| Δ Δc | total central angle curve central angle | M.L. M.P. | main line mile post | National Boundary | | | North Arrow | |
|----------------------|--|-------------------|--|--|----------------------|----------------------|--------------------------------|----------------------|
| Ø θs | diameter spiral central angle | matl. max. | material maximum | State Boundary | | | North Arrow | |
| abut. | abutment | MGAL min. | thousand gallon minimum | County Boundary | | | Slope Stake Limi | its |
| ADT AH | average daily traffic ahead | mon. | monument | City Boundary | | | Construction Lim | nits |
| appr. | approach | N NC | north normal crown | Township or Range Line | | | Bottom of Ditch | |
| BK b.f. | back back face | 0.C. | on center | Section Line | | | | |
| BM | bench mark | o. to o. | out to out | Section Corner (Found, Projected) | 36 31 1 6 | 36 31 | Fence | |
| BP br. | balance point bridge | OD OG | outside diameter original ground | | 1 6 | | Gate with Fence | |
| brg. btwn | bearing between | OHWM | ordinary high water mark | ¹ ⁄ ₄ Section Line | 15 | 15 | Cattleguard | |
| | c. center to center | PC | point of curve | ¹ / ₄ Section Corner (Found, Projected) | 22 | 22 | _ | |
| ¢ | centerline | PCC PCS | point of compound curve point of curve to spiral | ¹ ⁄ ₁₆ Section Line | | | Guardrail | |
| clr. CMP | clear corrugated metal pipe | PI | point of intersection | ¹ / ₁₆ Section Corner (Found, Projected) | 0 | | Concrete Barrier | and Gu |
| col. | column | pl. POC | plate point on curve | Property Line | | | Retaining Wall | |
| conc. conn. | concrete connection | POS POT | point on spiral point on tangent | Parcel Number | (40 | | | |
| constr. jt. cont. | construction joint continuous | PS | point of tangent to spiral | | | | Signs (single, do | uble po: |
| CS | point of curve to spiral | PSF PSI | pounds per square foot pounds per square inch | National Park Boundary | | | Delineators | |
| ctrs. CUFT | centers cubic foot (feet) | PSC PST | point of spiral to curve point of spiral to tangent | National Forest Boundary | | | Pipe Culvert (arr | ow shov |
| culv. CUYD | culvert cubic yard(s) | PT | point of tangent | National Wildlife Refuge Boundary | //// NWR //// NWR // | // NWR //// NWR //// | | |
| D | diameter | pvmt. | pavement | BLM Lands Boundary | | | Pipe Culvert with | i End Se |
| DHV | design hourly volume | R R. | radius range | Indian Reservation Boundary | | | Pipe Culvert with | n Headw |
| dia. diaph. | diameter diaphragm | R/W | right-of-way | Existing Roadway (Paved, Gravel) | | | Pipe Culvert with | n Drop II |
| dist. | distance | rdwy. reinf. | roadway reinforcement | Existing Roadway (Paveu, Graver) | | | | |
| drwg(s). r | drawing(s) | reqd. | required | Railroad | | | Box Culvert | |
| e | east superelevation rate | rt. or RT rte. | right route | Tro:/ | | | Underdrain | |
| e.f. El. 94.16 | each face elevation in feet | S | south | Trail | | | Overhead/Above | Ground |
| elev. | elevation | SADT | seasonal average daily traffic | Fiber Roll | | | | |
| emb. EOP | embankment edge of pavement | SC sect. | point of spiral to curve section | Silt Fence | | | Underground Util FM = force | |
| EQ or eq. EW | equation edge of water | shldr. SLRY | shoulder slurry unit | Condhag | | | P = power, | SA = s |
| exc. | excavation | spa. | spacing, spaces or spaced | Sandbag | | | STEAM = st | team, T |
| exp. jt. | expansion joint | SQFT SQYD | square foot square yard | Intermittent Drainage or Small Creek | | | Poles (Power, Te | |
| f.f. fin. | front face finish | SRS SS | point of spiral to reverse spiral point of spiral to spiral (no curve) | Large Creek or River | ° ° ° ° | | Light, Sup | oport w _i |
| flg. | flange footing | ST | point of spiral to tangent | | · · · · · | | Miscellaneous Ut | - |
| ftg. | footing gage (gauge) | STA, Sta. std. | station standard | Lake, Pond or Reservoir; Marshland | 0 | <u>*</u> <u>*</u> | EM = electr UP = transf | |
| ga. galv. | galvanized | stgr. stiff. | stringer stiffener | | | <u> </u> | | |
| ID | inside diameter | struc. | structural | Spring or Seep | 0/- | | Building | |
| IE jt. | invert elevation joint | STS | point of spiral to tangent spiral | Treeline; Individual Trees | | mar and mar | Right-of-Way Lin | ne |
| KSI | thousand pounds per | | tangent distance | | · · · · | | Permanent Easer | ment |
| | square inch | T. TBM | township temporary bench mark | | | TP | Construction For | omont |
| L | length of curve | thd. TS | thread point of tangent to spiral | Material Source; Bore Hole; Test Pit | \times • | N 1000 | Construction Eas | sement |
| lat. LNFT | latitude linear foot (feet) | Ts | tangent distance (spiraled curve) | Spot Elevation; Coordinate Grid Tick | | m | Riprap | - Pi |
| long. LPSM | longitudinal lump sum | typ. | typical | Above Ground Tank; Underground Tank | | () | | - A |
| Ls | length of spiral | V vph | design speed (velocity) vehicles per hour | · | | | | 86 |
| lt. or LT LW | left low water | VPI | vertical point of intersection | Boulder; Well; Antenna; Grave | | | | |
| | | W | west | Cooking Grate; Garbage Can; Picnic Table | | Ó. | | |
| ٨ | IOTE: | | | Flagpole; Fire Hydrant | | $-\alpha$ | | |
| | Other symbols used in the | e plans will b | pe shown in a legend | Gas & Water Meter; Gas & Water Valve | | | | |
| | on the appropriate plan si | | | Control Point (Terrestrial and GPS) | | | | |
| | | | | | + 1 | F | NO SCALE | |

| | | | PROJECT | | SHEET NUMBER |
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| φ | Z EXISTING | <u> </u> | PRO | POSED | |
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| d Guard Wall | | = = = > | | | _ |
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| le post; portable) | | | • | | 1 |
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| ound Utilities – | — — P — — | — P — | — Р — | P : | |
| | _\/\/ | — W — | | wi | |
| es in, FO = fiber opti A = sanitary sewer, m, T = telephone, | ic, G = gas, i , SD = storm | IRR = irri <u>o</u> drain, SS | gation, C S = storm | | |
| hone, Joint Use,— ort w/Anchor) | | | | |) |
| / Features | | | | TP | |
| meter, TP = teleph ner or junction box | none pedestal, x, WF = water | TV = CA fountain | <i>TV pedes</i> | ital, | |
| | | | | | |
| | | r/w — | | | |
| nt | | P/E — | P/E | | |
| nent | - no symbo | | TCE | | |
| MARKA . | | | Δ | Δ | |
| | Section A | -A | | | |
| | | | | | |
| | NT OF TRANSPORTA FEDERAL LANDS HI | | | WFLHD D W101 | |
| | | | | SPECIFIC | ATION |
| | SYMBOLS | | ╞ | FP-1 APPROVED F | OR USE |
| ABBR | REVIATIO | CN1 | | 6/20 | 22 |

| Δ | | total central angle | M.L. | main line | | | |
|-----------------|--|--|--------------------|--|---|---|--|
| ∆c Ø | | curve central angle diameter | M.P. m2 | mile post square meter | National Boundary | | North Arrow |
| θs | | spiral central angle | m3 matl. | cubic meter material | State Boundary | | Slope Stake Limits |
| abu AD | Т | abutment average daily traffic | max. min. | maximum minimum | County Boundary | | |
| AH app | | ahead approach | mon. | monument | City Boundary | | Construction Limits |
| BK | | back | N NC | north normal crown | Township or Range Line | | Bottom of Ditch |
| b.f. BM | | <i>back face bench mark</i> | 0. <i>C</i> . | on center | Section Line | | Fence |
| BP br. | | balance point bridge | o. to o. OD | out to out outside diameter | Section Corner (Found, Projected) | | Gate with Fence |
| brg btw | | bearing between | OG OHWM | original ground ordinary high water mark | 1⁄4 Section Line | 15 15 | Cattleguard |
| | | center to center | PC | point of curve | ¹ / ₄ Section Corner (Found, Projected) | 22 C | Guardrail |
| ⊈ clr. | | centerline clear | PCC PCS | point of compound curve point of curve to spiral | $\frac{1}{16}$ Section Line | | |
| СМ | Ρ | corrugated metal pipe | PI | point of intersection | $\frac{1}{16}$ Section Corner (Found, Projected) | SEC. | Concrete Barrier and Gu |
| col. con | IC. | column concrete | pl. POC | plate point on curve | Property Line | P/LP/L | Retaining Wall |
| con con | nn. Istr. jt. | connection construction joint | POS POT | point on spiral point on tangent | Parcel Number | 400 | Signs (single, double po |
| con CS | | continuous point of curve to spiral | PS PSC | point of tangent to spiral point of spiral to curve | National Park Boundary | | Delineators |
| ctrs cul | s. | centers culvert | PST PT | point of spiral to tangent point of tangent | National Forest Boundary | | Pipe Culvert (arrow sho |
| D | | diameter | pvmt. | pavement | National Wildlife Refuge Boundary | //// NWR //// NWR //// NWR //// NWR /// | · · · · · |
| DH dia. | | design hourly volume diameter | R R. | radius range | BLM Lands Boundary | *************************************** | Pipe Culvert with End S |
| dia dist | ph. | diaphragm distance | R/W | right-of-way | Indian Reservation Boundary | | Pipe Culvert with Headv |
| | vg(s). | drawing(s) | rdwy. reinf. | roadway reinforcement | Existing Roadway (Paved, Gravel) | | Pipe Culvert with Drop I |
| E e | | east superelevation rate | reqd. rt. or RT | required right | | | Box Culvert |
| e.f. | 94.016 | each face elevation in meters | rte. | route | Railroad | | Underdrain |
| ele em | <i>v.</i> | elevation embankment | S SADT | south seasonal average daily traffic | Trail | | Overhead/Above Groun |
| EOI | Р | edge of pavement | SC sect. | point of spiral to curve section | Fiber Roll | | - |
| EW | | equation edge of water | shldr. SLRY | shoulder slurry unit | Silt Fence | | - Underground Utilities FM = force main, |
| exc exp | :. 5. jt. | excavation expansion joint | spa. | spacing, spaces or spaced | Sandbag | | P = power, SA = s STEAM = steam, |
| f.f. | | front face | SRS SS | point of spiral to reverse spiral point of spiral to spiral (no curve) | Intermittent Drainage or Small Creek | | |
| fin. flg. | | finish flange | ST STA, Sta. | point of spiral to tangent station | Intermittent Dramage of Small Creek | | Poles (Power, Telephone Light, Support w |
| ftg. | | footing | std. stgr. | standard stringer | Large Creek or River | | Miscellaneous Utility Fea |
| ga. gal | | gage (gauge) galvanized | stiff. struc. | stiffener structural | Lake, Pond or Reservoir; Marshland | °•• ¥ ¥ | EM = electric mete |
| | | inside diameter | STS | point of spiral to tangent spiral | | 4 | UP = transformer of |
| IE jt. | | invert elevation joint | Ţ | tangent distance | Spring or Seep | and AB | Building |
| K.P | 2. | kilometer post | T. TBM | township temporary bench mark | Treeline; Individual Trees | man and the first for the for | Right-of-Way Line |
| | | length of curve | thd. TS | thread point of tangent to spiral | , | | Permanent Easement |
| Iat. | g. | latitude longitudinal | Ts typ. | tangent distance (spiraled curve) typical | Material Source; Bore Hole; Test Pit | | Construction Easement |
| 29497 294 LS | | lump sum length of spiral | V | design speed (velocity) | Spot Elevation; Coordinate Grid Tick | N 1000 | Riprap Q |
| Virk It. o | or LT | left Iow water | vph VPI | vehicles per hour vertical point of intersection | | E 400 | |
| c:\pw | | | W | west | Above Ground Tank; Underground Tank | | A |
| | | | 1 00 | west | Boulder; Well; Antenna; Grave | | |
| | N | IOTE: | | | Cooking Grate; Garbage Can; Picnic Table | | |
| Σ | 1. Other symbols used in the plans will be shown in a legend | | | e shown in a leaend | Flagpole; Fire Hydrant | ► -Q | |
| 4:48 P | | on the appropriate plan sl | | · - • - • - • · · · | Gas & Water Meter; Gas & Water Valve | | |
| 2024 | | Dimensions in this plan se | et are in milli | meters | Control Point (Terrestrial and GPS) | CP GPS | |
|) June | | unless otherwise noted. | | | Control Follit (Terrestrial alla GPS) | ↔ + | NO SCALE |

| | | PR | OJECT | SHEET NUMBER | | | |
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| ohone, Joint Use, — | | | • | | | | |
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| y Features | | | TP ■ | | | | |
| meter, TP = teleph mer or junction box | ione pedesta , WF = wate | r, TV = CAT r fountain | V pedestal, | | | | |
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| | Section | A-A | | | | | |
| <i>This drawing contains Metric units of measure. Dimensions without units are millimeters.</i> | | | | | | | |
| U.S. DEPARTMENT OFFICE OF FE | OF TRANSPORTA DERAL LANDS HI | | WFLHD | | | | |
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| PLAN S | | | FP- | 14 | | | |
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