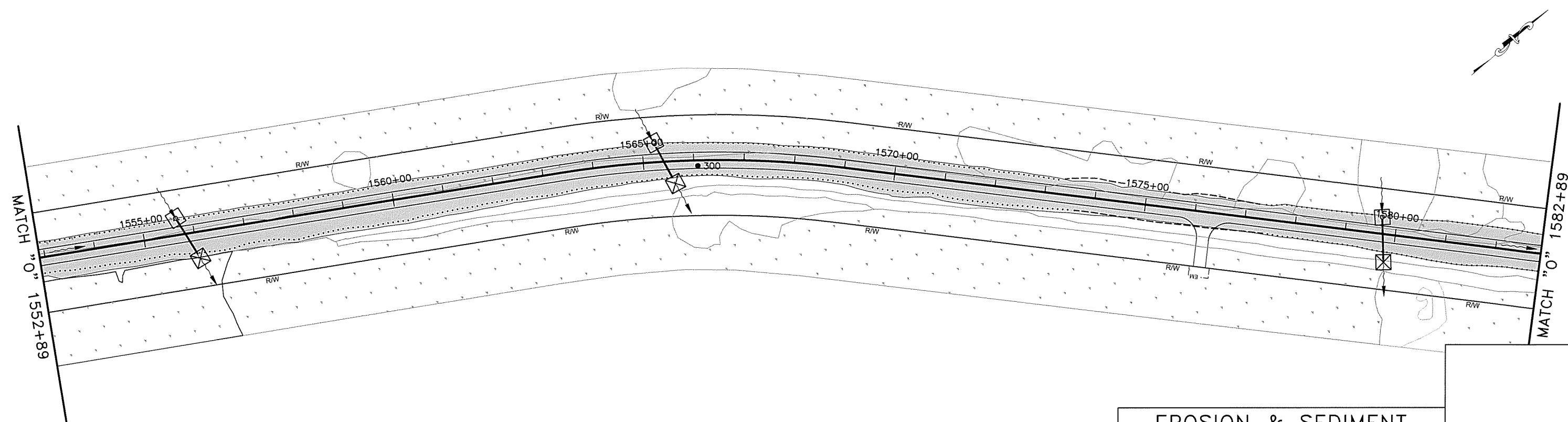
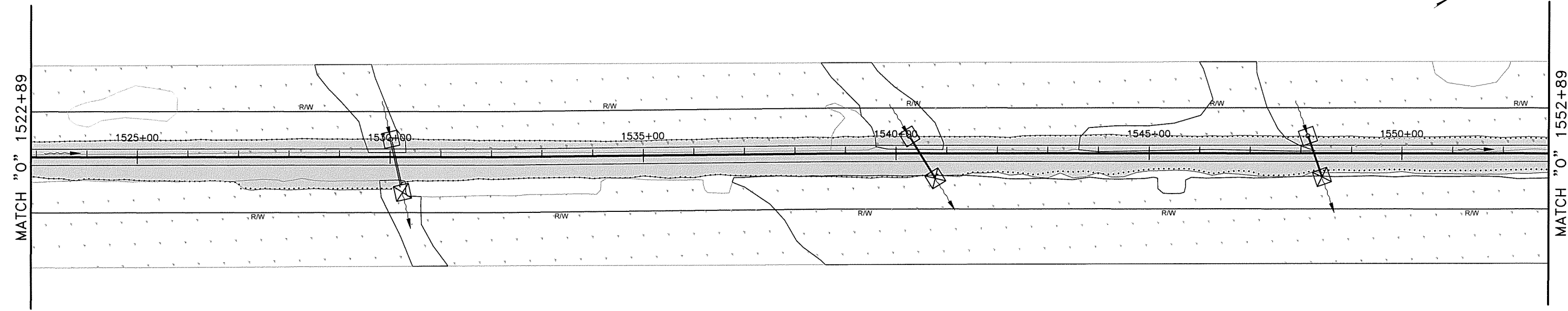
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q10       | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (9 OF 15)

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PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC; CERT. OF AUTHORIZATION NO.: AECC605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

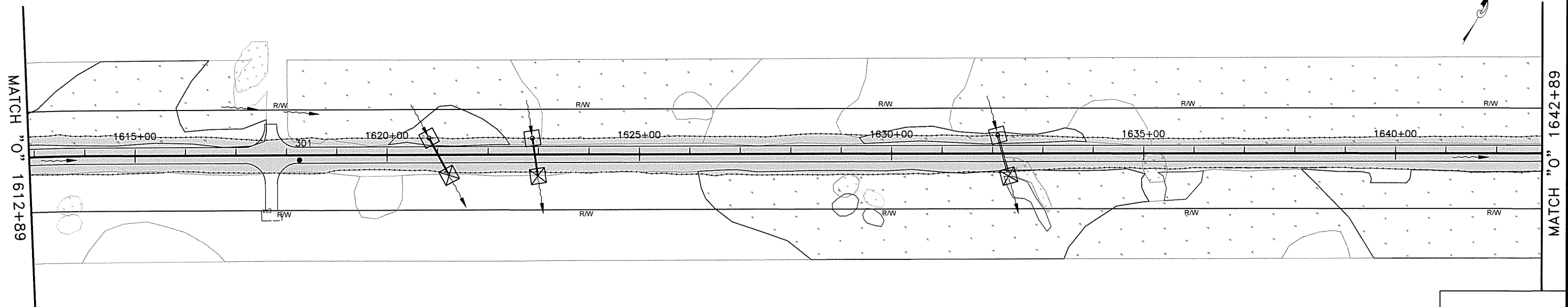
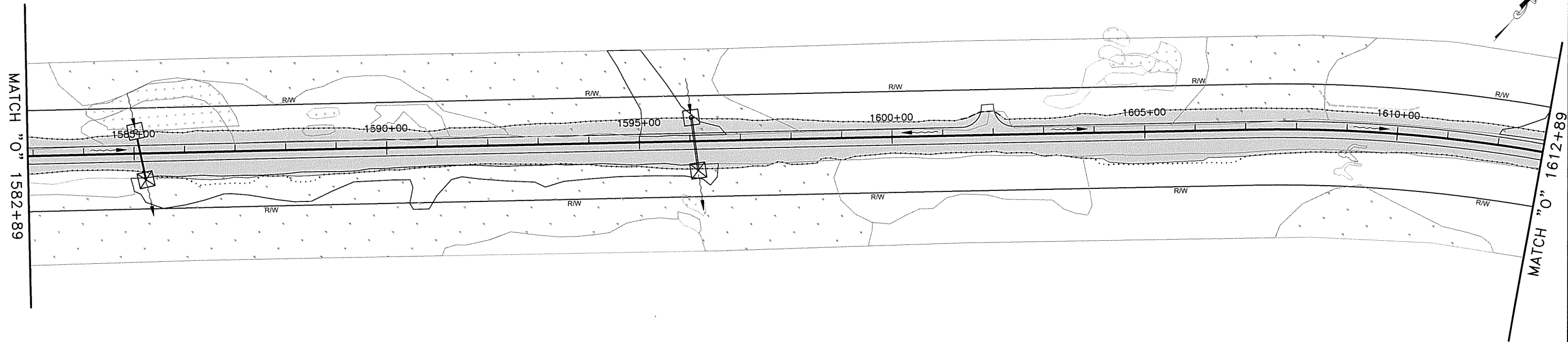
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q11       | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (10 OF 15)

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PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 102B AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

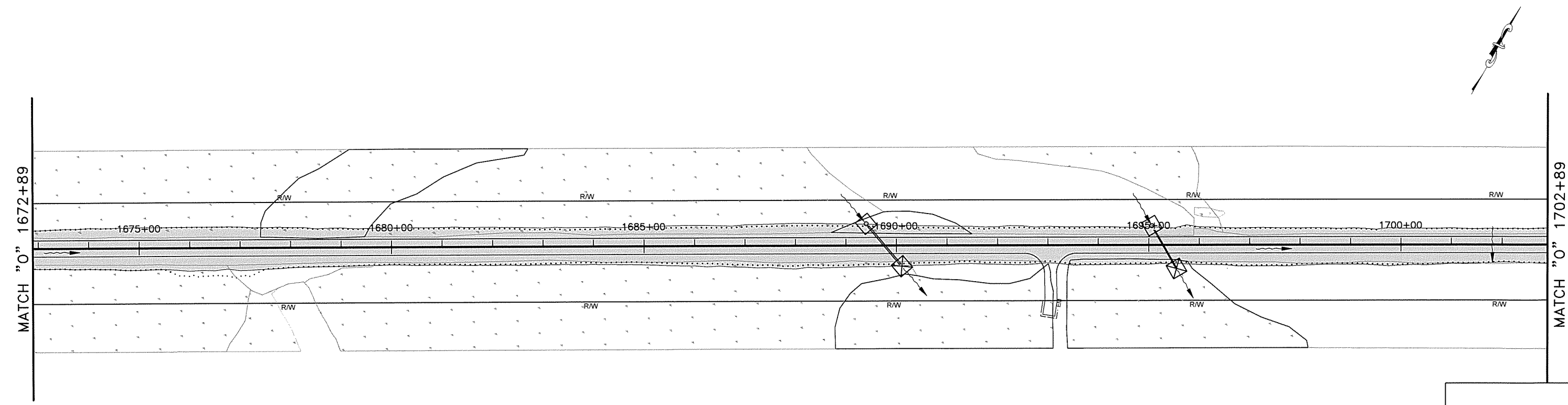
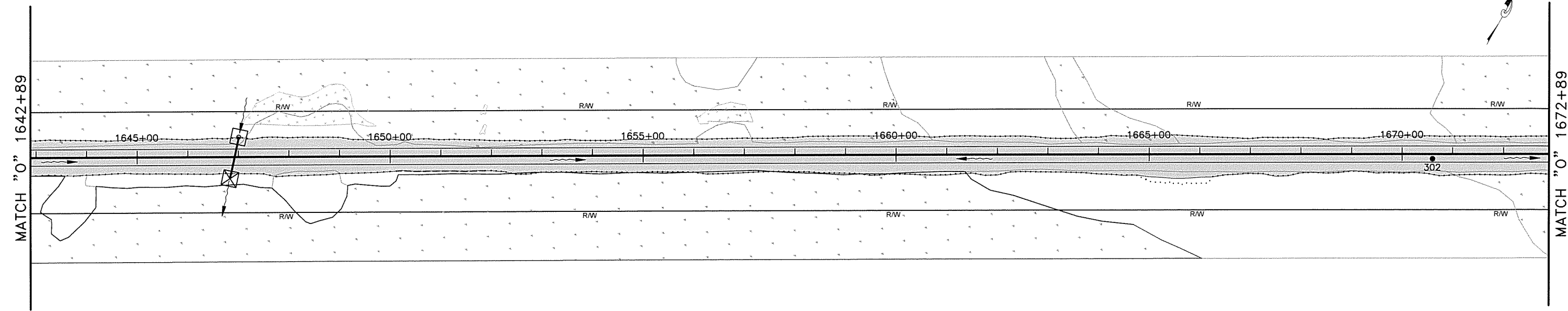
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q12       | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (11 OF 15)

P:\2017\17331FB-Delton\MP289-305\C\6001\enst17331FB-Q12 EROSION & SEDIMENT CONTROL PLAN (11 OF 15) Fri, May/07/21 08:46am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AEC0605, 102B AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

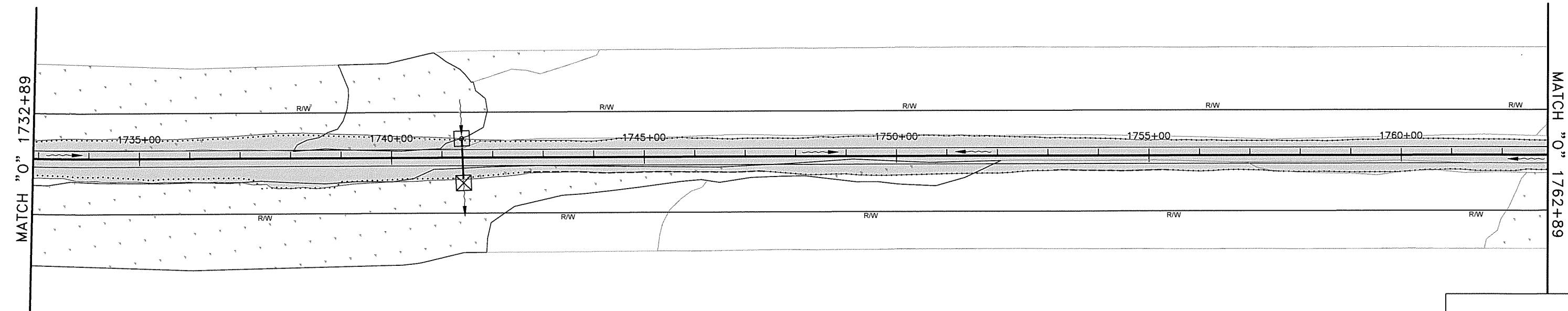
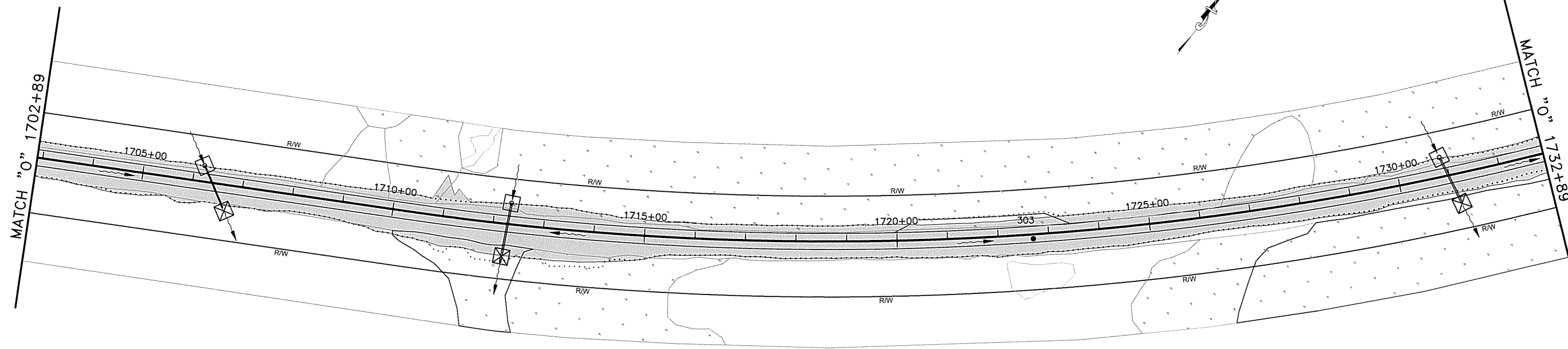
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q13       | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (12 OF 15)

P:\2017\17331FB-Dillon\MP289-305\C\6001\enr\17331FB-Q13 EROSION & SEDIMENT CONTROL PLAN (12 OF 15). Fri, May/07/21 08:46am  
PLANS DEVELOPED BY: PDC INC. ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC665, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

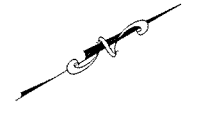
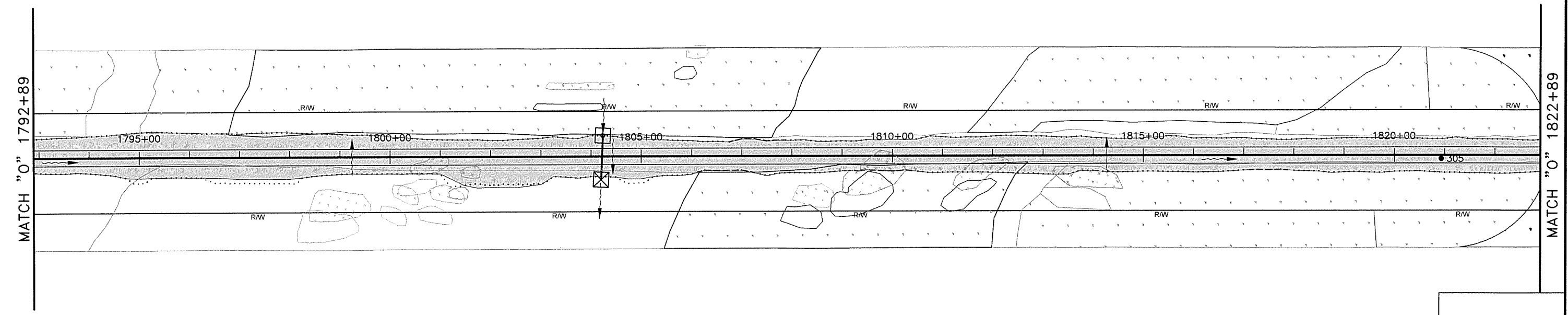
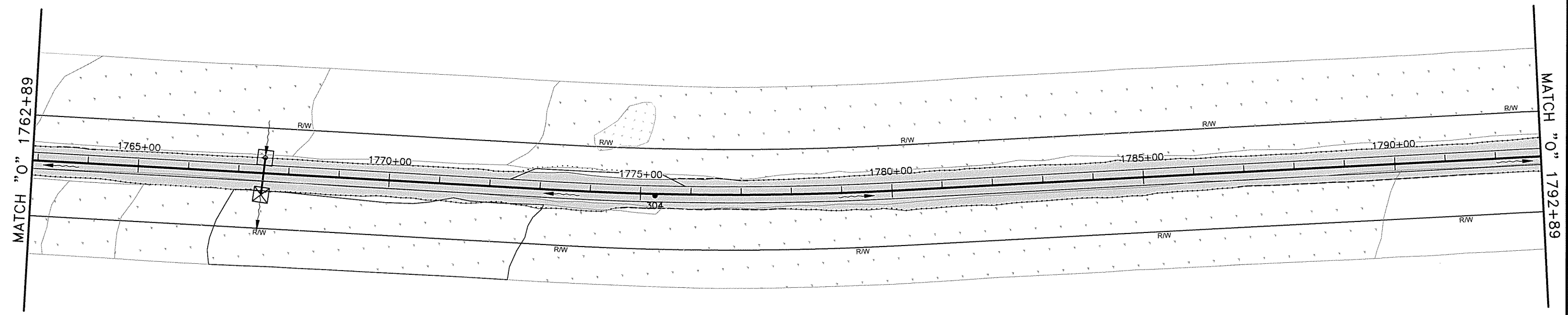
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q14       | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (13 OF 15)

P:\2017\17331FB-Dillon\MP289-305\C\6001\cnet\17331FB-Q14. EROSION & SEDIMENT CONTROL PLAN (13 OF 15). Fri, May/07/21 08:46am  
PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC. CERT. OF AUTHORIZATION NO.: AECC605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

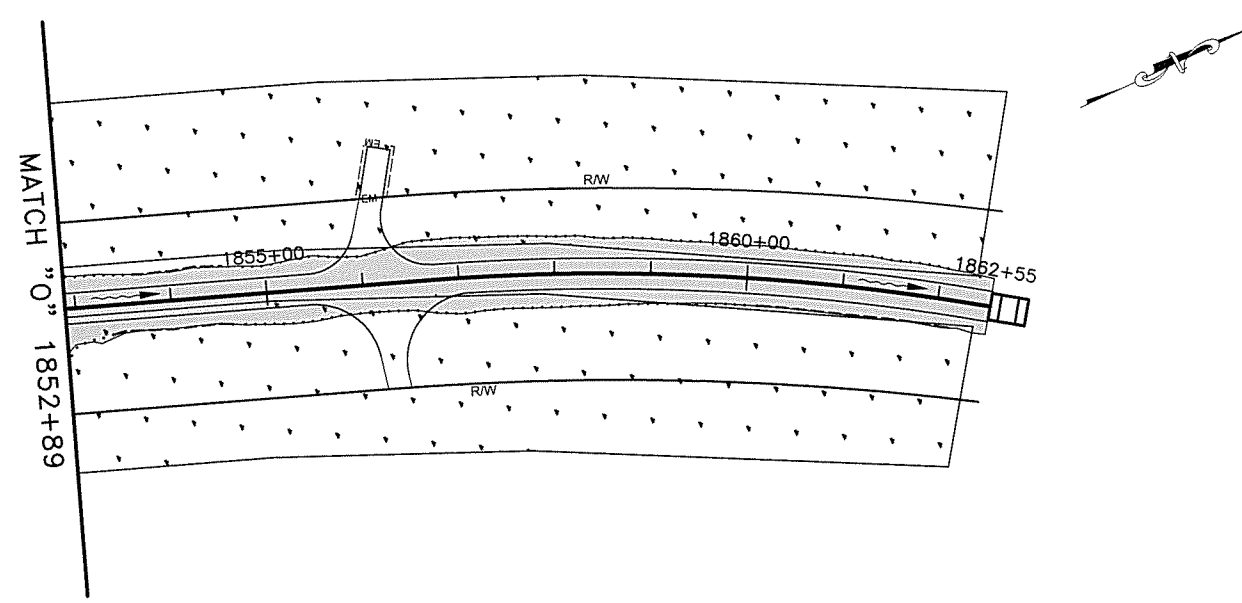
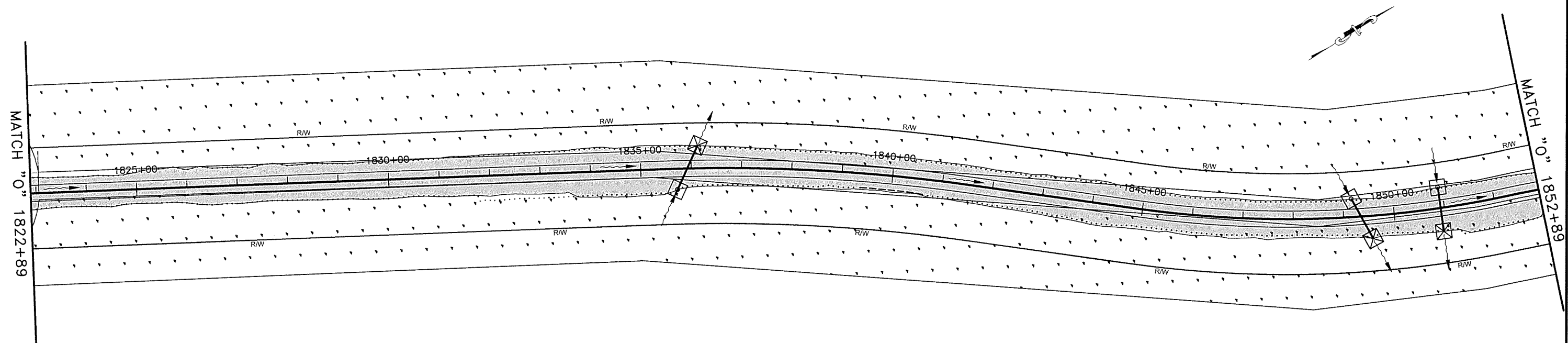
| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q15       | Q16          |



EROSION & SEDIMENT  
CONTROL PLAN (14 of 15)

P:\2017\17331FB-Dutton\MP289-305\C\68001\er17331FB-015. EROSION & SEDIMENT CONTROL PLAN (14 of 15). Fri, May/07/21 08:47am  
 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC; CERT. OF AUTHORIZATION NO.: AECC005, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

| STATE  | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 0656005/Z609130000  | 2021 | Q16       | Q16          |

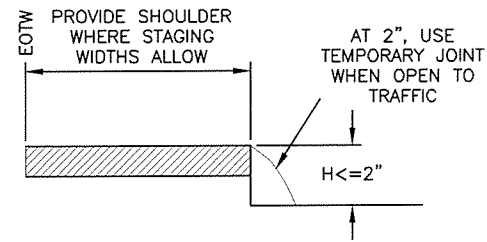


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 PLANS DEVELOPED BY: PDC INC ENGINEERS, LLC, CERT. OF AUTHORIZATION NO.: AECC605, 1028 AURORA DRIVE, FAIRBANKS, AK 99709, (907)452-1414

EROSION & SEDIMENT  
 CONTROL PLAN (15 of 15)



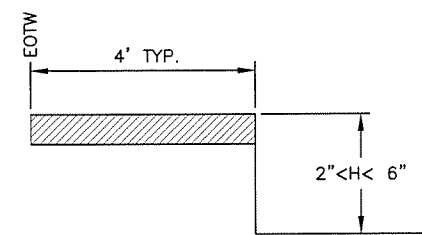
### VERTICAL DROP-OFFS



**CASE A**

DROP-OFFS  $\leq 2$  INCHES  
(PAVED SURFACES ONLY)

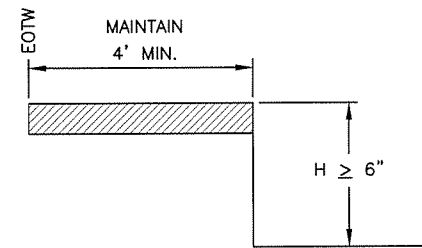
1. USE "UNEVEN LANES" (W8-11) SIGNS FOR ALL DROP-OFFS IN BETWEEN TRAFFIC LANES
2. LEAVE NO DROP-OFFS  $> 1.5$ " IN THE TRAFFIC LANE OR ACTIVE WHEEL TRACK



**CASE B**

$2" < \text{DROP-OFFS} < 6"$   
(ALL ROADWAY SURFACES)

1. PLACE CONES OR CANDLES FOR DROP-OFFS  $\geq 4$  FEET AND  $\leq 30$  FEET FROM EOTW.
2. USE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS  $< 4$  FEET FROM THE EOTW.



**CASE C**

DROP-OFFS  $\geq 6"$   
(ALL ROADWAY SURFACES AND ROADSIDE SLOPES)

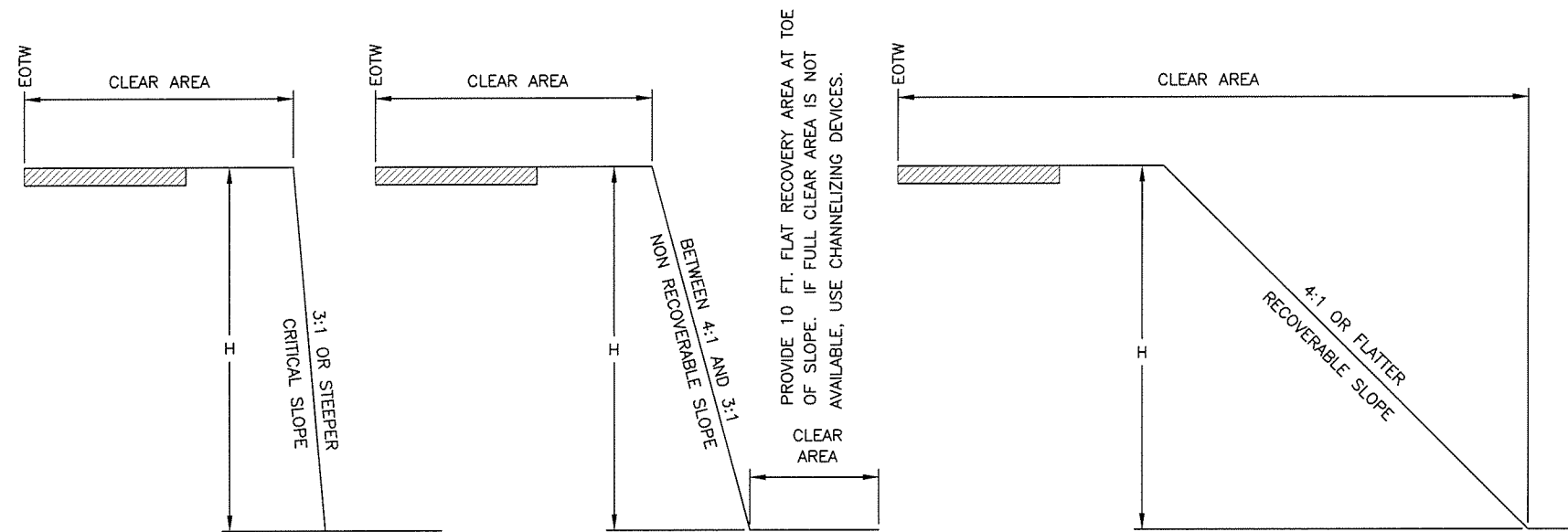
1. PLACE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS  $\leq 24$ " WITHIN THE CLEAR AREA.
2. PROVIDE PORTABLE CONCRETE BARRIERS FOR DROP-OFFS  $> 24$ " WITHIN 15 FEET OF THE EOTW. USE DRUMS OR TYPE II BARRICADES IF BEYOND 15 FEET.

### FILL SLOPES

STEEPER THAN OR EQUAL TO 3:1

BETWEEN 4:1 AND 3:1

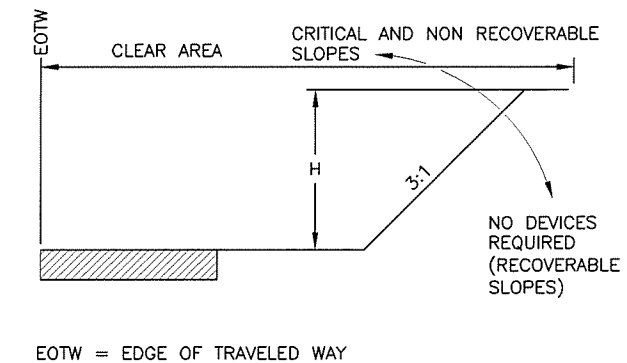
FLATTER THAN OR EQUAL TO 4:1



| CLEAR AREA REQUIREMENTS |  |  |  |
|-------------------------|--|--|--|
|                         | LOW SPEED<br>$\leq 35$ MPH               | INTERMEDIATE SPEED<br>40 MPH TO 45 MPH     | HIGH SPEED<br>$\geq 50$ MPH                |
| RURAL                   | 15'                                      | 24'  | 30'  |
| URBAN                   | 10' DITCH SECTIONS, OR<br>2' BEHIND CURB | 15' DITCH CONDITIONS, OR<br>2' BEHIND CURB | 15' DITCH CONDITIONS, OR<br>2' BEHIND CURB |

| CHANNELIZING DEVICE REQUIREMENTS FOR SLOPES<br>3:1 OR STEEPER WITHIN THE CLEAR AREA |                            |   |
|---|----------------------------|---|
|   | H $\leq 15'$               | H $> 15'$   |
| $< 2000$ VPD<br>LOW VOLUME  | CANDLES OR CONES           | TYPE II BARRICADES OR DRUMS                         |
| $> 2000$ VPD  | TYPE II BARRICADE OR DRUMS | PORTABLE CONCRETE BARRIER<br>OR TEMPORARY GUARDRAIL |

### CUT SLOPES



#### TRAFFIC CONTROL NOTES:

1. USE THE EXISTING CROSS-SECTION (PRIOR TO CONSTRUCTION) AS A BASIS FOR DETERMINING WHEN CHANNELIZING DEVICES ARE NEEDED.
2. INSTALL CHANNELIZING DEVICES WHEN THE HORIZONTAL OR VERTICAL CURVATURE IS MADE MORE SEVERE.
3. INSTALL FLEXIBLE DELINEATORS WHEN ALL VEGETATION OVER 4 FEET HIGH IS CLEARED FROM FILL SLOPES THAT ARE 3:1 OR STEEPER IN THE CLEAR AREA.
4. USE PORTABLE CONCRETE BARRIER FOR WARRANTING CONDITIONS WHICH LAST LONGER THAN 3 DAYS. FOR CONDITIONS LASTING LESS THAN 3 DAYS, OTHER CHANNELIZING DEVICES MAY BE INSTALLED.
5. TERMINATE RUNS OF PORTABLE CONCRETE BARRIER USING THE FOLLOWING METHODS:
  - A) CONNECT TO A PORTABLE CRASH CUSHION, OR
  - B) PROVIDE A CONCRETE BARRIER WITH THREE BEAM TRANSITION TO W-BEAM GUARDRAIL, TREATED WITH A PARALLEL TERMINAL (SEE SECTION 710).
  - C) FLARE THE ENDS OF THE PORTABLE CONCRETE BARRIER AWAY FROM THE ROADWAY AT A RATE OF 7:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER, OUTSIDE OF THE CLEAR AREA. INSTALL A SLOPING PORTABLE CONCRETE BARRIER END TREATMENT, OR
  - D) BURY IN THE BACKSLOPE.

6. TERMINATE THE RUNS OF TEMPORARY W-BEAM GUARDRAIL USING THE FOLLOWING METHODS:
  - A) PROVIDE A PARALLEL TERMINAL (SEE SECTION 710)
  - B) FLARE THE ENDS OF THE TEMPORARY GUARDRAIL AWAY FROM THE ROADWAY AT A RATE OF 6:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER OUTSIDE OF THE CLEAR AREA, TERMINATE WITH A STANDARD W-BEAM END SECTION, OR
  - C) BURY IN THE BACKSLOPE.

#### EQUIPMENT NOTES:

1. WHEN THERE IS ACTIVE, NONMOBILE CONSTRUCTION EQUIPMENT WITHIN THE CLEAR AREA, DELINEATE THE ROADSIDE WITH TRAFFIC CONES.
2. SEPARATE PROCEDURES ARE REQUIRED FOR MOBILE WORK ZONE OPERATIONS AND SHORT DURATION WORK OF LESS THAN 12 HOURS.

#### WINTER SHUTDOWN NOTES:

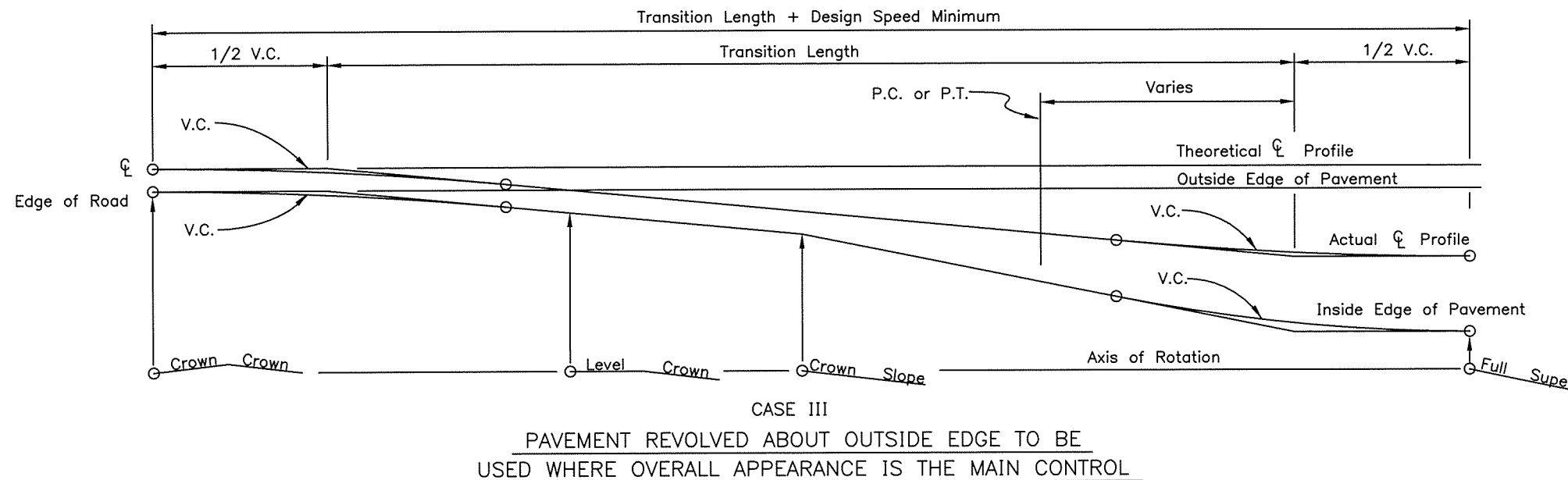
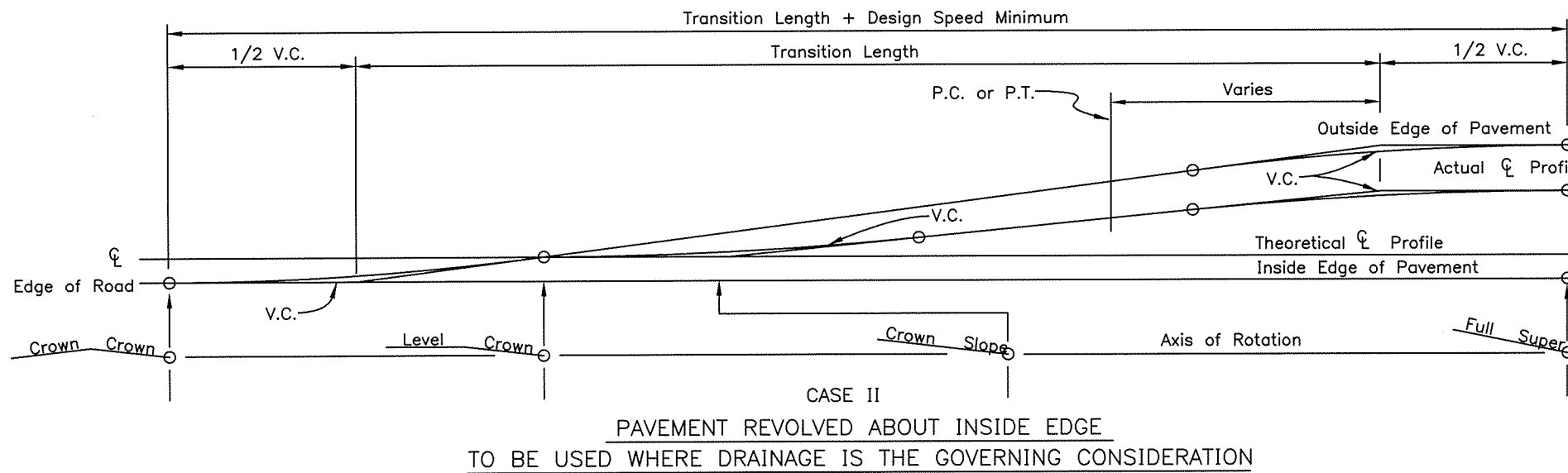
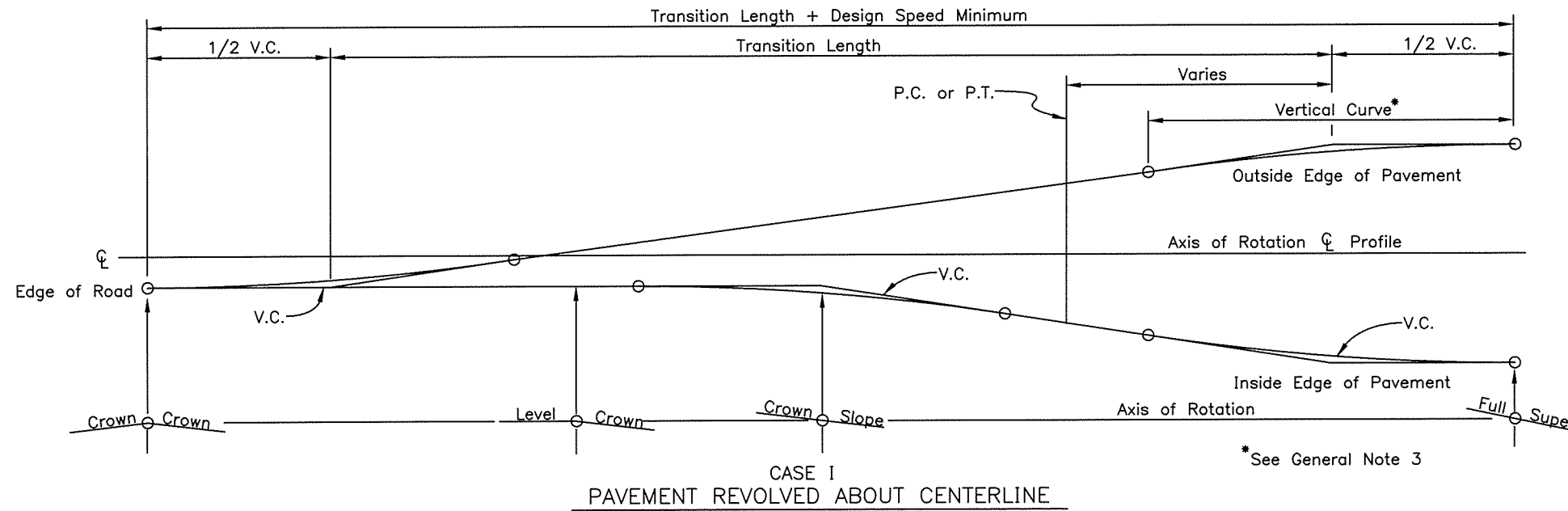
1. WHEN REQUIRED, USE CHANNELIZING DEVICES WHICH CAN BE MAINTAINED OVER WINTER.
2. NO CHANNELIZING DEVICES ARE REQUIRED IF:
  - A) CONSTRUCTION SLOPES ARE RECOVERABLE, AND
  - B) SLOPES ARE SMOOTH AND COMPACTED, AND
  - C) REQUIRED CLEAR AREA IS PROVIDED

#### REVISIONS

| DESCRIPTION                       | BY  | DATE     |
|-----------------------------------|-----|----------|
| CREATED                           | GG  | 11/20/03 |
| CLARIFIED DETAILS                 | CA  | 01/31/06 |
| UPDATED ET-PLUS NOMENCLATURE      | CFJ | 02/02/10 |
| UPDATED 6A                        | CMA | 07/18/11 |
| NATIONAL CAD STDS                 | SP  | 02/13/15 |
| NOTE TO DESIGNERS & MINOR CHANGES | SP  | 12/05/18 |

## TRAFFIC CONTROL DEVICES SHEET





GENERAL NOTES:

1. Location of transition length relative to horizontal curves will be shown on the plans or as directed by the Engineer.
2. Widening for guardrail or curvature will not change the location of the axis of rotation.
3. Minimum vertical curve length in feet shall be the numerical value of the design speed in M.P.H.
4. Superelevation shall be built into the subgrade and carried through the shoulders.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

SUPERELEVATION  
TRANSITION

Adopted as an Alaska  
Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

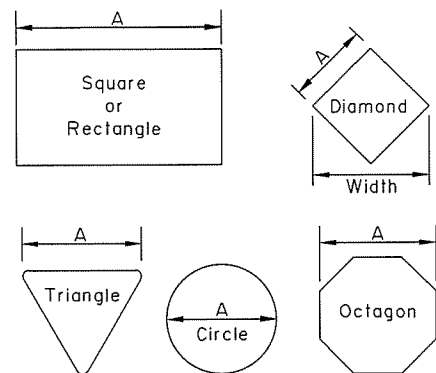
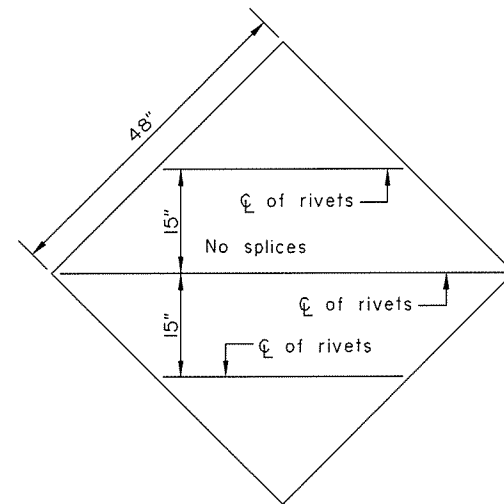
Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

GENERAL NOTES

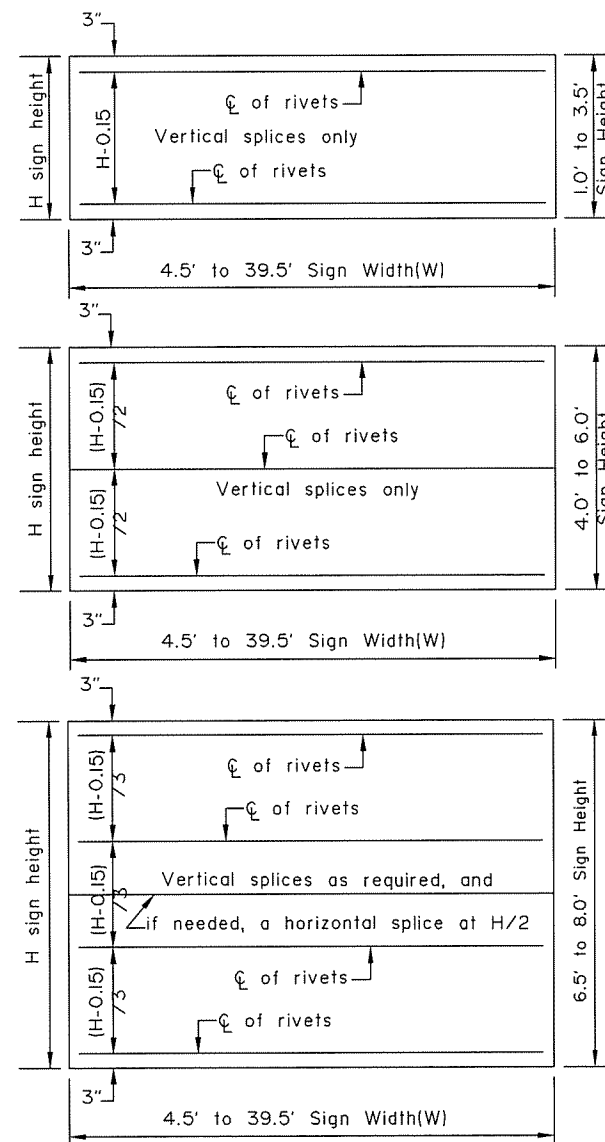
1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer certifies their design equals or exceeds the strength of the zee shaped design.
4. Install one piece wind framing members on all signs up to 23.5' wide. Use one splice in each wind frame on all signs wider than 23.5'. Locate splices at least 18" from all posts and panel edges. Stagger splices in adjacent framing members at least 8.0' apart.
5. Attach wind framing members with rivets or with an engineer approved, double sided, high strength, adhesive tape. Clean and handle sheeting and framing members and apply tape in accordance with the tape manufacturer's written instructions. Install two rivets in both ends of each framing member.
6. Use 3/16" diameter rivets conforming to aluminum alloy 6061-T6 for cold driven rivets, or aluminum alloy 6061-T43 for hot driven rivets.
7. Sign fabricators may use sign panels extruded with integral framing with approval of the engineer, if the manufacturer certifies their design equals or exceeds the strength of the 0.125" thick panel with framing attached to it.
8. Frame all signs taller than 8.0' with five wind framing members located  $(H-0.15)/4$  spaces. If needed, make a horizontal splice at the middle wind frame.
9. Do not use round pipes for sign supports.



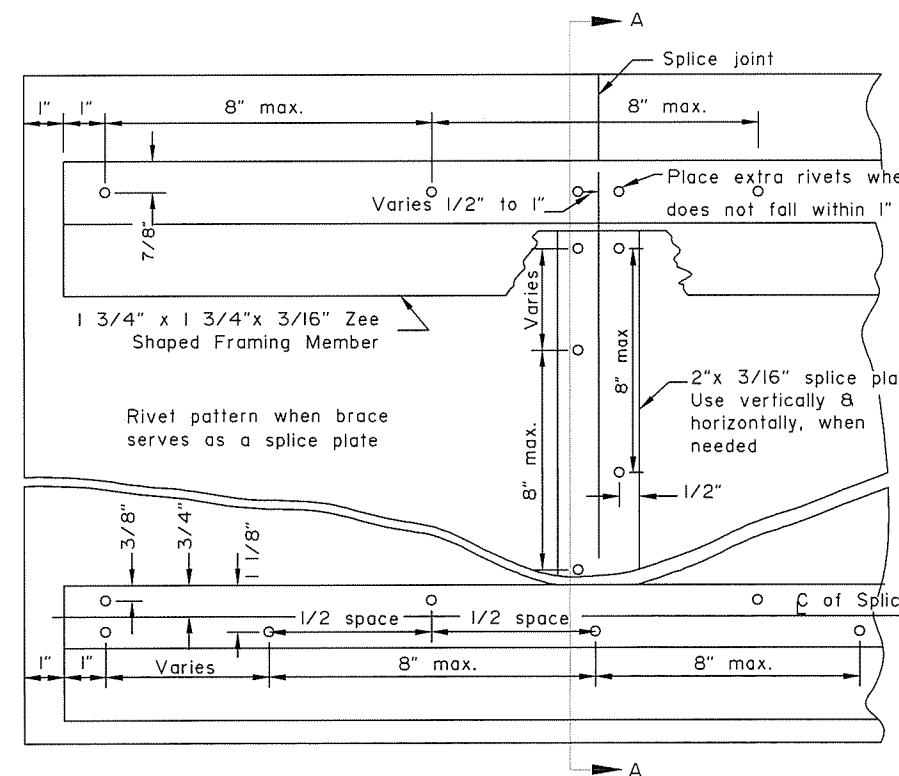
| Maximum size unframed signs using 0.125" thick aluminum sheeting. |     |
|---|-----|
| Sign Shape  | A   |
| Squares, Shields, and Route Markers                               | 48" |
| Rectangles  | 48" |
| Diamonds  | 48" |
| Triangles   | 48" |
| Rounds and Octagons   | 48" |

Install wind framing on all signs that exceed the dimensions listed.

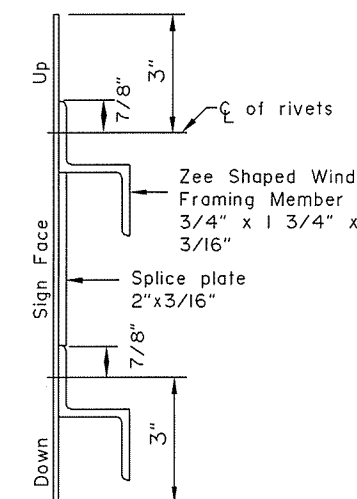
LIGHT SIGNS



WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

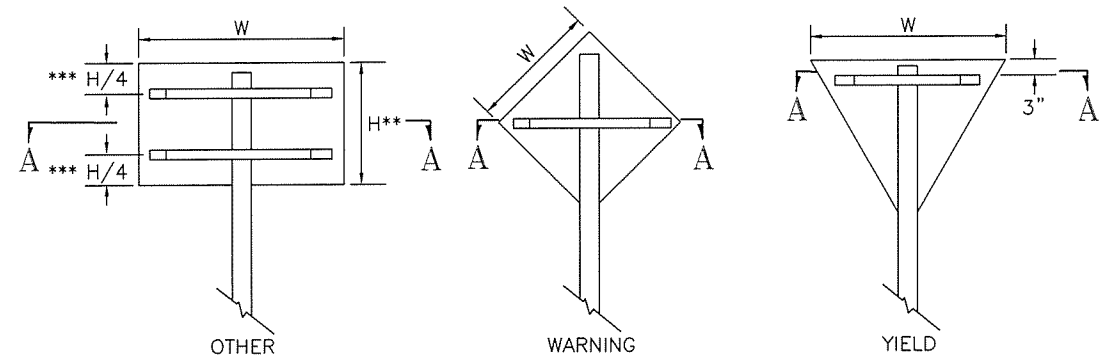
State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
SIGN FRAMING

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: WTH Date: 7/8/2020

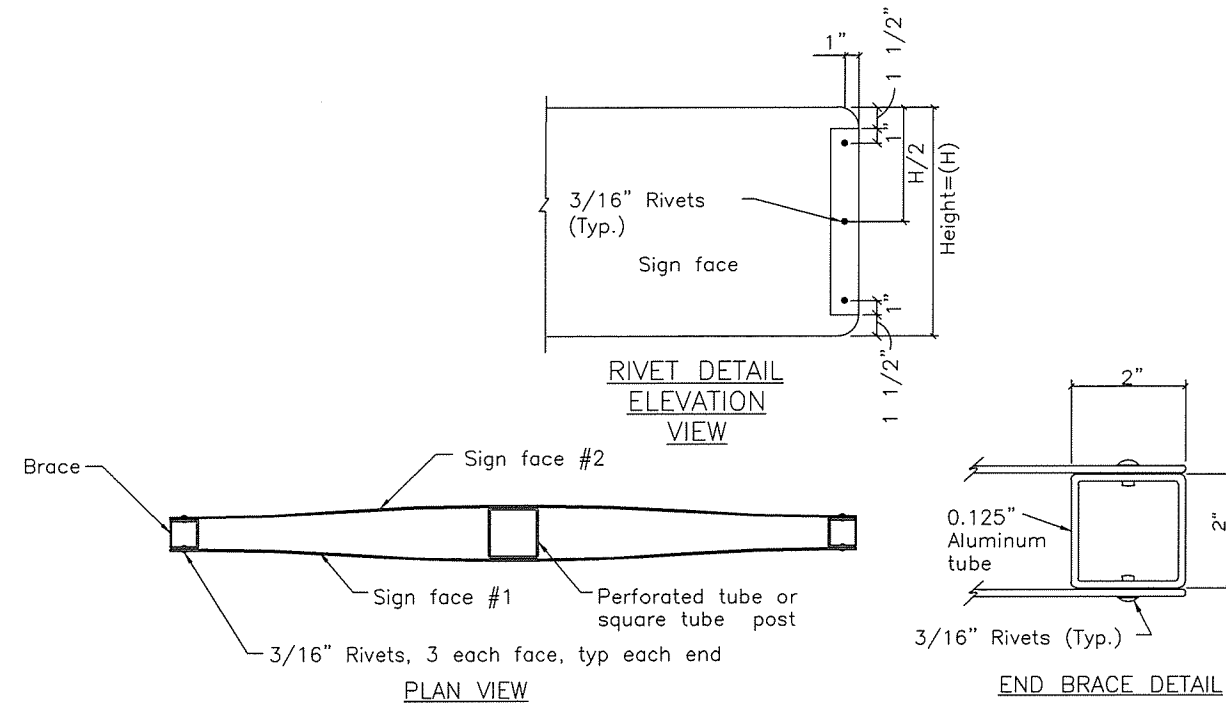
Next Code and Standards Review date: 7/8/2030



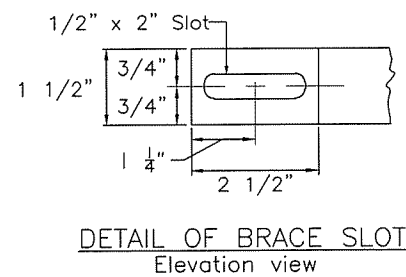
\*\*\* Use one brace when  $H \leq 18"$   
 Use two braces when  $18" < H < 48"$   
 Use three braces when  $H \geq 48"$

\*\* Position of brace may be varied to match  
 Pre-drilled mounting holes in panel

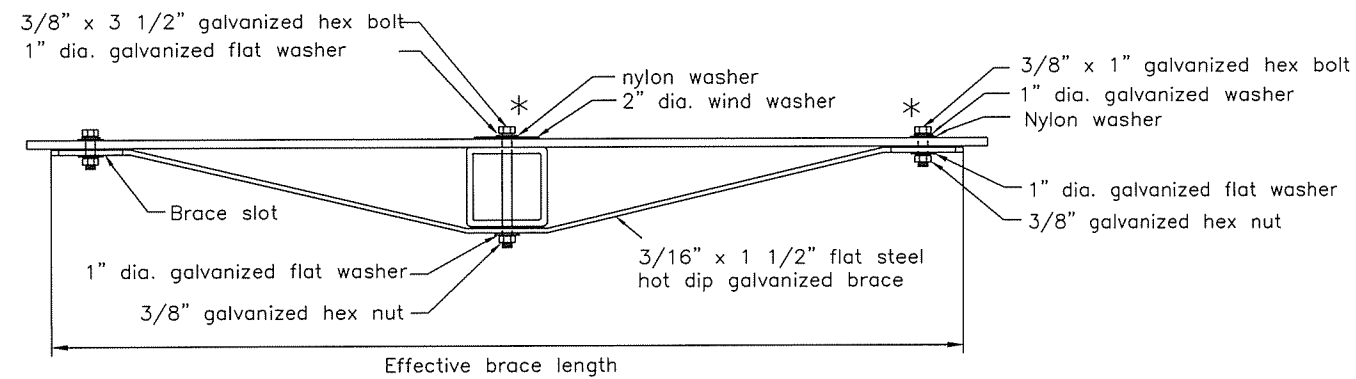
SIGN BRACING PLACEMENT



SMALL STREET NAME SIGN (D3-1, D3-1A, D3-1D) BRACING DETAILS



DETAIL OF BRACE SLOT  
Elevation view



TUBE POST SIGN BRACING SECTION A-A  
Plan view

\* Adjust location of bracing so that bolts and washers will miss the sign legend

| Sign Width(W) | Effective Brace Length |       |       |
|---------------|------------------------|-------|-------|
|               | Warning                | Yield | Other |
| 30"           | 36"                    | 24"   | 24"   |
| 36"           | 42"                    | 30"   | 30"   |
| 42"           | 48"                    | -     | 36"   |
| 48"           | Two posts              | 36"   | 42"   |

< 30" No bracing required and use square tube

Note: Drawing not to scale

State of Alaska DOT&PF  
 ALASKA STANDARD PLAN  
**BRACING FOR SIGNS  
 MOUNTED ON SINGLE POST**

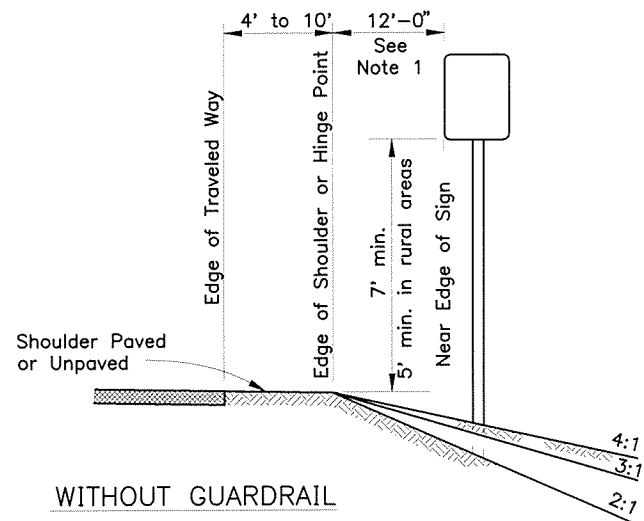
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
 Carolyn Morehouse, P.E.  
 Chief Engineer

Adoption Date: 7/17/2020

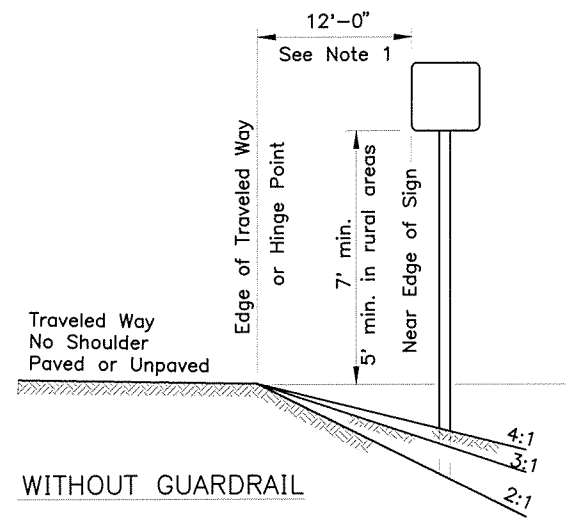
Last Code and Stds. Review  
 By: WTH Date: 7/8/2020  
 Next Code and Standards Review date: 7/8/2030

# S-05.02

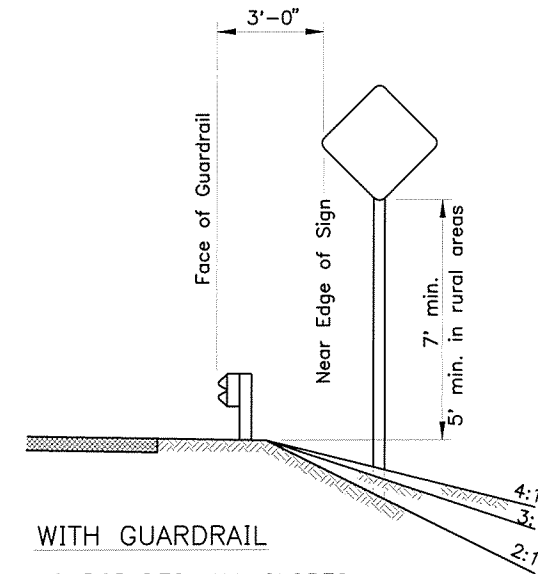
SHEET  
1 of 1



**WITHOUT GUARDRAIL**  
SUBGRADES OVER 28', ALL SLOPES



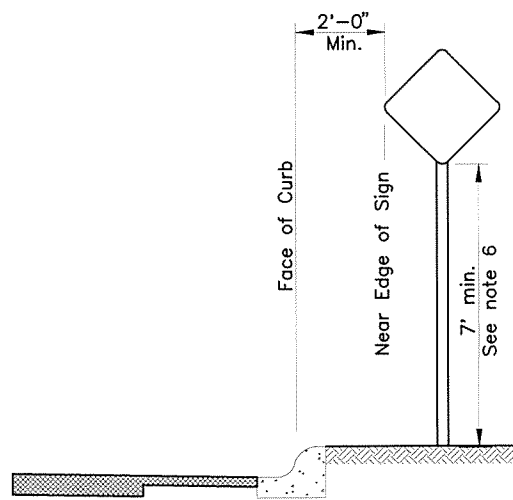
**WITHOUT GUARDRAIL**  
SUBGRADES 24' TO 28', ALL SLOPES



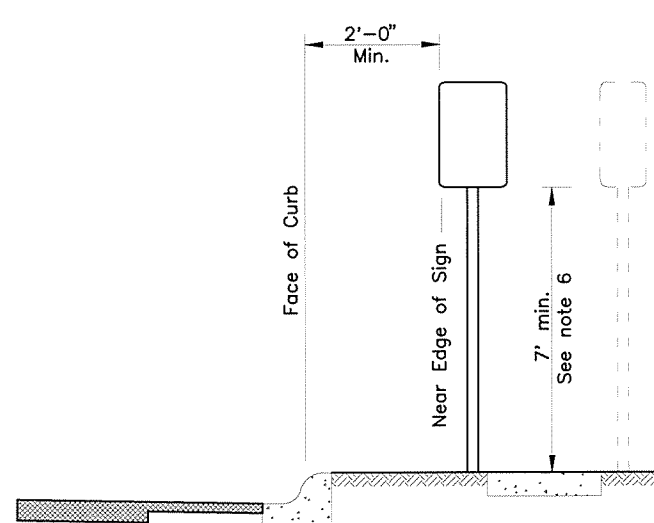
**WITH GUARDRAIL**  
ALL SUBGRADES, ALL SLOPES

## GENERAL NOTES

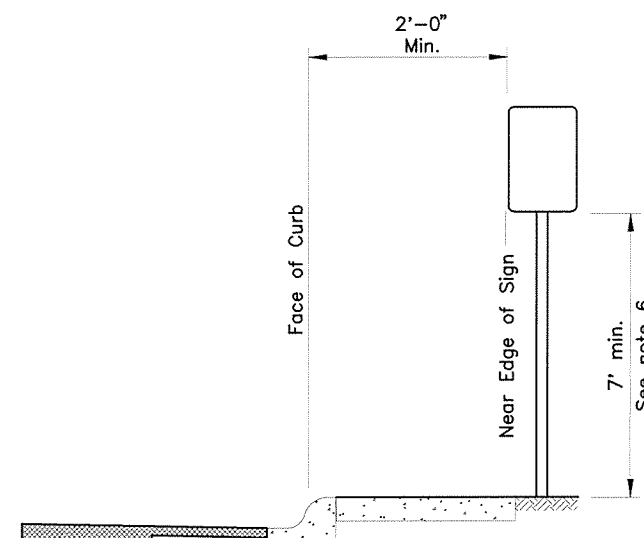
1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6' where shoulder width is 6' or greater.
2. Add 6" to mounting height on unpaved roads.
3. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
4. When signs are placed 30' or more from the edge of traveled way, mount them with the bottom of the sign at least 5' above the road surface at the near edge of the road.
5. When multiple hinged sign supports are used, mount hinges at least 7' above the ground.
6. Minimum mounting height is 7'-0" where parking or pedestrian movements are likely to occur, or where signs extend over sidewalks.
7. For construction signs in rural areas, mounting height shall be 7' minimum.



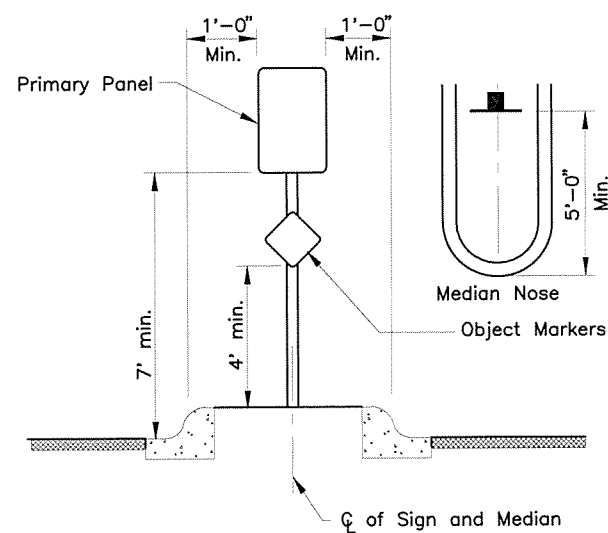
**CURB WITHOUT SIDEWALK**



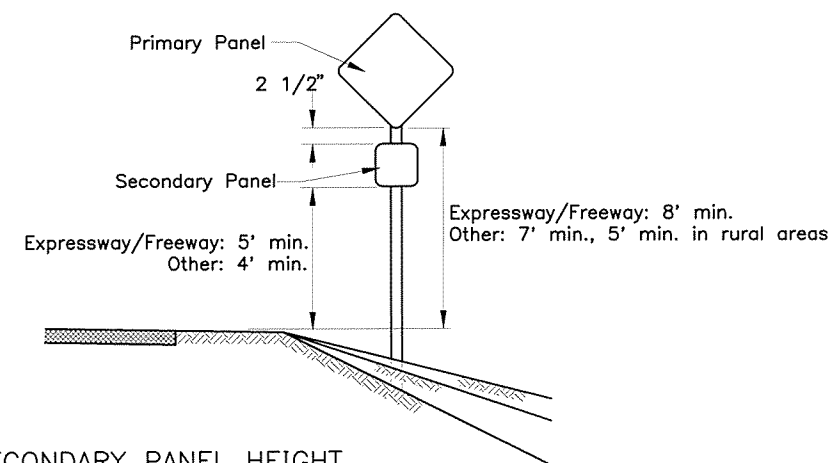
**CURB WITH PARKWAY AND SIDEWALK**  
(If R/W width permits, signs should be placed behind sidewalk.)



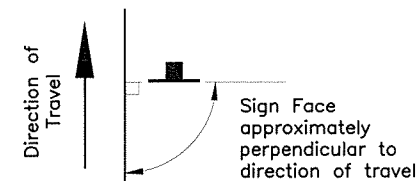
**CURB WITH SIDEWALK WITHOUT PARKWAY**



**RAISED MEDIANS**  
Minimum 4' Width for Signing



**SECONDARY PANEL HEIGHT**  
ALL TWO PANEL MOUNTING



**SIGN POSITIONING**

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

## POST MOUNTED SIGN OFFSET AND HEIGHT

Adopted as an Alaska Standard Plan by *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

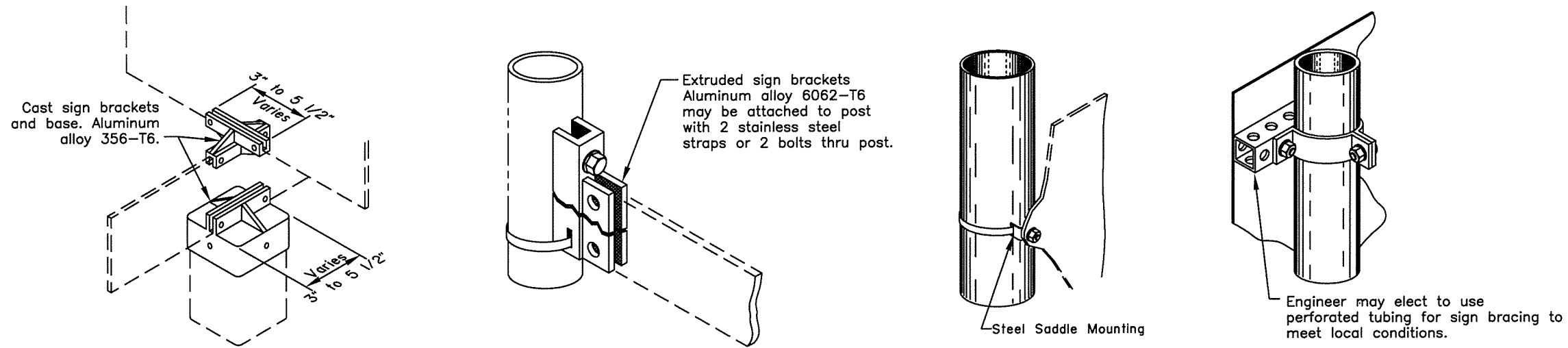
Last Code and Stds. Review  
By: KKK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

S-05.02

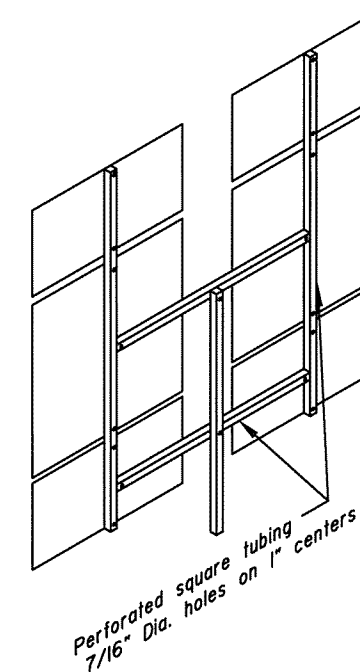
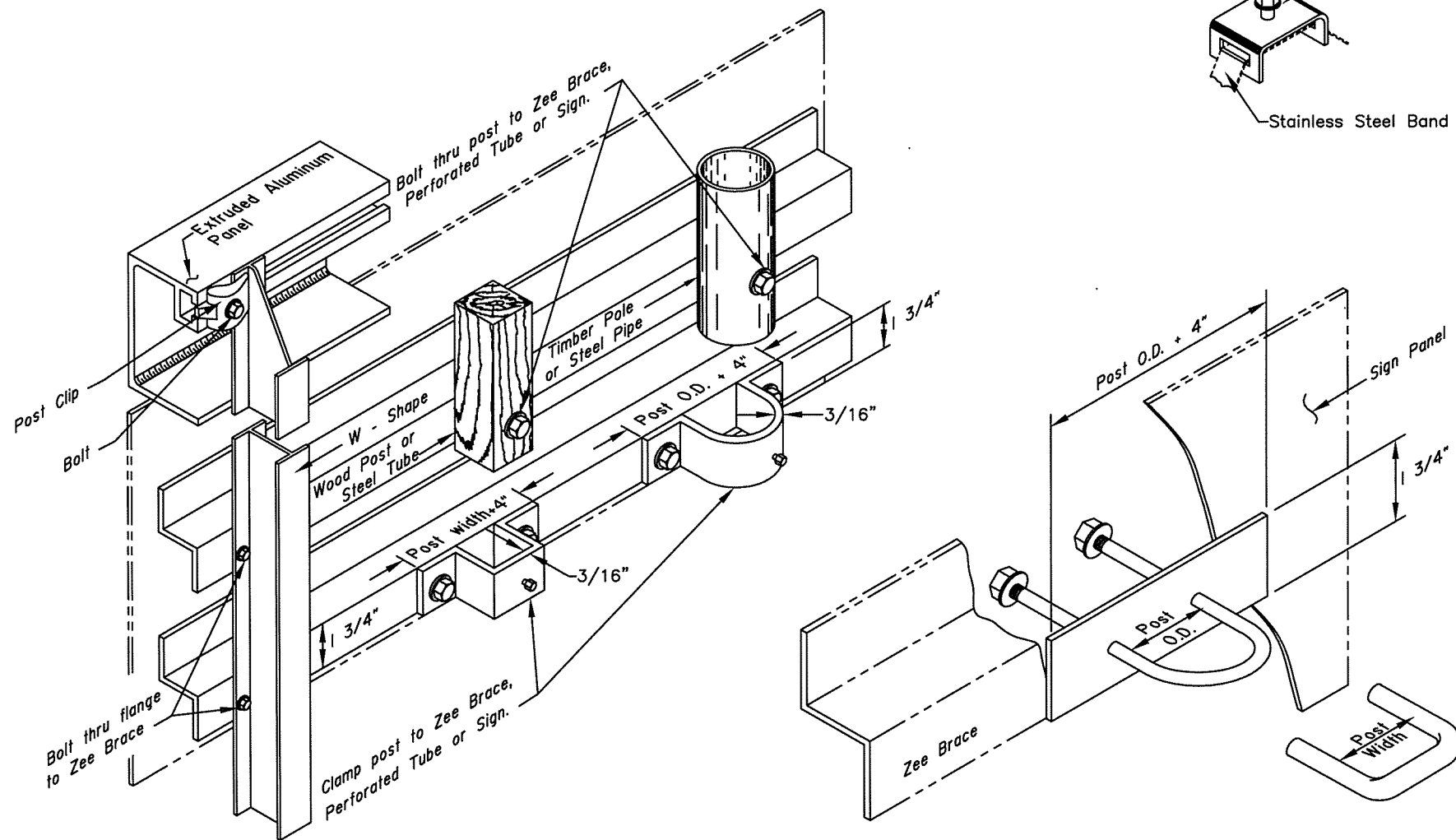
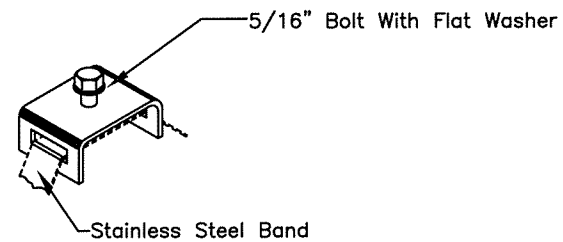
# S-20.10

SHEET  
| of |



### GENERAL NOTES

1. Details shown indicate general design only. Dimensions and design may vary among the manufacturers.
2. Install weather tight caps on all pipe and tube post (except perforated tubing).
3. Protect sign posts installed using driving methods with drive caps during installation.
4. Bolt braces to posts at each point where they cross posts.
5. Install signs with top of post, mounting brackets, etc. with a minimum of 3" below top of sign.
6. Paint all sign mounting fasteners on sign face a color closely matching the sign face.
7. Attach all signs, zebs and braces mounted to the posts with 5/16" bolts.
8. Furnish all aluminum nuts, bolts and washers with anodized finish.



| FASTENER SPECIFICATION TABLE |                      |                    |       |                 |
|------------------------------|----------------------|--------------------|-------|-----------------|
| FASTENERS                    |                      | ALUMINUM           | STEEL | STAINLESS STEEL |
| BOLTS                        | MACHINE CARRIAGE "U" | 2024-T4            | A-307 | A-276           |
| NUTS                         | REGULAR LOCK         | 6061-T6<br>2017-T4 | A-307 | A-276           |
| WASHERS                      |                      | 2024-T4            | A-36  | A-276           |
| POST CLIP                    |                      | 356-T6             |       |                 |

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
SIGN TO SIGN POST CONNECTION

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

Next Code and Standards Review date: 02/08/2029

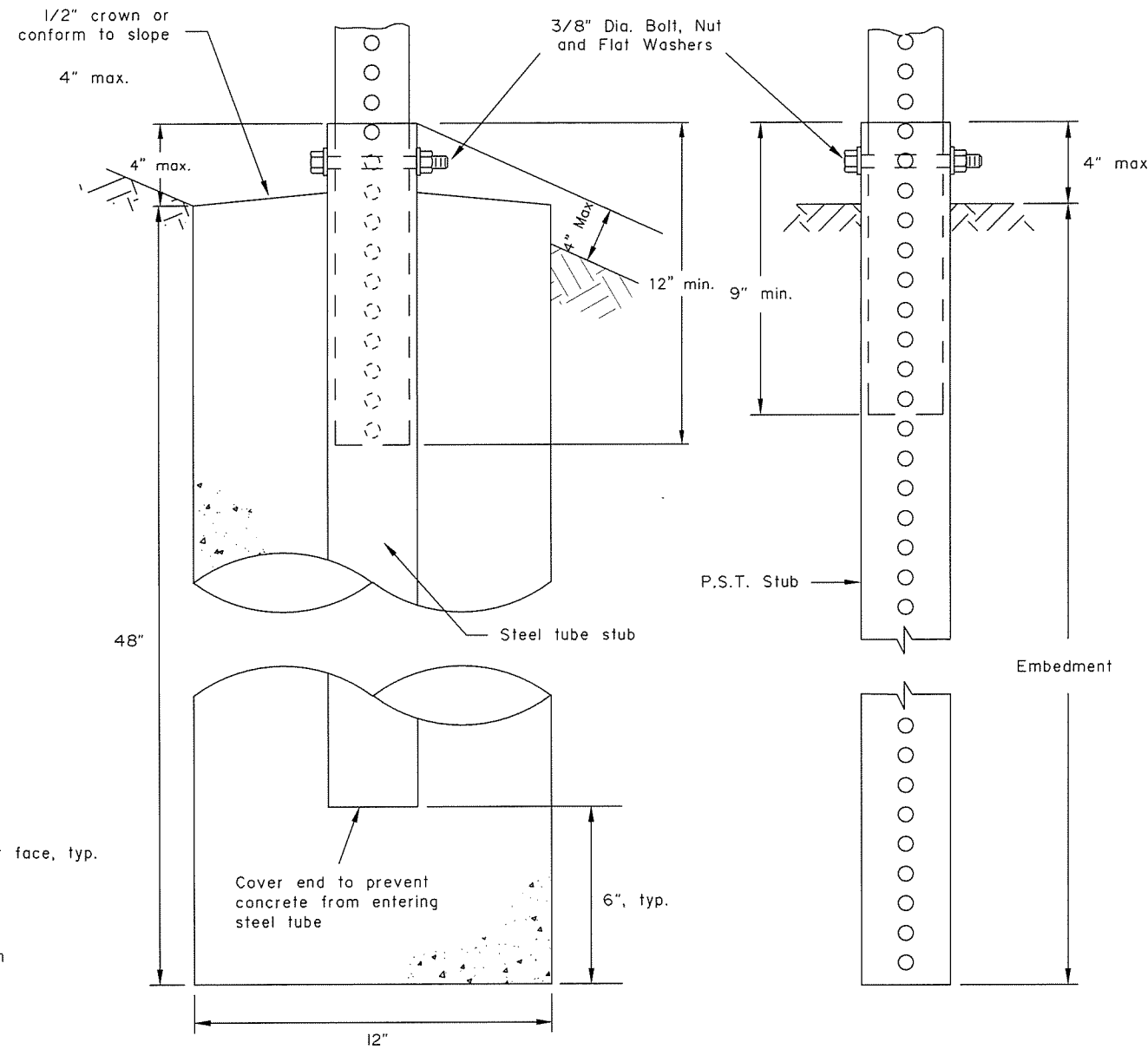
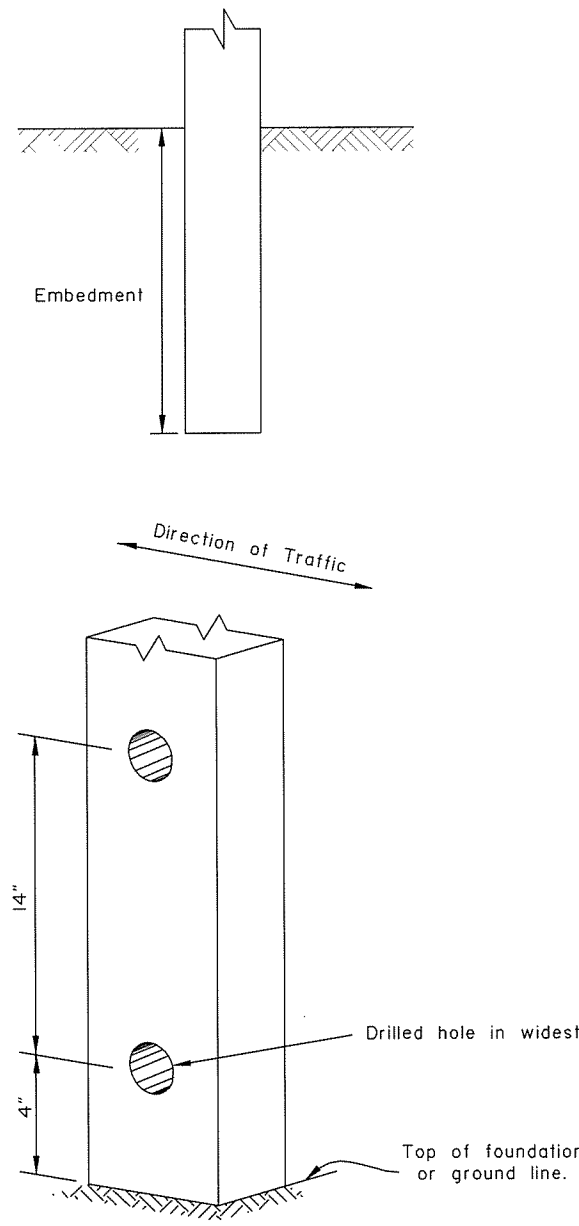
S-20.10

**GENERAL NOTES:**

1. Sign shall be placed symmetrically around posts and refer to Standard Plan S-00 for sign framing details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Concrete shall be class B.
5. Do not use the supports on this drawing for multiple support signs if supports are separated by more than 7 feet.
6. Treat all field cuts and field drilled holes in wood posts in accordance with Section 730-2.04 of the Standard Specifications.

**SIGN POST SPACING NOTES:**

1. Install sign support in accordance with the table below, unless otherwise required by plans or specifications.
2. Exceptions:
  - a. Use one post for all E5-1 gore signs, regardless of width.
  - b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See tables below for the sizes of wood posts and P.S.T.s that may be used within 7'. See Manufacturer's documentation for breakaway couplings and tubes that may be used within 7'.
4. See Standard Plan S-31 for frangible couplings, hinges, and foundations for tube and W-shape sign supports.



**SLEEVE TYPE  
CONCRETE FOUNDATION**

**SLEEVE TYPE\*  
SOIL EMBEDMENT**

| WOOD SIGN POSTS |           |            |                                |
|-----------------|-----------|------------|--------------------------------|
| SIZE            | HOLE DIA. | EMBEDMENT* | NO. OF POSTS WITHIN 7 Ft. PATH |
| 4"x4"           | NONE      | 4'-1"      | 2                              |
| 4"x6"           | 1 1/2"    | 5'-3"      | 2                              |
| 6"x6"           | 1 1/2"    | 4'-9"      | 1                              |
| 6"x8"           | 3"        | 4'-9"      | 1                              |

\* Embedment depth applies in both strong and weak soil.

**WOOD POSTS**

| PERFORATED STEEL TUBES (P.S.T.) |                 |   |
|---------------------------------|-----------------|---|
| POST SIZE                       | Embedment Depth | No. of P.S.T.s permitted within 7 ft path |
| 1 1/2" x 1 1/2"                 | 4'-8"           | 2   |
| 1 3/4" x 1 3/4"                 | 4'-6"           | 2   |
| 2" x 2"                         | 4'-3"           | 2   |
| 2 1/4" x 2 1/4"                 | 5'-0"           | 1   |
| 2 1/2" x 2 1/2"                 | 4'-6"           | 1   |

\* Use 3"x3"x3/16" Stub for 2 1/2"x2 1/2" PST Applications.

**PERFORATED STEEL TUBE (PST) POSTS**

| TUBE SIGN POST SPACING |              |                        |               |           |      |            |         |             |
|------------------------|--------------|------------------------|---------------|-----------|------|------------|---------|-------------|
| Sign Width (feet)      | No. of Posts | Distance Between Posts | Sign Overhang | Post Type |      |            |         | Notes       |
|                        |              |                        |               | P.S.T.    | Wood | Steel Tube | W-Shape |             |
| 0.5 to 4.0             | 1            | -                      | 0.5W          | X         | X    | X          |         | See Note 2. |
| 4.5 to 10.0            | 2            | 0.6W                   | 0.2W          | X         | X    | X          |         | See Note 3. |
| 10.5 to 11.0           | 2            | 6                      | Varies        | X         | X    | X          |         | See Note 3. |
| 11.5 to 13.0           | 2            | 8                      | Varies        |           |      |            | X       |             |
| 13.5 to 20.0           | 2            | 0.6W                   | 0.2W          |           |      |            | X       |             |
| 20.5 to 22.5           | 3            | 8                      | Varies        |           |      |            | X       |             |
| 23.0 to 29.5           | 3            | 0.35W                  | 0.15W         |           |      |            | X       |             |
| 30.0 to 31.5           | 4            | 8                      | Varies        |           |      |            | X       |             |
| 32.0 to 40.0           | 4            | 0.25W                  | 0.125W        |           |      |            | X       |             |

**TUBE SIGN POST SPACING**

Note: Drawing not to scale

**State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
LIGHT SIGN STRUCTURE  
POST EMBEDMENT**

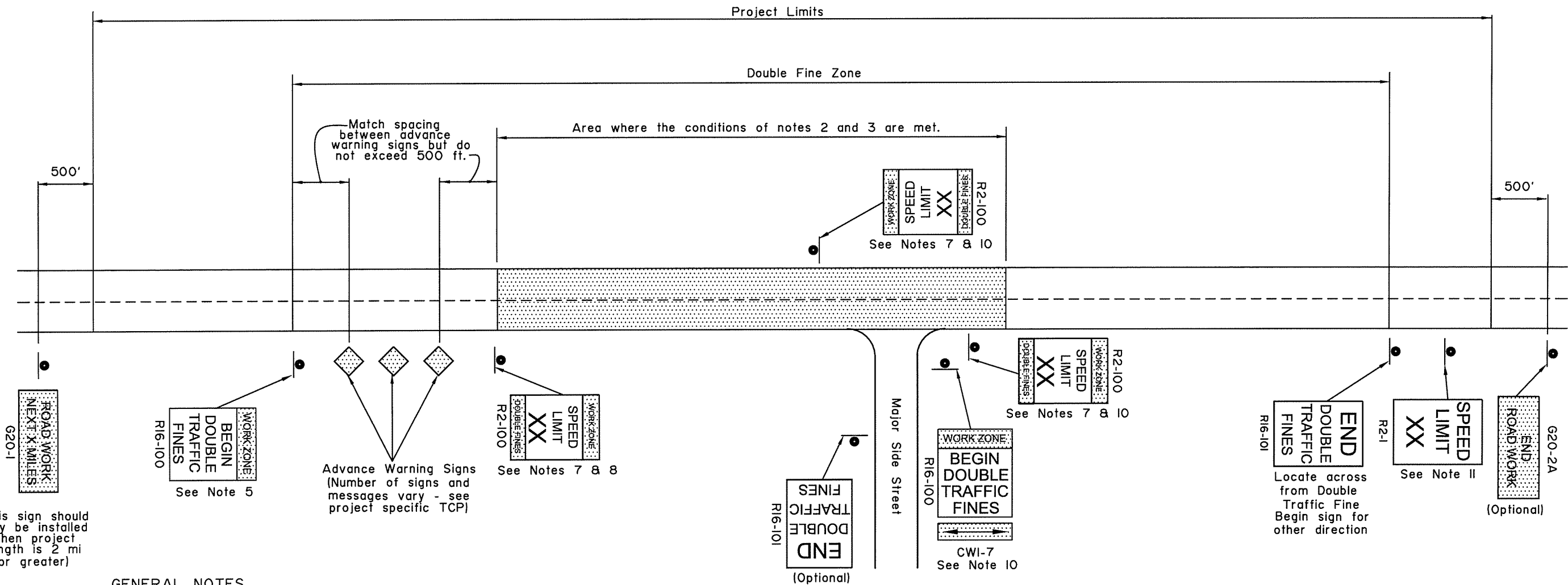
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: WTH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030





**GENERAL NOTES**

1. Signs are shown for one direction only (with one exception). Signs for the other direction mirror those shown.
2. Double fine signs shall be used only where one or more of the following conditions exist:
  - a. Active work areas (where road workers and/or machines are presently working on or adjacent to a road)
  - b. Detours on new temporary roads built for that purpose (this does not include detours on existing streets)
  - c. Sections of paved roads where pavement has been removed.
  - d. Roads being paved where unmatched asphalt lifts result in a vertical lip between lanes.
3. Double fine signs shall be confined to the areas where the above conditions exist, with the following exceptions:
  - a. If the project is 2 miles or shorter in length, the entire project may be posted for double fines when the above conditions exist on any part of the project.
  - b. When the above conditions exist at multiple locations separated by less than 2 miles, the locations and the intervening segments may be posted as a single double fine zone.
4. Double fine signs shall be removed or covered when work activity ceases for more than two days and conditions b, c, or d of note 2 are not met.
5. The R16-100 "BEGIN" sign may be used in place of the first advance warning sign. However, when this is done, the appropriate advance warning sign must be reinstalled when the double fine sign is taken down or covered.
6. When a double fine zone is longer than 2 miles, work zone speed limit signs shall be posted at spacings not greater than 2 miles within the double fine zone.
7. "Work zone speed limit signs", as used here, refer either to 1) R2-100 signs or 2) standard R2-1 regulatory speed limit signs with CW20-102 "DOUBLE FINES" plates mounted below.
8. The limit shown on work zone speed limit signs shall be either the existing limit before construction or, if a work zone speed limit order has been approved in accordance with ADOT&PF Procedure 05.05.020 PDR, a reduced limit.
9. All existing regulatory speed limit signs within double fine zones shall either be replaced with R2-100 signs or supplemented with CW20-102 plates.
10. Signs shall be installed at major intersections within the double fine zone to warn entering drivers of double fines. This may be done with a R16-100 sign with a CWI-7 arrow panel on the side street or with two work zone speed limit signs on the main street on either side of the intersection. Use of R16-100 signs on side streets eliminates the need for "Road Work Ahead" signs on those streets. If the speed limit has been reduced, the two work zone speed limit signs are mandatory.
  - ii. At the end of each double fine zone, install an R2-1 sign showing the speed limit for the road beyond the double fine zone.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

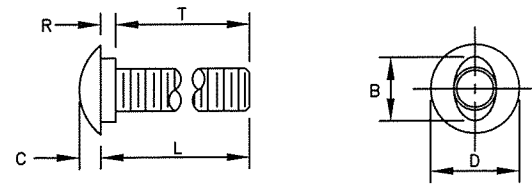
**LOCATION OF  
DOUBLE TRAFFIC  
FINE SIGNS**

Adopted as an Alaska  
Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

Adoption Date: 02/08/2019

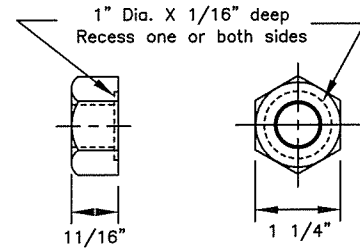
Last Code and Stds. Review  
By: Date:  
Next Code and Standards Review date: 02/08/2029

C-04.12

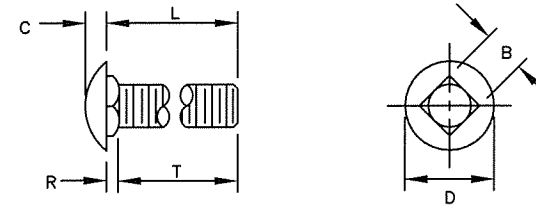


| B      | C     | D                  | L (Length)  | R     | T (Thread Length) |
|--------|-------|--------------------|-------------|-------|-------------------|
| 15/16" | 5/16" | 1 5/16" or 1 7/16" | As Required | 7/32" | As Required       |

5/8" BUTTONHEAD BOLT  
(FBB01-05)

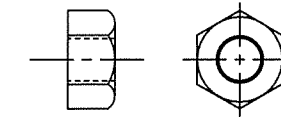


5/8" Dia. RECESSED HEX NUT  
(FBB01-05)



| B    | C     | D       | L (Length)  | R     | T (Thread Length) |
|------|-------|---------|-------------|-------|-------------------|
| 5/8" | 5/16" | 1 5/16" | As Required | 3/16" | As Required       |

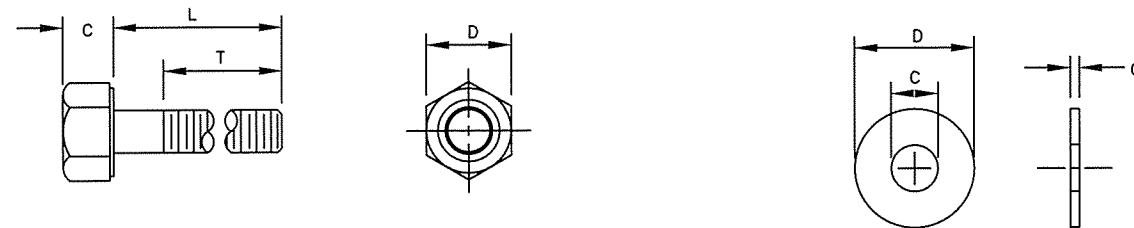
5/8" Dia. CARRIAGE BOLT  
(FBC10-20)



STANDARD HEX NUT

**GENERAL NOTES:**

- All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.

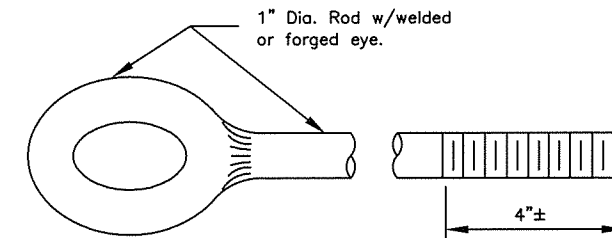


| Bolt Size | C      | D      | L (Length)  | T (Thread Length) |
|-----------|--------|--------|-------------|-------------------|
| 5/16"     | —      | —      | 1 1/2"      | 7/8"              |
| 5/16"     | —      | —      | 1"          | 1"                |
| 3/8"      | —      | —      | 7 1/2"      | 1 1/2"            |
| 1/2"      | —      | —      | 1 1/2"      | 1 1/2"            |
| 1/2"      | —      | —      | 1 1/4"      | 1 1/4"            |
| 5/8" H.S. | 5/16"  | 7/8"   | 8"          | 1 1/2"            |
| 5/8"-11   | —      | —      | 1 1/2"      | 1 1/2"            |
| 3/4"      | —      | —      | 1 1/2"      | 1 1/2"            |
| 3/4"      | —      | —      | As Required | 2"                |
| 3/4" H.S. | 15/32" | 1 1/4" | 2"          | 1 1/2"            |

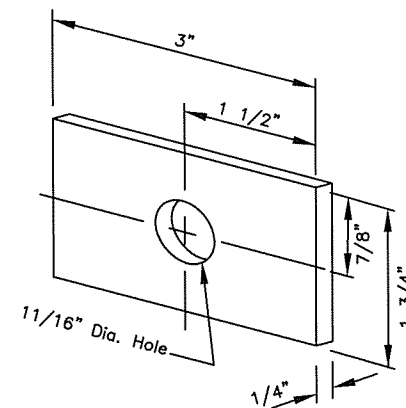
STANDARD HEX BOLTS

| For Bolt # | C       | D        | G     |
|------------|---------|----------|-------|
| 3/8"       | 7/16"   | 1"       | 5/64" |
| 1/2"       | 17/32"  | 1 1/16"  | 3/32" |
| 1/2" H.S.  | 17/32"  | 1 1/16"  | 3/32" |
| 5/8"       | 11/16"  | 1 3/4"   | 9/64" |
| 3/4"       | 13/16"  | 1 15/32" | 9/64" |
| 3/4" H.S.  | 13/16"  | 2"       | 5/32" |
| 1"         | 1 1/16" | 2"       | 9/64" |

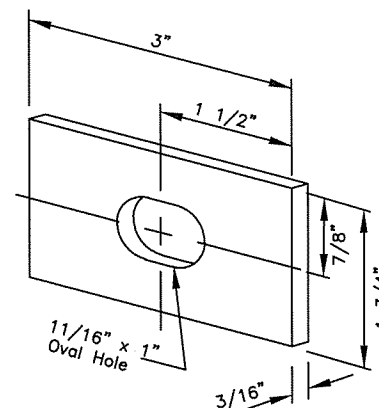
STANDARD STEEL WASHERS



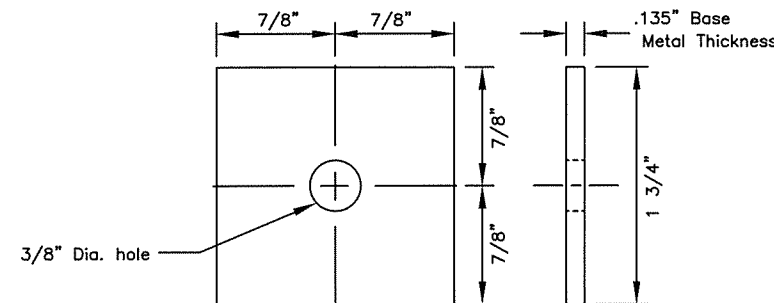
EYE BOLT



FLAT PLATE WASHER



RECTANGULAR POST BOLT WASHER  
(FWR03)



SQUARE STEEL WASHER  
(FWR01)

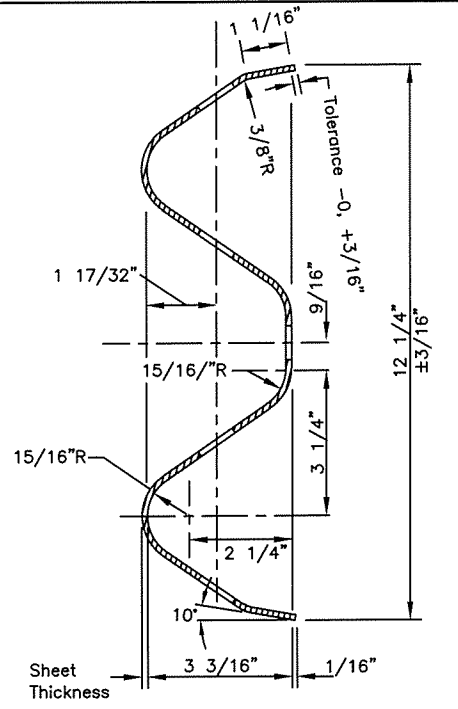
State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
  
STANDARD GUARDRAIL  
HARDWARE  
(NUTS, BOLTS & WASHERS)

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

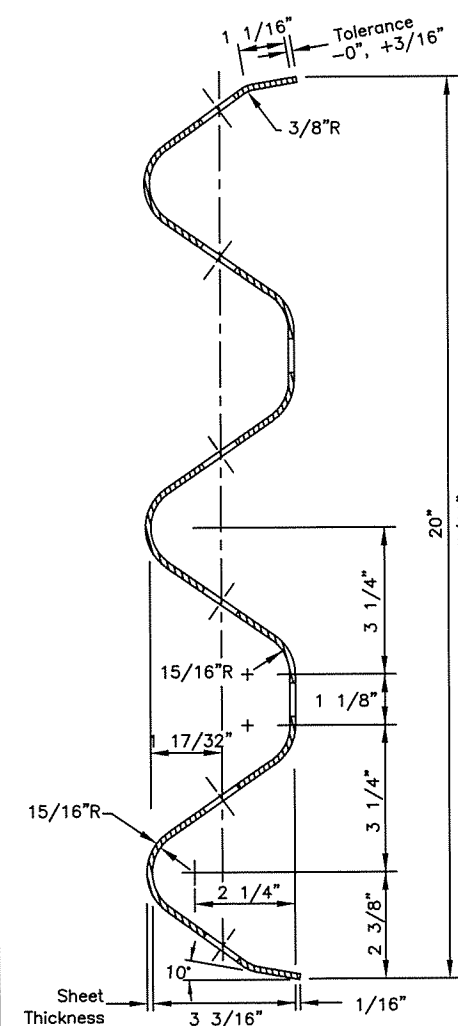
Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

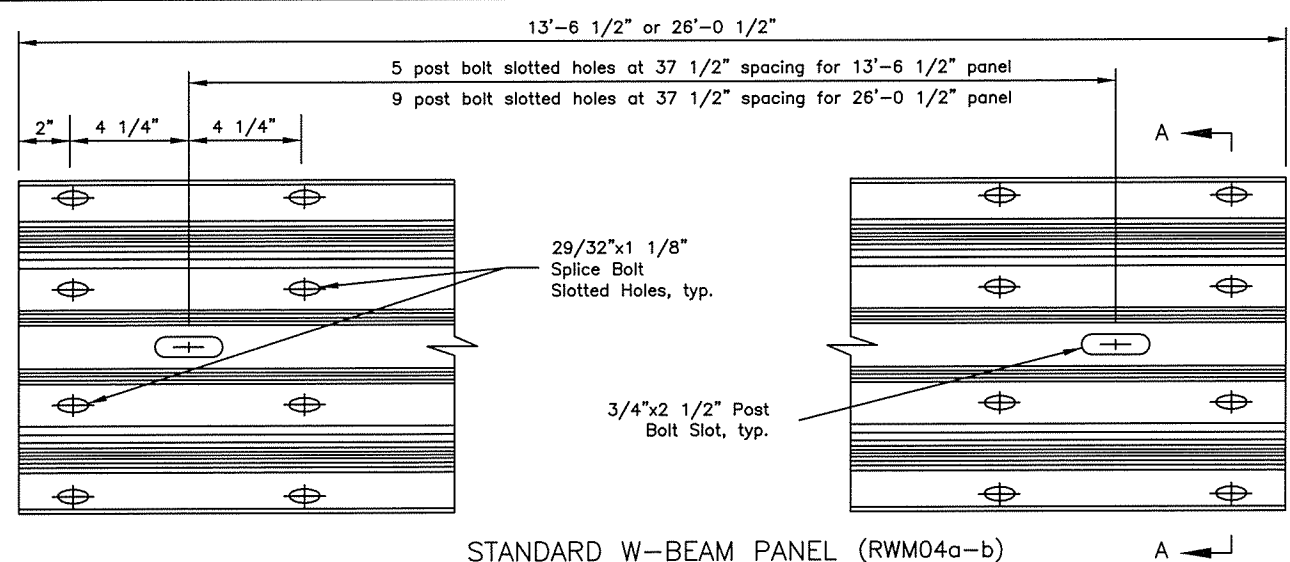
Next Code and Standards Review Date: 7/8/2030



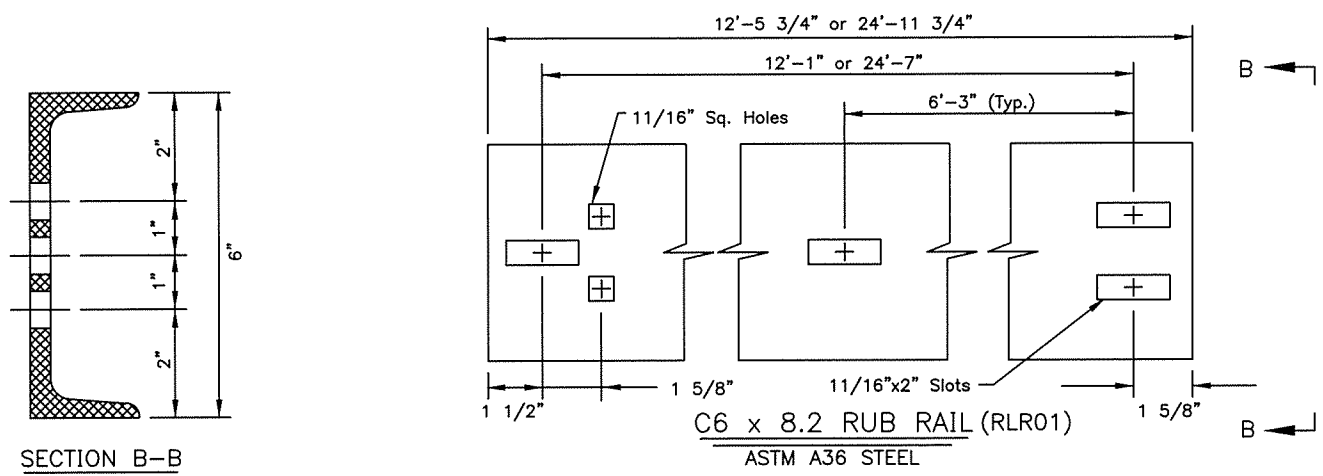
**SECTION A-A**  
(cross section same as RWM02a-b)



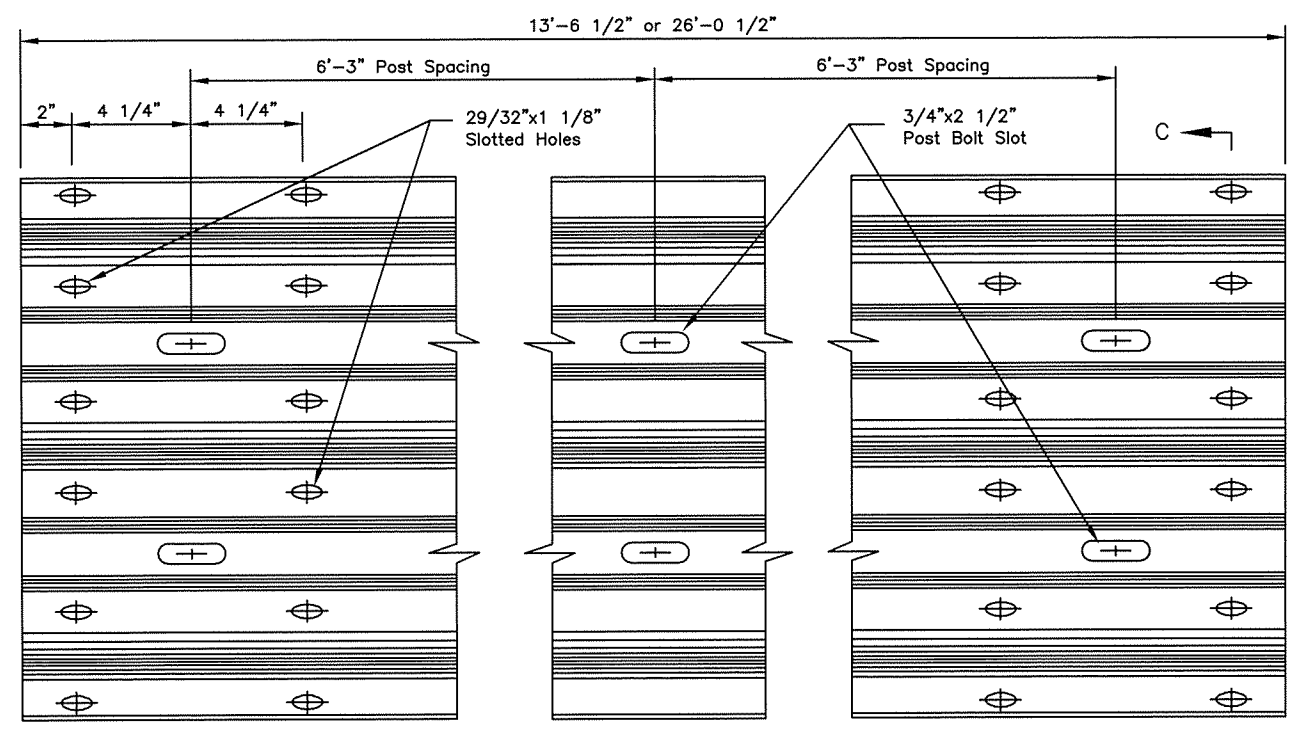
**SECTION C-C**  
(RTM01a-02b)



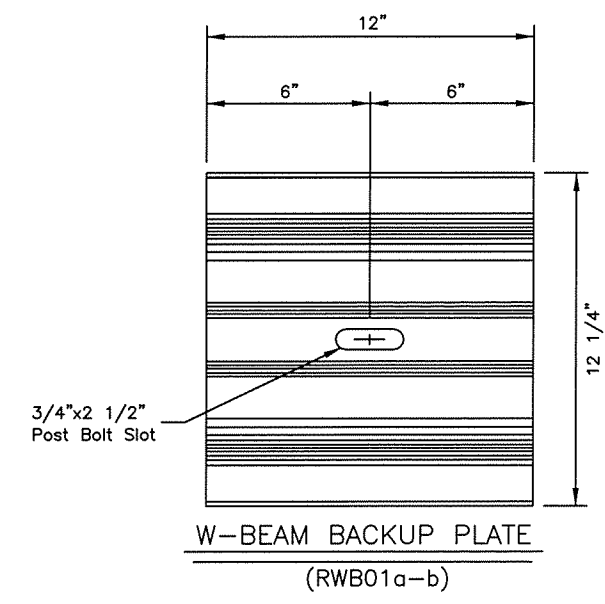
**STANDARD W-BEAM PANEL (RWM04a-b)**



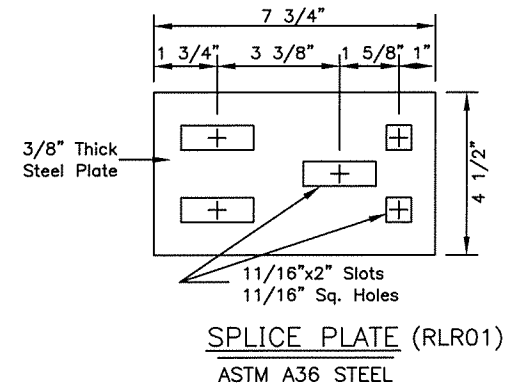
**C6 x 8.2 RUB RAIL (RLR01)**  
ASTM A36 STEEL



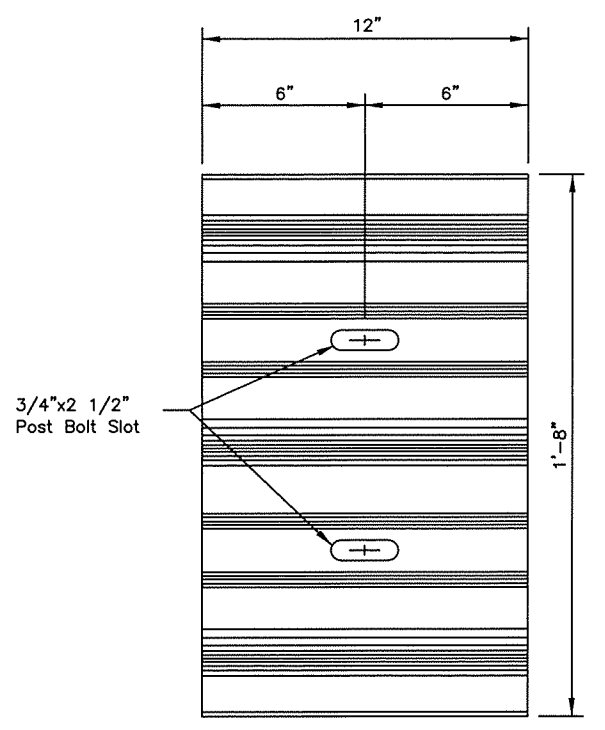
**STANDARD THRIE BEAM PANEL (RTM01a-02b)**



**W-BEAM BACKUP PLATE (RWB01a-b)**



**SPLICE PLATE (RLR01)**  
ASTM A36 STEEL



**THRIE BEAM BACKUP PLATE (RTB01a-02b)**

**GENERAL NOTES:**

1. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.
2. Install back-up plates between blockouts and w-beam or thrie-beam rail at intermediate (non-splice) posts when steel blockouts are used but not with wood, rubber, plastic, or other approved blockouts.

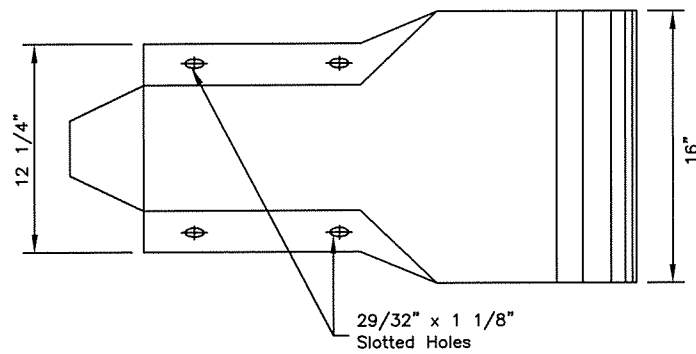
State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**STANDARD GUARDRAIL  
HARDWARE  
(RAILS AND SPLICES)**  
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020  
Last Code and Stds. Review  
By: KLK Date: 7/8/2020  
Next Code and Standards Review Date: 7/8/2030

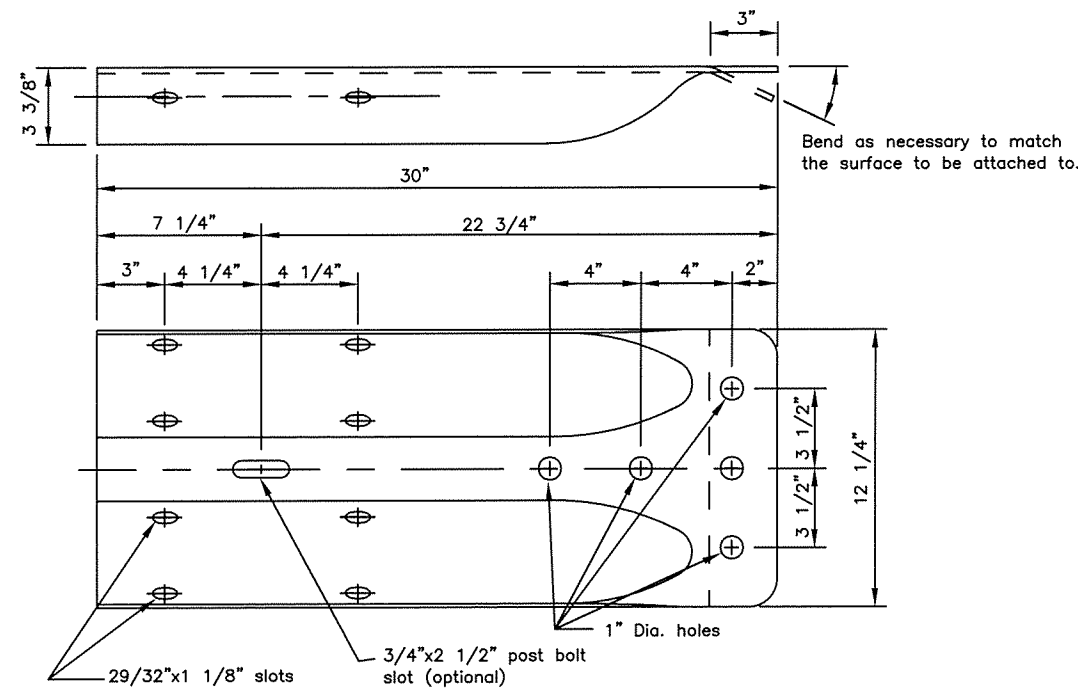
G-00.05

**GENERAL NOTES:**

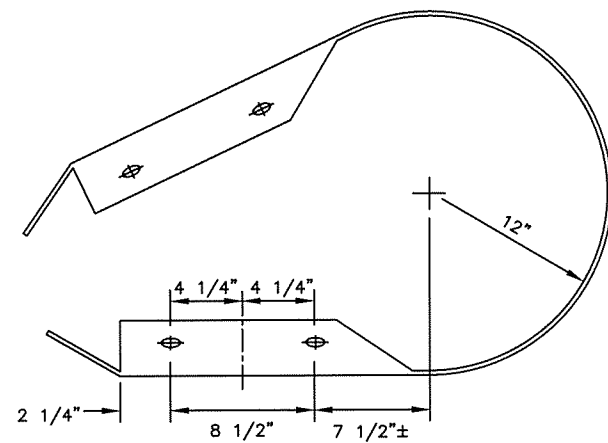
1. W-Beam and Thrie Beam Terminal Connectors shall conform to AASHTO M 180, Class B, Type II.
2. W-Beam end sections shall conform to AASHTO M 180, Class A, Type II.
3. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.



PROFILE



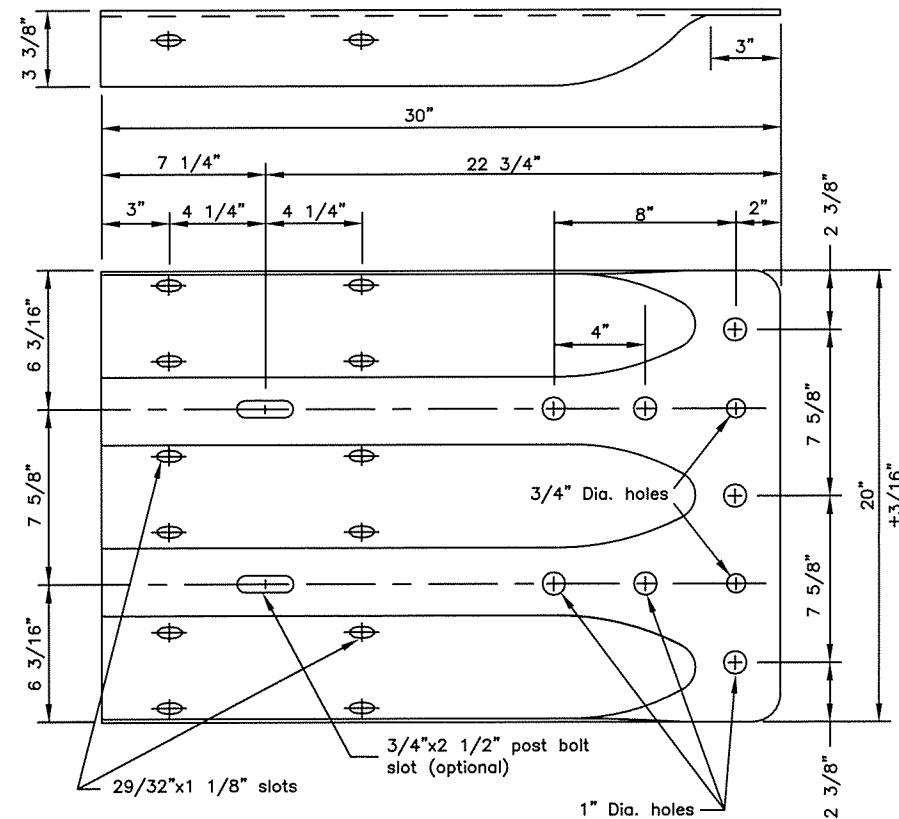
STANDARD W-BEAM TERMINAL CONNECTOR  
(RWE02)



W-BEAM PLAN VIEW

\*Radius to be specified on the plans

STANDARD W-BEAM END SECTION  
(RWE06)



STANDARD THRIE BEAM TERMINAL CONNECTOR  
(RTE01b)

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

STANDARD GUARDRAIL  
HARDWARE  
(TERMINAL CONNECTORS)

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

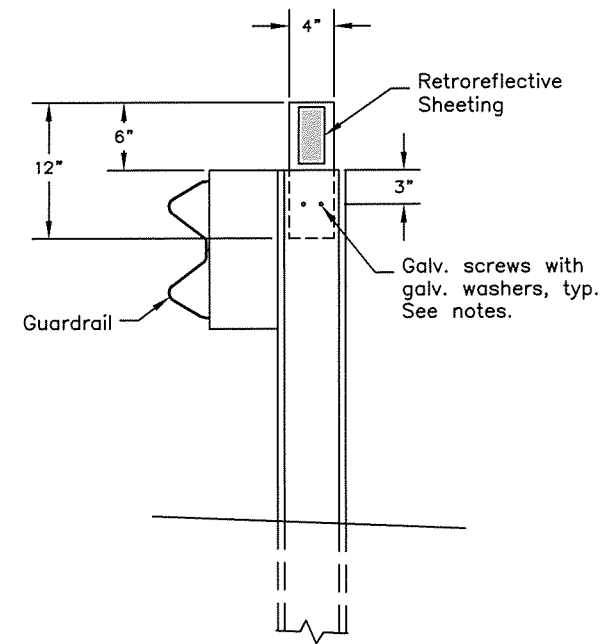
Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

G-00.05





GUARDRAIL FLEXIBLE DELINEATOR DETAIL

(Steel post shown – similar for wood post)

**CONSTRUCTION NOTES**

1. Install guardrail flexible delineators where shown on the plans.
2. Install guardrail flexible delineators at 50 foot spacing, unless otherwise noted on the plans. Install not less than 2 delineators per guardrail run.
3. Use 3" x 5" white/yellow/red retroreflective sheeting as required per Standard Plan T-05. Install retroreflective sheeting on both sides of delineator on two-way roads.
4. Attach 4" x 12" flexible delineators to the top of new guardrail posts, on the trailing side of the posts relative to the adjacent lane's direction of travel.
5. Use 2 each 1/4" dia. x 1-1/2" long galvanized lag screws for attaching to wood posts and 2 each 1/4" dia. x 3/4" long galvanized self-drilling fasteners for steel posts. Install a galvanized washer between the fastener head and the flexible delineator.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**STANDARD GUARDRAIL  
HARDWARE  
(FLEXIBLE DELINEATORS)**

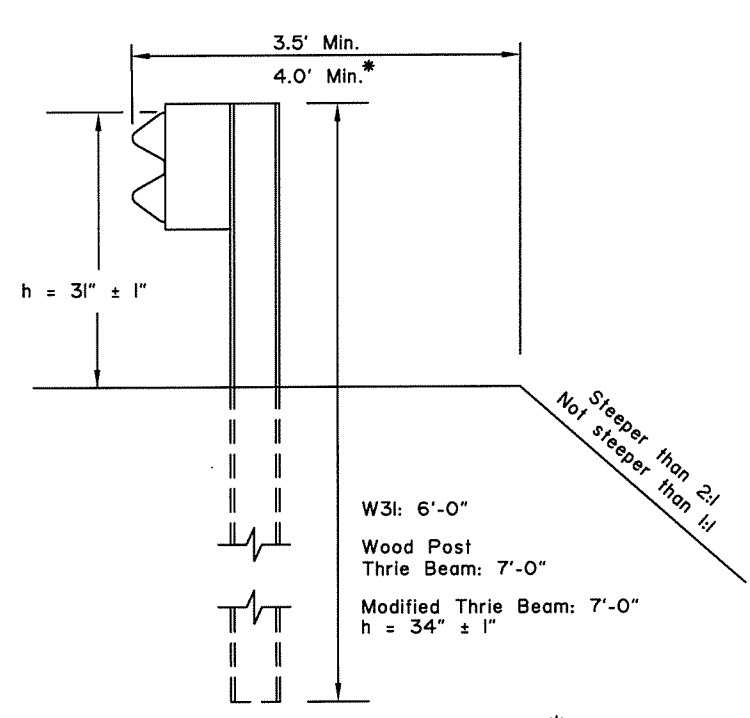
Adopted as an Alaska  
Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

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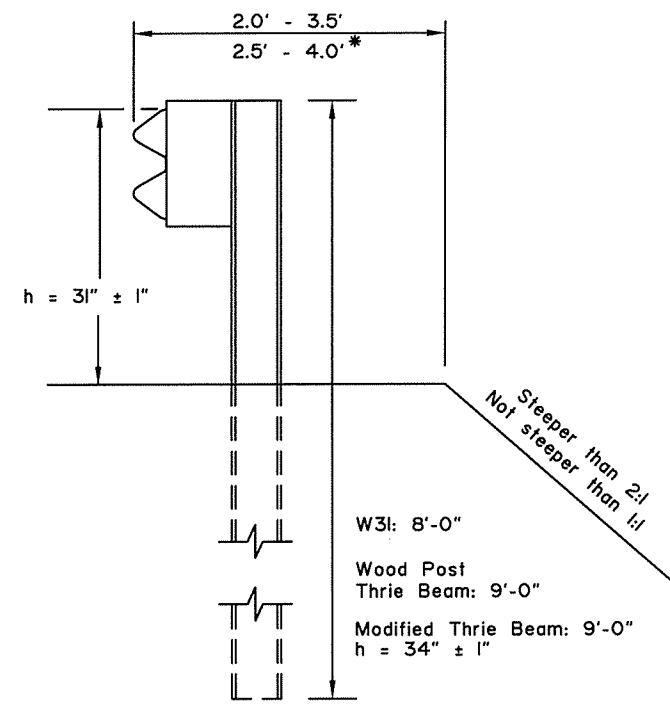
Last Code and Stds. Review  
By: KLK Date: 7/8/2020  
Next Code and Standards Review Date: 7/8/2030

G-00.05



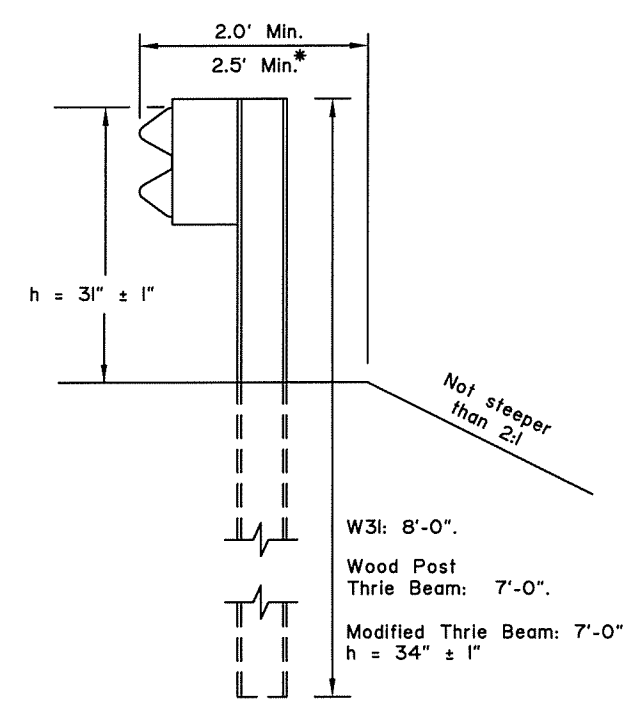
CASE 1

\* with Modified Thrie Beam

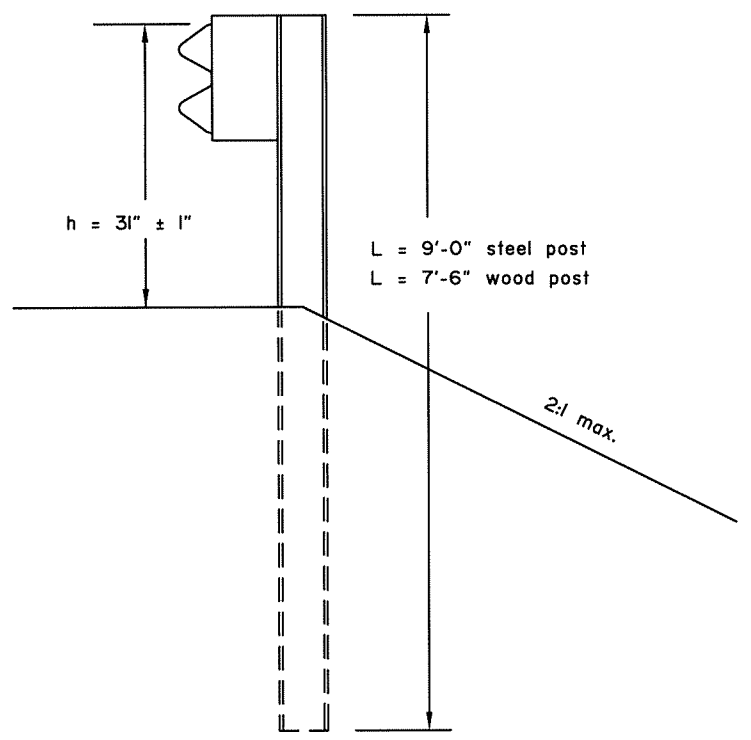


CASE 2

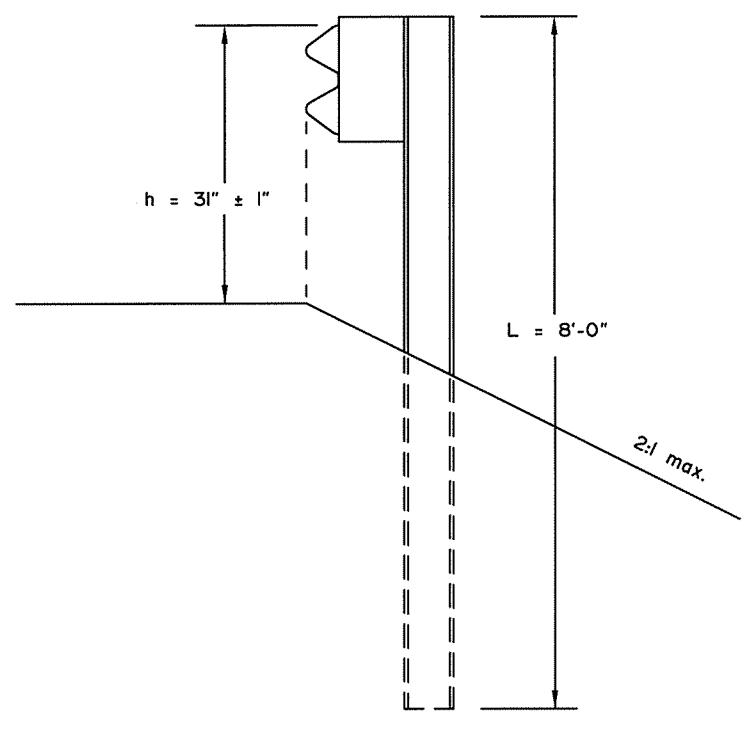
\* with Modified Thrie Beam



CASE 3



CASE 4  
(See Note 5)



CASE 5  
(See Note 5)

**CONSTRUCTION NOTES:**

1. This drawings is to be used for post length determination only. See Plans for slopes and behind-post embankment widths.
2. To determine post length, identify the case that matches site conditions and read the length corresponding to the pertinent guardrail type.
3. These dimensions apply to both curbed and uncurbed section.
4. Case 1, 2 and 3 are shown with steel posts. Wood posts may be substituted when allowed by specifications. Wood Post Thrie Beam installations must use wood posts only.
5. Case 4 and 5 apply to W31 guardrail only.

**DESIGN NOTES:**

1. No fixed objects allowed within 36" of the back of post for Cases 1, 2 & 3.
2. No fixed objects allowed within 48" of the back of post for Cases 4 & 5.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**GUARDRAIL  
POST INSTALLATION**

Adopted as an Alaska  
Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

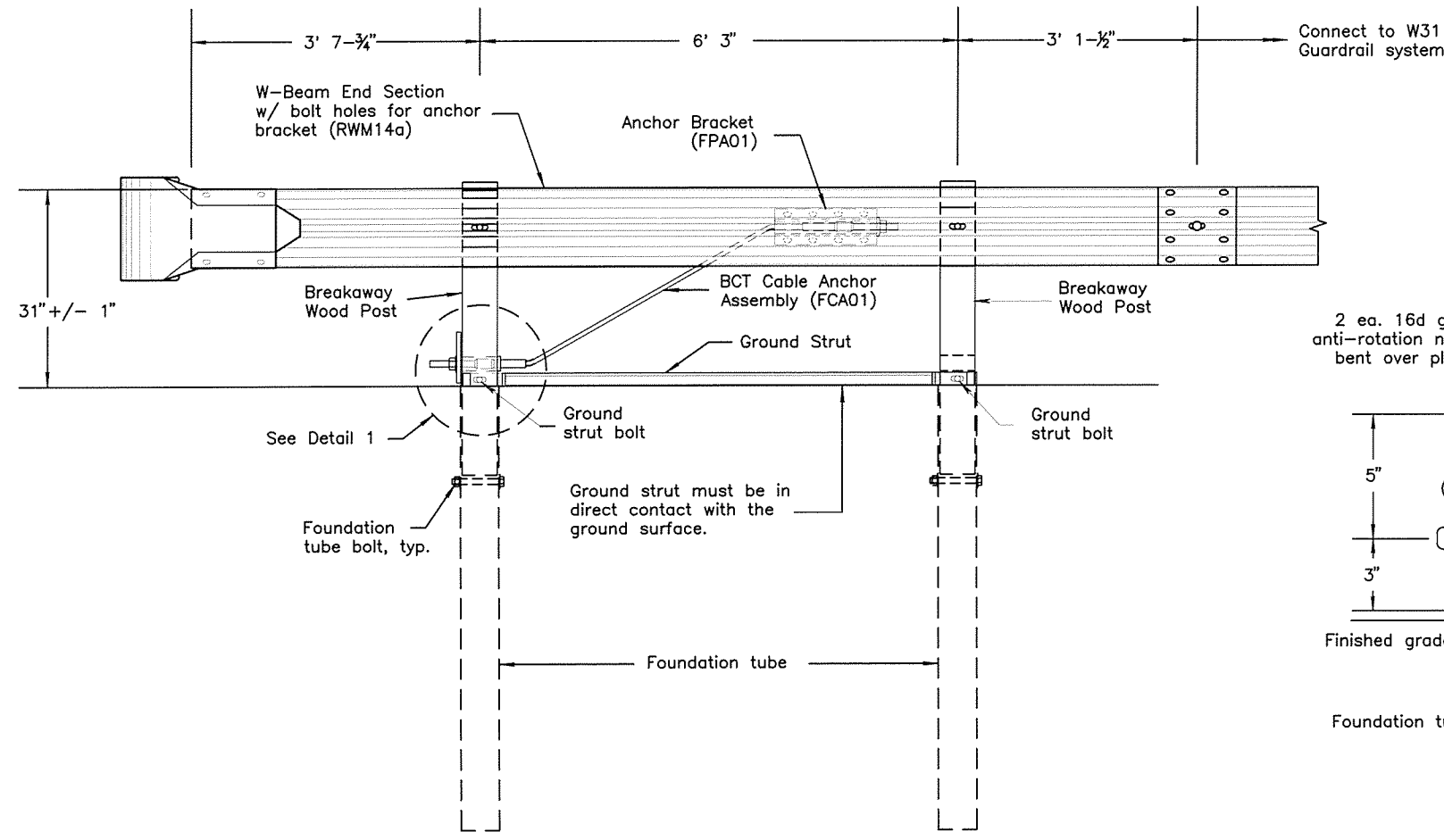
Adoption Date: 02/08/2019

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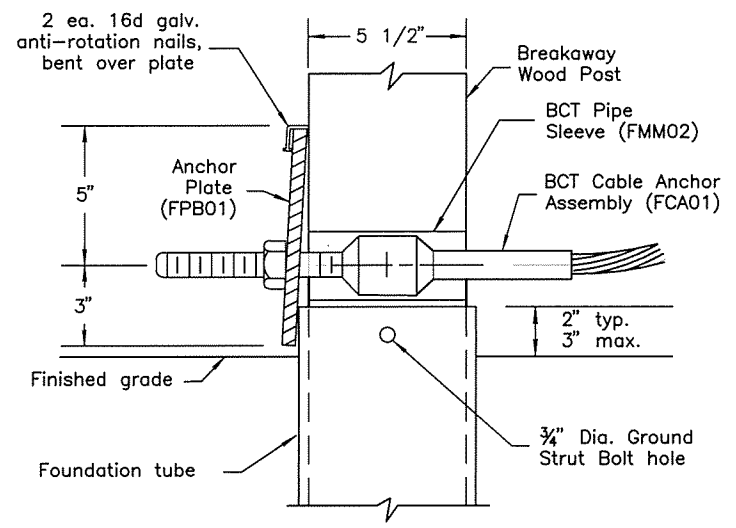
Last Code and Stds. Review  
By: Date:  
Next Code and Standards Review date: 02/08/2029

G-10.20

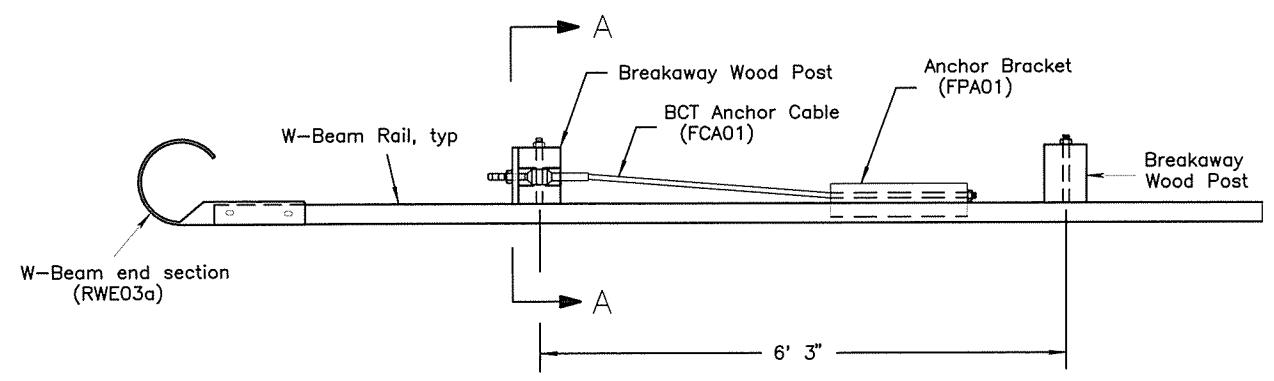




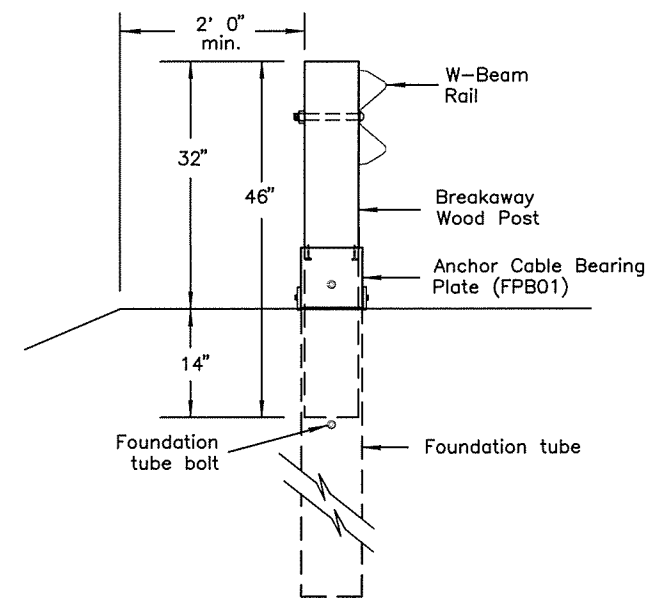
ELEVATION



DETAIL 1  
(Ground strut not shown for clarity)



PLAN VIEW



SECTION A-A

**CONSTRUCTION NOTES**

1. All covered hardware must comply with Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators are given in parenthesis, when possible.
2. End section bolts and nuts have the same material requirements as splice bolts.
3. Foundation tube bolts are 7/8" diameter ASTM A307 hex head. Foundation tube bolts require an ASTM A563 A nut and two ASTM F844 7/8" diameter flat washers. Install one washer under bolt head and one under nut.
4. Anchor bracket and strut bolts are 5/8" diameter ASTM A307 hex head. Foundation tube bolts require ASTM A563 A nut and two ASTM F844 7/8" diameter flat washers. Install one washer under bolt head and one under nut.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**W31 DOWNSTREAM  
END ANCHOR**

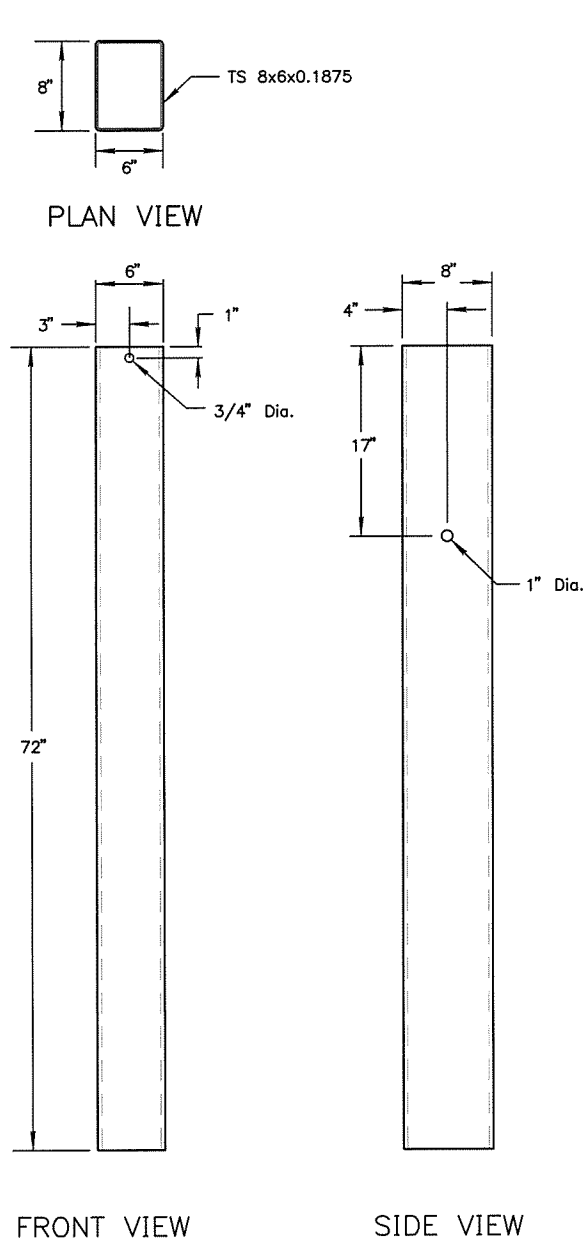
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

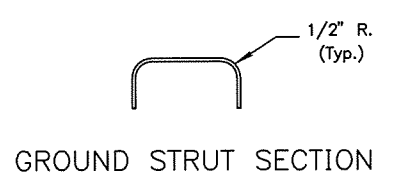
Last Code and Stds. Review  
By: KKK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

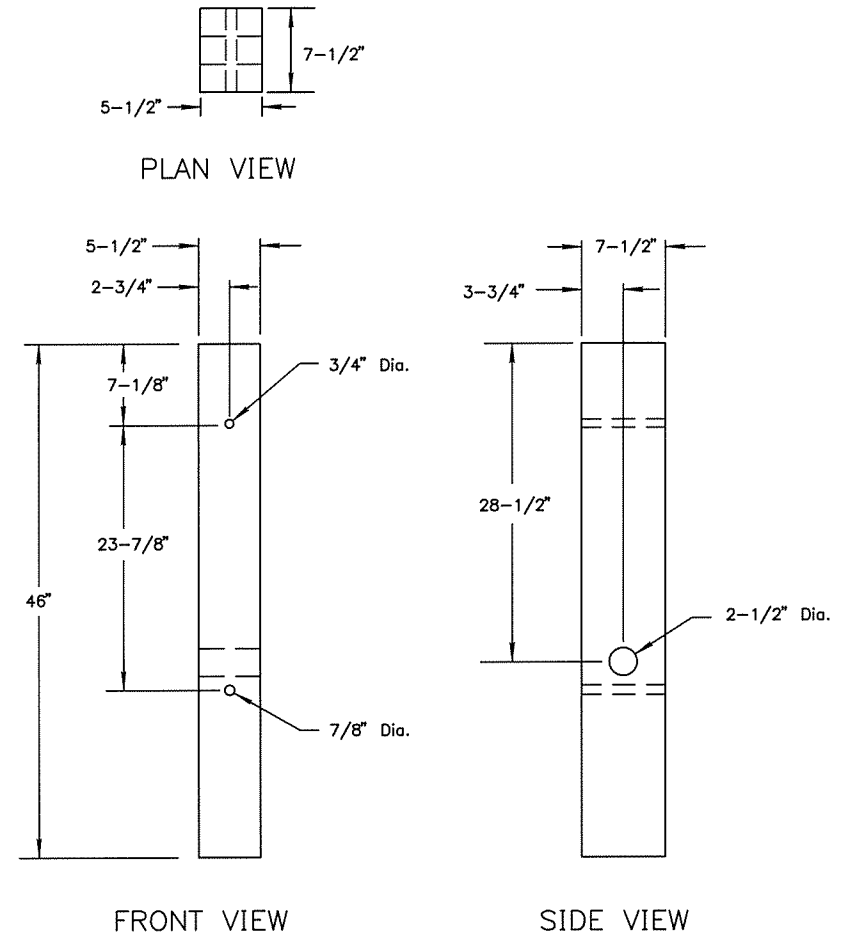
G-14.01



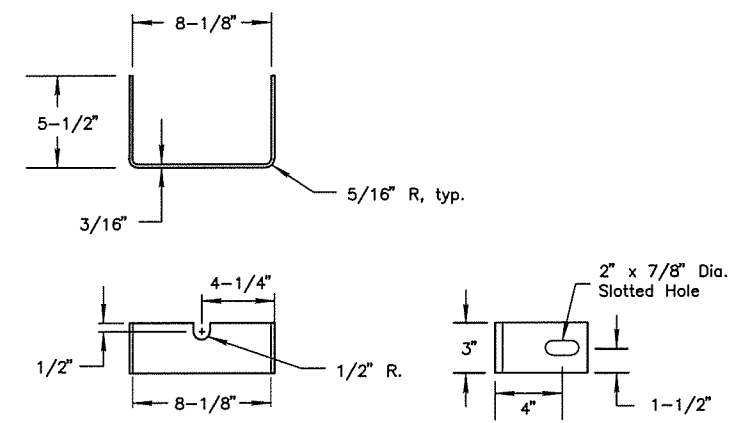
FOUNDATION TUBE



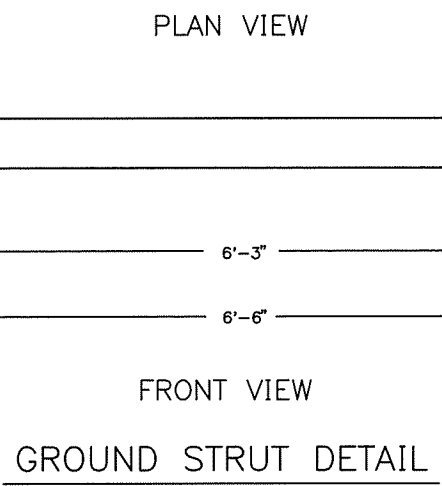
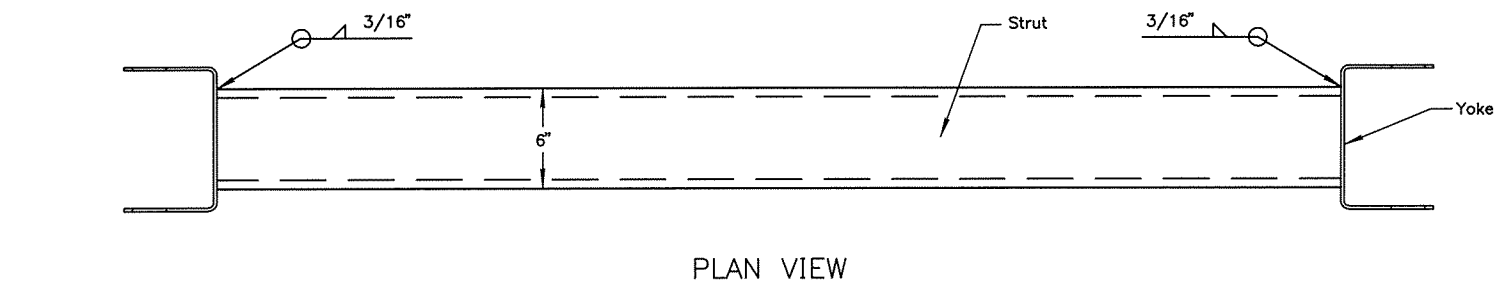
GROUND STRUT SECTION



BREAKAWAY WOOD POST



YOKE DETAIL



GROUND STRUT DETAIL

**CONSTRUCTION NOTES**

- All covered hardware must comply with Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators are given in parenthesis, when possible.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

W31 DOWNSTREAM  
END ANCHOR

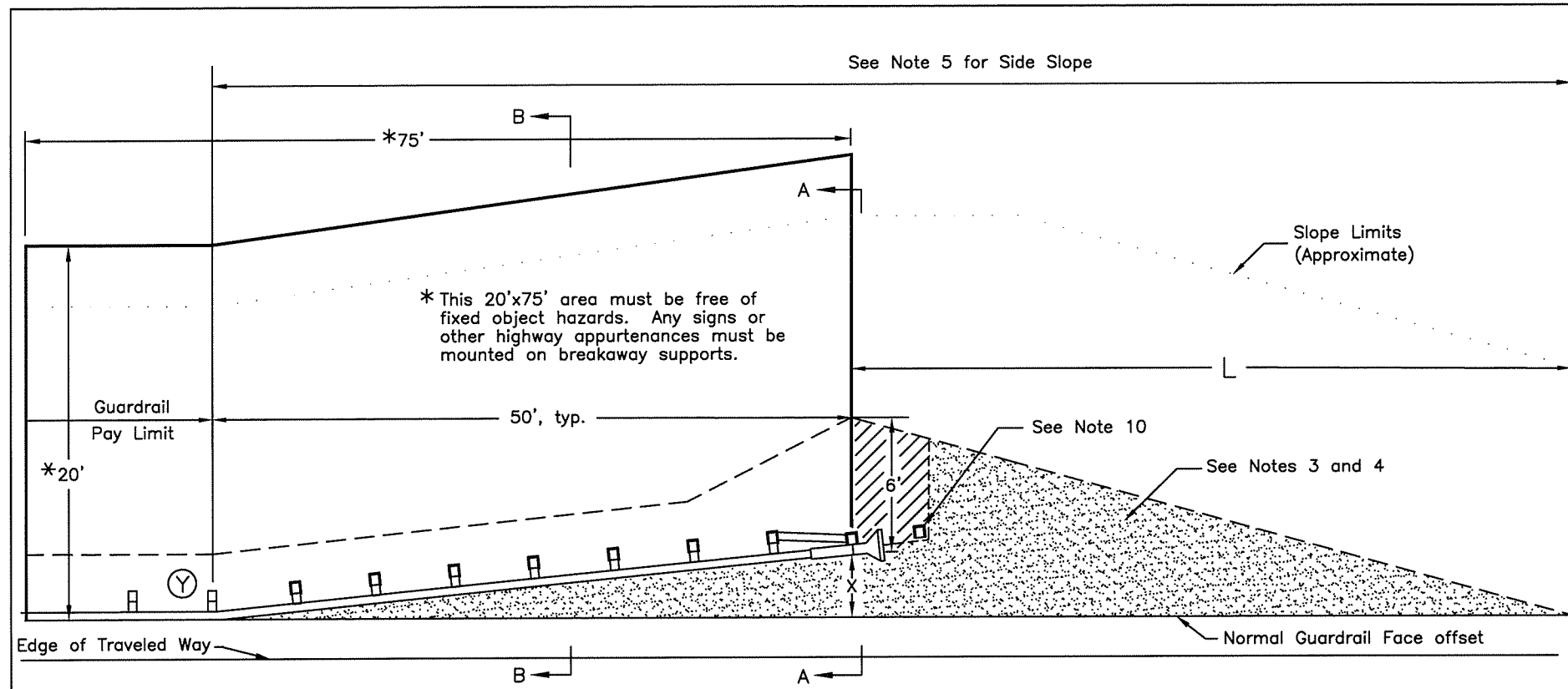
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

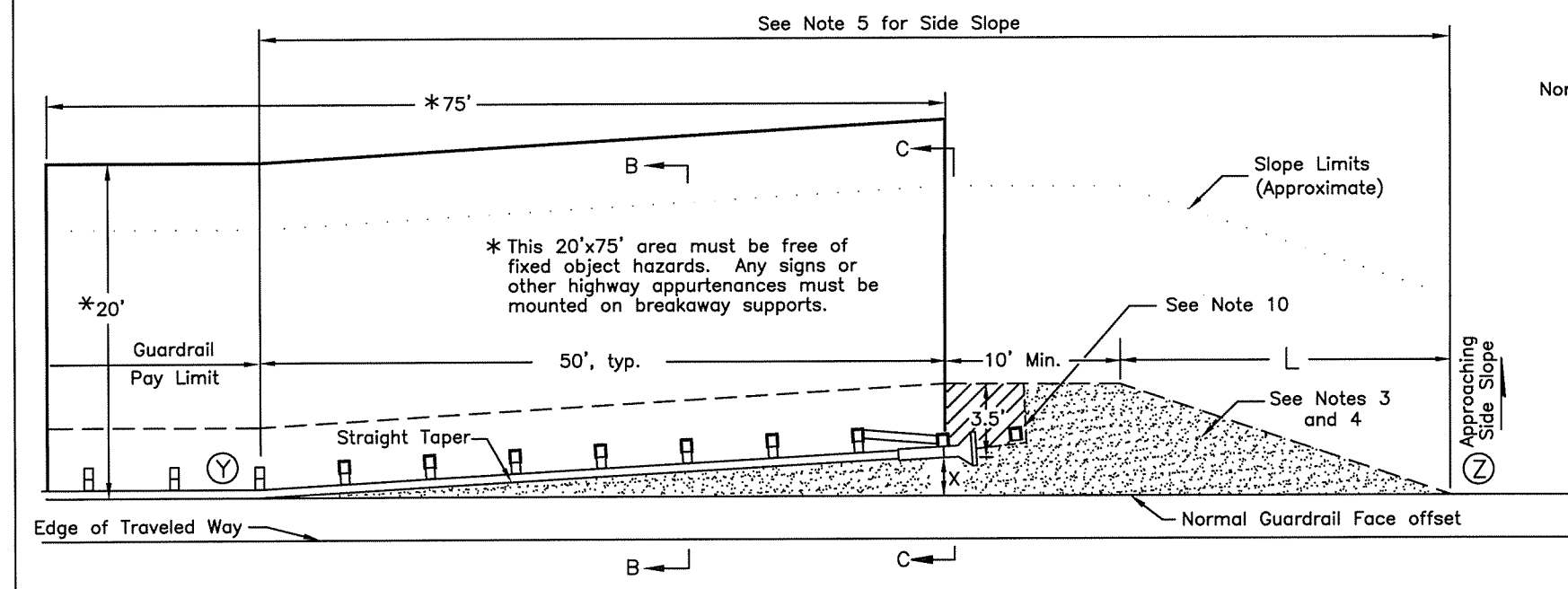
Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

G-14.01



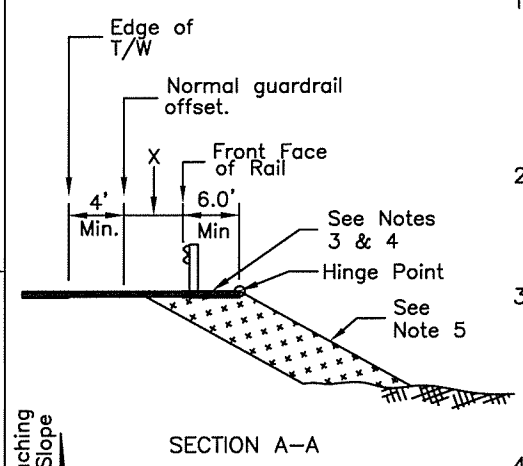
**STANDARD GUARDRAIL TERMINAL WIDENING DETAIL**



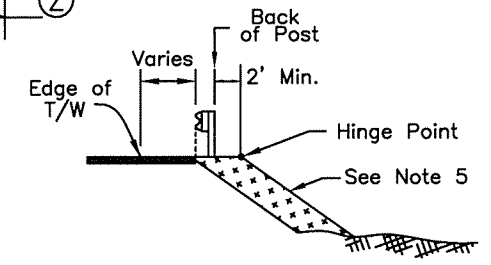
**ALTERNATE GUARDRAIL TERMINAL WIDENING DETAIL**

(USE ONLY WHEN LIMITED RIGHT-OF-WAY OR LIMITING SITE CONDITIONS MAKE THE STANDARD DETAIL INFEASIBLE)

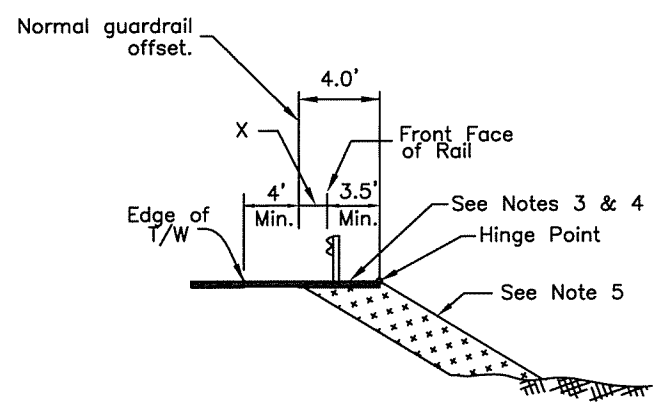
X=End offset. See manufacturer's information for the range of acceptable end offsets for each MASH compliant terminal.



SECTION A-A



SECTION B-B (Applies to both details)



SECTION C-C

**GENERAL NOTES**

1. This Std. Dwg. applies to all MASH approved guardrail end terminals (GETs). The alternate detail may only be used with parallel or tangent GETs. The terminal details shown are for illustration only - see manufacturer's drawings for actual post, rail, strut, etc. configuration and layout.
2. Use this Std. Widening Detail for all GETs except when limited right-of-way or limiting site conditions make the use of the Std. Widening Detail infeasible. In that case, the alternate detail is permissible.
3. Construct the shaded areas to match the slope of the adjacent shoulder. The slope may be increased to 10:1 if identified in the plans or when approved by the engineer. Match the slope when the shoulder slopes toward the road as well as away from the road.
4. On paved roads, the shaded areas shall be paved. On gravel roads, surface the shaded areas with the same materials used to surface the travel lanes.
5. From point (Y) to point (Z) make the side slope match the approaching side slope except where it is flatter than 4:1. In that case, the slope may be steepened to 4:1.
6. Attach a flexible marker at the beginning of each GET.
7. The max. allowable height for foundation tubes or other steel components of terminal post breakaway systems is 4" above the surrounding grade.
8. The details on this sheet do not apply to W31 Downstream End Anchors (Std Dwg G-14).
9. The details on this sheet apply to GETs on both the approach and downstream ends on two-way undivided roads and to any downstream MASH compliant GETs.
10. Some MASH GET systems have an additional post/anchor at the approximate location shown. If this post/anchor is present do not pave the diagonally hatched area. If not present, pave the diagonally hatched area also.

| Taper Lengths (L)<br>for Common End Offsets (X) |                 |                  |
|---|-----------------|------------------|
| End Offset                                      | Standard Detail | Alternate Detail |
| 0'  | 24.0'           | 13.0'            |
| 1'  | 26.0'           | 17.0'            |
| 1.5'  | 28.0'           | 19.0'            |
| 2'  | 30.0'           | 21.0'            |
| 2.5'  | 32.0'           | 22.0'            |
| 4'  | 37.0'           | 28.0'            |

Interpolate if the end offset falls between table values

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**WIDENING FOR  
GUARDRAIL END TERMINALS**

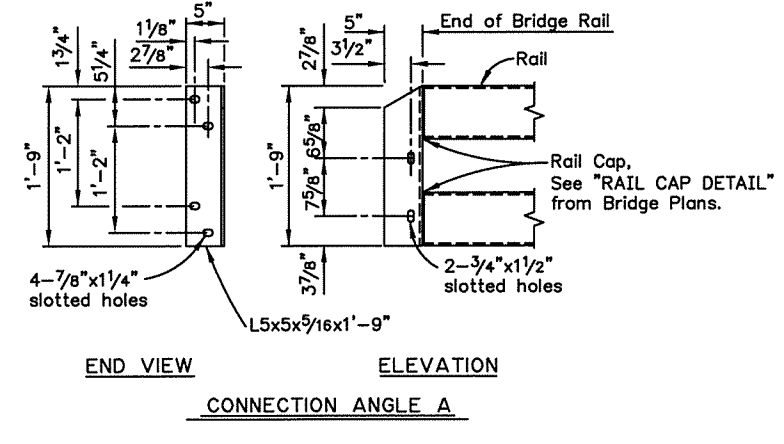
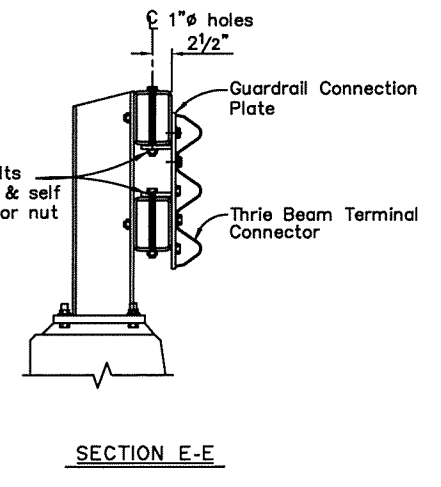
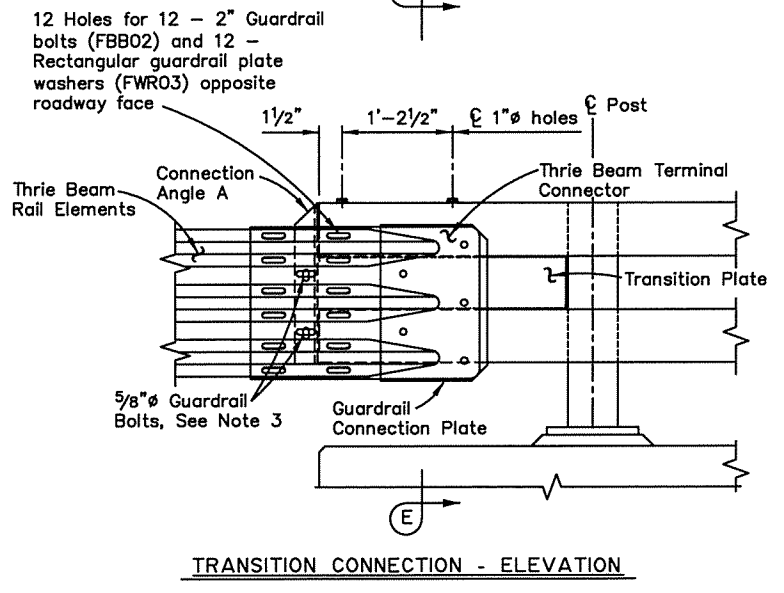
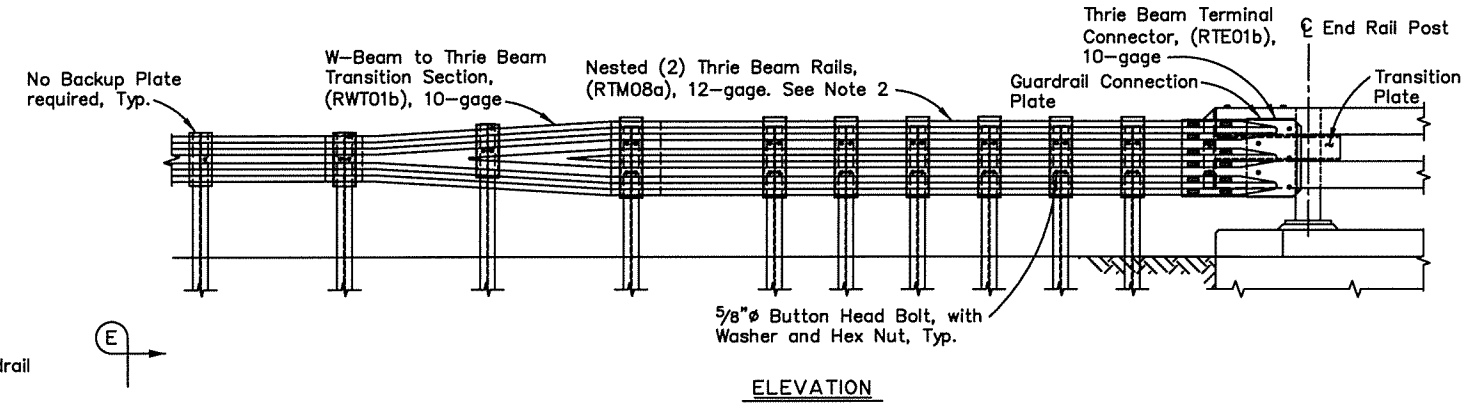
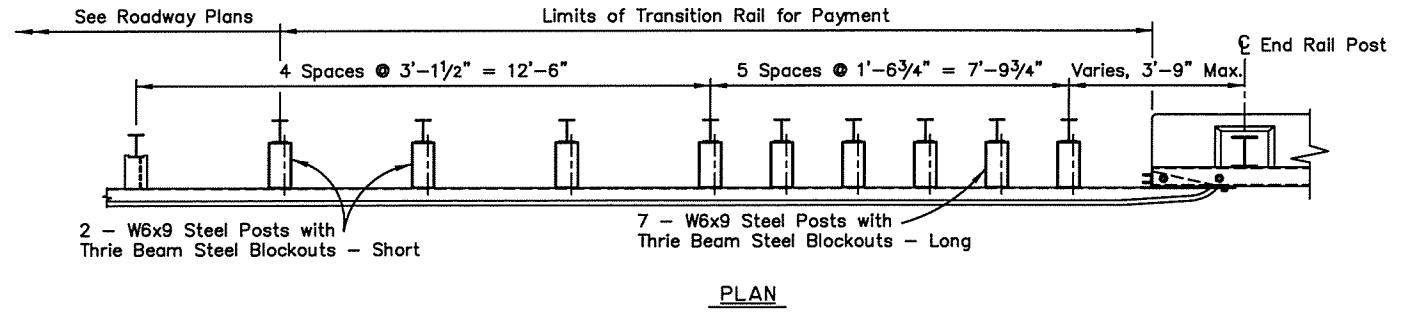
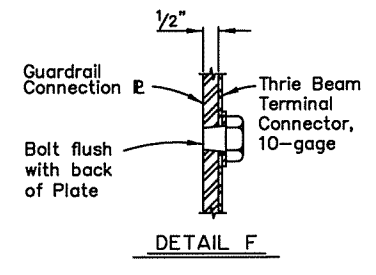
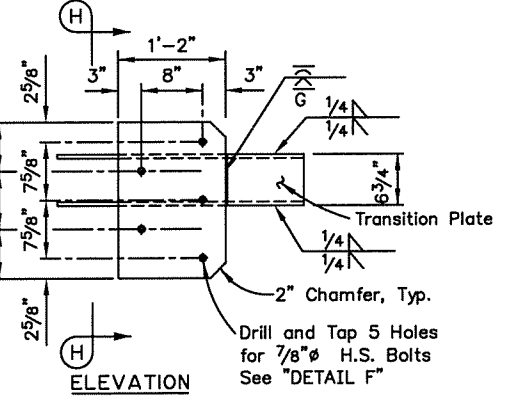
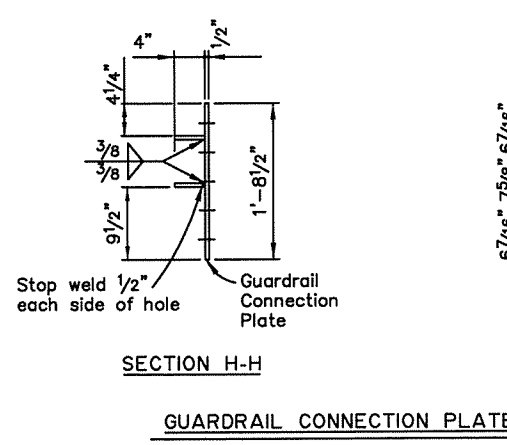
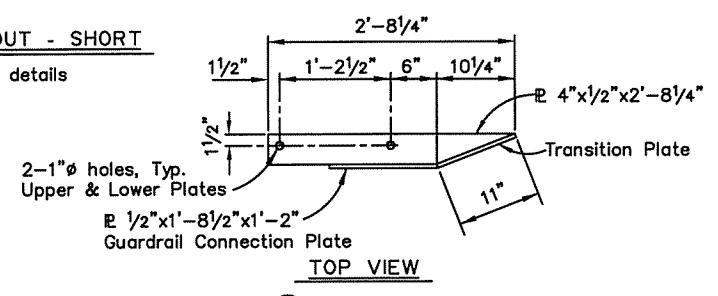
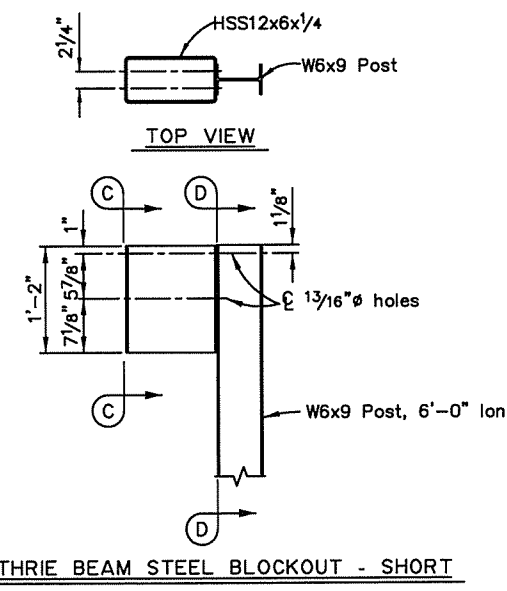
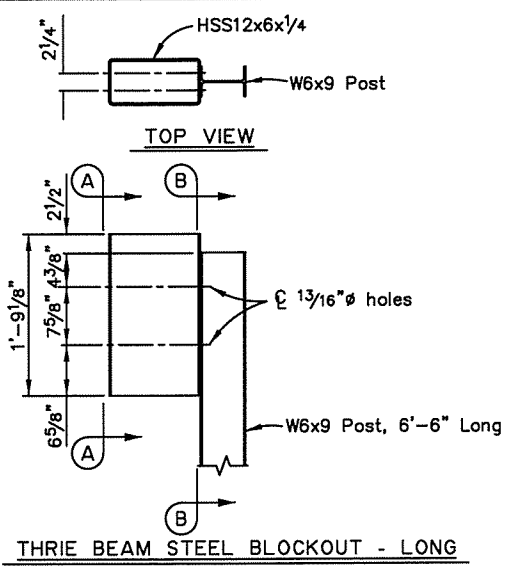
Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

Next Code and Standards Review date: 02/08/2029

G-20.12



- NOTES:**
1. Use AASHTO M 180 for all guardrail and guardrail hardware. Use H.S. Bolts conforming to ASTM F3125 Grade A325. All other steel conforms to ASTM A709 Grade 50.
  2. Lap approach guardrail to prevent snags from oncoming traffic.
  3. Provide 1/2 inch horizontal slots in approach guardrail. Adjust guardrail bolts for sliding fit.
  4. Conform to G-00, G-05 and G-10 of the Standard Plans for all guardrail details not shown.

**State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
MASH BRIDGE RAIL  
THRIE BEAM TRANSITION**

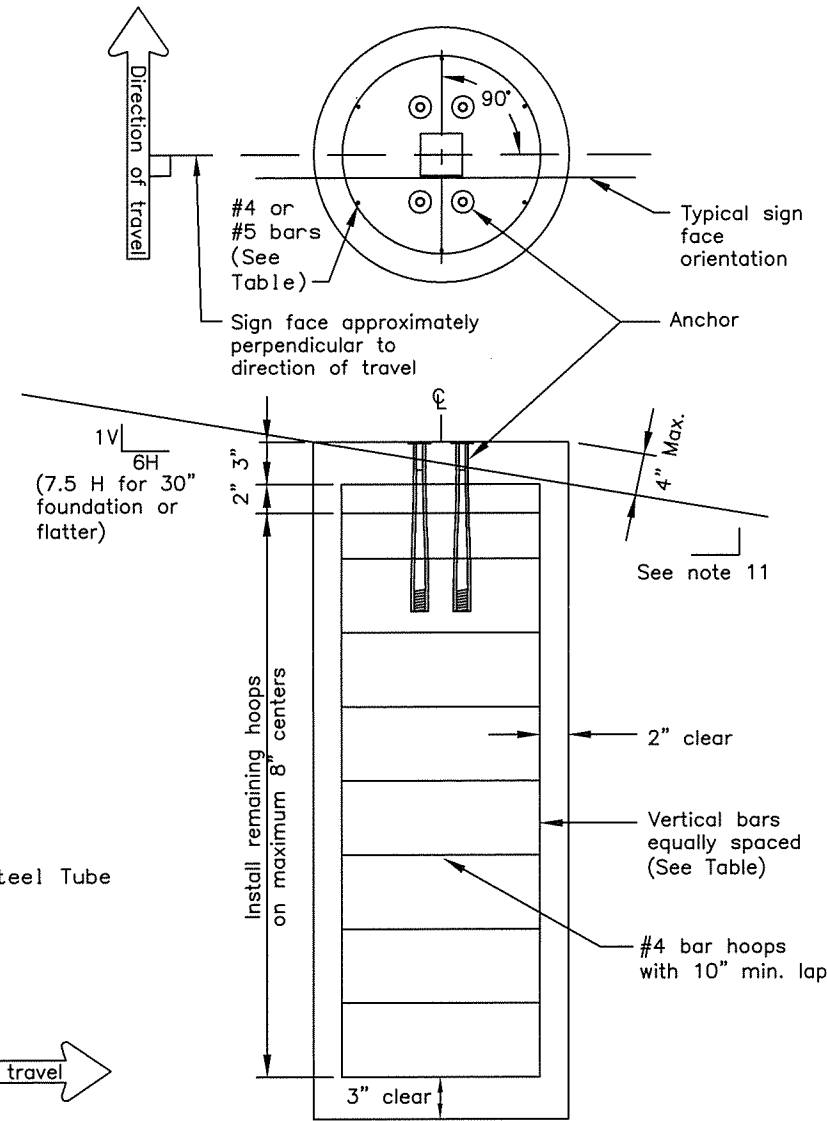
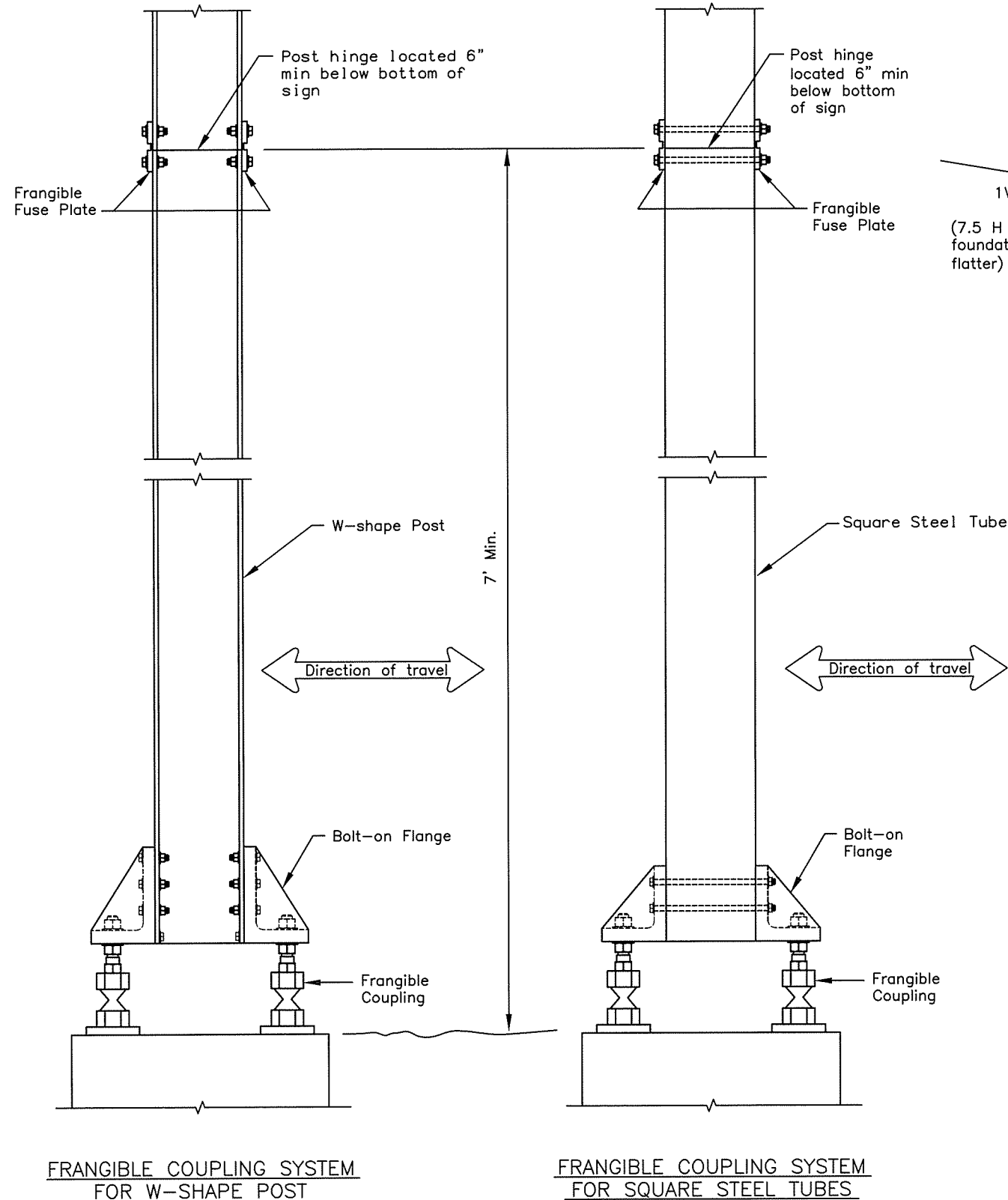
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 08/06/2020

Last Code and Stds. Review  
By: SEM Date: 07/17/2020  
Next Code and Standards Review date: 07/17/2030

No Scale

**NOTE:**  
Install hinges when more than one post is used to support a sign. Do not install hinges on single post installations.



**SIGN POST FOUNDATION**  
See Table for depth and diameter

| POST SIZE & TYPE | FOUNDATION * |            |                       | REINFORCEMENT           |                 |            |       |  |
|------------------|--------------|------------|-----------------------|-------------------------|-----------------|------------|-------|--|
|                  | DIA.         | MIN. DEPTH | Cy <sup>3</sup> CONC. | VERTICAL BARS QTY./SIZE | HOOPS QTY./SIZE | HOOPS DIA. |       |  |
| 2 1/2" TUBE      | 1'-6"        | 6'-0"      | 0.39                  | 7 #5                    | 5'-6"           | 10 #4      | 1'-2" |  |
| 3" TUBE          | 1'-6"        | 6'-0"      | 0.39                  | 7 #5                    | 5'-6"           | 10 #4      | 1'-2" |  |
| 3 1/2" TUBE      | 1'-6"        | 6'-0"      | 0.39                  | 7 #5                    | 5'-6"           | 10 #4      | 1'-2" |  |
| 4" TUBE          | 2'-6"        | 6'-0"      | 1.09                  | 8 #8                    | 5'-6"           | 10 #4      | 2'-2" |  |
| 4 1/2" TUBE      | 2'-6"        | 6'-0"      | 1.09                  | 8 #8                    | 5'-6"           | 10 #4      | 2'-2" |  |
| 5" TUBE          | 2'-6"        | 6'-0"      | 1.09                  | 8 #8                    | 5'-6"           | 10 #4      | 2'-2" |  |
| W6 x 9           | 2'-6"        | 6'-0"      | 1.09                  | 8 #8                    | 5'-6"           | 10 #4      | 2'-2" |  |
| W6 x 12          | 2'-6"        | 6'-0"      | 1.09                  | 8 #8                    | 5'-6"           | 10 #4      | 2'-2" |  |
| W6 x 15          | 3'-0"        | 6'-6"      | 1.70                  | 8 #11                   | 6'-0"           | 12 #4      | 2'-8" |  |
| W6 x 30          | 3'-0"        | 7'-6"      | 1.96                  | 8 #11                   | 7'-0"           | 13 #4      | 2'-8" |  |

**FOUNDATION TABLE**

\* Foundations sized for use where there are no loose, high moisture, or fine grained soils.

**GENERAL NOTES**

1. Furnish sign posts with NCHRP 350 compliant frangible couplings designed to break away safely when struck from any direction. There is no MASH compliant device at this time. See SPDR report for more info.
2. Furnish frangible coupling systems with bolt-on flanges.
3. Details on this sheet illustrate only the general components of a frangible coupling system, and are not intended to specify a particular product.
4. Install frangible fuse plates as specified by the manufacturer and hinged joints when multiple posts are used to support a sign. Do not use round pipes.
5. Install the components of the breakaway system, including hinges, in accordance with the written instructions of the system manufacturer.
6. Use Class A, B or W concrete conforming to Sections 501 or 550 of the Standard Specifications. Furnish ASTM A615 grade 60 steel bars for concrete reinforcement conforming to AASHTO M31.
7. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of #3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
8. Install the concrete anchors using a rigid template. Locate the anchors on centers and within tolerances specified by the manufacturer.
9. Install the anchors in fresh concrete as recommended by the manufacturer. Adjust the template's final position until it is level. Remove and replace all foundations that need more than 2 shims under any 1 coupling or more than a total of 3 shims under any pair of couplings to plumb the post.
10. Drill the holes for attaching brackets before the sign posts are hot dip galvanized. Test fit templates in the holes to ensure the brackets can be installed square to the posts.
11. Special grading detail and/or shielding may be required to maintain 4" maximum clear distance.

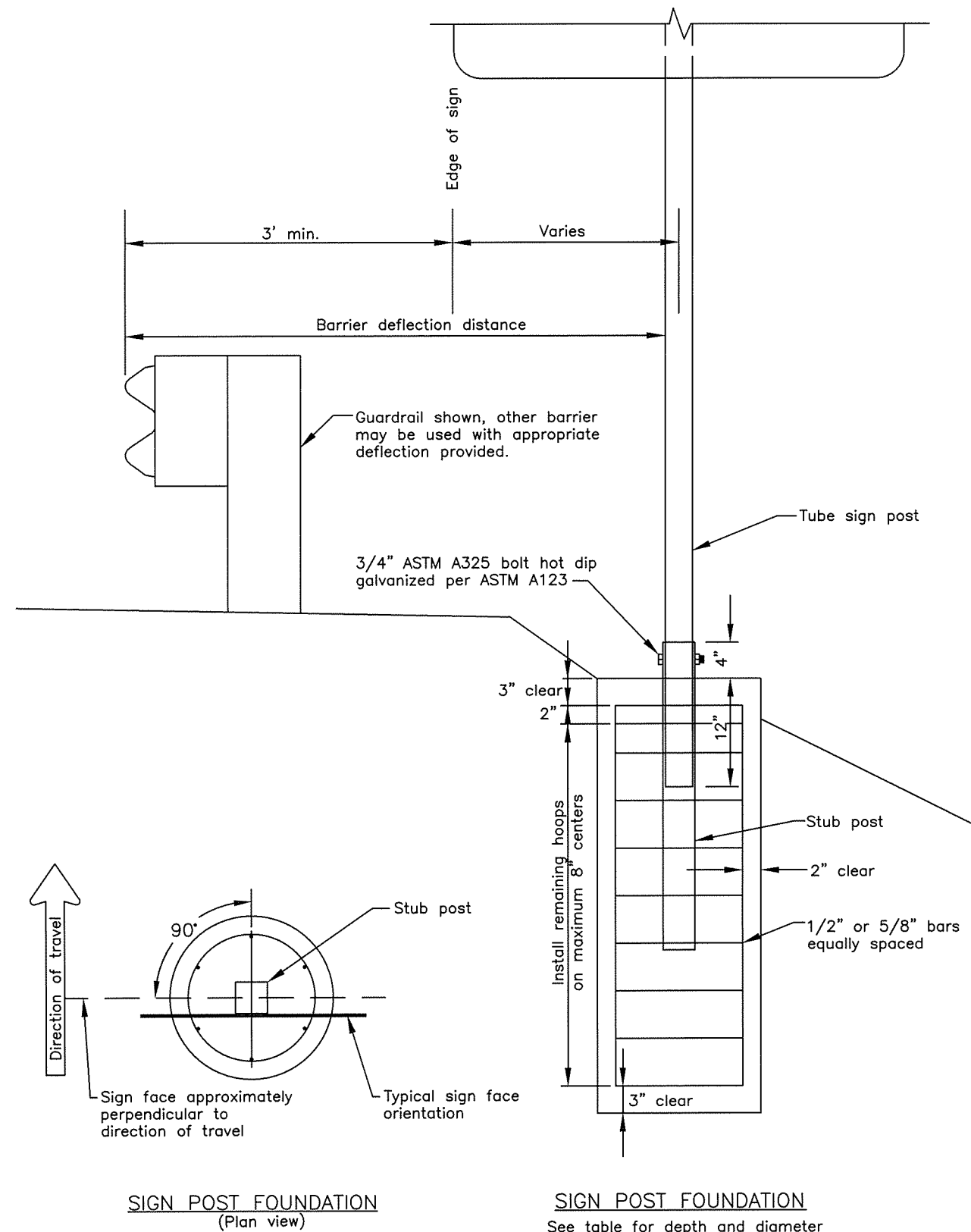
State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
SIGN POST BASE AND  
FOUNDATION

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK, MJM Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030



**GENERAL NOTES**

1. This is a non-crashworthy sign support. It may only be used at locations shielded by a guardrail, barrier, or wall. It may not be used if the sign post is within 20' of the rail and is closer than 75' from the guardrail end post (measured along the rail). For this case use a breakaway sign support. See Standard Plan G-20.
2. Furnish steel tube sign post and stub post that conform to ASTM A500, grade B, and meet ASTM A123 for hot dip galvanizing.
3. Install tubes and stub post with a 0.1875" wall thickness.
4. For Perforated Tubes use Standard Plan S-30.
5. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of No. 3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
6. Use Class A, B or W concrete.

| POST SIZE & TYPE | FOUNDATION * |            |            | REINFORCEMENT |       |       |      | STUB POST |        |    |
|------------------|--------------|------------|------------|---------------|-------|-------|------|-----------|--------|----|
|                  | DIA.         | MIN. DEPTH | C.Y. CONC. | VERTICAL BARS |       | HOOPS |      | SLEEVE    |        |    |
|                  |              |            | QTY.       | SIZE          | LGTH. | SIZE  | DIA. | SIZE      | LGTH.  |    |
| 2 1/2" TUBE      | 1'-0"        | 4'-6"      | 0.13       | 6             | #4    | 4'-0" | #4   | 8"        | 3"     | 3' |
| 3" TUBE          | 1'-6"        | 4'-0"      | 0.25       | 7             | #5    | 3'-6" | #4   | 1'-2"     | 3 1/2" | 3' |
| 3 1/2" TUBE      | 1'-6"        | 4'-6"      | 0.27       | 7             | #5    | 4'-0" | #4   | 1'-2"     | 4"     | 3' |
| 4" TUBE          | 2'-6"        | 4'-0"      | 0.69       | 8             | #8    | 3'-6" | #4   | 2'-2"     | 4 1/2" | 3' |
| 4 1/2" TUBE      | 2'-6"        | 4'-6"      | 0.78       | 8             | #8    | 4'-0" | #4   | 2'-2"     | 5"     | 3' |

\* Foundation sized for use where there are no loose, high moisture, or fine grained soil.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**SIGN POST BASE AND  
FOUNDATION BEHIND  
BARRIER**

Adopted as an Alaska  
Standard Plan by: *Carolyn Morehouse*  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030