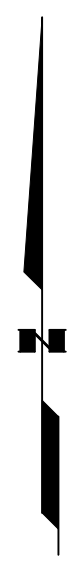
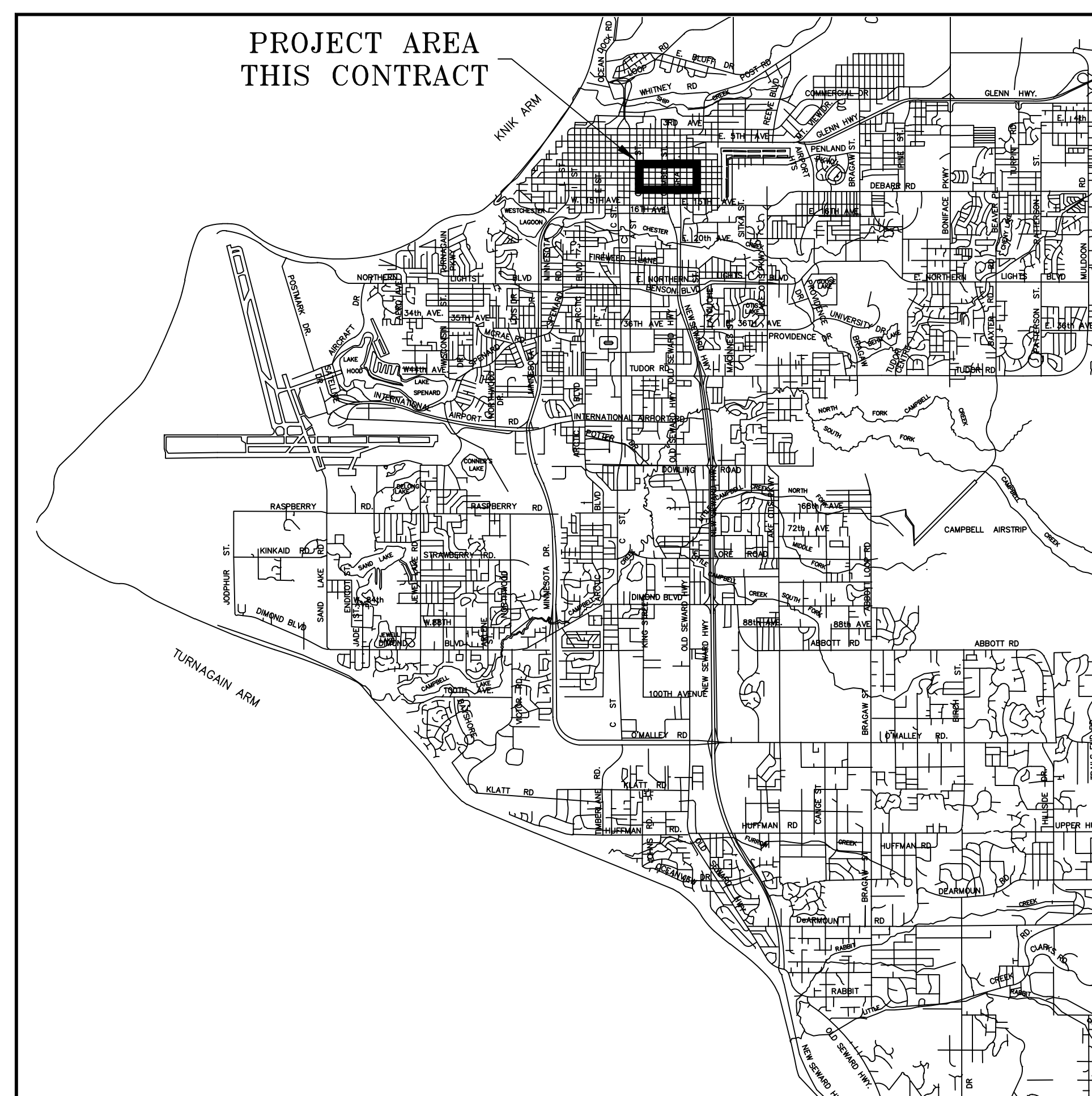


CHUGACH ELECTRIC ASSOCIATION, INC.
 115kV TRANSMISSION LINE
 SUB 06 – NIKKELS PP
 GAMBELL STREET TRANSMISSION POLE RELOCATE
 W.O. E2320071



VICINITY MAP

| DRAWING INDEX | | | | |
|---------------|----------------|--------------|---|-------|
| PAGE | DRAWING NUMBER | SHEET NUMBER | TITLE | NOTES |
| 1 | 06NK-MC-INDEX | 1 OF 1 | VICINITY MAP & DRAWING INDEX | |
| 2 | 06NK-MC-INFO | 1 OF 1 | LEGEND | |
| 3 | 06NK-PP-0001 | 1 OF 1 | PLAN & PROFILE STRUCTURE 64H TO STRUCTURE 84C | |
| 4 | 06NK-SS-001 | 1 OF 1 | SITE & STRUCTURAL RETIREMENT & PROPOSED PLANS | |
| 5 | 06NK-SS-002 | 1 OF 1 | STRUCTURAL & ASSEMBLY 115-TAN | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |

| PROJECT: <u>GAMBELL STREET TRANSMISSION POLE RELOCATE</u> | | | | |
|---|--------------------------------------|--------------|--------------------------|------------------------|
| ENG./DESIGN.: <u>SUPAT CHANONTO (CEA) / GREG HUFFMAN (EPS)</u> W.O. # <u>E2320071</u> | | | | |
| NO. | DESIGN/CONSTRUCTION/ASBUILT REVISION | DWN. BY/DATE | REVIEWED MGR./SUPV./DATE | APPROVED DIRECTOR/DATE |
| 0 | ISSUED FOR CONSTRUCTION | BWA 06/27/25 | GDH 06/27/25 | |
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| NO. | RECORD REVISION | CAD DRAWN BY | W.P.# | W.O. NUMBER | RECORD APPROVED | DATE |
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|----------------------------------|--|--|--|
| DRAWING NAME: | | 115kV TRANSMISSION LINE SUB 06 – NIKKELS PP MISCELLANEOUS & KEY MAPS VICINITY MAP & DRAWING INDEX | |
| CONFIDENTIAL | | 06NK-MC-INDEX_0001_0 | |
| DRAWING NO. - PREVIOUS/REFERENCE | | NEW | |
| DRAWING NO.: | | 06NK-MC-INDEX | |
| SHEET 0001 OF 1 | | PAGE 1 OF 5 | |

SYMBOL LEGEND

| | |
|--|--|
| | ELECTRIC BOX, TRANSFORMER, LOAD CENTER |
| | ELECTRIC PEDESTAL |
| | ELECTRIC METER |
| | ELECTRIC JUNCTION BOX |
| | LIGHT POLE |
| | MASTARM LIGHTPOLE |
| | UTILITY POLE |
| | GUY WIRE |
| | FIBER OPTIC VAULT |
| | TELEPHONE PEDESTAL |
| | TELEPHONE JUNCTION BOX |
| | POST |
| | BOLLARD |
| | GATE POST |
| | SIGN |
| | RAILROAD LIGHTS |
| | WATER VALVE |
| | FIRE HYDRANT |
| | WATER MANHOLE |
| | MONITORING WELL |
| | BOULDER |
| | SANITARY SEWER CLEANOUT |
| | SANITARY SEWER MANHOLE |
| | STORM DRAIN MANHOLE |
| | STORM DRAIN CATCH BASIN MANHOLE |
| | FLOWLINE CATCH BASIN MANHOLE |
| | CATCH BASIN |
| | GAS METER |
| | VERTICAL SUPPORT MEMBER |
| | DECORATIVE VEGETATION |
| | SWAMP |
| | TREE |
| | UNDERGROUND ELECTRIC CROSSING |
| | UNDERGROUND FIBER OPTIC CROSSING |
| | UNDERGROUND GAS CROSSING |
| | UNDERGROUND SANITARY SEWER CROSSING |
| | UNDERGROUND STORM DRAIN CROSSING |
| | UNDERGROUND TELEPHONE CROSSING |
| | UNDERGROUND WATER CROSSING |
| | CULVERT |
| | RAILROAD TRACKS |
| | FENCE |
| | UNDERGROUND FIBER OPTIC LINE |
| | UNDERGROUND WATER LINE |
| | UNDERGROUND STORM DRAIN LINE |
| | UNDERGROUND SANITARY SEWER LINE |
| | UNDERGROUND ELECTRIC LINE |
| | UNDERGROUND TELEPHONE LINE |
| | UNDERGROUND GAS LINE |
| | OVERHEAD ELECTRIC |
| | OVERHEAD TELEPHONE |

LEGEND

| | |
|--|------------------------------|
| | DISTRIBUTION SUBSTATION |
| | BULK TRANSMISSION SUBSTATION |
| | POLE |
| | 230KV OH |
| | 230KV UG |
| | 69KV OH |
| | 138KV OH |
| | 138KV UG |
| | 115KV OH |
| | 34.5KV OH |
| | 34.5KV UG |

HATCH LEGEND

| | |
|--|------------------|
| | CONCRETE SURFACE |
| | PAVED SURFACE |
| | WATER BODY |
| | BUILDING |
| | UNPAVED SURFACE |

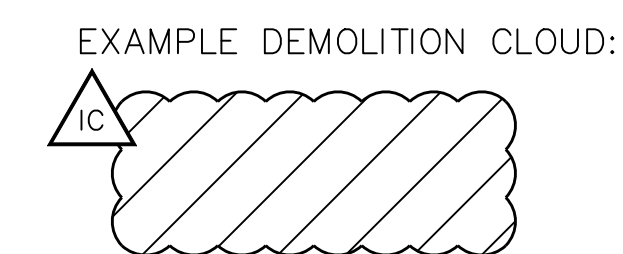
CONTRACT NOTES

- THE FOLLOWING TRIANGLES AND CLOUDING WILL BE USED ON DRAWINGS TO IDENTIFY THE CONTRACTOR'S SCOPE OF WORK IN SPECIFIC AREAS. AREAS NOT CLOUDED ON DRAWINGS SHALL NOT BE IN THE CONTRACTOR'S SCOPE OF WORK.
 - IN CONTRACT
 - NOT IN CONTRACT
- IF NO CLOUDS ARE NOTED ON THE DRAWING, THE CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE THE ENTIRE DRAWING.
- IF THE DRAWING IS ISSUED FOR REFERENCE ONLY, IT WILL BE IDENTIFIED WITH THE FOLLOWING BLOCK. THE PURPOSE OF AN "ISSUED FOR REFERENCE ONLY" DRAWING IS TO CONVEY INFORMATION THAT MAY BE USEFUL TO THE CONTRACTOR IN PERFORMANCE OF THE CONTRACT. NONE OF THE MATERIAL SHOWN ON THE DRAWING IS WITHIN THE CONTRACTOR'S SCOPE OF WORK TO SUPPLY.

ISSUED FOR REFERENCE ONLY
- DO NOT EDIT -

- SCOPE OF WORK OR PERFORMANCE INFORMATION FOR THE CONTRACTOR MAY BE CONVEYED WITH "CONSTRUCTION NOTES". BELOW IS AN EXAMPLE OF CONSTRUCTION NOTES.
 - CONSTRUCTION NOTES:
 - (1) EXAMPLE NOTE
 - (2) EXAMPLE NOTE
- DEMOLITION DRAWINGS WILL BE IDENTIFIED WITH THE FOLLOWING BLOCK. DEMOLITION WORK THAT IS WITHIN THE CONTRACTOR'S SCOPE OF WORK WILL BE IDENTIFIED BY DEMOLITION CLOUDS. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT FOR THE REMOVAL OF THE IDENTIFIED ITEMS. SCOPE OF WORK OR PERFORMANCE INFORMATION FOR THE CONTRACTOR MAY BE CONVEYED WITH "DEMOLITION NOTES". BELOW IS AN EXAMPLE OF A DEMOLITION CLOUD AND DEMOLITION NOTES.

DEMOLITION



EXAMPLE DEMOLITION NOTES:

DEMOLITION NOTES:

- (1) EXAMPLE NOTE
- (2) EXAMPLE NOTE

- DETAIL AREAS NOT FOR REVIEW AT A SUBMITTAL WILL BE IDENTIFIED WITH THE HOLD TAG SHOWN BELOW. THE HOLD TAG SHALL BE PLACED DIRECTLY OVER THE EFFECTED AREA WITH THE DIMENSIONS LISTED BELOW WITH A 30° ROTATION WHEN FEASIBLE. THE HOLD TAG MAY BE ADJUSTED IN ROTATION AND LENGTH WHEN NECESSARY.

HOLD

| PROJECT: GAMBELL STREET TRANSMISSION POLE RELOCATE | | | | |
|---|--------------------------------------|--------------|--------------------------|------------------------|
| ENG./DESIGN.: SUPAT CHANONTO (CEA) / GREG HUFFMAN (EPS) W.O. # E2320071 | | | | |
| NO. | DESIGN/CONSTRUCTION/ASBUILT REVISION | DWN. BY/DATE | REVIEWED MGR./SUPV./DATE | APPROVED DIRECTOR/DATE |
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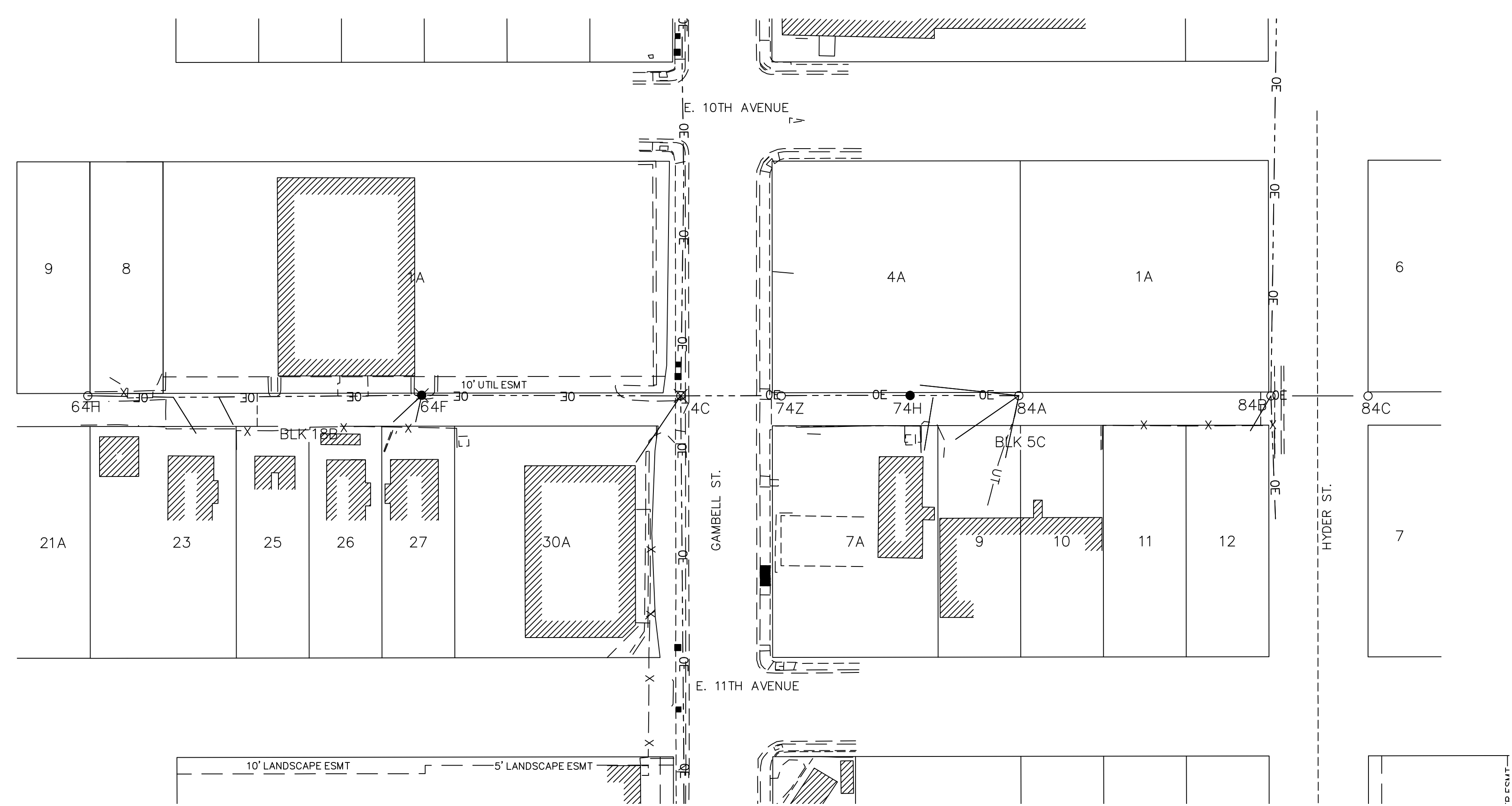
| NO. | RECORD REVISION | CAD DRAWN BY | W.P.# | W.O. NUMBER | RECORD APPROVED | DATE |
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Anchorage, Alaska 99519-6300

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|----------------------------------|--|--|--|
| DRAWING NAME: | | 115kV TRANSMISSION LINE SUB 06 - NIKKELS PP MISCELLANEOUS & KEY MAPS LEGEND | |
| CONFIDENTIAL | | | |
| DRAWING NO. - PREVIOUS/REFERENCE | | NEW | |
| DRAWING NO.: | | 06NK-MC-INFO | |
| SHEET 0001 OF 1 | | PAGE 2 OF 5 | |

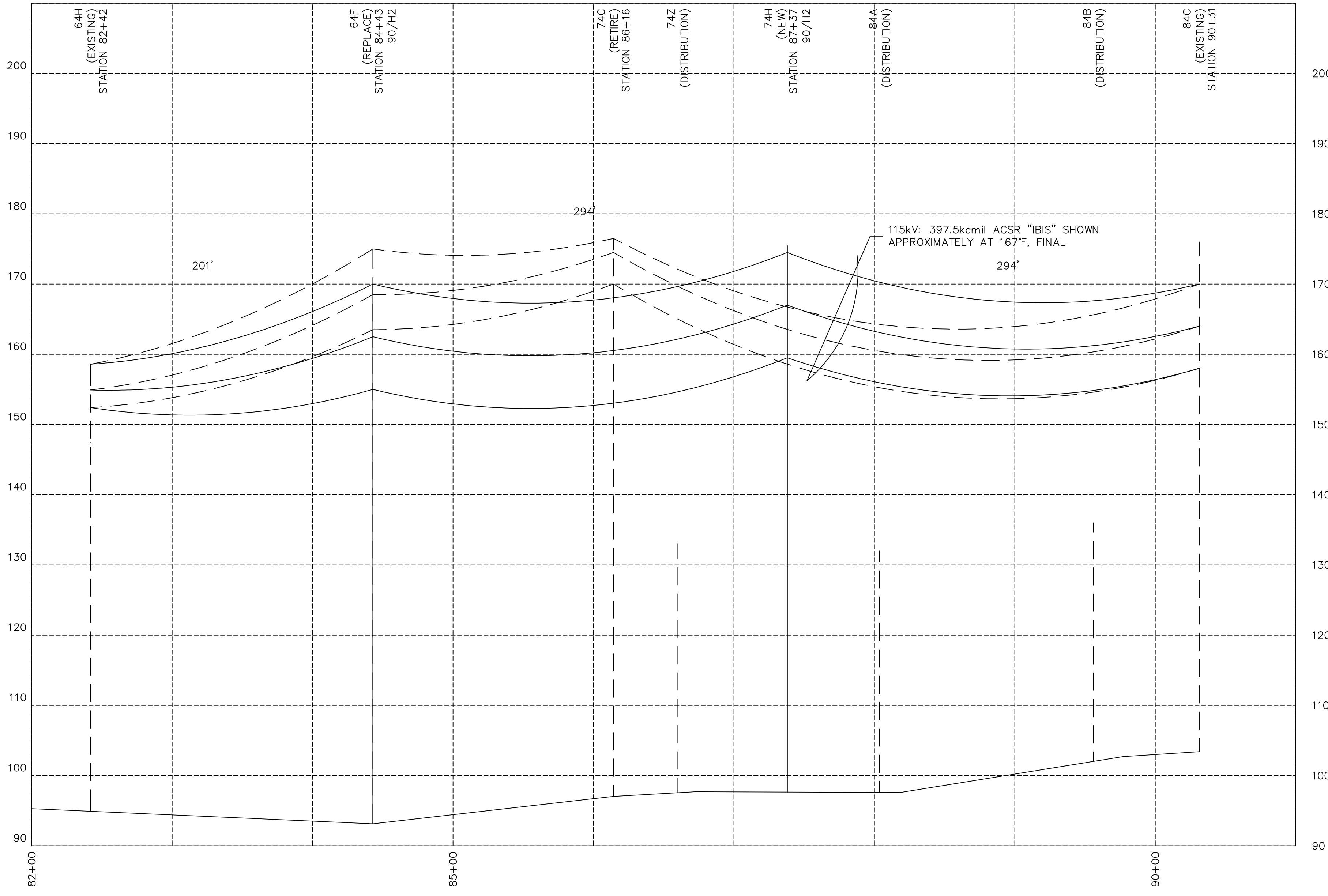
06NK-MC-INFO-0001-0



- LEGEND**
- ⊗ EXISTING STRUCTURE TO BE RETIRED
 - EXISTING STRUCTURE TO REMAIN
 - PROPOSED STRUCTURE
 - ⊗ EXISTING STRUCTURE TO BE REPLACED

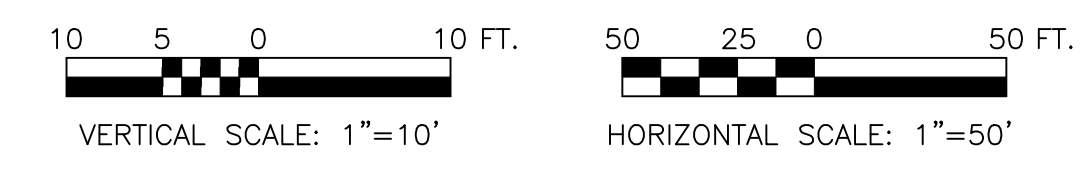
STRUCTURE SCHEDULE

| STRUCTURE NUMBER | APPROX. STATION | APPROX. AHEAD SPAN (FT) | STRUCTURE TYPE | POLE LENGTH (FT)/CLASS | EMBEDMENT DEPTH (FT) | 115kV ASSEMBLY | RETIREMENT UNITS | COMMENTS | STRUCTURE NUMBER |
|------------------|-----------------|-------------------------|----------------|------------------------|----------------------|------------------------|--|---|------------------|
| 64H | 82+42 | 201 | EXIST. WOOD | EXIST. | - | 3-AR | - | MAINTAIN EXIST. 115kV TENSION | 64H |
| 64F | 84+43 | 173 (OLD) 294 (NEW) | NEW WOOD | NEW 90/H2 | 12.0 | 115-TAN | (1) *WOOD POLE, (1) *115kV POST | REPLACE POLE | 64F |
| 74C | 86+16 | 413 | EXIST. WOOD | EXIST. | - | EXIST. IN-LINE DEADEND | (2) *WOOD POLE, (1) *115kV DE, (1) *115kV POST | RETIRE 115kV POLE & SUPPORTING STUB POLE | 74C |
| 74H | 87+37 | 294 | NEW WOOD | NEW 90/H2 | 12.0 | 115-TAN | - | NEW POLE | 74H |
| 84C | 90+31 | 370 | EXIST. WOOD | EXIST. | - | 3-AR | - | PLACE 115kV IN TRAVELERS DURING RE-TENSIONING. REPLACE ARMOR RODS | 84C |
| 14C | - | 330 | EXIST. WOOD | EXIST. | - | 3-AR | - | PLACE 115kV IN TRAVELERS DURING RE-TENSIONING. REPLACE ARMOR RODS | 14C |
| 34A | - | - | EXIST. WOOD | EXIST. | - | EXIST. CORNER DEADEND | - | - | 34A |



**APPROXIMATE SAGGING TABLE
115kV TRANSMISSION LINE**

| | | | | | | | |
|------------------------------------|---------------------------|------|------|------|------|------|------|
| CONDUCTOR: 397.5 KCMIL ACSR "IBIS" | | | | | | | |
| CONDUCTOR TEMP, °F | 0 | 10 | 20 | 30 | 40 | 50 | 60 |
| CONDUCTOR TENSION, LBS | 3661 | 3341 | 3042 | 2766 | 2518 | 2297 | 2104 |
| SPAN LENGTH, FT | FINAL SAG IN DECIMAL FEET | | | | | | |
| 365 | 2.48 | 2.72 | 2.99 | 3.29 | 3.61 | 3.96 | 4.32 |
| 210 | 0.82 | 0.90 | 0.99 | 1.09 | 1.20 | 1.31 | 1.43 |
| 370 | 2.55 | 2.80 | 3.07 | 3.38 | 3.71 | 4.07 | 4.44 |
| 330 | 2.03 | 2.22 | 2.44 | 2.69 | 2.95 | 3.24 | 3.53 |



PROJECT: **GAMBELL STREET TRANSMISSION POLE RELOCATE**
 ENG./DESIGN.: **SUPAT CHANONTO (CEA) / GREG HUFFMAN (EPS)** W.O. # **E2320071**

| NO. | DESIGN/CONSTRUCTION/ASBUILT REVISION | DWN. BY/DATE | REVIEWED MGR./SUPV./DATE | APPROVED DIRECTOR/DATE |
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| 0 | ISSUED FOR CONSTRUCTION | BWA 06/27/25 | GDH 06/27/25 | |

| NO. | RECORD REVISION | CAD DRAWN BY | W.P.# | W.O. NUMBER | RECORD APPROVED | DATE |
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DRAWING NAME: **115kV TRANSMISSION LINE
SUB 06 - NIKKELS PP
PLAN & PROFILE
STRUCTRE 64H TO STRUCTURE 84C**

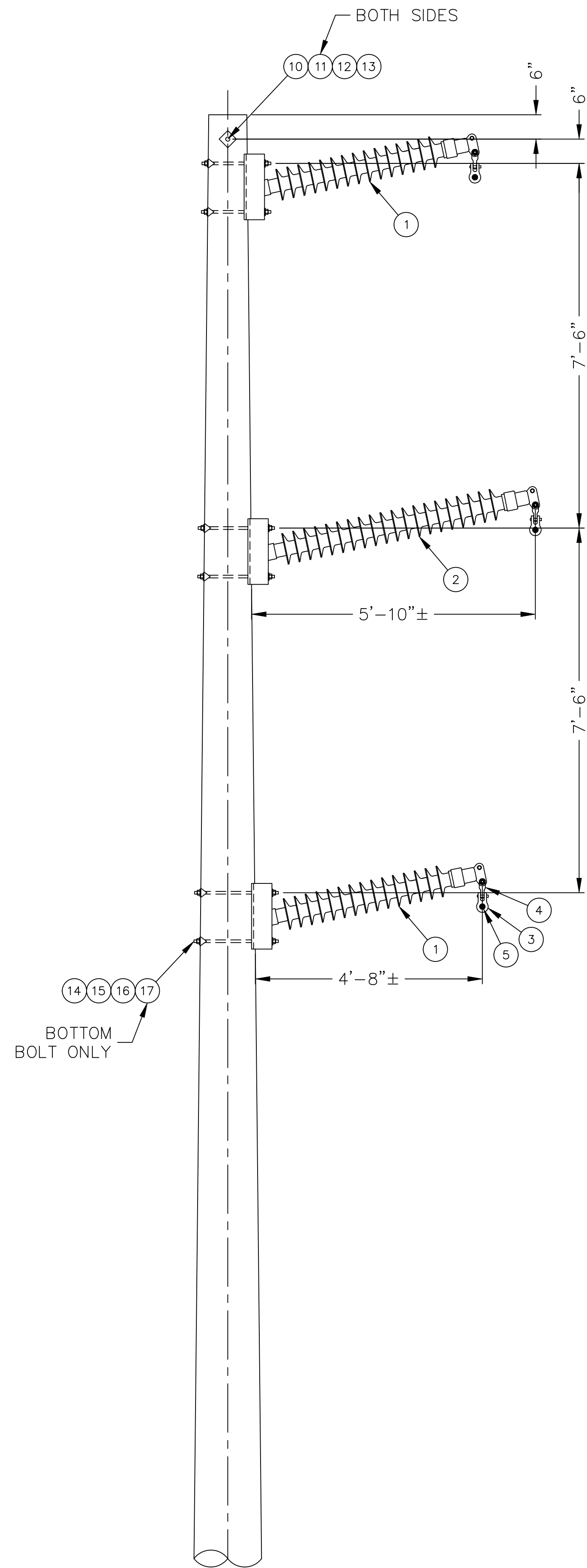
CONFIDENTIAL

DRAWING NO.: 06NK-PP-0001
 SHEET 0001 OF 1
 PAGE 3 OF 5

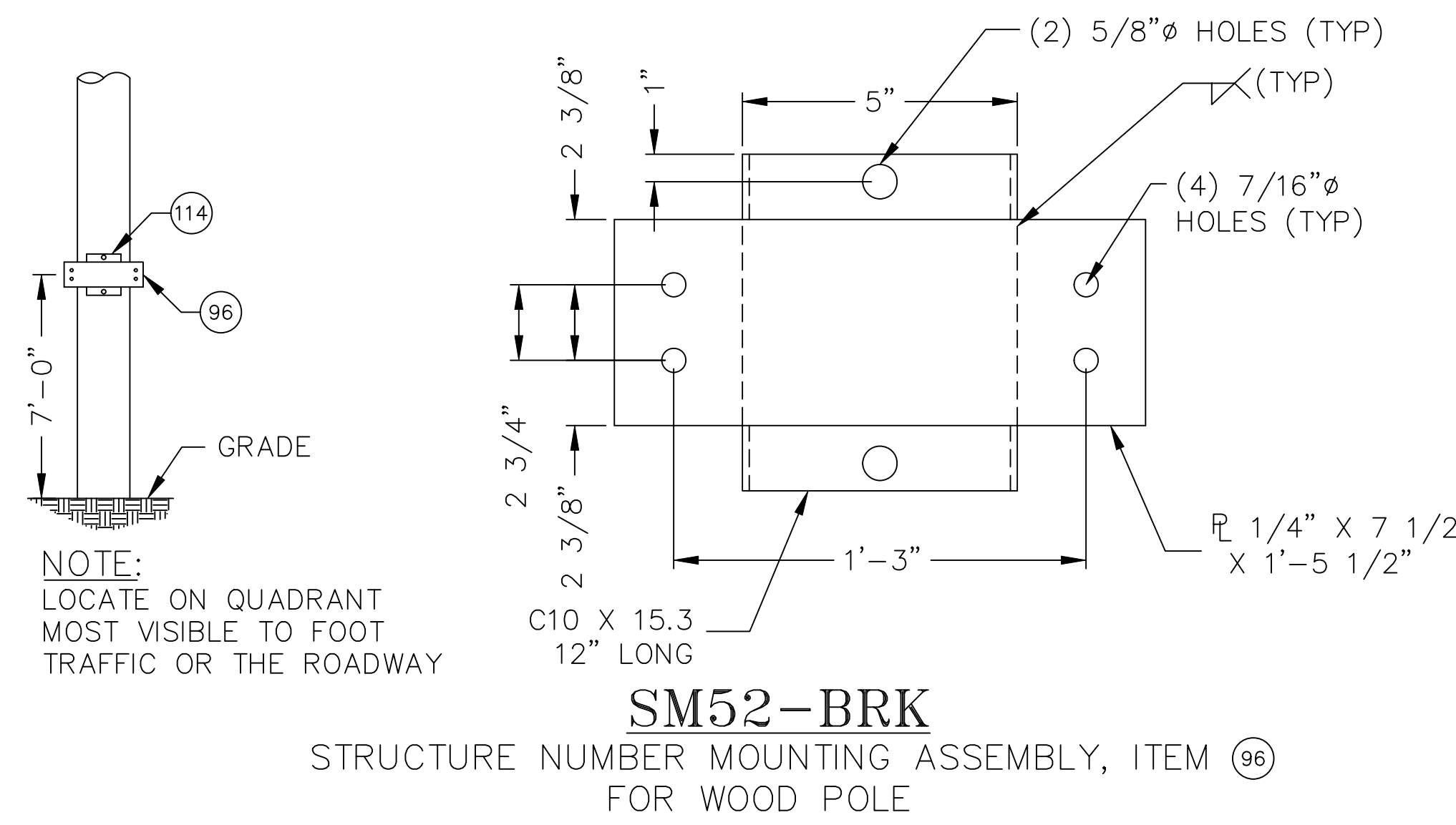
LIST OF MATERIALS FOR 115-TAN, SM52-BRK, & SM52-3

| ITEM | QTY/ASM | | | DESCRIPTION | MANUFACTURE/CATALOG # |
|-------|---------|----------|--------|--|-----------------------|
| | 115-TAN | SM52-BRK | SM52-3 | | |
| 1 | 2 | - | - | INSULATOR, HORIZONTAL POST, 115kV, GAIN BASE, 2.5" ROD, 2-HOLE BLADE | HUBBELL #P250043S0020 |
| 2 | 1 | - | - | INSULATOR, HORIZONTAL POST, 161kV, GAIN BASE, 2.5" ROD, 2-HOLE BLADE | HUBBELL #P250058S0020 |
| 3 | 3 | - | - | CLAMP, SUSPENSION, 1.00" - 1.47" CLAMPING RANGE | HUBBELL #HAS-147-N |
| 4 | 3 | - | - | Y-CLEVIS EYE, 25K | HUBBELL #YCS-06-90 |
| 5 | 3 | - | - | ARMOR RODS, 397 ACSR "IBIS" | PLP #AR-0132 |
| * 10 | 1 | - | - | MACHINE BOLT, 5/8" X REQ'D LENGTH | - |
| * 11 | 2 | - | - | SQUARE WASHER, CURVED, 3" X 3" FOR 5/8" BOLT, GALVANIZED | HB #SCW3-60 |
| * 12 | 1 | - | - | LOCKNUT FOR 5/8" BOLT, MF TYPE | HB #MF60 |
| * 13 | 1 | - | - | WASHER, SPRING, FOR 5/8" BOLT | HB #2702.6 |
| * 14 | 6 | - | - | BOLT, MACHINE, 7/8" X REQ'D LENGTH | - |
| * 15 | 6 | - | - | SQUARE WASHER, CURVED, 4" X 4" FOR 7/8" BOLT | HB #CW80 |
| * 16 | 6 | - | - | LOCKNUT FOR 7/8" BOLT, MF TYPE | HB #MF80 |
| * 17 | 3 | - | - | WASHER, SPRING, FOR 7/8" BOLT | HB #2702.8 |
| * 96 | - | 1 | - | STRUCTURE NUMBER MOUNTING BRACKET | - |
| * 102 | - | - | 3 | POLE DECAL/NUMBER, HDPE, 5"x7" | - |
| * 103 | - | - | 1 | POLE NUMBER BASE TRAY, ALUMINUM W/YELLOW REFLECTION SHEETING | - |
| * 107 | - | - | 4 | BOLT, 3/8"x1", W/NUT | - |
| * 111 | - | - | 4 | SPLIT WASHER, 3/8" BOLT | - |
| * 114 | - | 2 | - | LAG SCREW, 1/2"x6", GALVANIZED | - |

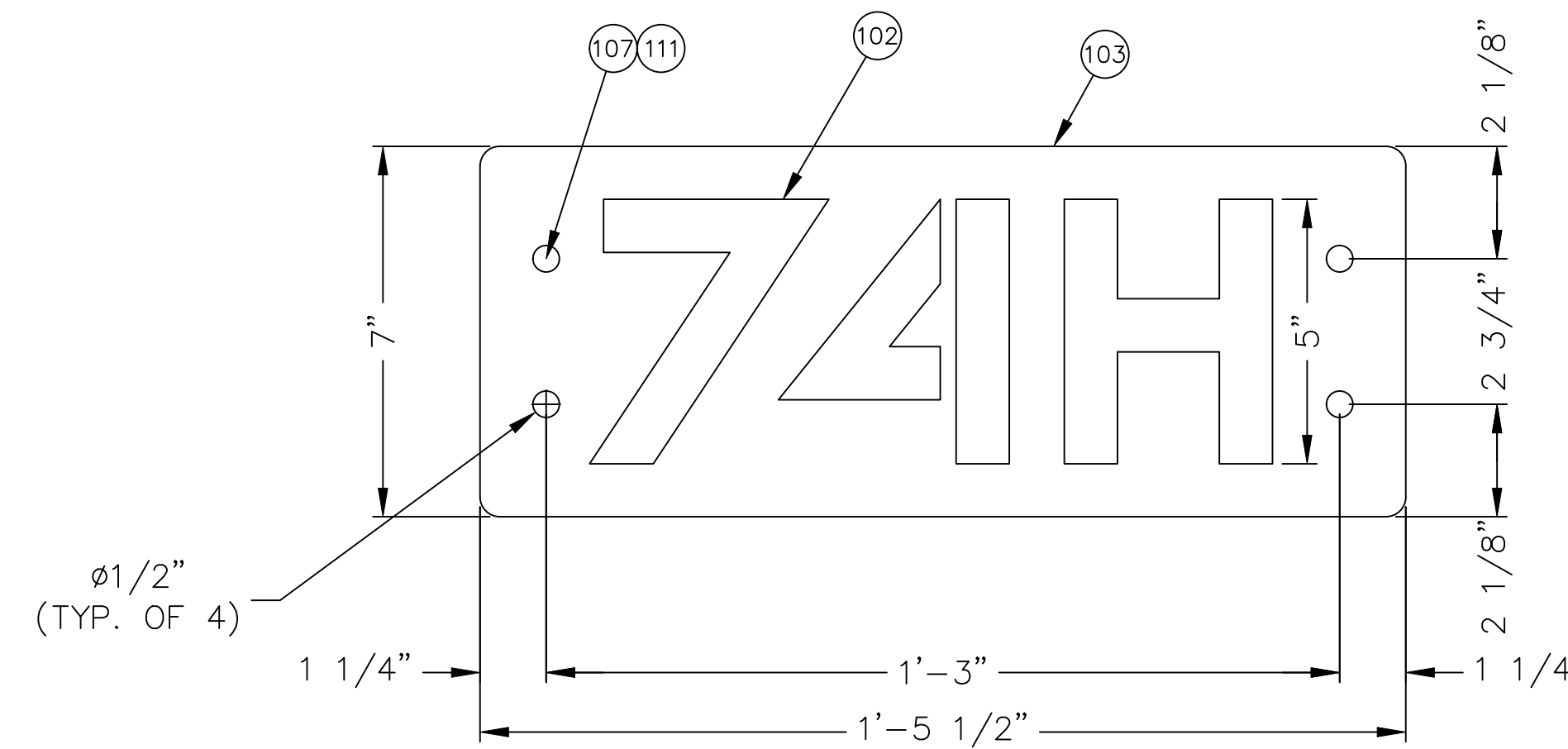
* CONTRACTOR FURNISHED



115-TAN
115kV TANGENT WOOD POLE ASSEMBLY
LOOKING EAST



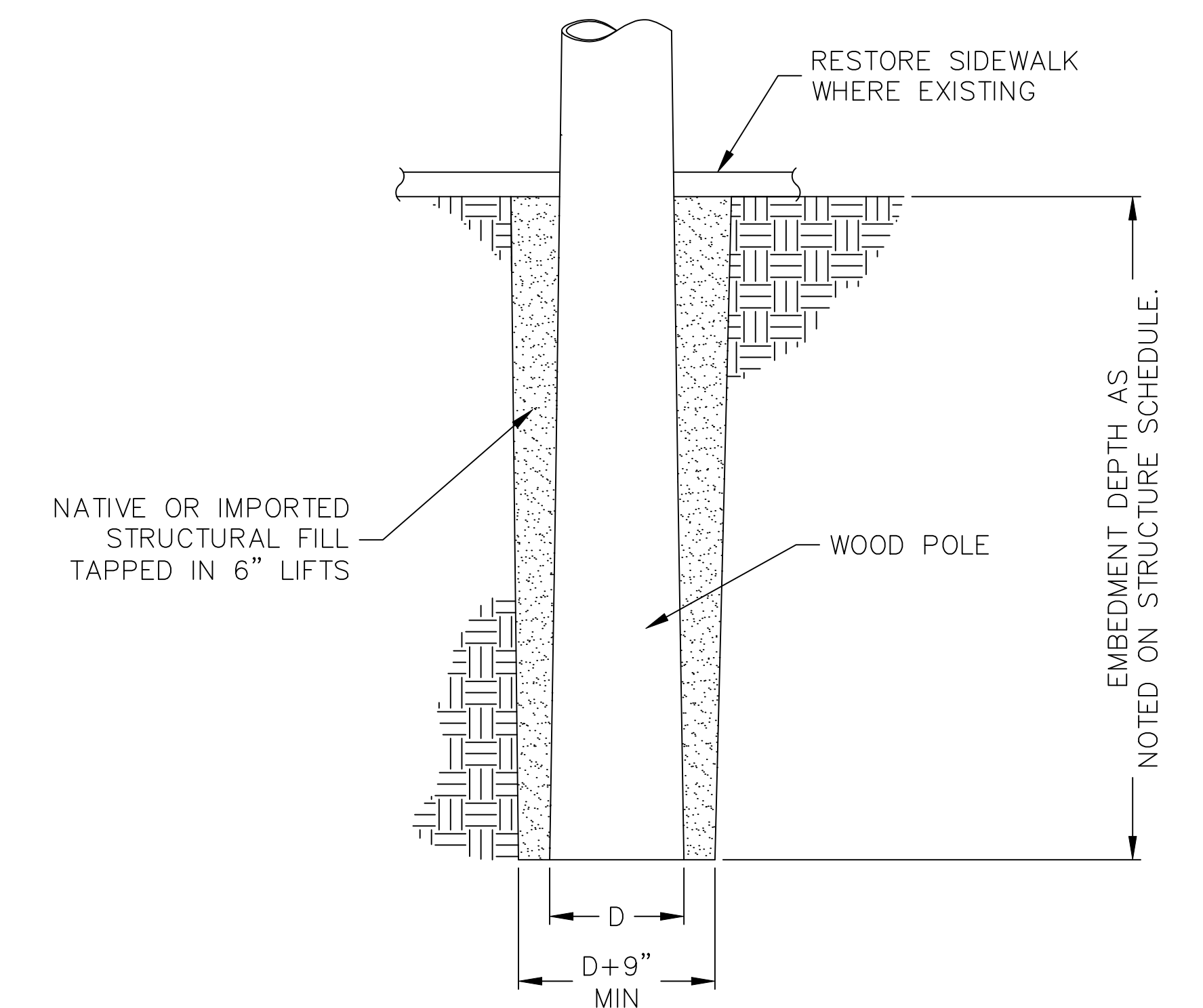
SM52-BRK
STRUCTURE NUMBER MOUNTING ASSEMBLY, ITEM 96
FOR WOOD POLE



SM52-3
STRUCTURE NUMBER ASSEMBLY
FOR WOOD POLES

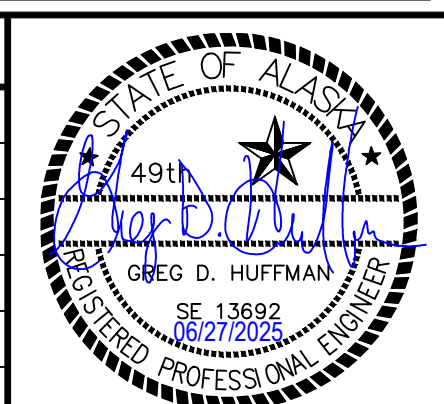
NOTES:

1. SIGNS SHALL BE FABRICATED WITH 3M 3931 YELLOW TYPE IV REFLECTIVE SHEETING WITH BLACK NUMBERS ON .125" THICK ALUMINUM.
2. THESE MATERIALS CONFORM TO STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AS REQUIRED UNDER SECTIONS 615 AND 730.
3. SIGN NUMBERS SHALL MATCH STRUCTURE NUMBER INDICATED ON STRUCTURE SCHEDULE.



TYPICAL DIRECT EMBEDDED FOUNDATION
(UNIT SM31A FOR IMPORTED STRUCTURAL FILL)

| | | | | |
|---|--------------------------------------|--------------|--------------------------|------------------------|
| PROJECT: GAMBELL STREET TRANSMISSION POLE RELOCATE | | | | |
| ENG./DESIGN.: SUPAT CHANONTO (CEA) / GREG HUFFMAN (EPS) W.O. # E2320071 | | | | |
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| 1 | X | XX | - | - | XXX | XX/XX/XX |



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| DRAWING NAME: | | 115kV TRANSMISSION LINE SUB 06 - NIKKELS PP STRUCTURAL & ASSEMBLY 115-TAN | |
| DRAWING NO. - PREVIOUS/REFERENCE | | 06NK-SS-0002_0001_0 | |
| DRAWING NO.: | | 06NK-SS-0002 | |
| SHEET 0001 OF 1 | | PAGE 5 OF 5 | |