APPENDIX A

General Order 95 Clearance Requirements

37 Minimum Clearances of Wires above Railroads, Thoroughfares, Buildings, Etc.

Clearances between overhead conductors, guys, messengers or trolley span wires and tops of rails, surfaces of thoroughfares or other generally accessible areas across, along or above which any of the former pass; also the clearances between conductors, guys, messengers or trolley span wires and buildings, poles, structures, or other objects, shall not be less than those set forth in Table 1, at a temperature of 60° F. and no wind.

The clearances specified in Table 1, Case 1, Columns A, B, D, E and F, shall in no case be reduced more than 5% below the tabular values because of temperature and loading as specified in Rule 43, or other conditions. The clearances specified in Table 1, Cases 2 to 6 inclusive, shall in no case be reduced more than 10% below the tabular values because of temperature and loading as specified in Rule 43, or other conditions.

The clearance specified in Table 1, Case 1, Column C (22.5 feet), shall in no case be reduced below the tabular value because of temperature and loading as specified in Rule 43.

The clearances specified in Table 1, Cases 11, 12 and 13, shall in no case be reduced below the tabular values because of temperatures and loading as specified in Rule 43.

Where supply conductors are supported by suspension insulators at crossings over railroads which transport freight cars, the initial clearances shall be sufficient to prevent reduction to clearances less than 95% of the clearances specified in Table 1, Case 1, through the breaking of a conductor in either of the adjoining spans.

Where conductors, dead ends, and metal pins are concerned in any clearance specified in these rules, all clearances of less than 5 inches shall be applicable from surface of conductors (not including tie wires), dead ends, and metal pins, except clearances between surface of crossarm and conductors supported on pins and insulators (referred to in Table 1, Case 9) in which case the minimum clearance specified shall apply between center line of conductor and surface of crossarm or other line structure on which the conductor is supported.

All clearances of 5 inches or more shall be applicable from the center lines of conductors concerned.

When measuring the minimum allowable vertical conductor clearances in a span, the minimum clearance applies to the specific location under the span being measured and not for the entire span.

Note: Modified January 8, 1980 by Decision No. 91186, March 9, 1988 by Resolution E–3076; and November 6, 1992 by Resolution SU–15, September 20, 1996 by Decision 96–09–097, January 23, 1997 by Decision 97–01–044 and January 13, 2005 by Decision No. 0501030.

Table 1: Basic Minimum Allowable Vertical Clearance of Wires above Railroads, Thoroughfares, Ground or Water Surfaces; Also Clearances from Poles, Buildings, Structures or Other Objects (nn) (Letter References Denote Modifications of Minimum Clearances as Referred to in Notes Following This Table)

Case No.	Nature of Clearance	Wire or Conductor Concerned						
		A Span Wires (Other than Trolley Span Wires) Overhead Guys and Messengers	B Communication Conductors (Including Open Wire, Cables and Service Drops), Supply Service Drops of 0 - 750 Volts	C Trolley Contact, Feeder and Span Wires, 0 - 5,000 Volts	D Supply Conductors of 0 - 750 Volts and Supply Cables Treated as in Rule 57.8	E Supply Conductors and Supply Cables, 750 - 22,500 Volts	F Supply Conductors and Supply Cables, 22.5 - 300 kV	G Supply Conductors and Supply Cables, 300 - 550 kV (mm)
1	Crossing above tracks of railroads which transport or propose to transport freight cars (maximum height 15 feet, 6 inches) where not operated by overhead contact wires. (a) (b) (c) (d)	25 Feet	25 Feet	22.5 Feet	25 Feet	28 Feet	34 Feet	34 Feet (kk)
2	Crossing or paralleling above tracks of railroads operated by overhead trolleys. (b) (c) (d)	26 Feet (e)	26 Feet (e) (f) (g)	22.5 Feet (h) (i) (eee)	27 Feet (e) (g)	30 Feet (g)	34 Feet (g)	34 Feet (g) (kk)
3	Crossing or along thoroughfares in urban districts or crossing thoroughfares in rural districts. (c) (d)	18 Feet (j) (k) (ii)	18 Feet (j) (l) (m) (ii) (kkk)	19 Feet (hh) (eee)	20 Feet (ii)	25 Feet (o) (ii)	30 Feet (o) (ii)	30 Feet (o) (ii) (kk)
4	Above ground along thoroughfares in rural districts or across other areas capable of being traversed by vehicles or agricultural equipment.	15 Feet (k)	15 Feet (m) (n) (p)	19 Feet (eee)	19 Feet	25 Feet (o)	30 Feet (o) (p)	30 Feet (o) (kk)
5	Above ground in areas accessible to pedestrians only	8 Feet	10 Feet (m) (q)	19 Feet (eee)	12 Feet	17 Feet	25 Feet (o)	25 Feet (o) (kk)
6	Vertical clearance above walkable surfaces on buildings, (except generating plants or substations) bridges or other structures which do not ordinarily support conductors, whether attached or unattached.	8 Feet (r)	8 Feet (r)	8 Feet	8 Feet	12 Feet	12 Feet	20 Feet (ll)
6a	Vertical clearance above non–walkable surfaces on buildings, (except generating plants or substations) bridges or other structures, which do not ordinarily support conductors, whether attached or unattached	2 Feet	8 Feet (yy)	8 Feet	8 Feet (zz)	8 Feet	8 Feet	20 Feet
7	Horizontal clearance of conductor at rest from buildings (except generating plants and substations), bridges or other structures (upon which men may work) where such conductor is not attached thereto (s) (t)	-	3 Feet (u)	3 Feet	3 Feet (u) (v)	6 Feet (v)	6 Feet (v)	15 Feet (v)
8	Distance of conductor from center line of pole, whether attached or unattached (w) (x) (y)	-	15 inches (s) (aa)	15 inches (aa) (bb) (cc)	15 inches (o) (aa) (dd)	15 or 18 inches (o) (dd) (ee) (jj)	18 inches (dd) (ee)	Not Applicable
9	Distance of conductor from surface of pole, crossarm or other overhead line structure upon which it is supported, providing it complies with case 8 above (x)	-	3 inches (aa) (ff)	3 inches (aa) (cc) (gg)	3 inches (aa) (dd) (gg)	3 inches (dd) (gg) (jj)	1/4 Pin Spacing Shown in Table 2 Case 15 (dd)	1/2 Pin Spacing Shown in Table 2 Case 15 (dd)

Table 1 (Continued)

Case No.	Nature of Clearance	Wire or Conductor Concerned						
		A Span Wires (Other than Trolley Span Wires) Overhead Guys and Messengers	B Communication Conductors (Including Open Wire, Cables and Service Drops), Supply Service Drops of 0 - 750 Volts	C Trolley Contact, Feeder and Span Wires, 0 - 5,000 Volts	D Supply Conductors of 0 - 750 Volts and Supply Cables Treated as in Rule 57.8	E Supply Conductors and Supply Cables, 750 - 22,500 Volts	F Supply Conductors and Supply Cables, 22.5 - 300 kV	G Supply Conductors and Supply Cables, 300 - 550 kV (mm)
10	Radial centerline clearance of conductor or cable (unattached) from non-climbable street lighting or traffic signal poles or standards, including mastarms, brackets and lighting fixtures, and from antennas that are not part of the overhead line system.	-	1 Foot (u) (rr) (ss)	15 inches (bb) (cc)	3 Feet (oo)	6 Feet (pp)	10 Feet (qq)	10 Feet (ll)
11	Water areas not suitable for sailboating (tt) (uu) (ww) (xx)	15 Feet	15 Feet	-	15 Feet	17 Feet	25 Feet	25 Feet (kk)
12	Water areas suitable for sailboating, surface area of: (tt) (vv) (ww) (xx)							
	(A) Less than 20 acres	18 Feet	18 Feet	-	18 Feet	20 Feet	27 Feet	27 Feet (kk)
	(B) 20 to 200 acres	26 Feet	26 Feet	-	26 Feet	28 Feet	35 Feet	35 Feet (kk)
	(C) Over 200 to 2,000 acres	32 Feet	32 Feet	-	32 Feet	34 Feet	41 Feet	41 Feet (kk)
	(D) Over 2,000 acres	38 Feet	38 Feet		38 Feet	40 Feet	47 Feet	47 Feet (kk)
13	Radial clearance of bare line conductors from tree branches or foliage (aaa) (ddd)	-	-	18 inches (bbb)	-	18 inches (bbb)	1/4 pin spacing shown in table 2, Case 15 (bbb) (ccc)	1/2 pin spacing shown in table 2, Case 15
14	Radial clearance of bare line conductors from vegetation in Extreme and VeryHigh Fire Threat Zones in Southern California (aaa) (ddd) (hhh)(jjj)			18 inches (bbb)		48 inches (bbb) (iii)	48 inches (fff)	120 inches (ggg)

References to Rules Modifying Minimum Clearances in Table 1

	Rule
(a) Shall not be reduced more than 5% because of temperature or loading	37
1 Supply lines	54.4–B1
2 Communication lines	84.4–B1
(b) Shall be increased for supply conductors on suspension insulators, under certain conditions	37
(c) Special clearances are provided for traffic signal equipment	58.4–C
(d) Special clearances are provided for street lighting equipment	58.5–B
(e) Based on trolley pole throw of 26 feet. may be reduced where suitably protected	56.4–B2
1 Supply guys	56.4–B2
2 Supply cables and messengers	57.4–B2
3 Communication guys	86.4–B2
4 Communication cables and messengers	87.4–B2
(f) May be reduced depending on height of trolley contact conductors	
1 Supply service drops	54.8–C5
2 Communication service drops	84.8–D5
(g) May be reduced and shall be increased depending on trolley throw	
1 Supply conductors (except service drops)	54.4–B2
2 Communication conductors (except service drops)	84.4–B2
(h) May be decreased where freight cars are not transported.	
1. Trolley contact and feeder conductors.	74.4-B1
2. Trolley span wires	77.4-A
(i) May be reduced for trolley contact and span wires in subways, tunnels, under bridges and in fenced areas	
1 Trolley contact conductors	74.4–E
2 Trolley span wires	77.4–B
(j) May be reduced at crossings over private thoroughfares and entrances to private property and over private property	
1 Supply service drops	54.8–B2
2 Supply guys	56.4–A
3 Communication service drops	84.8–C2
4 Communication guys	86.4–A
(k) May be reduced along thoroughfares where not normally accessible to vehicles	
1 Supply guys	56.4–A1
2 Communication guys	86.4–A1
(l) May be reduced where within 12 feet of curb line of public thoroughfares	
1 Supply service drops	54.8–B1
2 Communication service drops	84.8–C1
(m) May be reduced for railway signal cables under special conditions	84.4–A4

References to Rules Modifying Minimum Clearances in Table 1

		Rule
(n)	May be reduced in rural districts	
1	Intentionally left blank	
2	Intentionally left blank	
3	Communication conductors along roads	84.4–A2
(o)	May be reduced for transformer, regulator or capacitor leads	
1	Transformer leads	58.1–B
2	Regulator or capacitor leads	58.1–B
(p)	May be reduced across arid or mountainous areas	
1	Supply conductors of more than 22,500 volts	54.4–A1
2	Communications conductors	84.4–A1
(q)	Shall be increased or may be reduced under special conditions	
1	Supply service drops	54.8–B3
2	Intentionally left blank	
3	Communications conductors	84.4–A3
4	Increased for communication service drops on industrial or commercial premises	84.8–C3a
5	Communication service drops on residential premises	84.8–C3b
(r)	May be reduced above roofs of buildings under special conditions	
1	Supply overhead guys	56.4–G
2	Supply service drops	54.8–B4
3	Communication overhead guys	86.4–F
4	Communication conductors and cables	84.4–E
5	Communication service drops	84.8–C4
(s)	Also applies at fire escapes, etc.	
1	Supply conductors	54.4–H1
2	Vertical clearances	54.8B4a
3	Horizontal clearance	54.8–B4b
4	Communication conductors	84.4–E
1	Supply conductors of 750 - 22,500 volts	54.4–H2
2	Trolley contact conductors	74.4–E
3	Communication conductors	84.4–F
(u)	Reduced clearances permitted under special conditions	
1	Supply service drops on industrial or commercial premises	54.8–B4a
2	Supply cables, grounded	57.4–G
3	Communication cables beside buildings, etc.	84.4–E
4	Communication conductors under bridges, etc.	84.4–F
5	Communication service drops	84.8–C4
6	Communication cables passing nonclimbable street light poles, etc.	84.4–D4a
(v)	May be reduced under special conditions	
1	Supply conductors of 750 - 7,500 volts	54.4–H1
2	Supply transformer lead and bus wires, where guarded	58.1
(w)	May be reduced at angles in lines and transposition points	
1	Supply conductors	54.4–D1
2	Communication conductors	84.4–D5
(x)	May be reduced for suitably protected lateral or vertical runs	
1	Supply bond wires	53.4
2	Supply ground wires	54.6–B
3	Supply lateral conductors	54.6–C
4	Supply vertical runs	54.6–D
5	Supply risers	54.6–E
6	Communication ground wires	84.6–B
7	Communication lateral conductors	84.6–C
8	Communication vertical runs	84.6–D
9	Communication risers	84.6–E
(y)	Increased clearances required for certain conductors	
1	Unattached conductors on colinear and crossing lines	32.3
2	Unattached supply conductors	54.4–D3
3	Supply service drops on clearance crossarms	54.8–C2
4	Supply service drops on pole top extensions	54.8–C3
5	Unattached supply service drops	54.8–D
6	Communication lines, colinear, conflicting or crossing	84.4–D3
7	Communication conductors passing supply poles and unattached thereto	84.4–D4
8	Communication service drops on clearance crossarms	84.8–D2
9	Communication service drops on pole top extensions	84.8–D3
10	Unattached communication service drops	84.8–E
(z)	Special provisions for police and fire alarm conductors require increased clearances	92.2
(aa)	May be reduced under special provisions	
1	Supply conductors of 0 - 750 volts in rack configuration	54.4–D5
2	Service supply drops from racks	54.8–F
3	Supply cables and messengers attached to poles	57.4–F
4	Communication conductors on communication poles	84.4–D
5	Communication conductors on crossarms	84.4–D1
6	Communication conductors attached to poles	84.4–D2
7	Communication service drops attached to poles	84.8–B
8	Communication cables and messengers	87.4–D
9	Supply or communication cables and messengers on jointly used poles	92.1–B
10	Communication open wire on jointly used poles	92.1–C
11	Multiconductor cable with bare neutral	54.10–B1
(bb)	May be reduced for class t conductors of not more than 750 volts and of the same potential and polarity	74.4–D
(cc)	Not applicable to trolley span wires	77.4–E
(dd)	Special clearances for pole–top and deadend construction	
1	Conductors deadended in vertical configuration on poles	54.4–C4
2	Conductors deadended in horizontal configuration	54.4–D8
(ee)	Clearance requirements for certain voltage classifications	54.4–D2
(ff)	Not applicable to communication conductors	84.4–D
(gg)	Clearance from crossarms may be reduced for certain conductors	
1	Suitable insulated leads to protect runs	54.4–E
2	Leads of 0 - 5,000 volts to equipment	54.4–E
3	Leads of 0 - 5,000 volts to cutouts or switches	58.3–A2
(hh)	Reduced clearance permitted from temporary fixtures and lighting circuits 0 - 300 volts	78.3–A1
(ii)	Special Clearances Required Above Public and Private Swimming Pools	
1	Supply line conductors	54.4–A3
2	Supply service drops	54.8–B5
3	Communication line conductors	84.4–A5
4	Communication service drops	84.8–C5
5	Supply guys, span wires	56.4–A3
6	Communication guys	86.4–A3
(jj)	May be decreased in partial underground distribution	54.4–D2

References to Rules Modifying Minimum Clearances in Table 1 Rule

(kk) Shall be increased by 0.025 feet per kV in excess of 300 kV

(ll) Shall be increased by 0.04 feet per KV in excess of 300 kV

(mm) Proposed clearances to be submitted to the cpuc prior to construction for circuits in excess of 550 kV.

(nn) Voltage shown in the table shall mean line–to–ground voltage for direct current (DC) systems

(oo) May Be reduced for grounded or multi–conductor cables

1 Grounded cables 57.4–H

2 Multi–Conductor cables 54.10–B2

(pp) May be reduced to 4 feet for voltages below 7,500 volts 54.4–D3

(qq) May be reduced to 6 feet for voltages below 75 kV

(rr) May be reduced for supply service drops 54.8–D1

(ss) May be reduced for communications service drops 84.8–E1

(tt) Where a federal agency or surrogate thereof has issued a crossing permit, clearances of that permit shall govern.

(uu) Or where sailboating is prohibited and where other boating activities are allowed

(vv) Clearance above contiguous ground shall be 5 feet greater than in cases 11 or 12 for the type of water area served for boat launch facilities and for area contiguous thereto, that are posted, designated or specifically prepared for rigging of sailboats or other watercraft.

(ww) For controlled impoundments, the surface areas and corresponding clearances shall be based upon the high water level. for other waters, the surface area shall be that enclosed by its annual flood level. the clearance over rivers, streams and canals shall be based upon the largest surface areas of any one–mile long segment which includes the crossing. The clearance over a canal, river or stream normally used to provide access for sailboats to a larger body of water shall be the same as that required for the larger body of water.

(xx) Water areas are lakes, ponds, reservoirs, tidal waters, rivers, streams and canals without surface obstructions.

(yy) May be reduced over non–walkable structures 54.8 (Table 10)

(zz) May be reduced to 2 feet for conductors insulated in accordance with 20.9–G

(aaa) Special requirements for communication and supply circuits energized at 0 - 750 volts 35

(bbb) May be reduced for conductor of less than 60,000 volts when protected from abrasion and grounding by contact with tree 35

(ccc) For 22.5 kV to 105 kV, minimum clearance shall be 18 inches.

(ddd) Clearances in this case shall be maintained for normal annual weather variations, rather than at 60 degrees, no wind.

Rule

(eee) May be reduced to 18 feet if the voltage does not exceed 1000 volts and the clearance is not reduced to more than 5% below the reduced value of 18 feet because of temperature and loading as specified in Rules 37 and 43.

(fff) Clearances in this case shall be increased for conductors operating above 72 kV, to the following:

1 Conductors operating between 72kV and a 110 kV shall maintain a 72 inch clearance

2 Conductors operating above 110 kV shall maintain a 120 inch clearance

(ggg) Shall be increased by 0.40 inch per kV in excess of 500 kV

(hhh) Extreme and Very High Fire Threat Zones are defined by California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) Fire Threat Map. The FRAP Fire Threat Map is to be used to establish approximate boundaries for purposes of this rule. The boundaries of the map are to be broadly construed, and utilities should use their own expertise and judgment to determine if local conditions require them to adjust the boundaries of the map. Southern California shall be defined as the following: Imperial, Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura Counties.

(iii) May be reduced to 18 inches for conductors operating less than 2.4 kV.

(jjj) Clearances in this case shall not apply to orchards of fruit, nut or citrus trees that are plowed or cultivated. In those areas Case 13 clearances shall apply.

(kkk) For communication conductors across or along public thoroughfares see 84.4–A(6).

Note: Revised February 1, 1948 by Supplement No. 1 (Decision No. 41134, Case No. 4324); January 2, 1962 by Resolution E–1109; February 7, 1964 by Decision No. 66707; March 29, 1966 by Decision No. 70489; August 9, 1966 by Decision No. 71094; September 18, 1967 by Decision No. 72984; March 30, 1968 by Decision No. 73813; January 8, 1980 by Decision No. 91186; March 9, 1988 by Resolution E–3076; November 21, 1990 by Resolution SU–6; January 21, 1992 by Resolution SU–10; and November 6, 1992 by Resolution SU–15, September 20, 1996 by Decision 96–09–097, October 9, 1996 by Resolution SU–40, January 23, 1997 by Decision 97–01–044, January 13, 2005 by Decision No. 0501030, January 12, 2012 by Decision No. 1201032, and January 21, 2015 by Decision 1501005.

38 Minimum Clearances of Wires from Other Wires

The minimum vertical, horizontal or radial clearances of wires from other wires shall not be less than the values given in Table 2 and are based on a temperature of 60° F. and no wind. Conductors may be deadended at the crossarm or have reduced clearances at points of transposition, and shall not be held in violation of Table 2, Cases 8–15, inclusive.

The clearances in Table 2 shall in no case be reduced more than 10 percent because of temperature and loading as specified in Rule 43 or because of a difference in size or design of the supporting pins, hardware or insulators. All clearances of less than 5 inches shall be applied between surfaces, and clearances of 5 inches or more shall be applied to the center lines of such items.

Note: Revised May 22, 1990 by Resolution No. SU–5.

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Table 2: Basic Minimum Allowable Clearance of Wires from Other Wires at Crossings, in Midspans and at Supports (Letter References Denote Modifications of Minimum Clearances as Referred to in Notes Following This Table) All Clearances are in Inches

Case No.	Nature of Clearance and Class and Voltage of Wire, Cable or Conductor Concerned	Other Wire, Cable or Conductor Concerned										
					Supply Conductors (Including Supply Cables)							
		A Span Wires, Guys and Messengers	B Trolley Contact Conductors 0 – 750 Volts	C Communication Conductors (Including Open Wire, Cables and Service Drops)	D 0 – 750 Volts (Including Service Drops) and Trolley Feeders (a)	E 750 - 7,500 Volts	F 7,500 - 20,000 Volts	G 20,000 - 35,000 Volts	H 35,000 - 75,000 Volts	I 75,000 - 150,000 Volts	J 150,000 - 300,000 Volts	K (kk) 300,000 - 550,000 Volts
	Clearance between wires, cables and conductors not supported on the same poles, vertically at crossings in spans and radially where colinear or approaching crossings											
1	Span wires, guys and messengers (b)	18 (c)	48 (d, e)	24 (e)	24 (e)	36 (f)	36	72	72	78	78 (gg)	138 (hh)
2	Trolley contact conductors, 0 - 750 volts	48 (d, e)	-	48 (d)	48 (d, h)	48	72	96	96	96	96 (gg)	156 (hh)
3	Communication conductors	24 (e)	48 (d)	24	48 (i)	48 (dd)	72	96	96	96	96 (gg)	156 (hh)
4	Supply conductors, service drops and trolley feeders, 0 - 750 volts (qq)	24 (e)	48 (d, h)	48 (i)	24	48	48	96 (oo)	96	96	96(gg)	156 (hh)
5	Supply conductors, 750 - 7,500 volts (qq)	36 (f)	48	48 (dd)	48	48 (h)	72	96 (oo)	96	96	96(gg)	156 (hh)
6	Supply conductors, 7,500 - 20,000 volts (qq)	36	72	72	48	72	72	96 (oo)	96	96	96 (gg)	156 (hh)
7	Supply conductors, more than 20,000 volts (qq)	72 (g)	96 (g)	96 (g)	96 (g, oo)	96 (g, oo)	96 (g, oo)	96 (g, oo)	96 (g)	96	96 (gg)	156 (hh)
	Vertical separation between conductors and/or cables, on separate crossarms or other supports at different levels (excepting on related line and buck arms) on the same pole and in adjoining midspans											
8	Communication Conductors and Service Drops	-	-	12 (j, rr)	48 (k, l, m, n, pp)	48 (k)	72 (m n)	72 (m)	72	78	87 (gg)	147 (hh)
9	Supply Conductors Service Drops and Trolley Feeders, 0 - 750 Volts	-	-	48 (k, l, m, n, pp)	24 (h, k, m, o)	48 (k, m, p)	48 (k, m, p)	72 (m, nn)	72	78	87 (gg)	147 (hh)

Table 2 (Continued)

		Other Wire, Cable or Conductor Concerned										
					Supply Conductors (Including Supply Cables)							
Case No.	Nature of Clearance and Class and Voltage of Wire, Cable or Conductor Concerned	A Span Wires, Guys and Messengers	B Trolley Contact Conductors 0 – 750 Volts	C Communication Conductors (Including Open Wire, Cables and Service Drops)	D 0 – 750 Volts (Including Service Drops) and Trolley Feeders (a)	E 750 - 7,500 Volts	F 7,500 - 20,000 Volts	G 20,000 - 35,000 Volts	H 35,000 - 75,000 Volts	I 75,000 - 150,000 Volts	J 150,000 - 300,000 Volts	K (kk) 300,000 - 550,000 Volts
10	Supply conductors, 750 – 7,500 volts	-	-	48 (k)	48 (k, m, p)	48 (m, o, r, ee)	48 (m, q)	48 (m, q)	48 (q)	60 (ff)	90 (gg)	150 (hh)
11	Supply conductors, 7,500 – 20,000 volts	-	-	72 (m, n)	48 (k, m, p)	48 (m, q)	48 (m, o, q, r, ee)	48 (m, q)	48 (q)	60 (ff)	90 (gg)	150 (hh)
12	Supply conductors, 20,000 – 75,000 volts	-	-	72 (m)	72 (m, nn)	48 (m, q)	48 (m, q)	48 (o, q)	48 (o, q)	60 (ff)	90 (gg)	150 (hh)
13	Supply conductors, more than 75,000 volts	-	-	72	72	60 (q)	60 (q)	60 (q)	60 (q)	60 (ff)	90 (gg)	150 (hh)
	Vertical clearance between conductors on related line arms and buck arms											
14	Line arms above or below related buck arms (s, t)	-	-	6	12 (u)	18 (u)	18 (u)	24	48	60 (ff)	90 (gg)	150(hh)
	Horizontal separation of conductors on same crossarm											
15	Pin spacing of longitudinal conductors vertical conductors and service drops (v, w, zz)	-	-	3 (x)	11–1/2 (h, x)	11 1/2 (x)	17–1/2 (x)	24 (x)	48	60 (ff)	90 (gg)	150 (hh)
	Radial separation of conductors on same crossarm, pole or structure—incidental pole wiring											
16	Conductors, taps or lead wires of different circuits (v, y, s, zz)	-	-	3 (x)	11–1/2 (h, x)	11 1/2 (x)	17–1/2 (x)	24 (x)	48	60 (ff)	90 (gg)	150 (hh)
16a	Uncovered, grounded, non-dielectric fiber optic cables on metallic structures, in transition (ss)	-	15	15	15	18	18	18	18	24	36	120
17	Conductors, taps or lead wires of the same circuit (v, s, aa, zz)	-	-	3	3	6	6	12	24	60 (ff)	90 (gg)	150 (hh)
	Radial separation between guys and conductors											
18	Guys passing conductors supported on other poles, or guys approximately parallel to conductors supported on the same poles	-	-	3	11–1/2	11–1/2	17–1/2	24	36	36 (ff)	78 (gg)	138 (hh)

Table 2 (Continued)

		Other Wire, Cable or Conductor Concerned										
					Supply Conductors (Including Supply Cables)							
Case No.	Nature of Clearance and Class and Voltage of Wire, Cable or Conductor Concerned	A Span Wires, Guys and Messengers	B Trolley Contact Conductors 0 – 750 Volts	C Communication Conductors (Including Open Wire, Cables and Service Drops)	D 0 – 750 Volts (Including Service Drops) and Trolley Feeders (a)	E 750 - 7,500 Volts	F 7,500 - 20,000 Volts	G 20,000 - 35,000 Volts	H 35,000 - 75,000 Volts	I 75,000 - 150,000 Volts	J 150,000 - 300,000 Volts	K (kk) 300,000 - 550,000 Volts
19	Guys and span wires passing conductors supported on the same poles	(cc)	-	3 (bb)	3	6	9	12	18	24	48 (ii)	86 (jj)
	Vertical and horizontal insulators clearances between conductors											
20	Vertical clearance between conductors of the same circuit on horizontal insulators	-	-	-	-	24	24	24	36 or 48 (ll, mm)	48 (mm)	48 (mm)	48 (mm)
	Vertical clearance above supply and/or communication lines											
21	Antennas and associated elements on the same support structure. (tt, uu)	24 (vv)	48 (vv)	24(ww)	48(vv, xx)	72	72	72	120 (vv, yy)	-	-	-

References to Rules Modifying Minimum Clearances in Table 2

		Rule
(a)	The clearances in column D are also applicable to supply cables of any voltage under certain conditions	57.4
(b)	Clearances for guys and span wires apply vertically at crossings (see case 18 for radial clearances from conductors)	
1	Supply guys and span wires from conductors	56.4–C
2	Supply guys and span wires from guys and span wires	56.4–D1
3	Communication guys and span wires from conductors	86.4–C
4	Communication guys and span wires from guys and span wires	86.4–D1
(c)	Not applicable between messengers or span wires of the same system	
1	Supply messengers	57.4–E
2	Trolley span wires	77.4–D
3	Communication messengers	87.4–G
(d)	Protection Required on guys, span wires, messengers and cables where within trolley throw	
1	Supply guys and span wires	56.4–B2
2	Supply messengers and cables	57.4-B2
3	Communication guys and span wires	86.4–B2
4	Communication messengers	87.4–B2
(e)	Not applicable to certain conductors supported on trolley span wires	
1	Trolley contact and feeder conductors	74.4–G2
2	Trolley feeder conductors	78.1
3	Trolley system communication conductors	78.2
4	Foreign conductors	78.3
(f)	Increased clearance required over trolley contact conductors 750 - 7,500 volts	74.4–G2
(g)	Shall be increased for voltages above 75,000 as required by Table 2, Columns I, J and K	N/A
(h)	May be reduced for certain conductors of Class T Circuits of the same system	74.4–C
(i)	May be reduced for service drops under special conditions	
1	Supply service drops and communication line conductors	54.8–C1a
2	Supply service drops and communication service drops	54.8–C4
3	Communication service drops and supply line conductors	84.8–D1a
4	Communication service drops and supply service drops	84.8–D4
(j)	May be reduced or shall be increased for certain communication conductors or cables	
1	Open wire conductors, attached to poles, within 3 feet of topmost conductor	84.4C1c
2	Line conductors of police or fire–alarm circuits and service drops from other communication circuits	84.8–D1b
3	Cables and messengers attached to poles	87.4–C3
(k)	Special clearances for 0 - 750 volts in rack configuration and messengers and cables attached to poles	
1	Supply conductors of 0 - 750 volts in rack configuration	54.9
2	Supply cables and messengers attached to poles	57.4–F
3	Communication cables and messengers attached to poles	87.4–C3
4	On jointly used poles	92.1

References to Rules Modifying Minimum Clearances in Table 2

		Rule
(l)	May be reduced for service drops and police and fire–alarm conductors, under special conditions	
1	Supply service drops and communication line conductors	54.8–C1b
2	Supply service drops on clearance arms	54.8–C2
3	Supply service drops on pole–top extensions	54.8–C3
4	Supply service drops and communication service drops	54.8–C4
5	Communication service drops and police, fire–alarm or supply line conductors	84.8–D1b
6	Communication service drops on clearance arms	84.8–D2
7	Communication service drops on pole–top extensions	84.8–D3
8	Communication service drops and supply service drops	84.8–D4
9	Police or fire–alarm conductors	92
(m)	May be reduced for lead wires	
1	Supply lead wires above supply conductors	54.4–C6
2	Supply drip loops above communication conductors	92.1–F3
(n)	May be reduced for supply conductors and private communication conductors of the same ownership	89.2–B
(o)	May be reduced or shall be increased for triangular or vertical configuration or for pole–top construction	
1	Triangular or vertical configuration on crossarms	54.4–C1c
2	deadended on pole in vertical configuration	54.4–C4
(p)	May be reduced for supply service drops of 0 - 750 volts	54.8–C6
(q)	Shall be increased between circuits where conductors are at pole top	54.4–D8
(r)	May be reduced under special conditions	
1	Supply conductors of 750 - 7,500 volts	54.4–C1a
2	Supply conductors of 7,500 - 20,000 volts	54.4C1b
(s)	Does not apply where conductors do not cross	
1	Supply conductors of different phase or polarity	54.4–C2a
2	Communication conductors	84.4–C1a
(t)	Shall not be applied consecutively both above and below the same supply conductors	54.4–C2a
(u)	Shall be increased where conductors of different classification are supported on the same crossarm	
1	Supply conductors of 0 - 750 volts and conductors of 7,500 - 22,500 volts	32.4–A2
2	Supply conductors of 0 - 750 volts and conductors of 750 - 7,500 volts	32.4–A3
(v)	Not applicable to certain kinds of conductors	
1	Supply conductors of same phase or polarity	54.4–C3c
2	Insulated supply conductors in multiple–conductor cables	57.4–C
3	Communication insulated conductors or multiple–conductor cables	87.4–C1
(w)	Shall apply radially to conductors on brackets attached to crossarms	
1	Supply conductors	54.4–C3b
2	Communication conductors	84.4–C1b
(x)	Shall be increased between conductors of different classification supported on the same crossarm	
1	Supply conductors of different voltage classification	32.4–A
2	Supply circuits of 0 - 750 volts and communication circuits	32.4–B
3	Supply circuits and private communications circuits	89.2–A
(y)	Special clearances for unprotected supply conductors from one level to another level	54.6–A 58.5–B3 92.1–F5
(z)	Not applicable to the following:	
1	Clearances between conductors at different levels specified in cases 8 to 13 inclusive	N/A
2	Supply lateral conductors, suitably protected	54.6–C
3	Supply vertical runs, suitably protected	54.6–D
4	Supply risers, suitably protected	54.6–E
5	Communication conductor	87.4–C1
(aa)	Not applicable between cables and their supporting messengers	
1	Supply	57.4–D
2	Communication	87.4–F
(bb)	May be reduced for guys and communication conductors supported on the same pole	
1	Supply	56.4–C4
2	Communication	86.4–C
(cc)	Clearance required between guys	
1	Supply guys, crossing	56.4–D2
2	Supply guys, approximately parallel	56.4–D3
3	Communication guys, crossing	86.4–D2
4	Communication guys, approximately parallel	86.4–D3
(dd)	Shall be increased where within 6 feet of a pole	103.5
(ee)	May be decreased in partial underground distribution	54.4–C4c
(ff)	Shall be increased by 0.40 inch per kV in excess of 75 kV	
(gg)	Shall be increased by 0.40 inch per kV in excess of 150 kV	
(hh)	Shall be increased by 0.40 inch per kV in excess of 300 kV	
(ii)	Shall be increased by 0.25 inch per kV in excess of 150 kV	
(jj)	Shall be increased by 0.25 inch per kV in excess of 300 kV	
(kk)	Proposed clearances to be submitted to the CPUC prior to construction for circuits in excess of 550 kV	
(ll)	36–inch clearance applies 35 kV to 68 kV. 42–inch clearance applies over 68 kV.	
(mm)	Vertical clearances shall be increased by 1/2 inch for each kV over 68 kV	
(nn)	The vertical separation between supply conductors and service drops of 0 - 750 volts and supply conductors of 20,000 - 22,500 volts may be reduced to 48 inches	
(oo)	May be reduced to 72inches for conductors of 20,000 - 22,500 volts	
(pp)	May be reduced to 36 inches vertically at midspan only when the supply conductors consist of abrasion resistant cable with a grounded metallic sheath or neutral–supported cable as specified in Rules 57 and 54.10.	
(qq)	Vertical clearances may be reduced between supply conductors of the same circuit at crossings in spans54.4–C7	
(rr)	Can be less than 12” for strand mounted terminals, splice cases and other equipment located 8” or more from centerline of pole but not less than 1” with mutual agreement between affected owners.	
(ss)	Requirements for transition of Fiber optic cable facilities	87.10
(tt)	For Antennas utilized by utilities for the sole purpose of operating and monitoring their supply system see Rules 54.4-G and 58.6.	
(uu)	For clearances below supply and communication lines see Rules 94.4-A and 94.4-B	
(vv)	Clearances for exposed associated cables may be reduced by 12 inches.	
(ww)	May be reduced to 10 inches for cables installed by Antenna owner/operator.	
(xx)	Clearance from service drop point of attachment on structure to Antenna(s) and associated supporting elements may be reduced to 10 inches.	
(yy)	Up to 50 kV.	
(zz)	In areas that are subjected to high winds, a utility may need to take extra measures to maintain all required separations. Measures may include but are not limited to, spacer bars and increased pin spacing	

Note: Revised February 7, 1964 by Decision No. 66707; September 18, 1967 by Decision No. 72984; March 30, 1968 by Decision No. 73813; July 22, 1968 by Decision No. 74342; September 11, 1974 by Decision No. 83420; March 9, 1988 by Resolution E–3076; November 6, 1992 by Resolution No. SU–15, January 19, 1994 by Resolution SU–25, October 9, 1996 by Resolution SU–40, January 13, 2005 by Decision No. 0501030 and October 2, 2008 by Decision No. 0810017.

APPENDIX B

Legal Land Description

Legal Land Description
City of Los Angeles, Department of Water and Power
Right -of-Way Application
CACA-055592

San Bernardino Meridian, California

T. 7 N.,R. 2 W.,
sec. 4, SW¼;
sec. 7, lot 1.
T. 7 N., R. 3 W.,
sec. 28, SW¼.
T. 8 N., R. 1 W.,
sec. 12, NW¼.
T. 9 N., R. 1 E.,
sec. 26, NW¼;
sec. 27, SE¼.
T. 10 N., R. 2 E.,
sec. 26, NE¼.
T. 11 N., R. 4 E.,
sec. 2, lot 2;
sec. 10, NW¼NE¼ and NE¼NW¼;
sec. 20, NW¼.
T. 12 N., R. 5 E.,
sec. 9, NE¼;
sec. 30, lot 2.
T. 13 N., R. 5.,
sec. 24, NE¼;
sec. 26, SE¼.
T. 13 N., R. 6 E.,
sec. 4, lot 2;
sec. 5, lot 2;
sec. 8, NW¼;
sec. 18, lot 1.
T. 14 N., R. 6 E.,
sec. 25, SE¼ and SW¼;
sec. 33, SW¼ and SE¼;
sec. 34, NE¼, SW¼, and SE¼;
sec. 35, NE¼ and NW¼.
T. 14 N., R. 7 E.,
sec. 17, SW¼ and SE¼.
T. 15 N., R. 7 E.,
sec. 25, SW¼;
sec. 34, S½SE¼;
sec. 35, NE¼, NW¼, and SW¼.
T. 15 N., R. 8 E.,
sec. 20, S½NE¼;
sec. 30, lot 1.
T. 15 N., R. 9 E.,
sec. 4; (partially surveyed)
sec. 5. (partially surveyed)

T. 16 N., R. 9 E.,
sec. 23; (partially surveyed)
sec. 24. (partially surveyed)
T. 16 N., R. 10 E.,
sec. 2; (partially surveyed)
sec. 3; (partially surveyed)
sec. 9; (partially surveyed)
sec. 17; (partially surveyed)
sec. 18. (partially surveyed)
T. 17 N., R. 13 E.,
sec. 2, lots 5 and 12;
sec. 3, lots 5-12, inclusive;
sec. 4, lot 11;
sec. 5, lot 9-11, inclusive.

10.7 total acres, approximately.

APPENDIX C

Engineering Drawings

Appendix C.1

McCullough-Victorville Line 1 Drawings

GENERAL NOTES:

1. ADD 2410000 TO NORTHINGS AND 7280000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

CURVE DATA					PI		
	R	L	T	Δ	N.	E.	EL.
①	496'	43.28'	21.66'	5°	2217.46	8794.67	4487.92
②	31'	34.89'	19.55'	64°28'51.85"	2121.77	8891.00	4491.26

ESTIMATED EARTHWORK QUANTITIES:

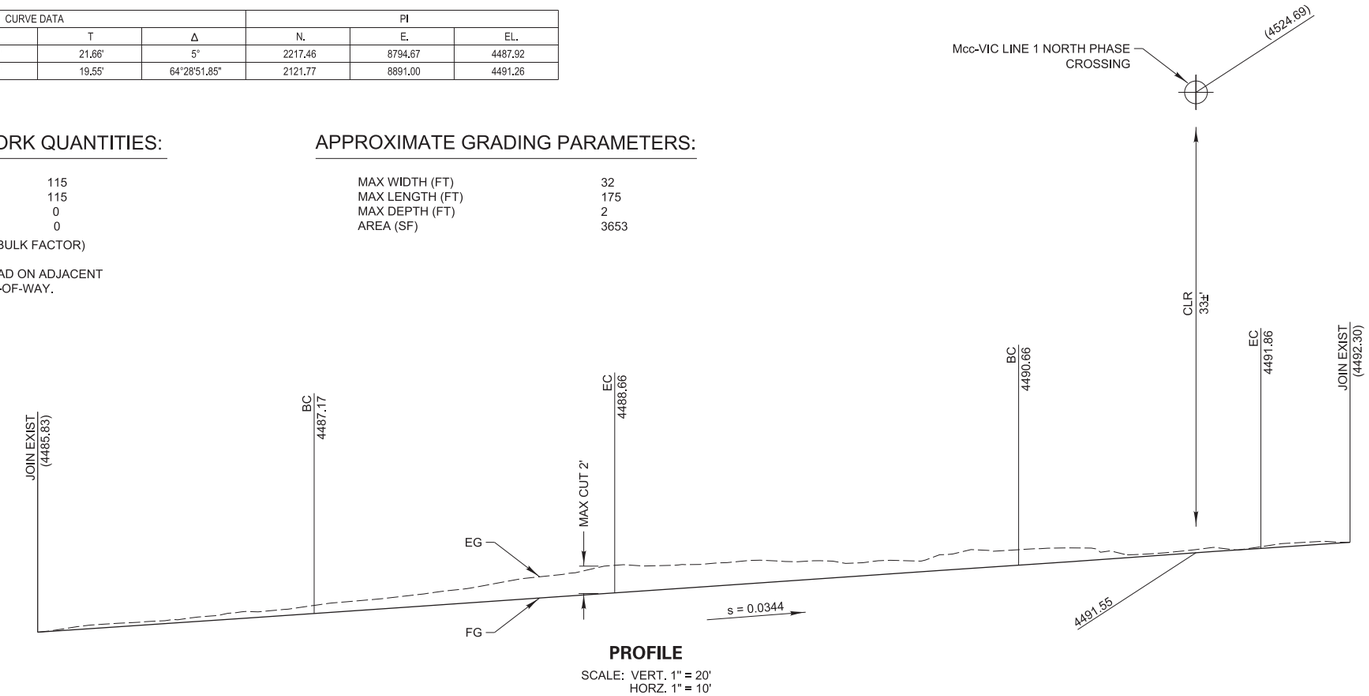
CUT (CY)	115
FILL (CY)	115
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)

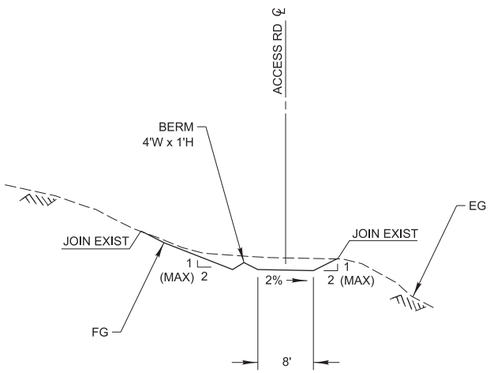
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

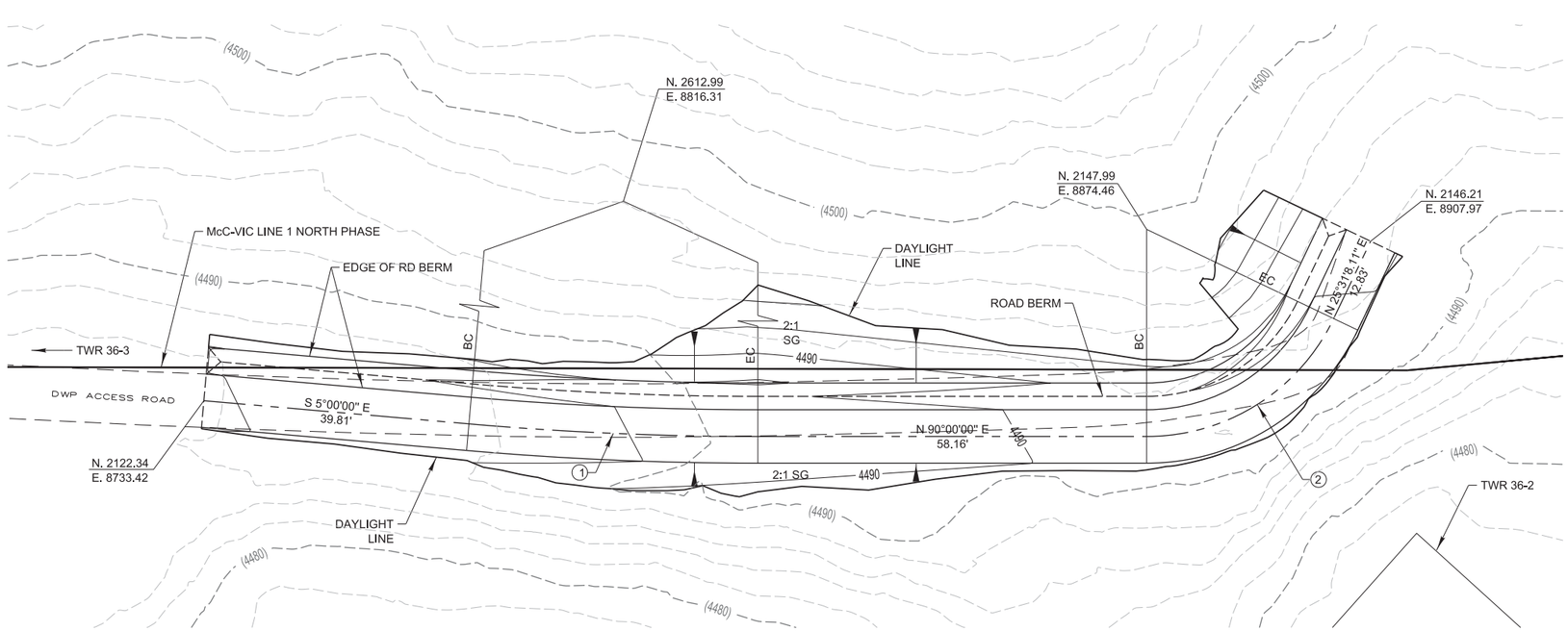
MAX WIDTH (FT)	32
MAX LENGTH (FT)	175
MAX DEPTH (FT)	2
AREA (SF)	3653



PROFILE
SCALE: VERT. 1" = 20'
HORZ. 1" = 10'



TYPICAL ROAD SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. FANG
SUP. ENGR. E. MALACON

REVISIONS

NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

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CHECKED BY _____
ENGINEERING APPROVAL
J Fang CE 65962

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 36–2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-36-2-CA01** REV. 1

09-28-12

DRA

mv36-2.dgn

GENERAL NOTES:

1. ADD 2411900 TO NORTHINGS AND 7286000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
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7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	107
FILL (CY)	107
IMPORT (CY)	0
EXPORT (CY)	0

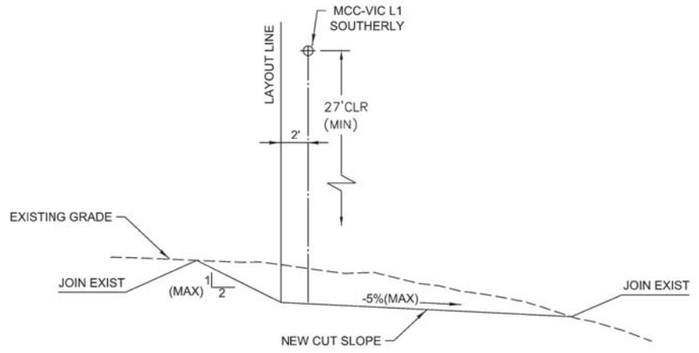
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

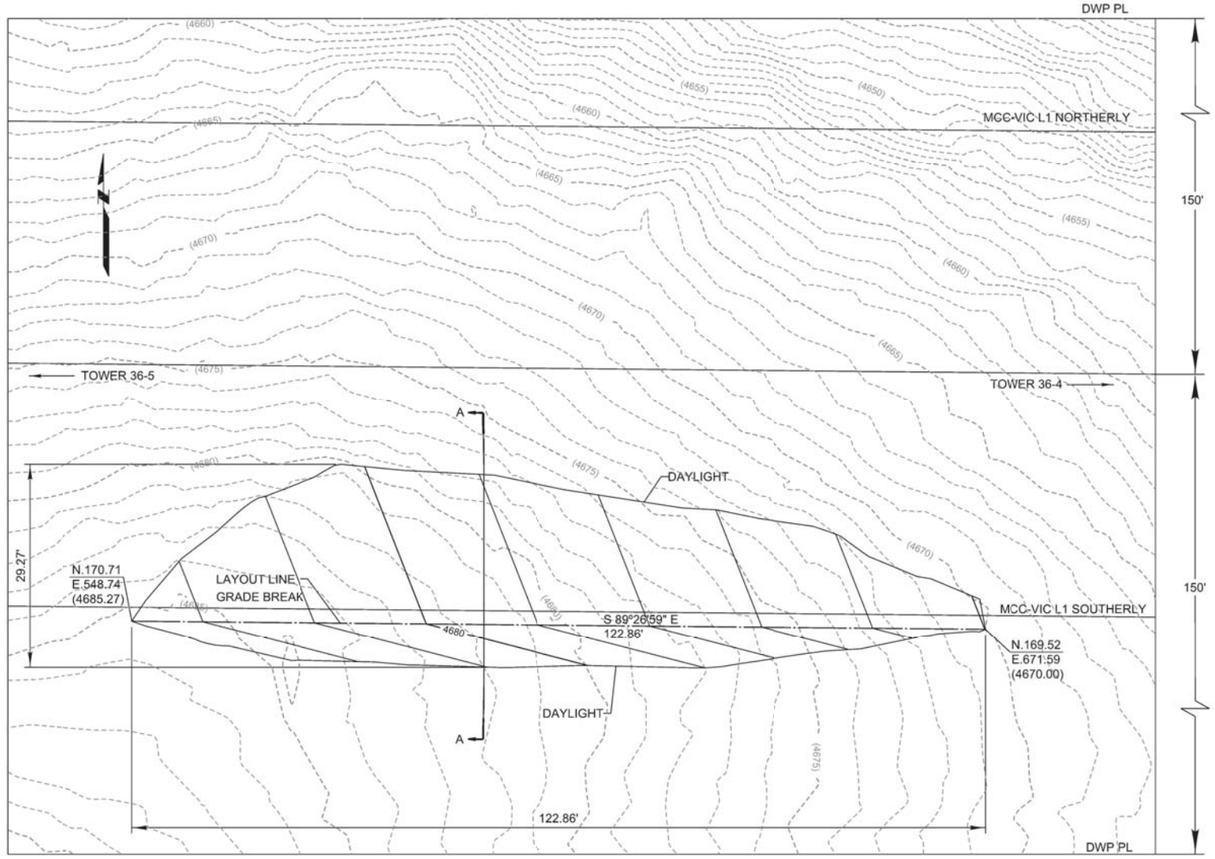
MAX WIDTH (FT)	30
MAX LENGTH (FT)	123
MAX DEPTH (FT)	2.7
AREA (SF)	2577

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS						
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 36–4, 36–5
		DRAFTING RELEASE		DRAFTING RELEASE		
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES
		CHECKED BY		CHECKED BY		DRAWING NUMBER MV1-36-4-CA01 REV.
		ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	
				T. Alcocer CE 70713		

DRA

MV1-36-4-CA01.dgn

GENERAL NOTES:

1. ADD 2412000 TO NORTHINGS AND 7285000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
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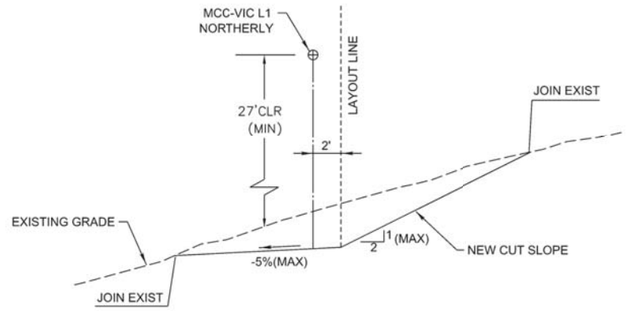
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



SECTION A-A
TYPICAL SECTION
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	59
FILL (CY)	59
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	27
MAX LENGTH (FT)	75
MAX DEPTH (FT)	3.1
AREA (SF)	1528

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
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REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
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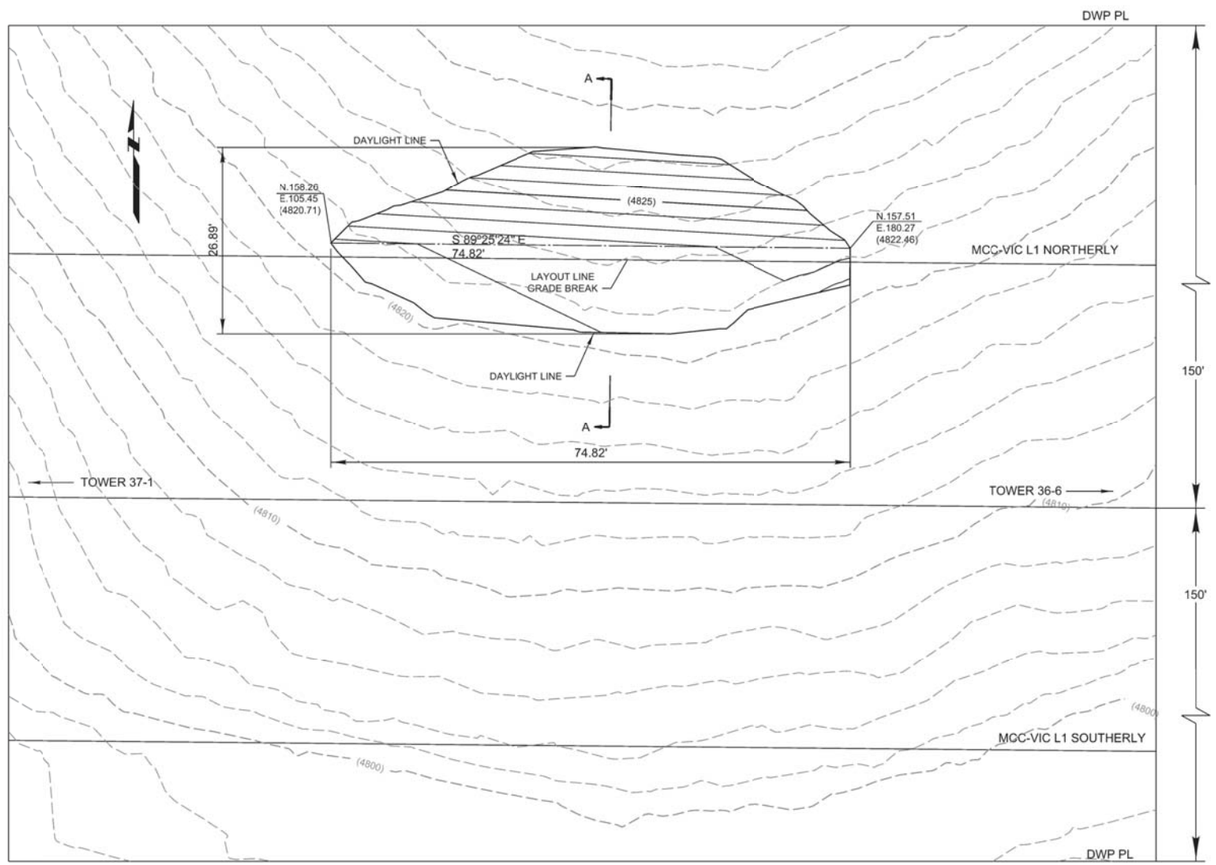

PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS
NO. | DESCRIPTION

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FINAL APPROVAL RELEASE SIGNATURE | DATE

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

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DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
T. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 36–6, 37–1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-36-6-CA01
REV.

MV1-36-6-CA01.dgn

GENERAL NOTES:

1. ADD 2412000 TO NORTHINGS AND 7283000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	150
FILL (CY)	150
IMPORT (CY)	0
EXPORT (CY)	0

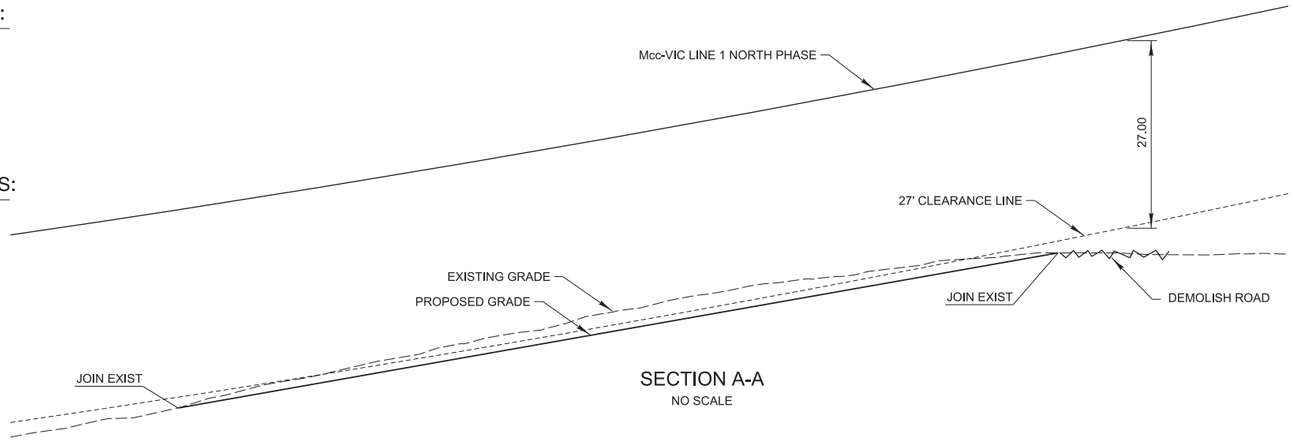
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	25
MAX LENGTH (FT)	130
MAX DEPTH (FT)	3
AREA (SF)	2514

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
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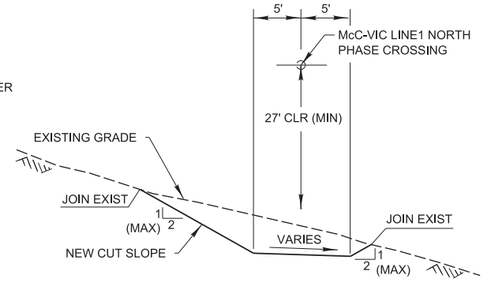

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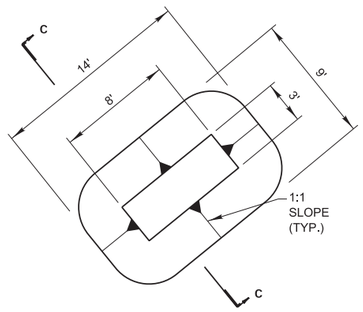
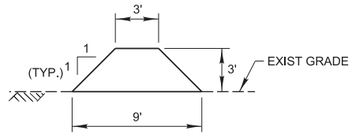


COMPACTED SOIL BARRICADE
DETAIL 1
NO SCALE



SECTION C-C
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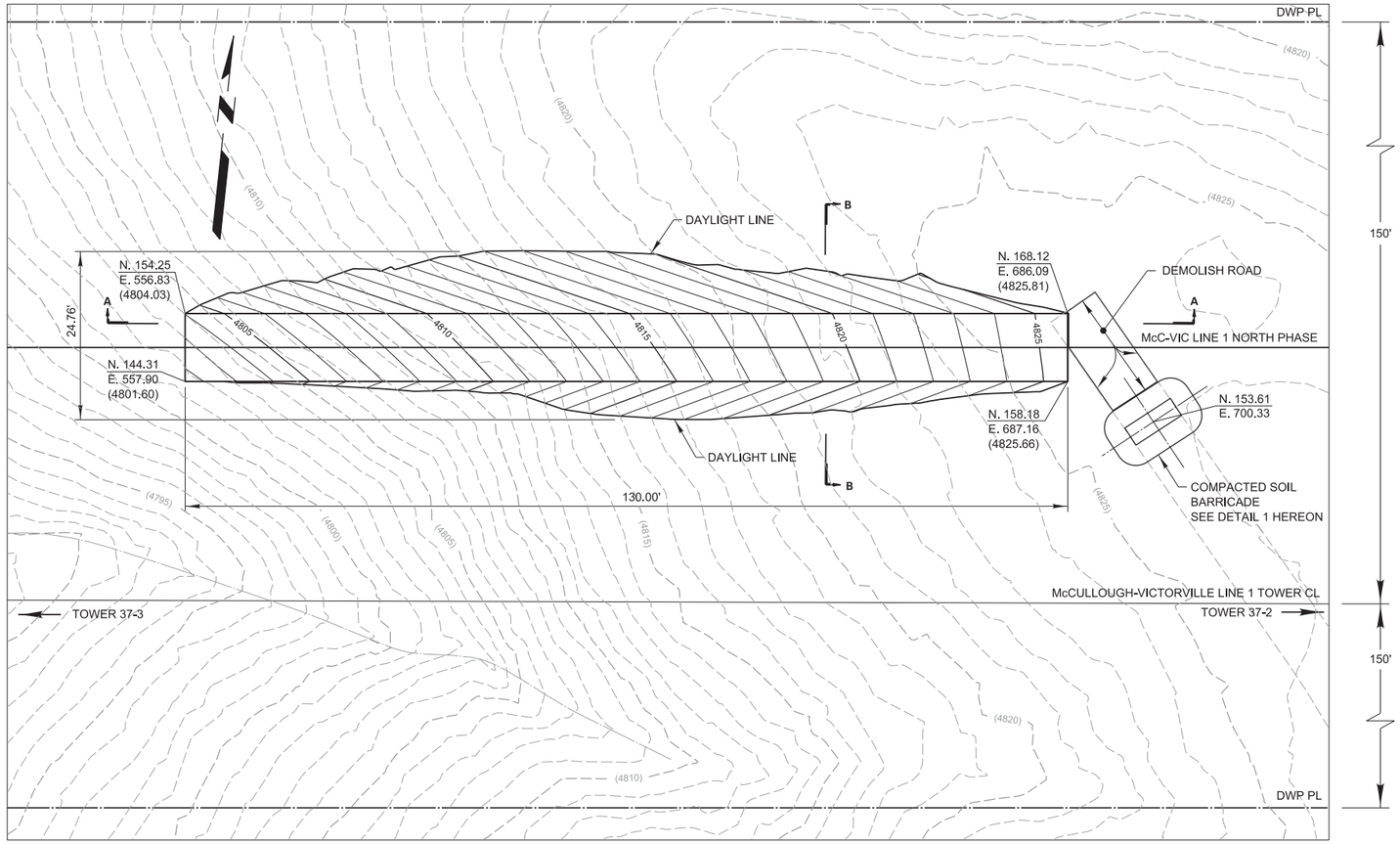


PLAN
SCALE: 1" = 10'

DES. ENGR. J. JONG
REP. ENGR. J. PANG

REVISIONS			
NO.	DESCRIPTION		

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Jong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, DETAIL, AND SECTIONS GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 37–2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-37-2-CA01** REV. 1

01-07-13

mv1-37-2.dgn

GENERAL NOTES:

1. ADD 2410000 TO NORTHINGS AND 7270000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	240
FILL (CY)	240
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)

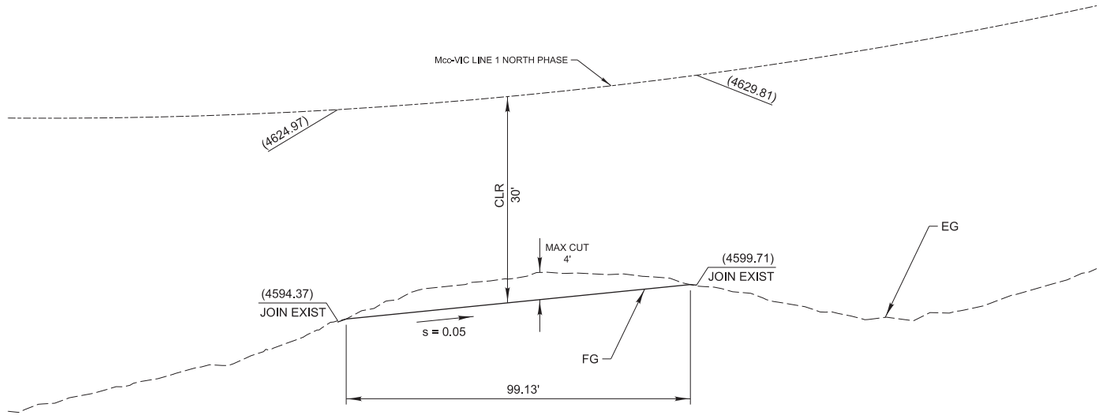
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

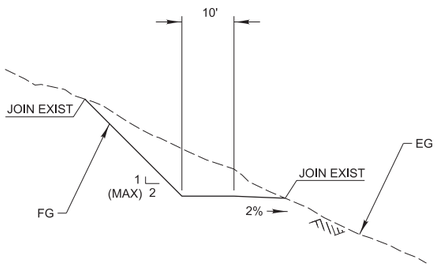
MAX WIDTH (FT)	40
MAX LENGTH (FT)	100
MAX DEPTH (FT)	4
AREA (SF)	3246

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



PROFILE
NO SCALE



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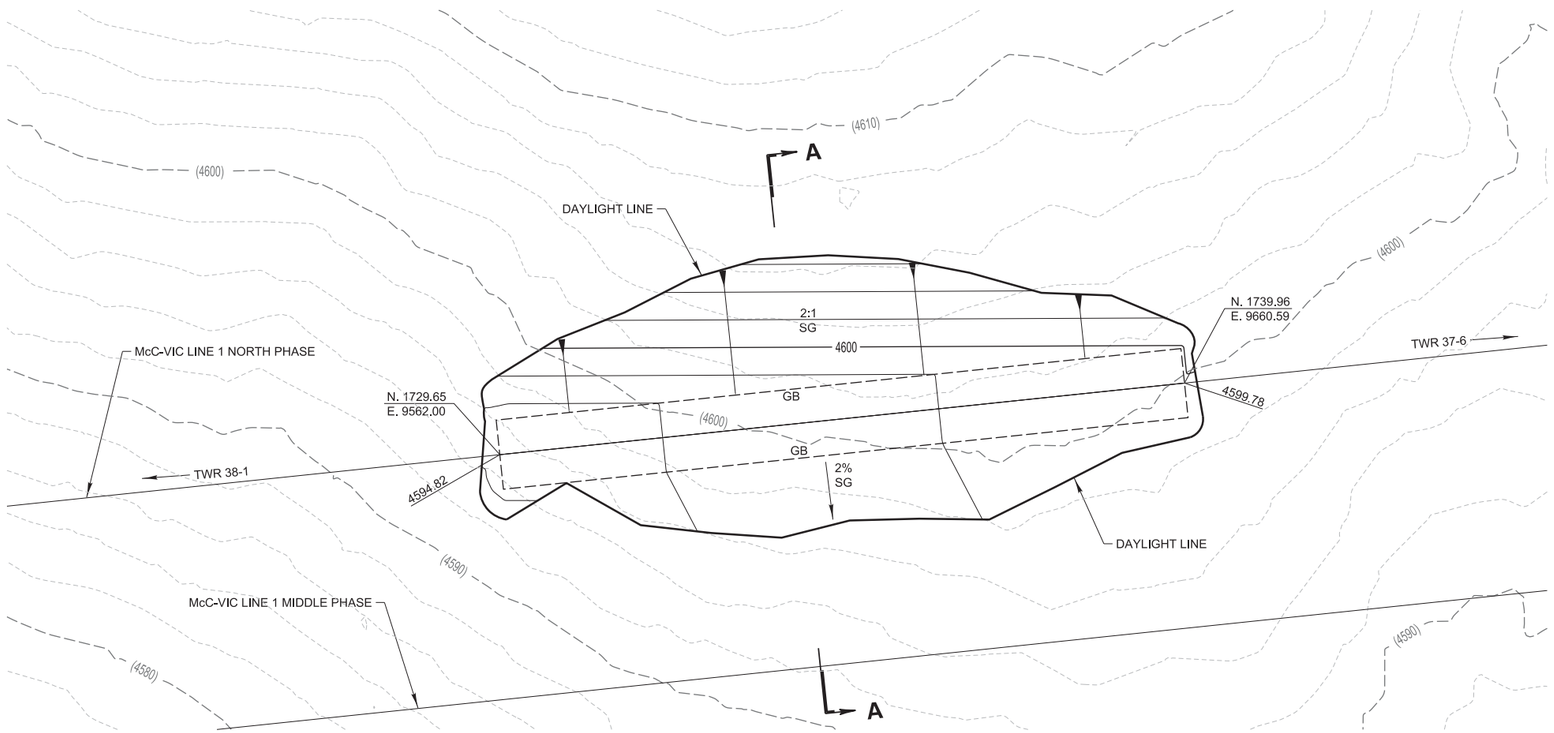


PLAN
SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. E. MALACON

REVISIONS

NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J Pang CE 65962

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 37–6

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-37-6-CA01** REV. 1

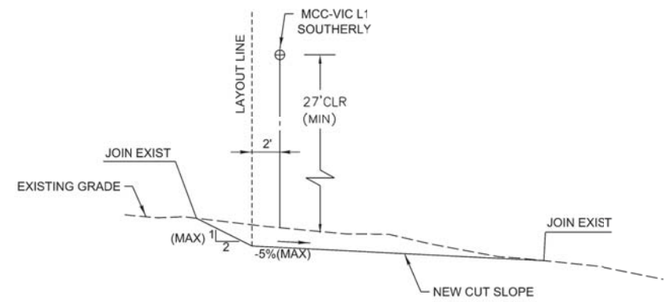
10-01-12

DRA

mv37-6.dgn

GENERAL NOTES:

1. ADD 2411000 TO NORTHINGS AND 7276000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



SECTION A-A
TYPICAL SECTION
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	48
FILL (CY)	48
IMPORT (CY)	0
EXPORT (CY)	0

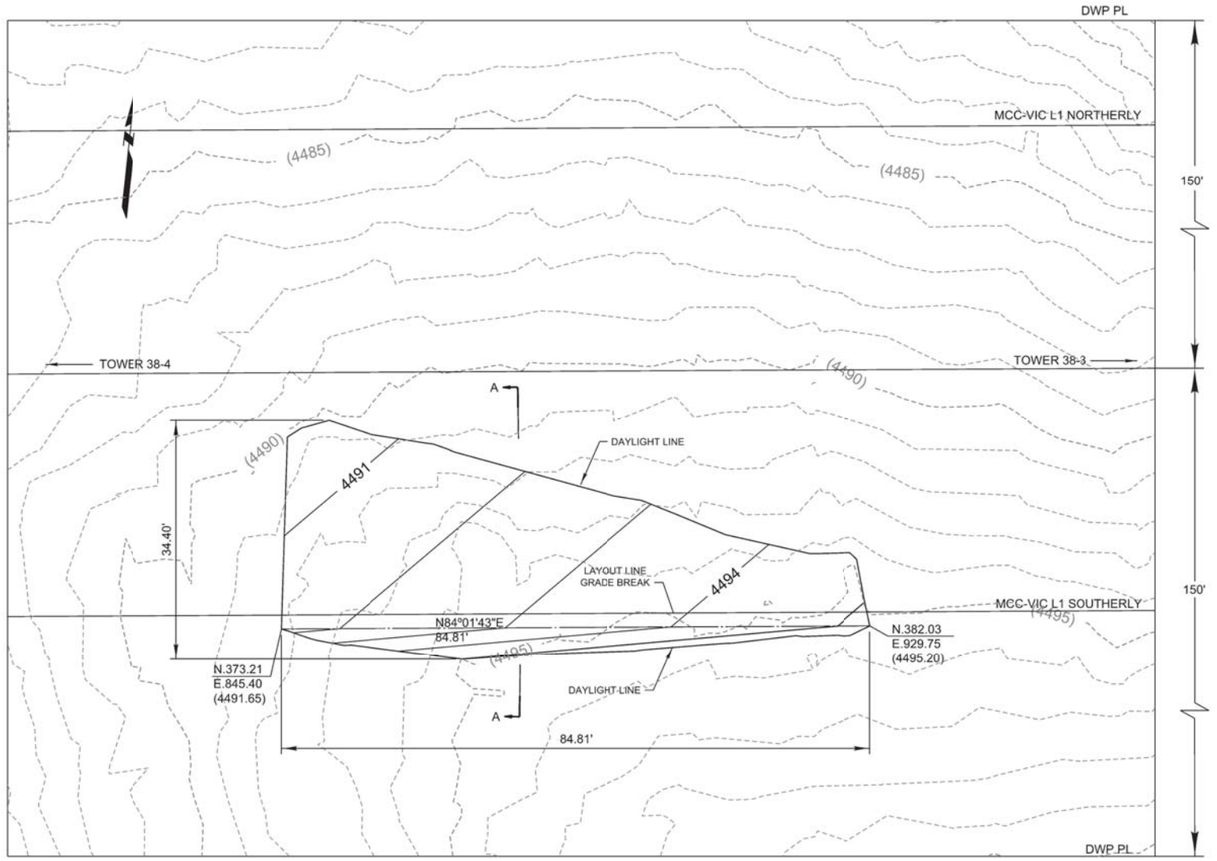
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	35
MAX LENGTH (FT)	85
MAX DEPTH (FT)	1.5
AREA (SF)	1948

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER SUP. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL T. Mercer CE 70713	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE

PLAN, PROFILE, AND SECTIONS
GRADING
MCCULLOUGH–VICTORVILLE LINE 1 TWR 38–4, 38–3

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-38-3-CA01** REV.

MV1-38-3-CA01.dgn

GENERAL NOTES:

1. ADD 2410000 TO NORTHINGS AND 7270000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

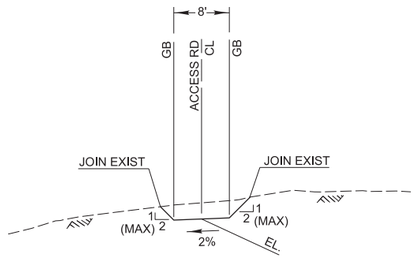
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

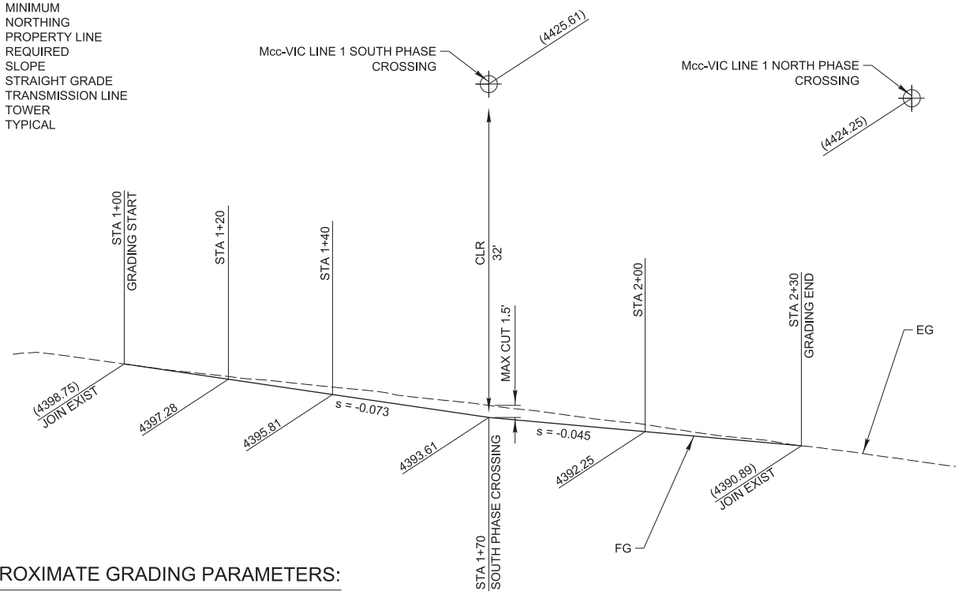
CUT (CY)	31
FILL (CY)	31
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)

* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.



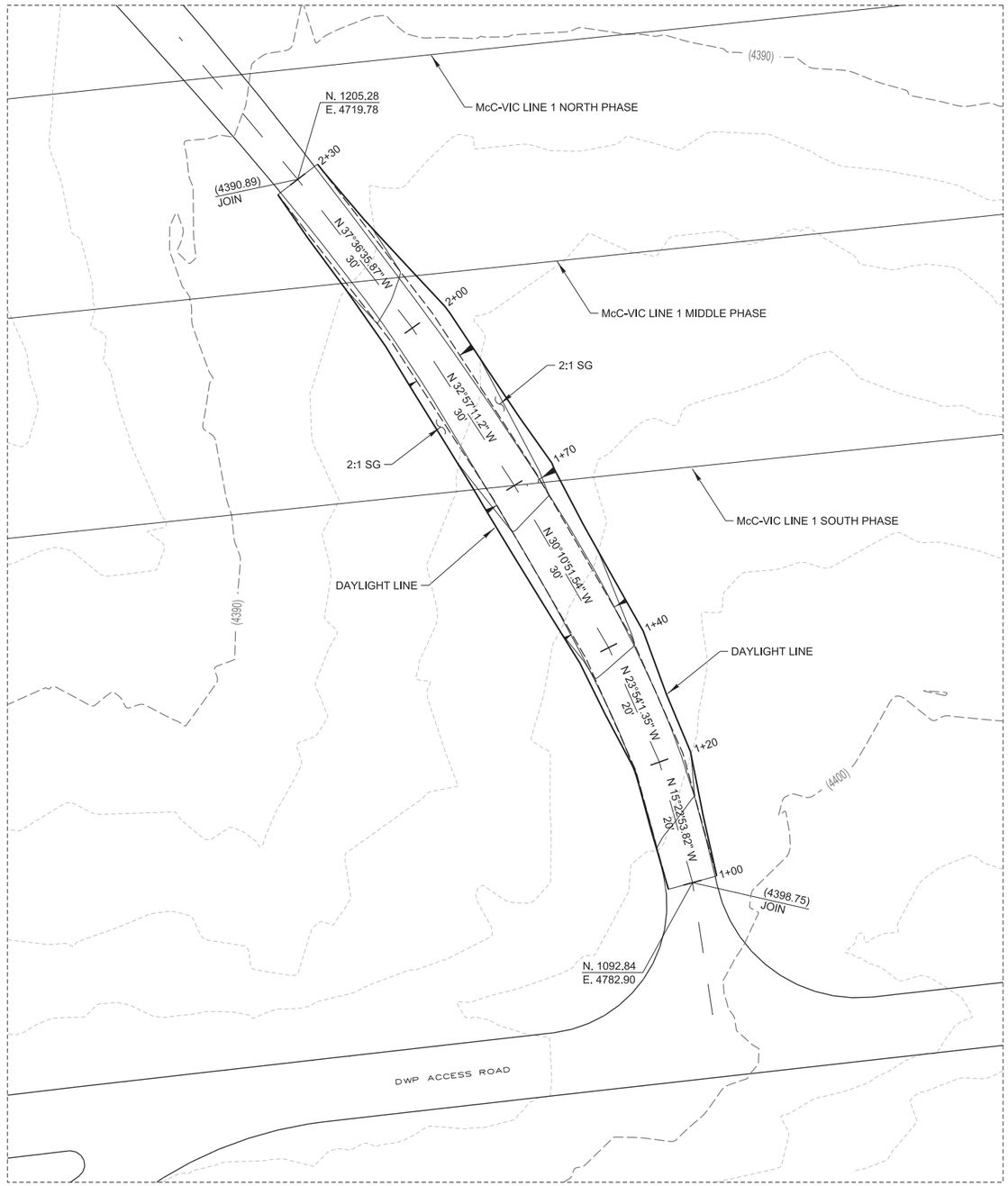
TYPICAL CROSS SECTION
NO SCALE



APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	13
MAX LENGTH (FT)	130
MAX DEPTH (FT)	1.5
AREA (SF)	1398

PROFILE
NO SCALE



PLAN
SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. E. MALACON

REVISIONS		
NO.	DESCRIPTION	

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J Pang CE 65962

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 38–5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-38-5-CA01
REV. 1

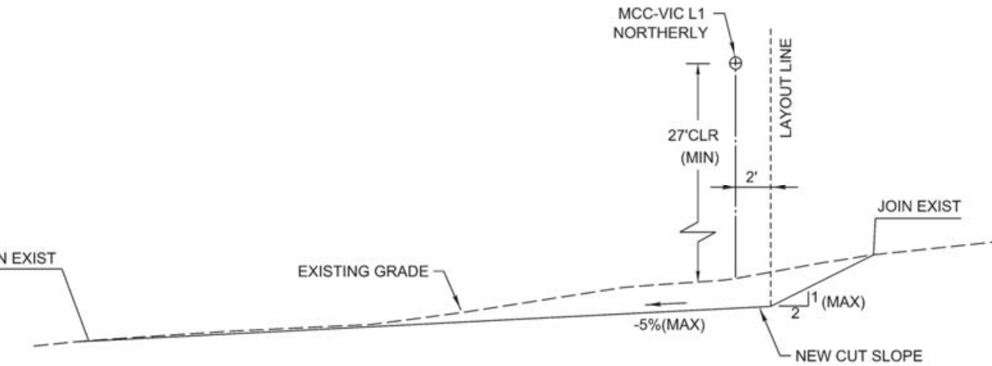
10-02-12

DRA

mv38-5.dgn

GENERAL NOTES:

1. ADD 2378900 TO NORTHINGS AND 7194900 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



SECTION A-A
TYPICAL SECTION
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	76
FILL (CY)	2
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
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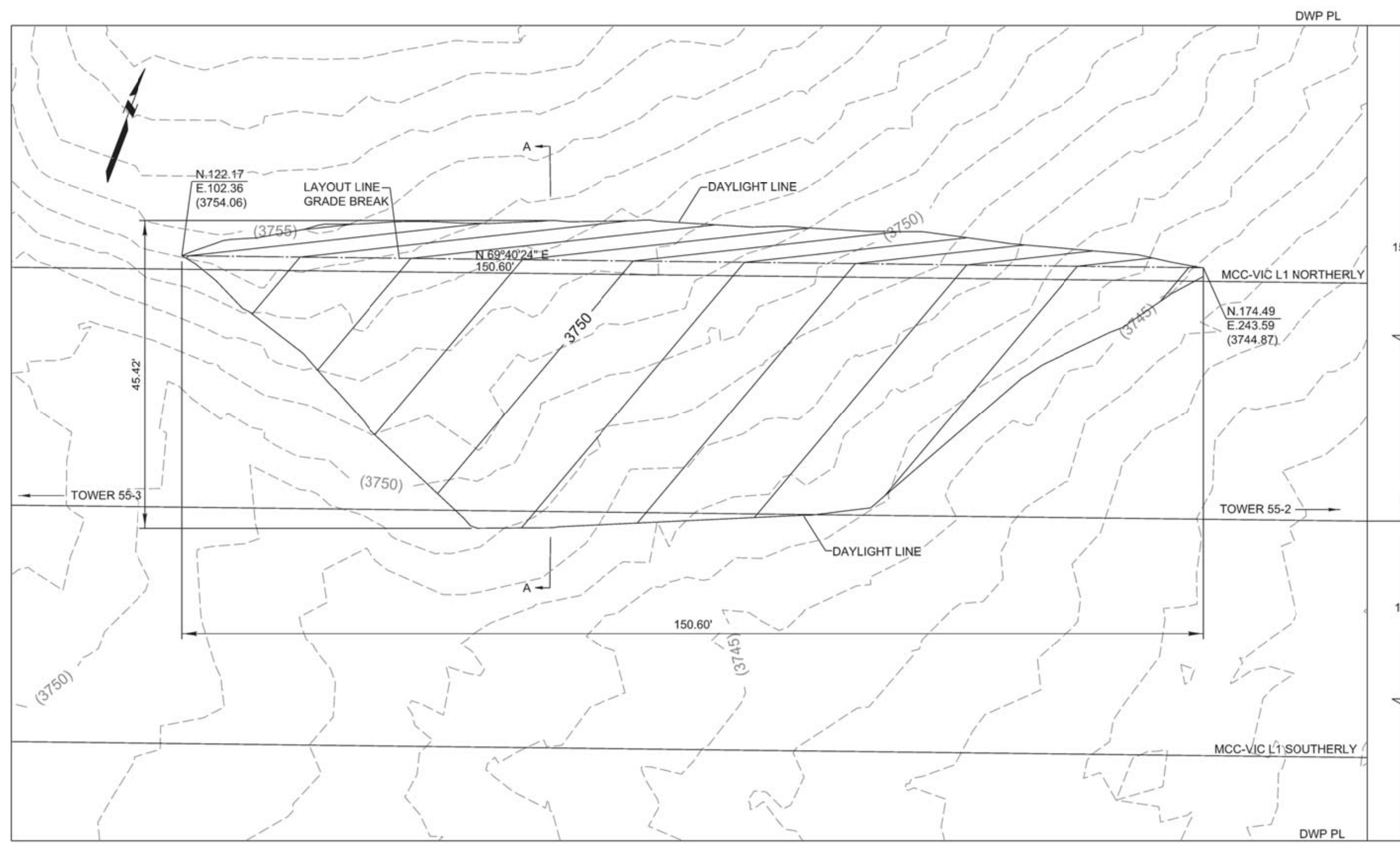
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	45
MAX LENGTH (FT)	151
MAX DEPTH (FT)	1.9
AREA (SF)	4620



PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
F. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS
GRADING
MCCULLOUGH–VICTORVILLE LINE 1 TWR 55–2, 55–3

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-55-2-CA01
REV.

DRA
MV1-55-2-CA01.dgn

GENERAL NOTES:

1. ADD 2376000 TO NORTHINGS AND 7187000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

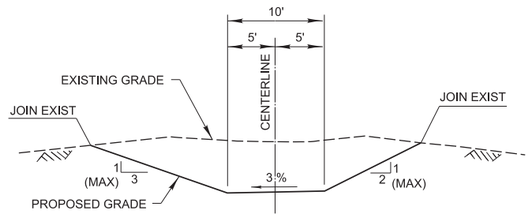
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	420
FILL (CY)	420
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	35
MAX LENGTH (FT)	170
MAX DEPTH (FT)	5.2
AREA (SF)	4300



SECTION A-A
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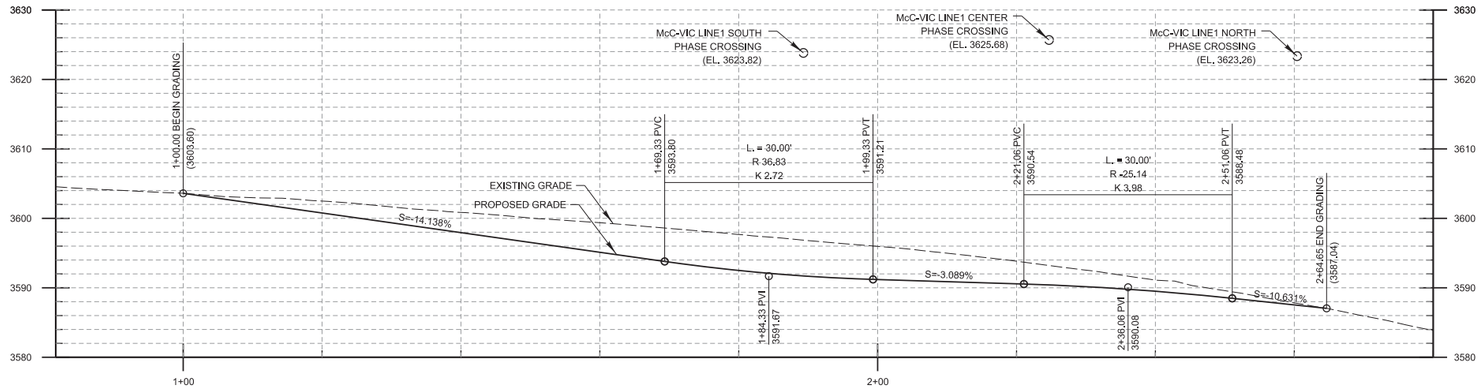
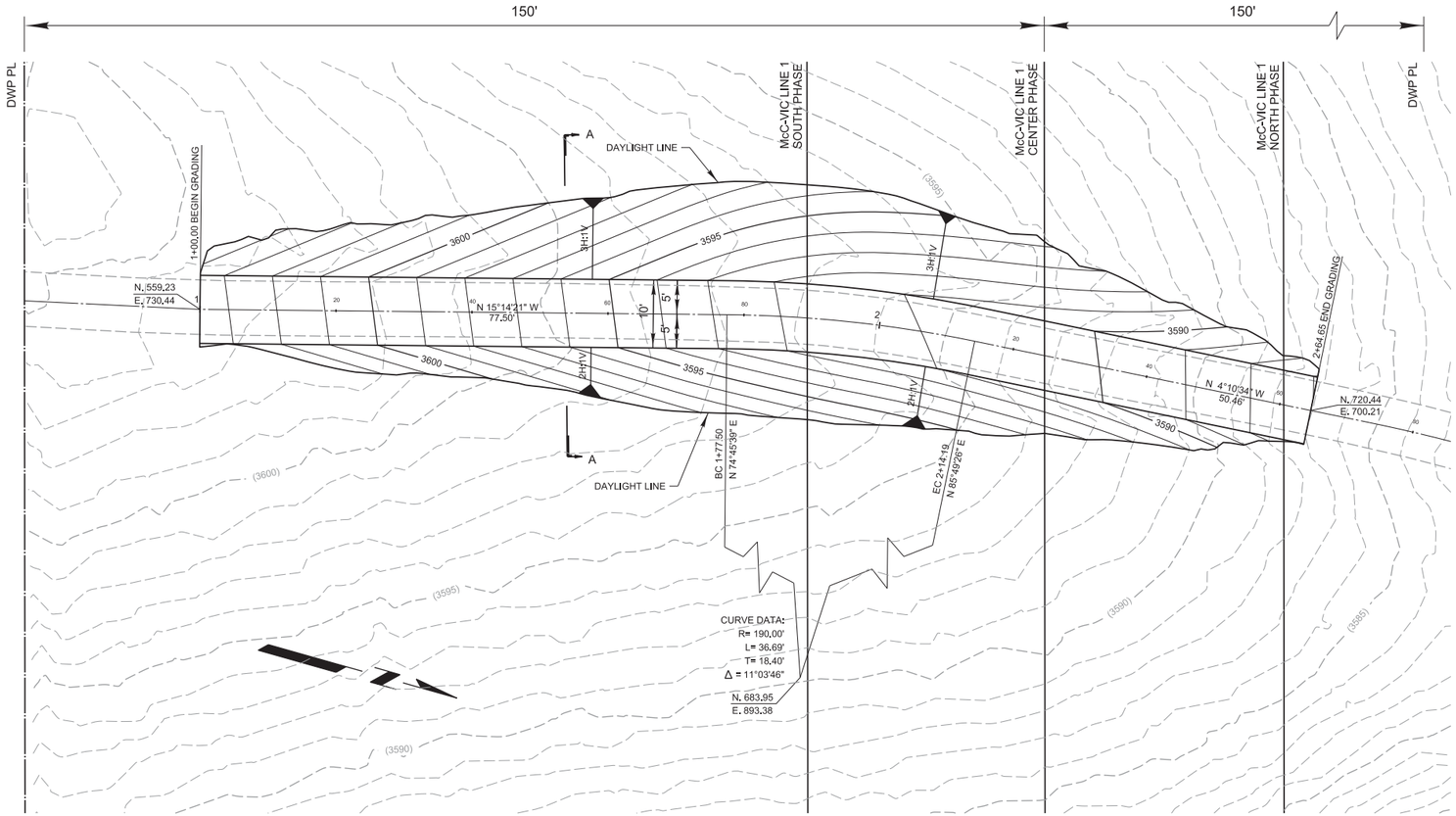


PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

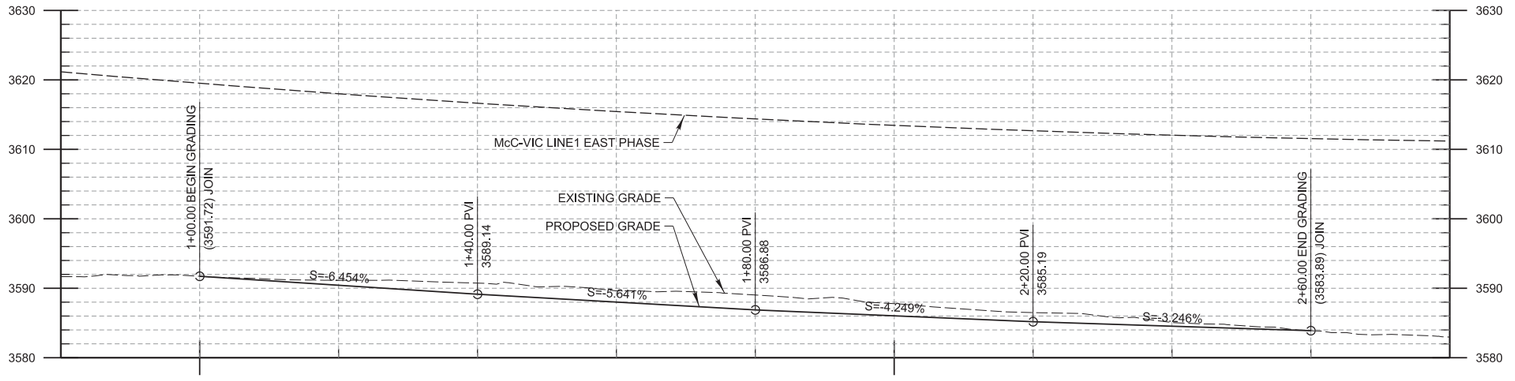
DES. ENGR. J. JONES SUP. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number _____ DRAFTING RELEASE DRAWN BY _____ CHECKED BY _____ ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY _____ CHECKED BY _____ ENGINEERING APPROVAL J. Fung CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, PROFILE, AND SECTION GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 56-4	
						POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES	DRAWING NUMBER MV1-56-4-CA01 REV. 1

01-07-13

mv1-56-4.dgn

GENERAL NOTES:

1. ADD 2370000 TO NORTHINGS AND 7180000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



GRADING PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	116
FILL (CY)	116
IMPORT (CY)	0
EXPORT (CY)	0

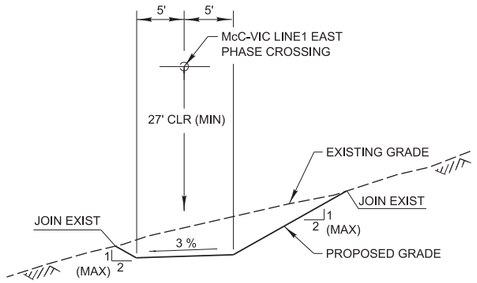
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

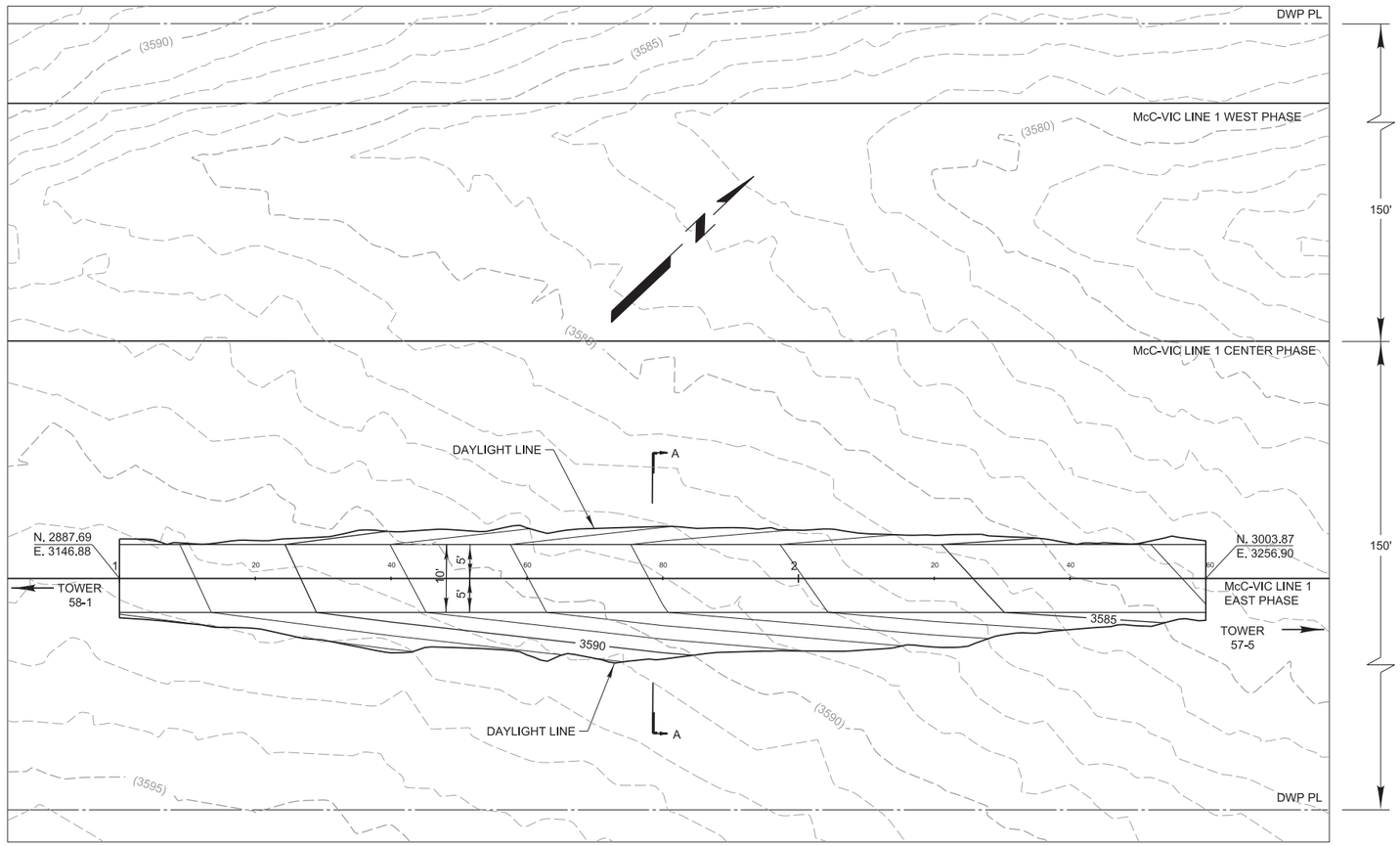
MAX WIDTH (FT)	20
MAX LENGTH (FT)	160
MAX DEPTH (FT)	2.5
AREA (SF)	3000

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



SECTION A-A
NO SCALE



PLAN
SCALE: 1" = 10'

REVISIONS

NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Tang CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

DES. ENGR. J. PANG
LEAD ENGR. J. PANG

PLAN, PROFILE, AND SECTION GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 57-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MV1-57-5-CA01 REV. 1

01-07-13

mv1-57-5.dgn

GENERAL NOTES:

1. ADD 2366000 TO NORTHINGS AND 7175000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. SEE MV1-59-4-CA02 FOR PROFILES.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL

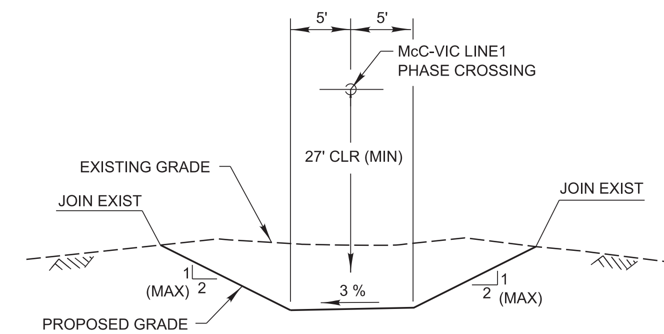
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	446
FILL (CY)	446
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

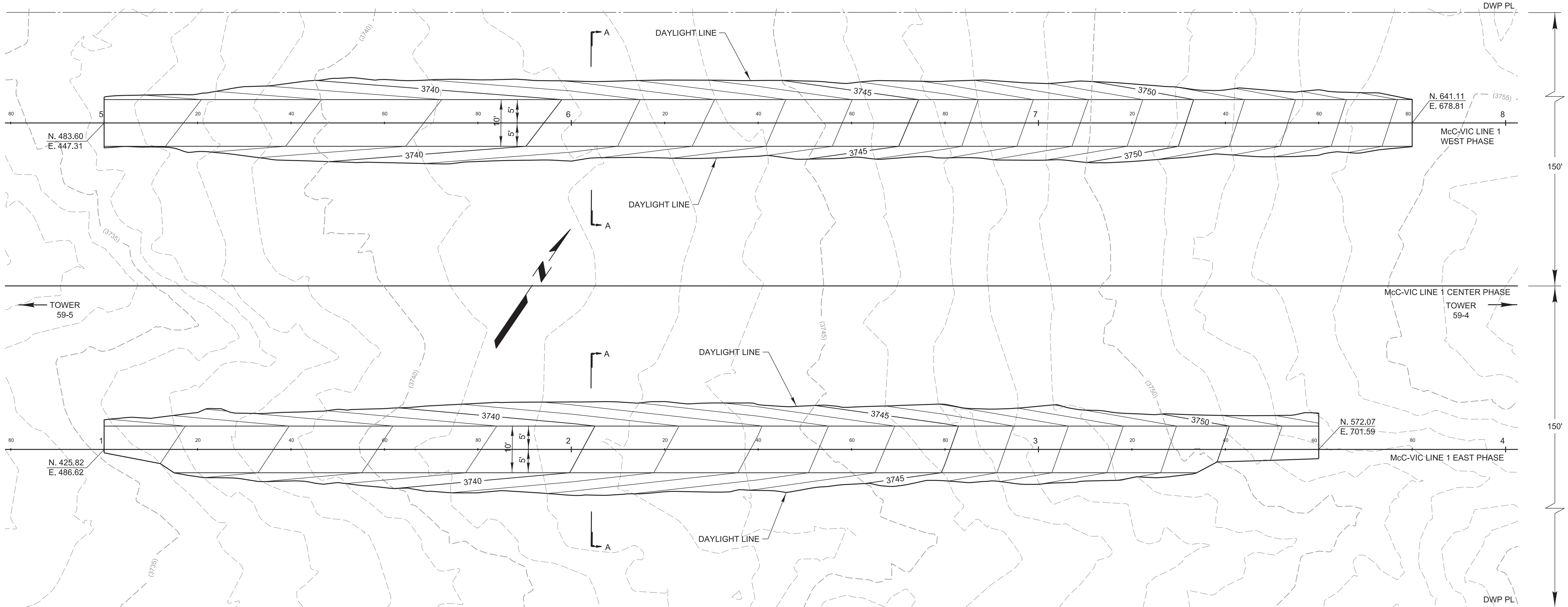
APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	25
MAX LENGTH (FT)	280
MAX DEPTH (FT)	3
AREA (SF)	8700



SECTION A-A

NO SCALE



PLAN

SCALE: 1" = 10'

DES. ENGR.	J. FONG
SUP. ENGR.	J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number ______

DRAFTING RELEASE

DRAWN BY ______

CHECKED BY ______

ENGINEERING APPROVAL

OWNER/AGENT APPROVAL

DRAWING REVISION RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED

DRAFTING RELEASE

DRAWN BY ______

CHECKED BY ______

ENGINEERING APPROVAL

J. Fong CE 69632

OWNER/AGENT APPROVAL

DRAWING RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

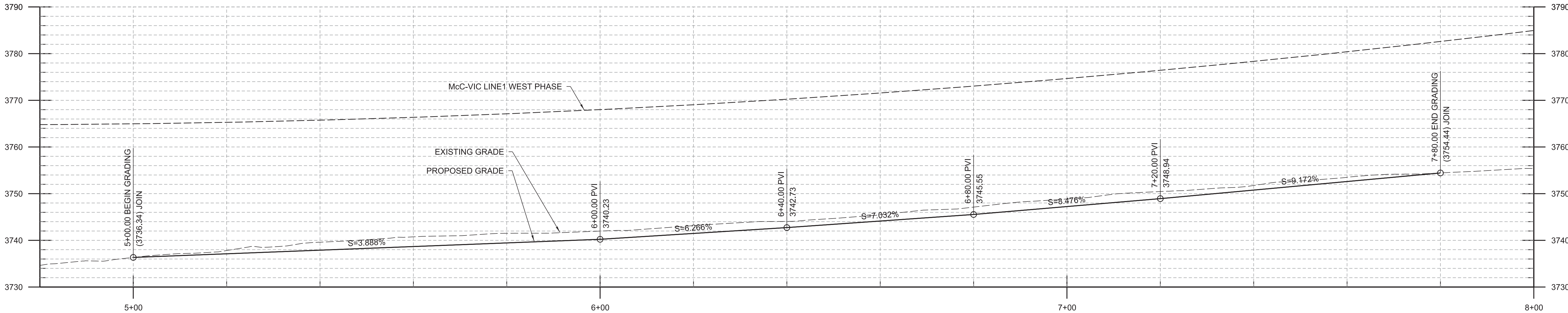
PLAN, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 59-4

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MV1-59-4-CA01 REV. 1

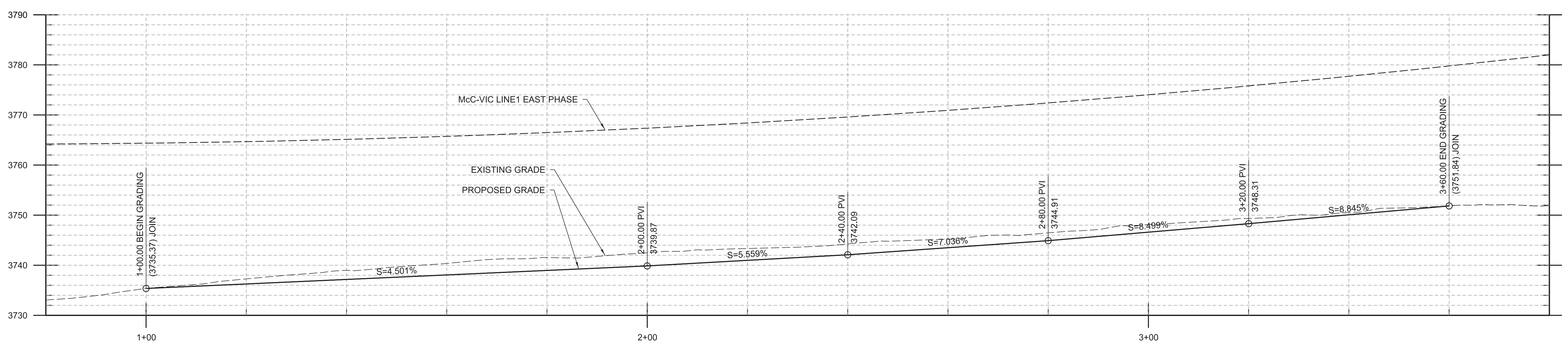
01-07-13

mv1-59-4.dgn



WEST PHASE PROFILE

SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



EAST PHASE PROFILE

SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

NOTE: SEE MV1-59-4-CA01 FOR PLAN, SECTION, AND NOTES.

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number ____

DRAFTING RELEASE
DRAWN BY ____
CHECKED BY ____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY ____
CHECKED BY ____
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PROFILES
GRADING
McCULLOUGH-VICTORVILLE LINE 1 TWR 59-4

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV1-59-4-CA02

REV.

11-15-12

mv1-59-4.dgn

GENERAL NOTES:

1. ADD 2360000 TO NORTHINGS AND 7170000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL, UNLESS NOTED OTHERWISE .
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	207
FILL (CY)	207
IMPORT (CY)	0
EXPORT (CY)	0

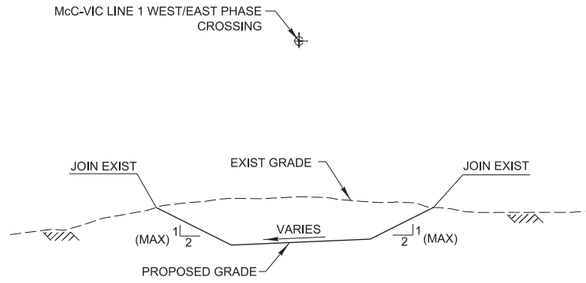
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

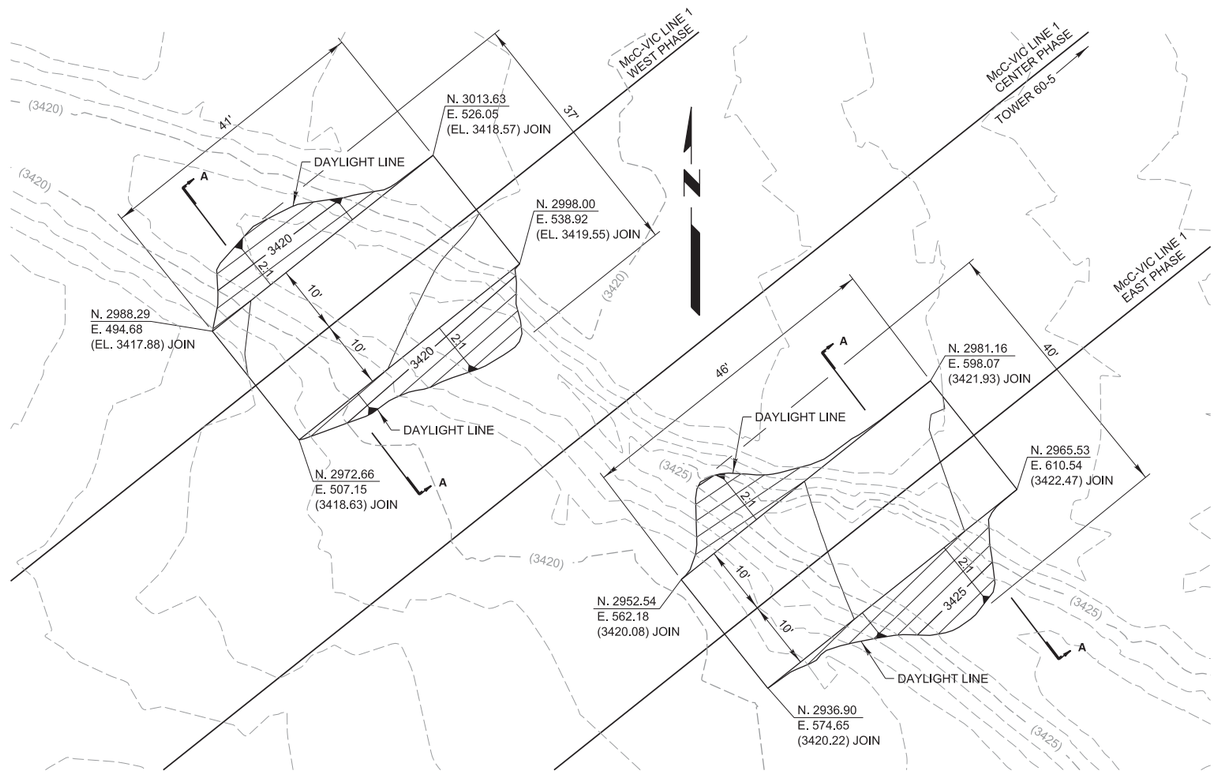
WEST:	
MAX WIDTH (FT)	37
MAX LENGTH (FT)	41
MAX DEPTH (FT)	4
AREA (SF)	140
EAST:	
MAX WIDTH (FT)	40
MAX LENGTH (FT)	46
MAX DEPTH (FT)	5
AREA (SF)	150

ABBREVIATIONS:

CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
S	SLOPE
SG	STRAIGHT GRADE
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

REVISIONS						
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 60-5
		DRAFTING RELEASE		DRAFTING RELEASE		
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES
		CHECKED BY		CHECKED BY		DRAWING NUMBER MV1-60-5-CA01
		ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	REV.
				J. Fong CE 69632		

DES. ENGR. J. FONG
ASST. ENGR. J. PANG

01-22-13

mv1-60-5.dgn

GENERAL NOTES:

1. ADD 2362000 TO NORTHINGS AND 7169000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	63
FILL (CY)	63
IMPORT (CY)	0
EXPORT (CY)	0

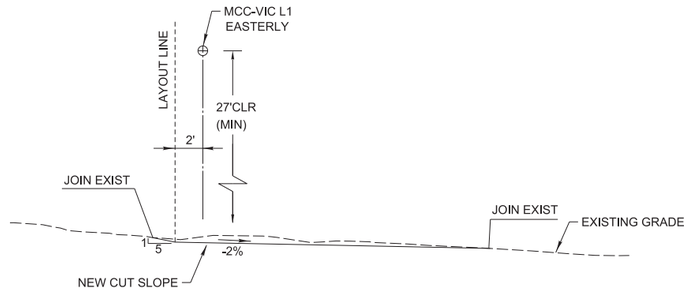
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

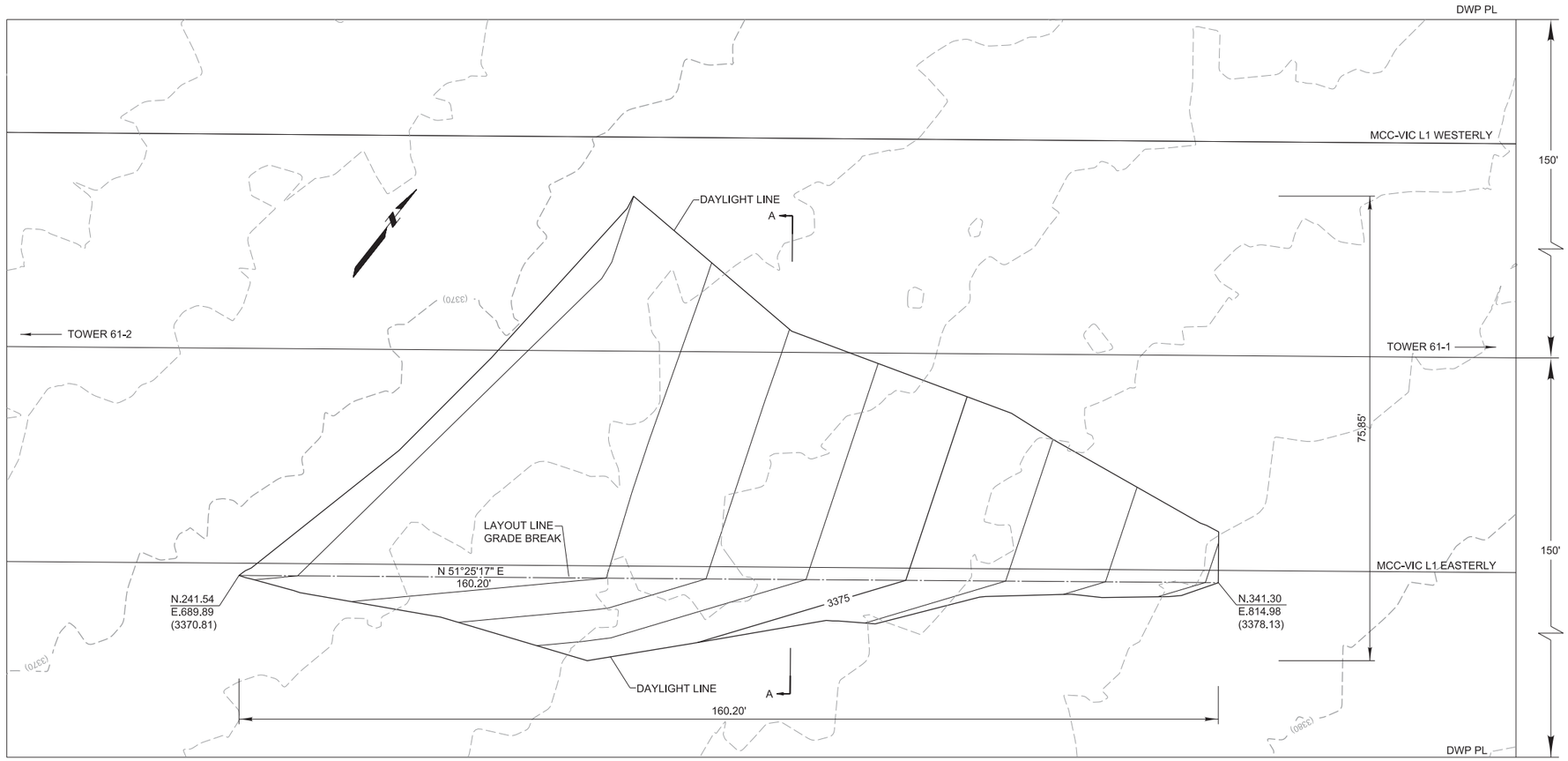
MAX WIDTH (FT)	160.2
MAX LENGTH (FT)	76.0
MAX DEPTH (FT)	1.11
AREA (SF)	5,973

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
T. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 61–2, 61–3

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-61-1-CA01
REV.

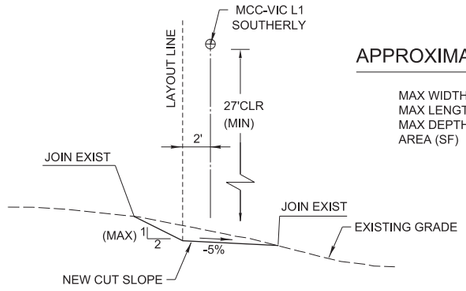
12-04-12

DRA

MV1-61-1-CA01.dgn

GENERAL NOTES:

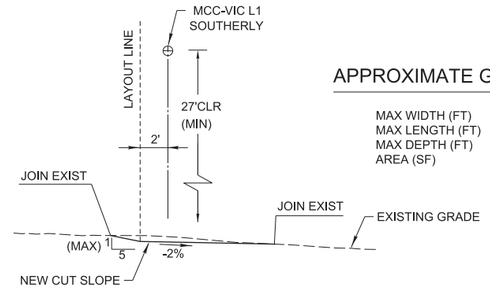
1. ADD 2361000 TO NORTHINGS AND 7168000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	23
MAX LENGTH (FT)	70
MAX DEPTH (FT)	2.2
AREA (SF)	1200

SECTION A-A
TYPICAL SECTION
NO SCALE



APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	32
MAX LENGTH (FT)	95
MAX DEPTH (FT)	0.8
AREA (SF)	1960

SECTION B-B
TYPICAL SECTION
NO SCALE

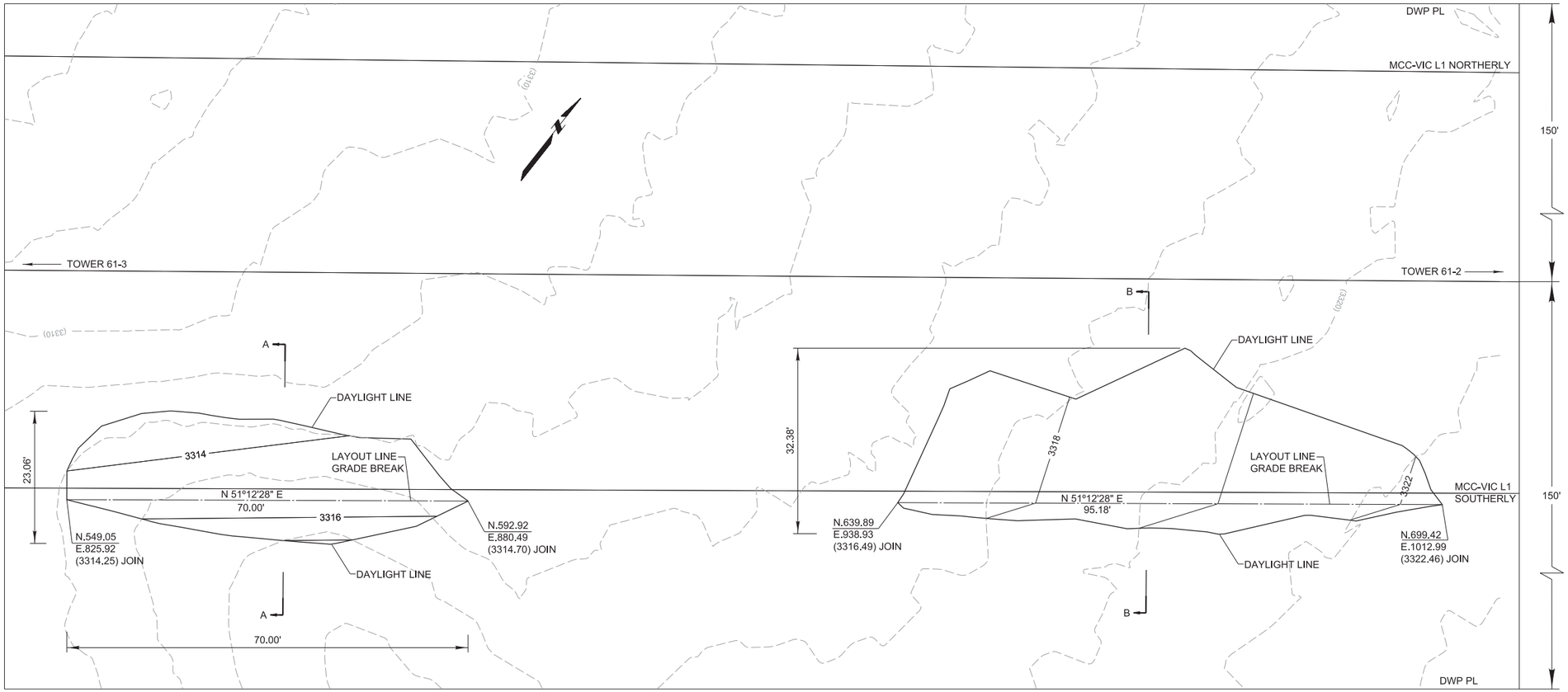
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	63
FILL (CY)	63
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER SUP. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J. Alcocer CE 70713	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	**PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 61–2, 61–3**	DRAWING NUMBER **MV1-61-2-CA01** REV.

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

12-04-12

DRA

MV1-61-2-CA01.dgn

GENERAL NOTES:

1. ADD 2350000 TO NORTHINGS AND 7160000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

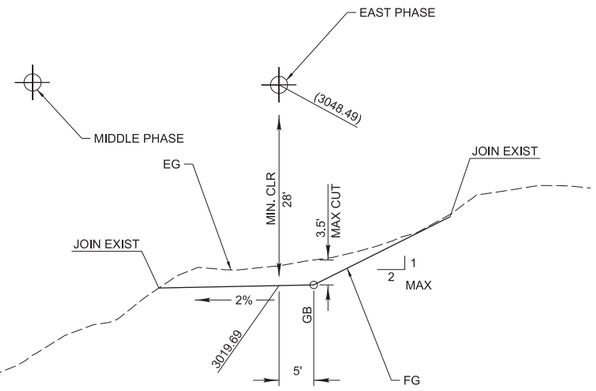
CUT (CY)	295
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK AND SHRINKAGE FACTORS)

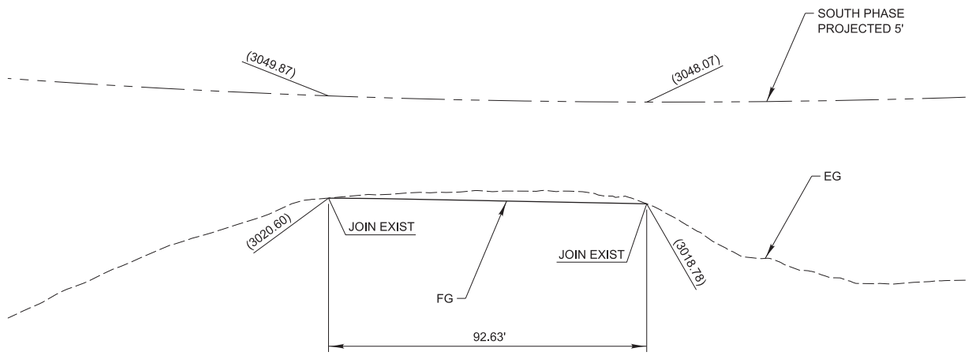
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

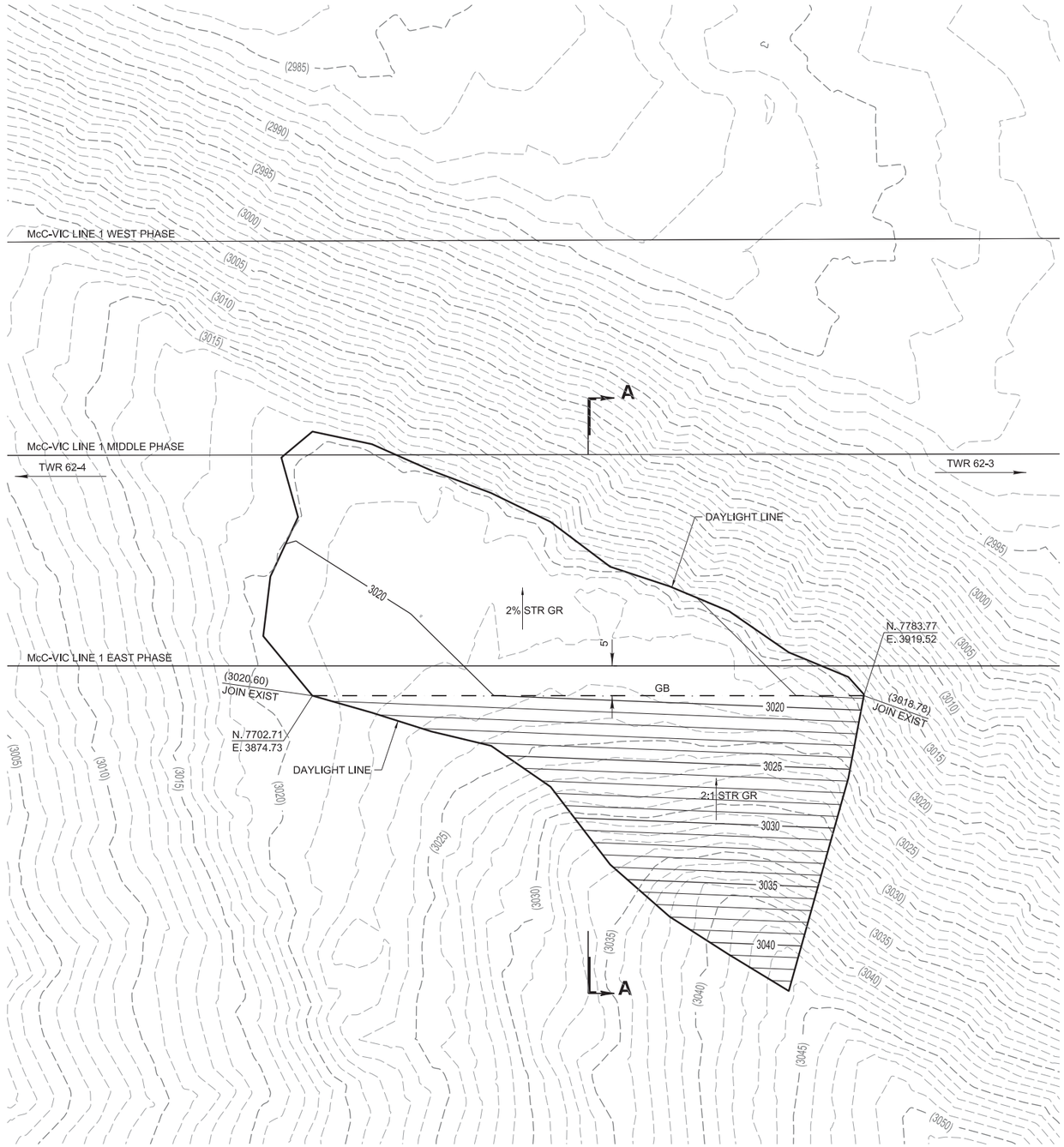
MAX WIDTH (FT)	60
MAX LENGTH (FT)	93
MAX DEPTH (FT)	3.5
AREA (SF)	4740



SECTION A–A
SCALE: 1" = 10'



PROFILE – GB
NO SCALE



PLAN
SCALE: 1" = 10'

* DWP PL 150' EAST AND WEST FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. E. MALACON

REVISIONS

NO.	DESCRIPTION

Revision Number _____

DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Pang CE 65962

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 62–3

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-62-3-CA01

REV. 1

11-30-12

DRA

mcv1_62-3.dgn

GENERAL NOTES:

1. ADD 2340000 TO NORTHINGS AND 7140000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. SEE MV1-66-5-CA02 FOR PLAN.
13. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	179
FILL (CY)	179
IMPORT (CY)	0
EXPORT (CY)	0

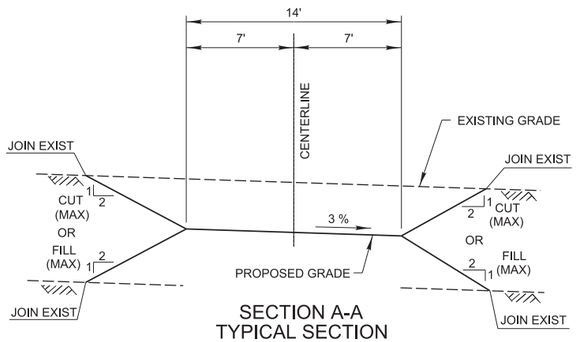
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

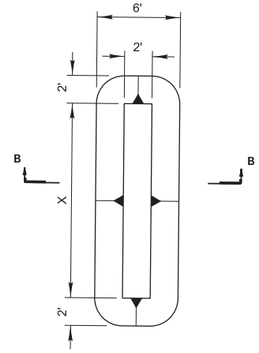
MAX WIDTH (FT)	25
MAX LENGTH (FT)	275
MAX DEPTH (FT)	3.5
AREA (SF)	9025

ABBREVIATIONS:

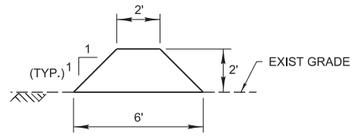
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



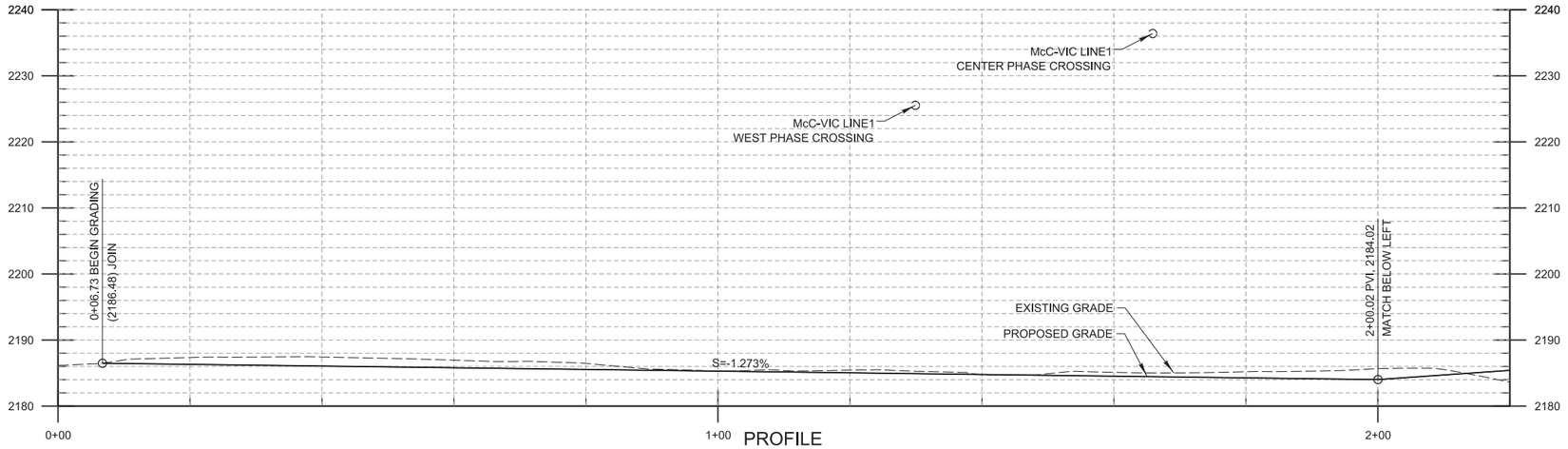
SECTION A-A
TYPICAL SECTION
NO SCALE



COMPACTED SOIL BARRICADE
DETAIL 1
NO SCALE



SECTION B-B
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

DES. ENGR.	J. TONG
SUPV. ENGR.	J. PANG
PROJ. ENGR.	J. PANG

REVISIONS NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
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CHECKED BY _____
ENGINEERING APPROVAL
J. Tong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

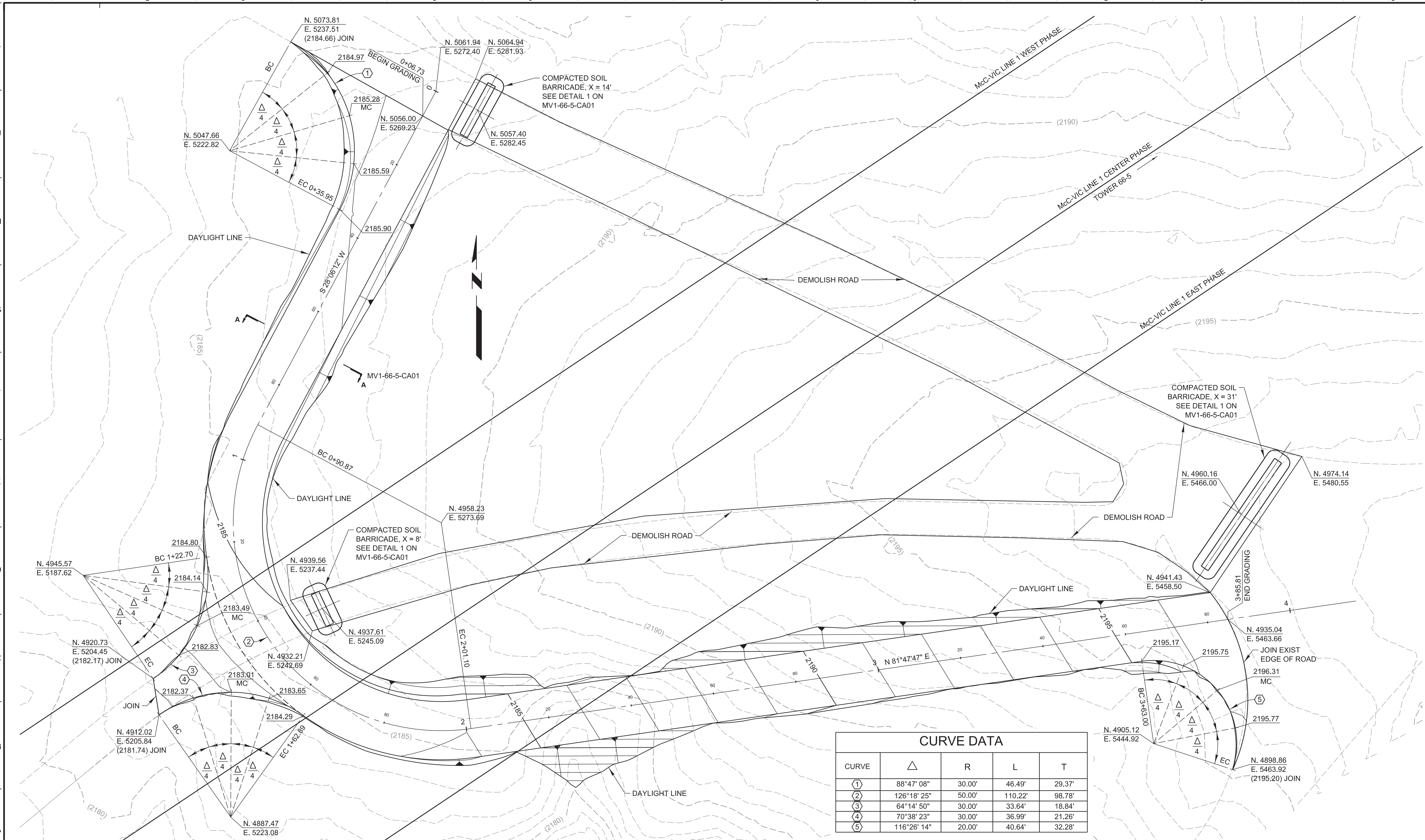
PROFILES, SECTIONS, DETAIL, AND NOTES GRADING
McCULLOUGH-VICTORVILLE LINE 1 TWR 66-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV1-66-5-CA01
REV.: 1

01-07-13

mv1-66-5.dgn



CURVE DATA

CURVE	△	R	L	T
1	88°47' 08"	30.00'	46.49'	29.37'
2	126°18' 25"	50.00'	110.22'	98.78'
3	64°14' 50"	30.00'	33.64'	18.84'
4	70°38' 23"	30.00'	36.99'	21.26'
5	116°26' 14"	20.00'	40.64'	32.28'

PLAN
SCALE: 1" = 10'

NOTE: SEE MV1-66-5-CA01 FOR PROFILES, GENERAL NOTES, ABBREVIATIONS, DETAIL, AND SECTIONS.

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number ____
DRAFTING RELEASE
DRAWN BY ____
CHECKED BY ____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

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ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN
GRADING
McCULLOUGH-VICTORVILLE LINE 1 TWR 66-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

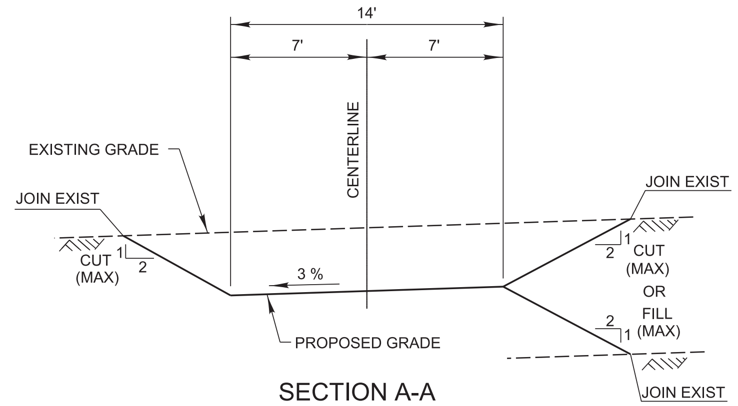
DRAWING NUMBER
MV1-66-5-CA02
REV.

12-10-12

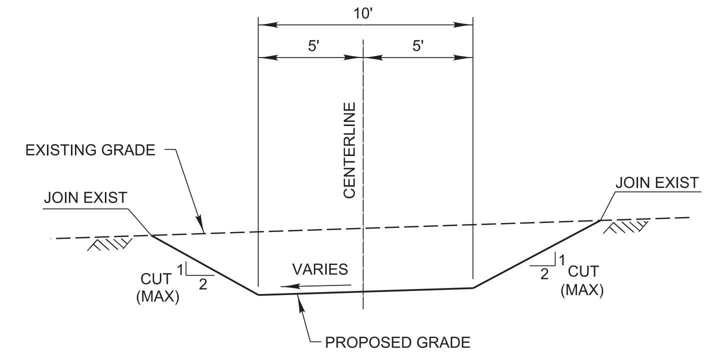
mv1-65-5.dgn

GENERAL NOTES:

1. ADD 2327000 TO NORTHINGS AND 7113000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. SEE MV1-73-6-CA02 FOR PLAN.
13. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.



SECTION A-A
MV1-73-6-CA02
NO SCALE



SECTION B-B
MV1-73-6-CA02
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	79
FILL (CY)	79
IMPORT (CY)	0
EXPORT (CY)	0

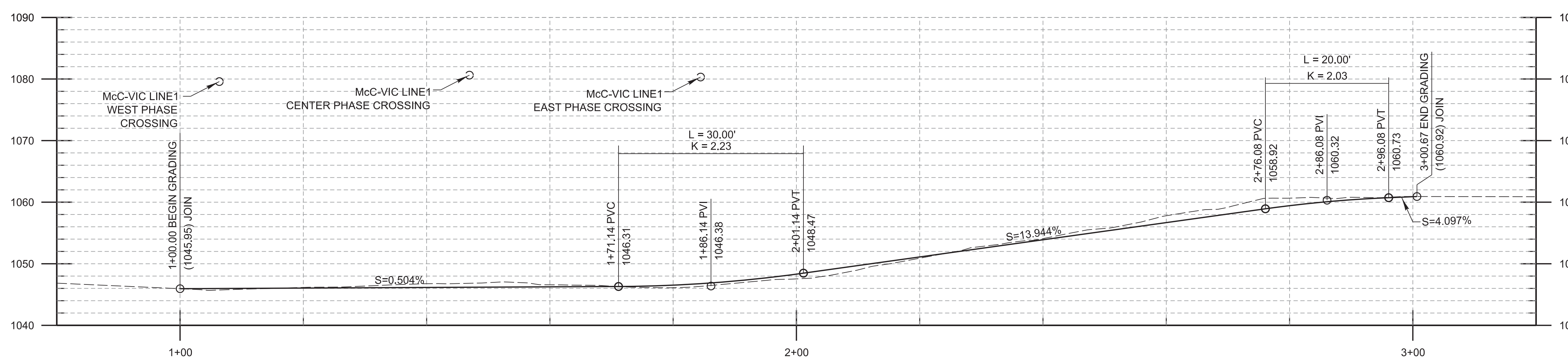
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	25
MAX LENGTH (FT)	190
MAX DEPTH (FT)	2
AREA (SF)	5000

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
K	RATE OF VERTICAL CURVATURE
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

DES. ENGR.	J. FONG
SUP. ENGR.	J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
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DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

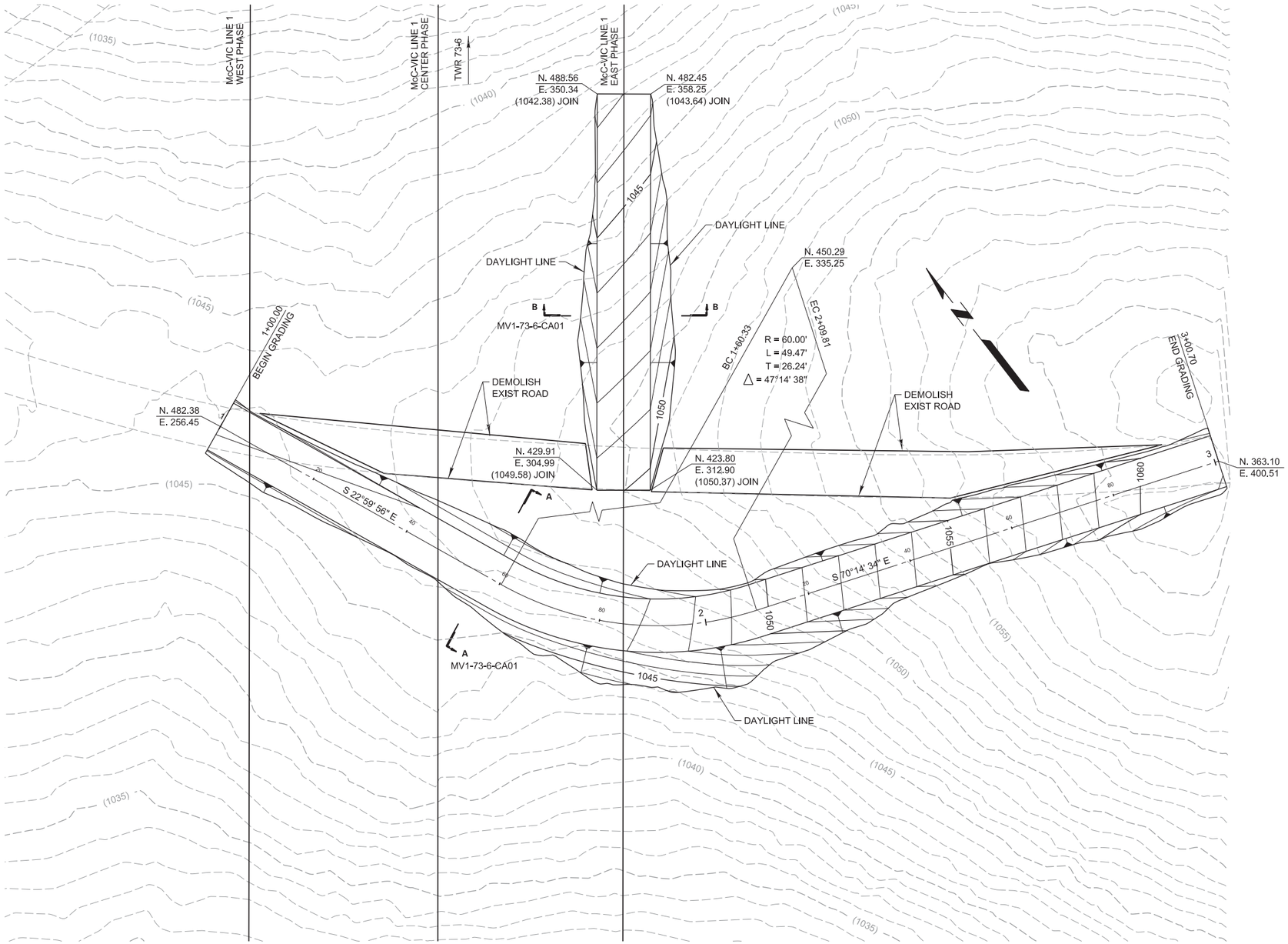
PROFILES, SECTIONS, AND NOTES
GRADING
McCULLOUGH-VICTORVILLE LINE 1 TWR 73-6

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV1-73-6-CA01
REV. 1

01-07-13

mv1-73-6.dgn



PLAN
SCALE: 1" = 10'

NOTE: SEE MV1-73-6-CA01 FOR PROFILES, GENERAL NOTES, ABBREVIATIONS, AND SECTIONS.

DES. ENGR. J.TONG DRAFT. ENGR. J.I.PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J. Tong CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 73-6 POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES	DRAWING NUMBER MV1-73-6-CA02 REV.

12-17-12

mv1-73-6.dgn

GENERAL NOTES:

1. ADD 2323000 TO NORTHINGS AND 7105000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	102
FILL (CY)	102
IMPORT (CY)	0
EXPORT (CY)	0

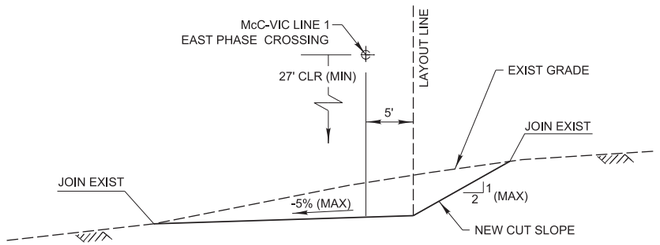
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

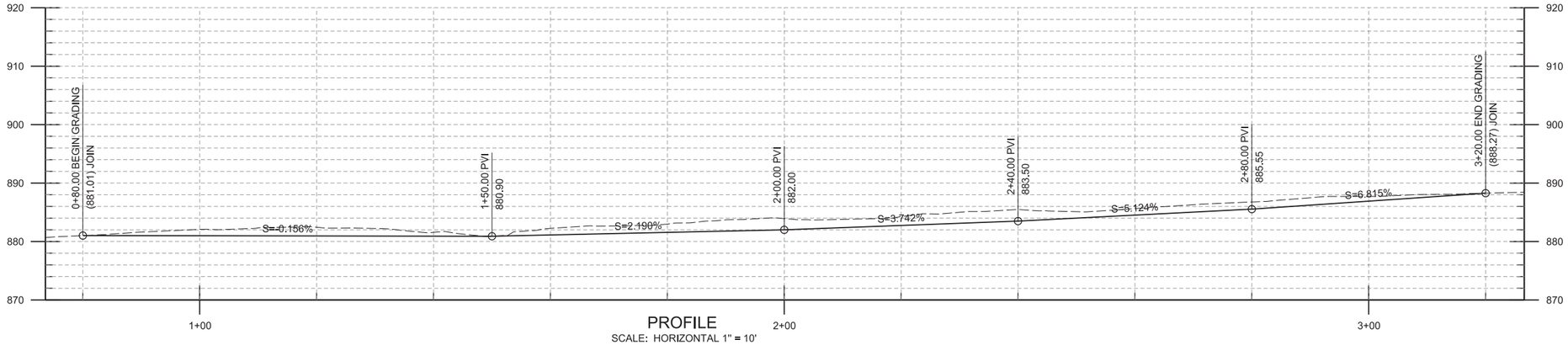
MAX WIDTH (FT)	29
MAX LENGTH (FT)	240
MAX DEPTH (FT)	2.25
AREA (SF)	3617

ABBREVIATIONS:

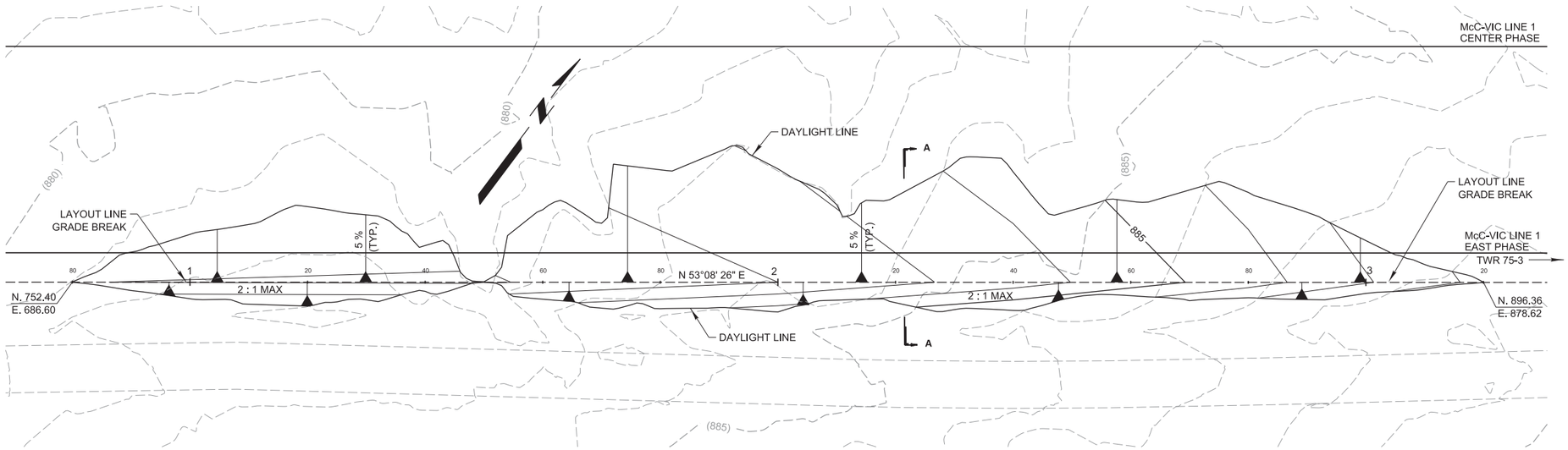
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
K	RATE OF VERTICAL CURVATURE
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

DES. ENGR. J. TONG DFT. ENGR. J. PANG SUP. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J Tong CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, PROFILES, SECTIONS, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 75-3	

DWP
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV1-75-3-CA01
REV.: 1
01-07-13

mv1-75-3.dgn

GENERAL NOTES:

1. ADD 2320000 TO NORTHINGS AND 7100000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	21
FILL (CY)	21
IMPORT (CY)	0
EXPORT (CY)	0

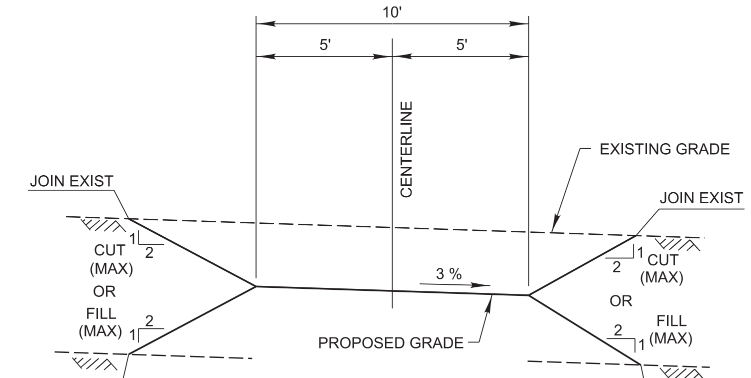
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

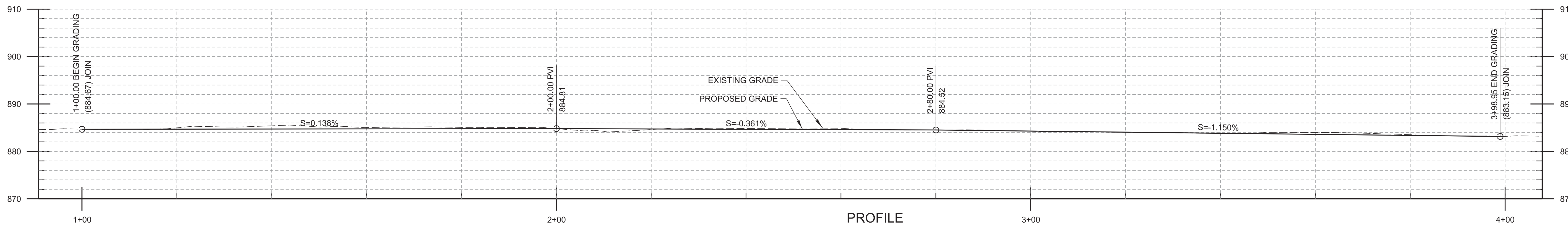
MAX WIDTH (FT)	15
MAX LENGTH (FT)	300
MAX DEPTH (FT)	1.25
AREA (SF)	3300

ABBREVIATIONS:

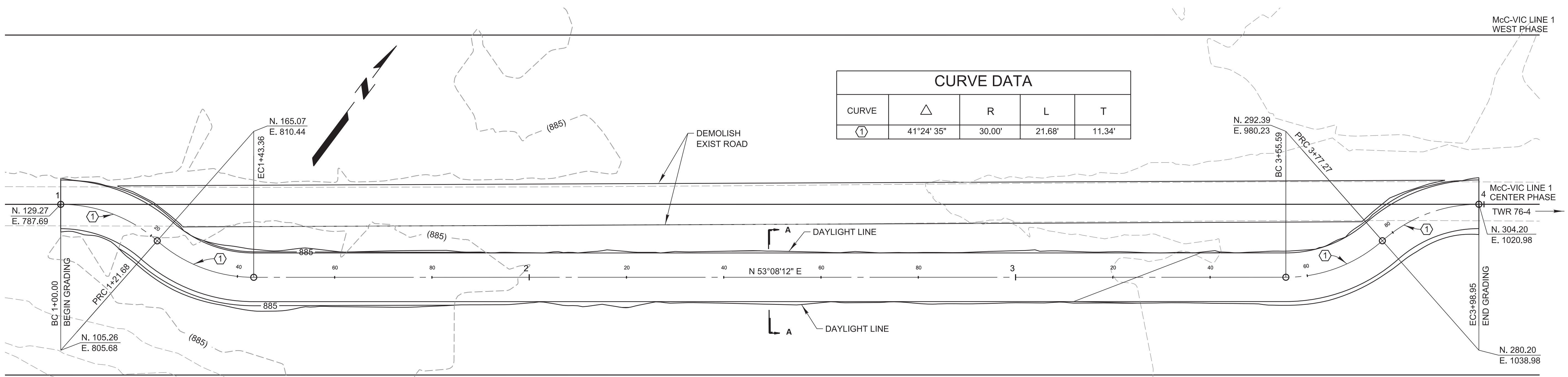
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
T	TANGENT
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



CURVE DATA

CURVE	△	R	L	T
1	41°24' 35"	30.00'	21.68'	11.34'

PLAN
SCALE: 1" = 10'

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number ____
DRAFTING RELEASE
DRAWN BY ____
CHECKED BY ____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY ____
CHECKED BY ____
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILES, SECTIONS, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 76-4

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-76-4-CA01
REV. 1

01-07-13

mv1-76-4.dgn

GENERAL NOTES:

1. ADD 2000000 TO NORTHINGS AND 7000000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.
13. BLOCK OFF ROAD WITH EARTHEN BERM OF THE FOLLOWING DIMENSIONS: 12" HIGH, 48" WIDE BASE, AND 2:1 SIDE SLOPES.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	16
FILL (CY)	16
IMPORT (CY)	0
EXPORT (CY)	0

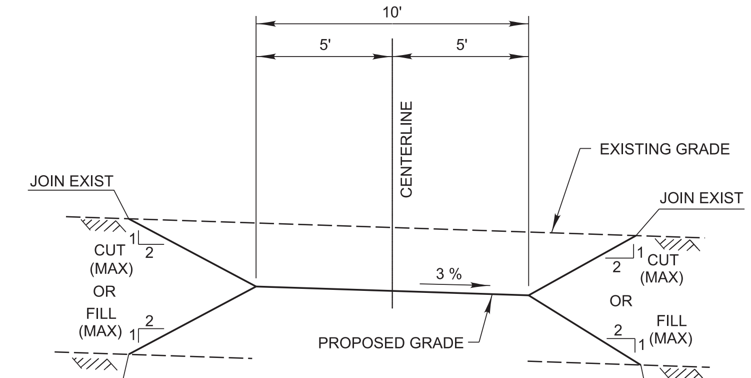
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

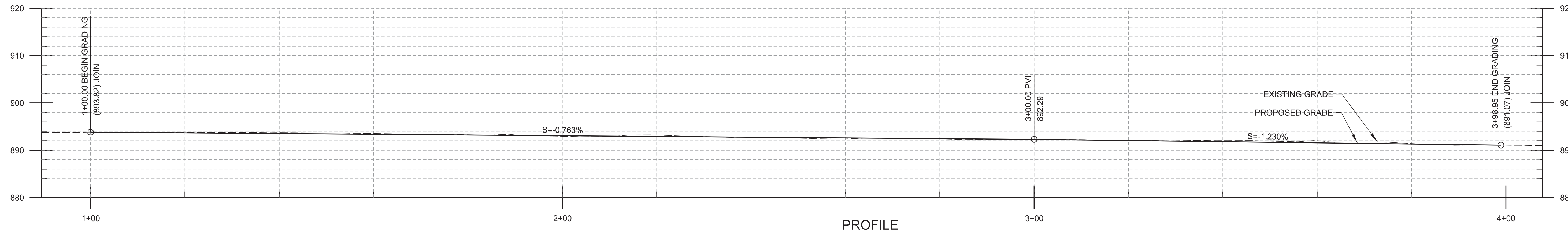
MAX WIDTH (FT)	13
MAX LENGTH (FT)	300
MAX DEPTH (FT)	1.25
AREA (SF)	3300

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
T	TANGENT
TYP.	TYPICAL
TWR	TOWER



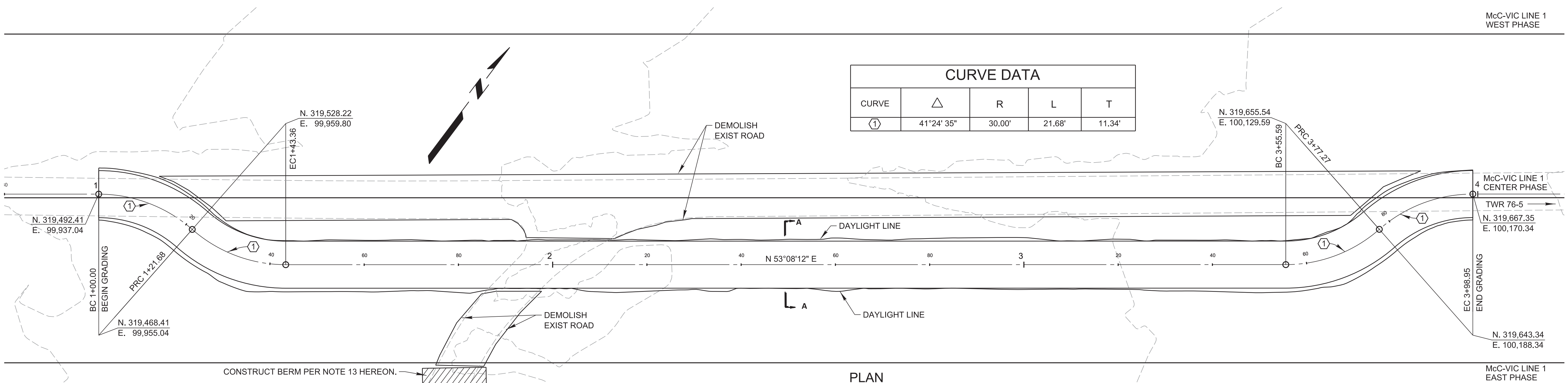
SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

CURVE DATA

CURVE	△	R	L	T
1	41°24' 35"	30.00'	21.68'	11.34'



PLAN
SCALE: 1" = 10'

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILES, SECTIONS, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 76-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV1-76-5-CA01

REV.

01-08-13

mv1-76-5.dgn

GENERAL NOTES:

1. ADD 2310000 TO NORTHINGS AND 7090000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	29
FILL (CY)	29
IMPORT (CY)	0
EXPORT (CY)	0

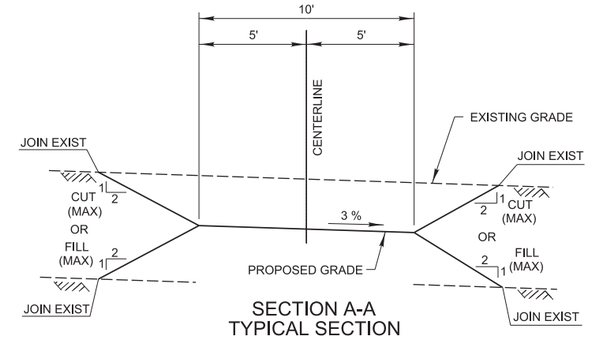
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

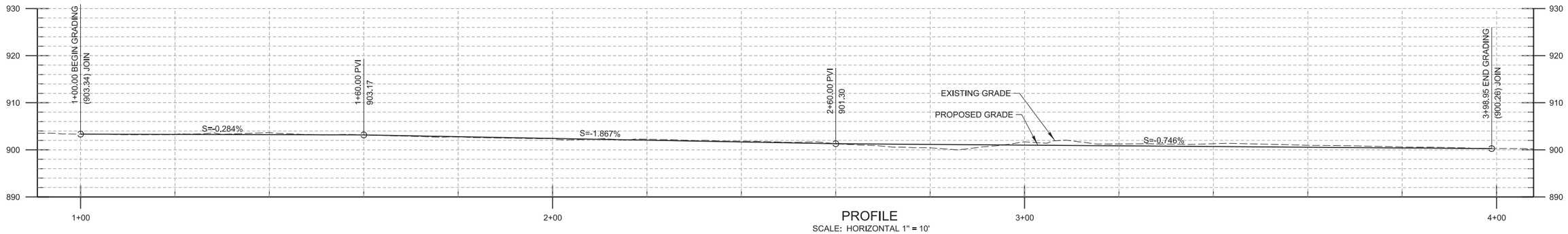
MAX WIDTH (FT)	15
MAX LENGTH (FT)	300
MAX DEPTH (FT)	1.25
AREA (SF)	3436

ABBREVIATIONS:

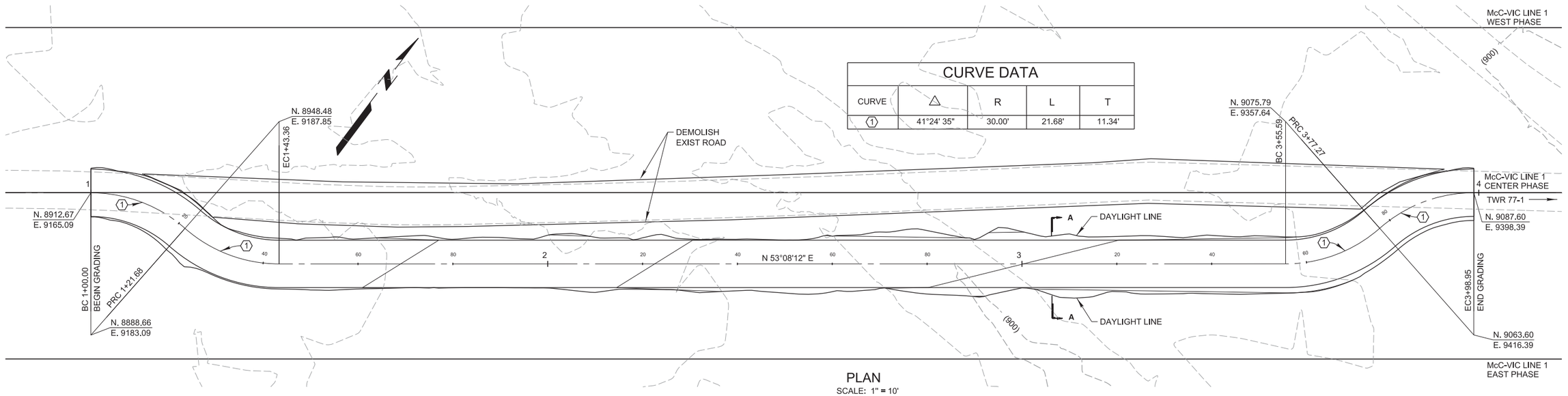
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
T	TANGENT
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



CURVE DATA				
CURVE	△	R	L	T
1	41°24' 35"	30.00'	21.68'	11.34'

PLAN
SCALE: 1" = 10'

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
_____
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
_____
DRAWING REVISION RELEASE APPROVAL
_____ _____
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
_____
DRAWING RELEASE APPROVAL
_____ _____
FINAL APPROVAL RELEASE SIGNATURE DATE

DES. ENGR. J. FONG
SUP. ENGR. J. PANG
PROJ. ENGR. J. PANG

PLAN, PROFILE, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 77-1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MV1-77-1-CA01 REV. 1

01-07-13

mv1-77-1.dgn

GENERAL NOTES:

1. ADD 2310000 TO NORTHINGS AND 7090000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. BLOCK OFF ABANDONED SECTION OF ROAD BY PLACING 1'-HIGH EARTHEN BERM, 4'-WIDE BASE, 2:1 SIDE SLOPES.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CONST	CONSTRUCTION
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

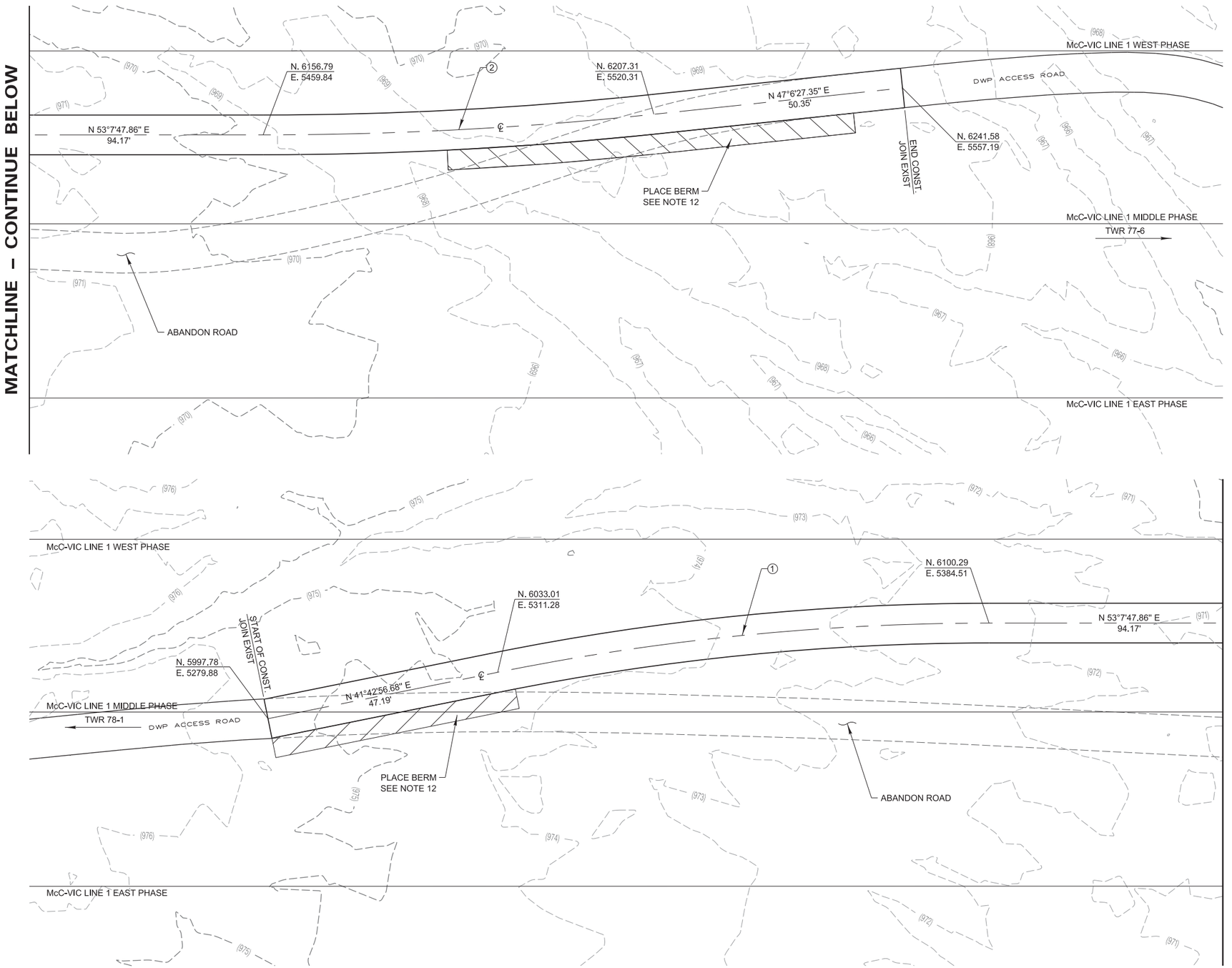
CUT (CY)	10
FILL (CY)	10
IMPORT (CY)	0
EXPORT (CY)	0

* PROFILE OF NEW ROAD TO FOLLOW EXISTING TOPOGRAPHY. CUT AND FILL QUANTITIES ARE NEGLIGIBLE.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	30
MAX LENGTH (FT)	330
MAX DEPTH (FT)	1
AREA (SF)	5000

	CURVE DATA				PI	
	R	L	T	Δ	N.	E.
①	500'	99.61'	49.97'	11°24'51.18"	6070.31	5344.53
②	750'	78.83'	39.45'	6°1'20.51"	6180.46	5491.40



PLAN
SCALE: 1" = 10'

* DWP PL 150' EAST AND WEST FROM CL OF TL TWR

REVISIONS						
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 77–4
		DRAFTING RELEASE		DRAFTING RELEASE		
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	
		CHECKED BY		CHECKED BY		
		ENGINEERING APPROVAL		ENGINEERING APPROVAL		
			FINAL APPROVAL RELEASE SIGNATURE DATE	J. Pang CE 65962	FINAL APPROVAL RELEASE SIGNATURE DATE	

DES. ENGR. J. PANG
SUP. ENGR. L. MALACON

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MV1-77-4-CA01 REV. 1

12-28-12

DRA

mv1_77-4_78-1.dgn

GENERAL NOTES:

1. ADD 2310000 TO NORTHINGS AND 7090000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. BLOCK OFF ABANDONED SECTION OF ROAD BY PLACING 1'-HIGH EARTHEN BERM, 4'-WIDE BASE, 2:1 SIDE SLOPES.
13. PLACE TOPSOIL FROM BLADED NEW ACCESS ROAD ONTO SURFACE OF ABANDONED ROAD TO ENCOURAGE RE-VEGETATION.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CONST	CONSTRUCTION
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	10
FILL (CY)	10
IMPORT (CY)	0
EXPORT (CY)	0

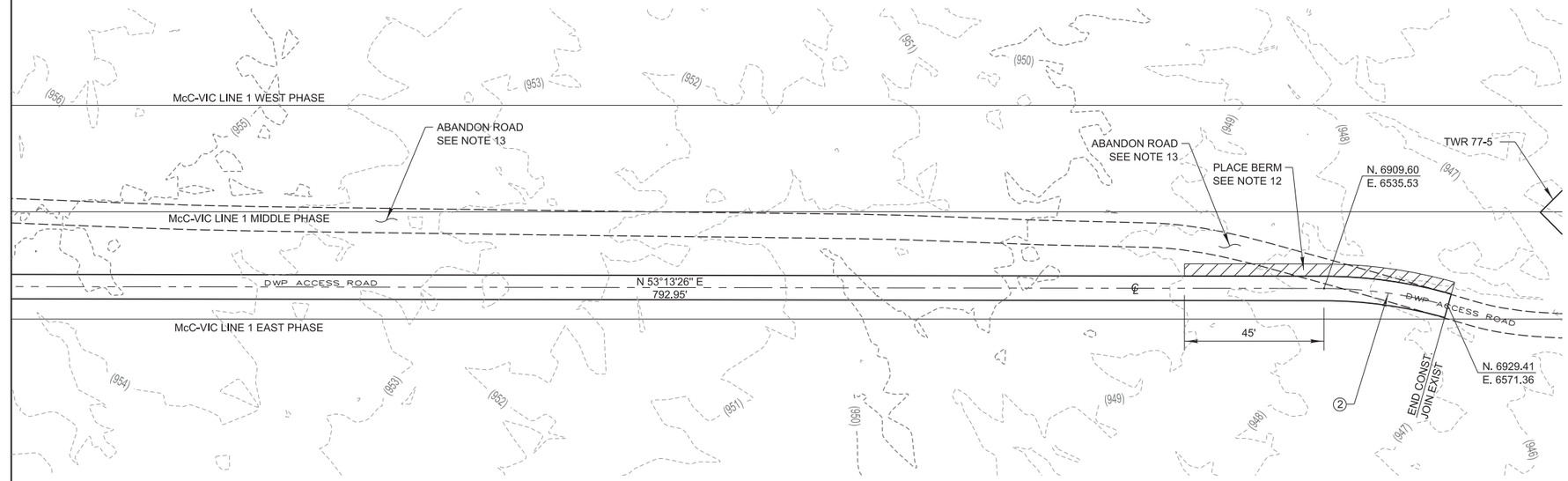
* PROFILE OF NEW ROAD TO FOLLOW EXISTING TOPOGRAPHY. CUT AND FILL QUANTITIES ARE NEGLIGIBLE.

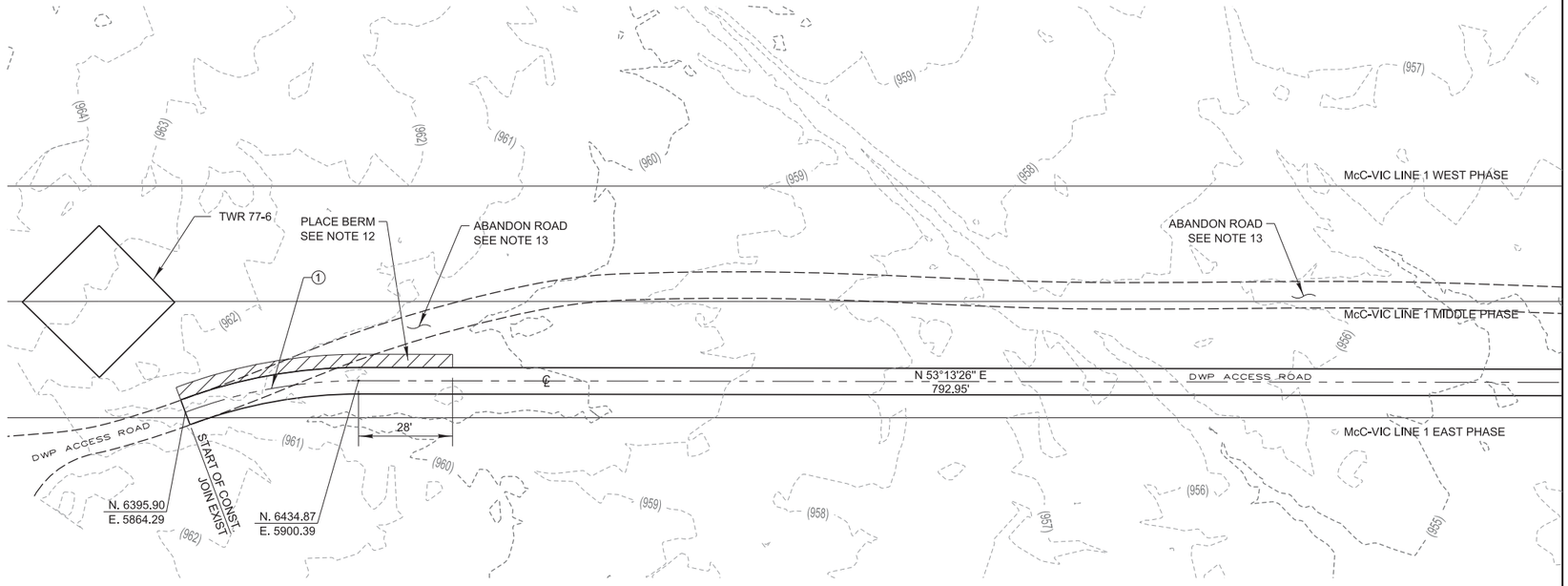
APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	50
MAX LENGTH (FT)	900
MAX DEPTH (FT)	1
AREA (SF)	21000

	CURVE DATA				PI	
	R	L	T	Δ	N.	E.
①	150'	53.95'	27.27'	20°36'31.52"	6418.87	5878.98
②	150'	41.07'	20.67'	15°41'17.40"	6921.97	6552.08

MATCHLINE – CONTINUE BELOW





MATCHLINE – CONTINUE ABOVE

PLAN
SCALE: 1" = 20'

* DWP PL 150' EAST AND WEST FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. E. MALACON

REVISIONS NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J Pang CE 65962

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DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN
GRADING
McCULLOUGH–VICTORVILLE LINE 1 TWR 77–5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-77-5-CA01** REV. 0

02-22-13

DRA

mv1_77-5_ca01.dgn

GENERAL NOTES:

1. ADD 2310000 TO NORTHINGS AND 7090000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. BLOCK OFF ABANDONED SECTION OF ROAD BY PLACING 1'-HIGH EARTHEN BERM, 4'-WIDE BASE, 2:1 SIDE SLOPES.
13. PLACE TOPSOIL FROM BLADED NEW ACCESS ROAD ONTO SURFACE OF ABANDONED ROAD TO ENCOURAGE RE-VEGETATION.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CONST	CONSTRUCTION
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

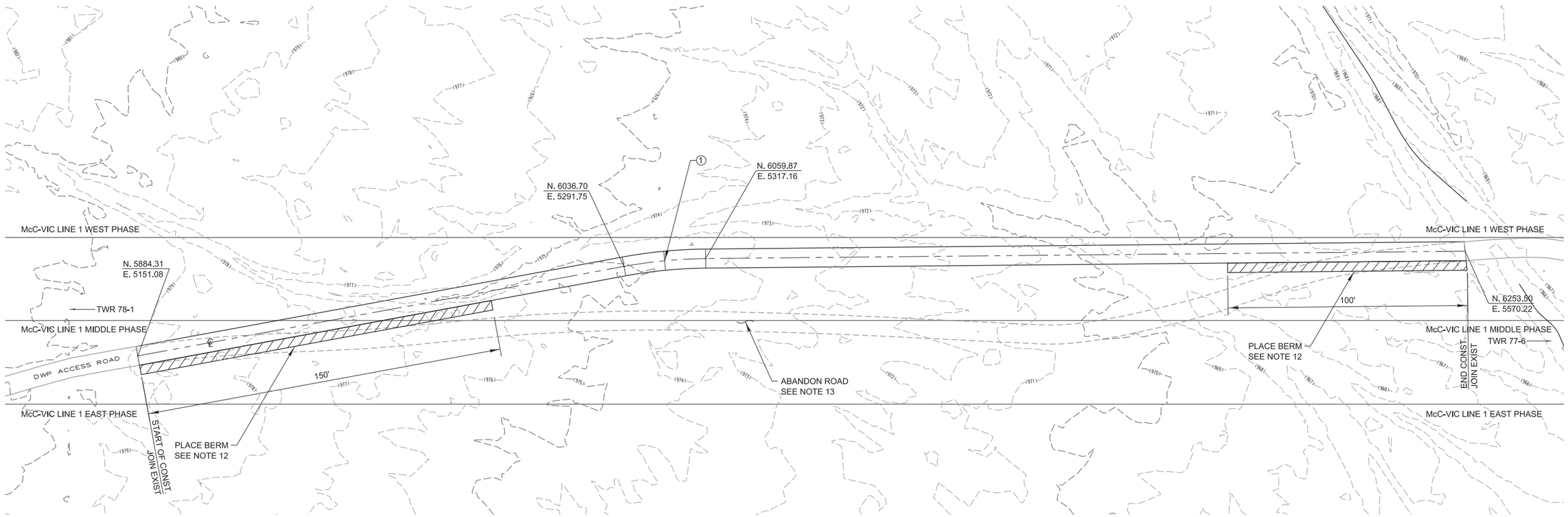
CUT (CY)	10
FILL (CY)	10
IMPORT (CY)	0
EXPORT (CY)	0

* PROFILE OF NEW ROAD TO FOLLOW EXISTING TOPOGRAPHY. CUT AND FILL QUANTITIES ARE NEGLIGIBLE.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	50
MAX LENGTH (FT)	560
MAX DEPTH (FT)	1
AREA (SF)	17000

CURVE DATA					PI	
	R	L	T	Δ	N.	E.
①	200'	34.44'	17.26'	9°51'58.07"	6049.38	5303.45



PLAN
SCALE: 1" = 20'

* DWP PL 150' EAST AND WEST FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. E. MALACON

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Pang CE 65962

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN
GRADING
McCULLOUGH–VICTORVILLE LINE 1 TWR 77–6

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-77-6-CA01
REV. 0

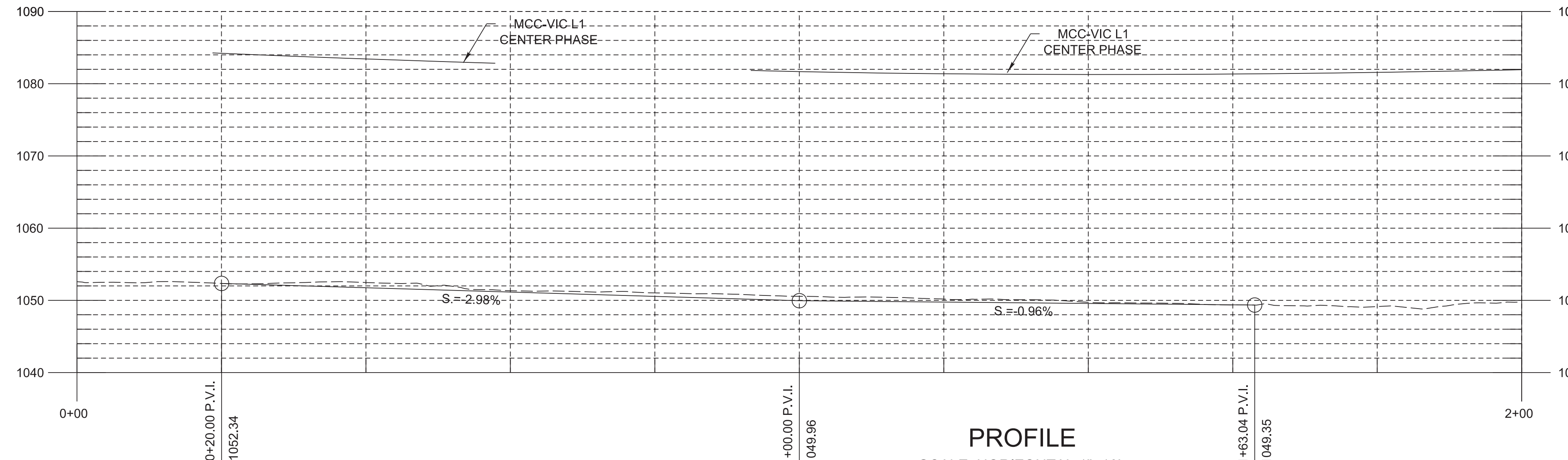
03-26-13

DRA

mv1_77-6_ca01.dgn

GENERAL NOTES:

1. ADD 2313000 TO NORTHINGS AND 7092000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	34
FILL (CY)	34
IMPORT (CY)	0
EXPORT (CY)	0

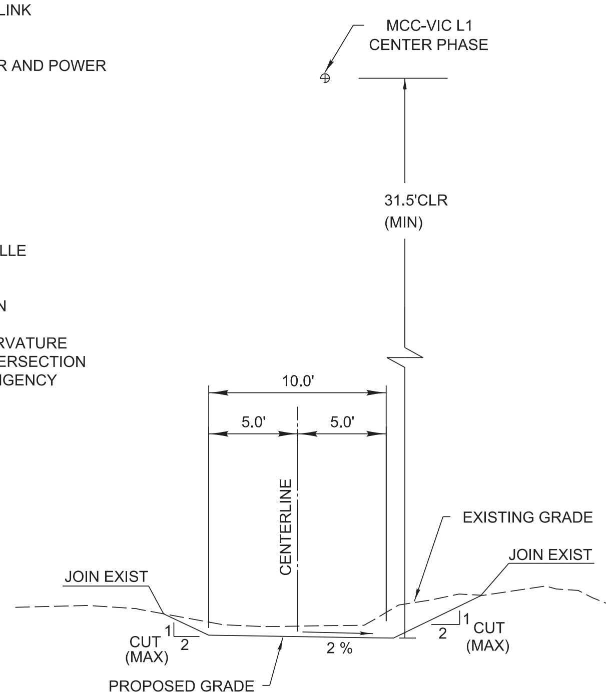
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

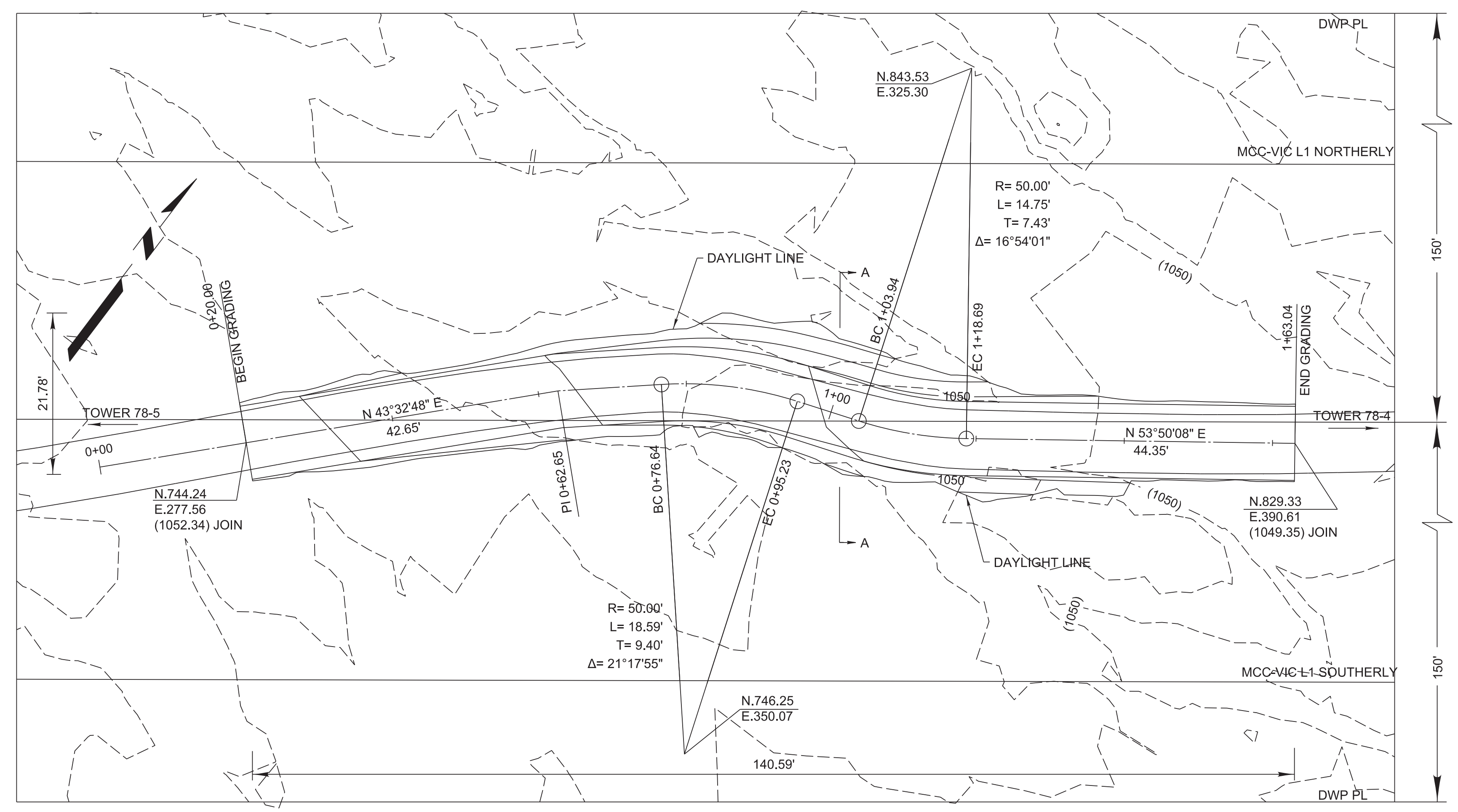
MAX WIDTH (FT)	22
MAX LENGTH (FT)	141
MAX DEPTH (FT)	1.6
AREA (SF)	1976

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
MCC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1"=10'

REVISIONS	
NO.	DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
F. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

PLAN, PROFILE, AND SECTIONS GRADING MCC-VICTORVILLE LINE 1 TWR 78-4, 78-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-78-4-CA01
REV.
12-03-12

MVL1-78-4.dgn

GENERAL NOTES:

1. ADD 2081000 TO NORTHINGS AND 6823000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	40
FILL (CY)	40
IMPORT (CY)	0
EXPORT (CY)	0

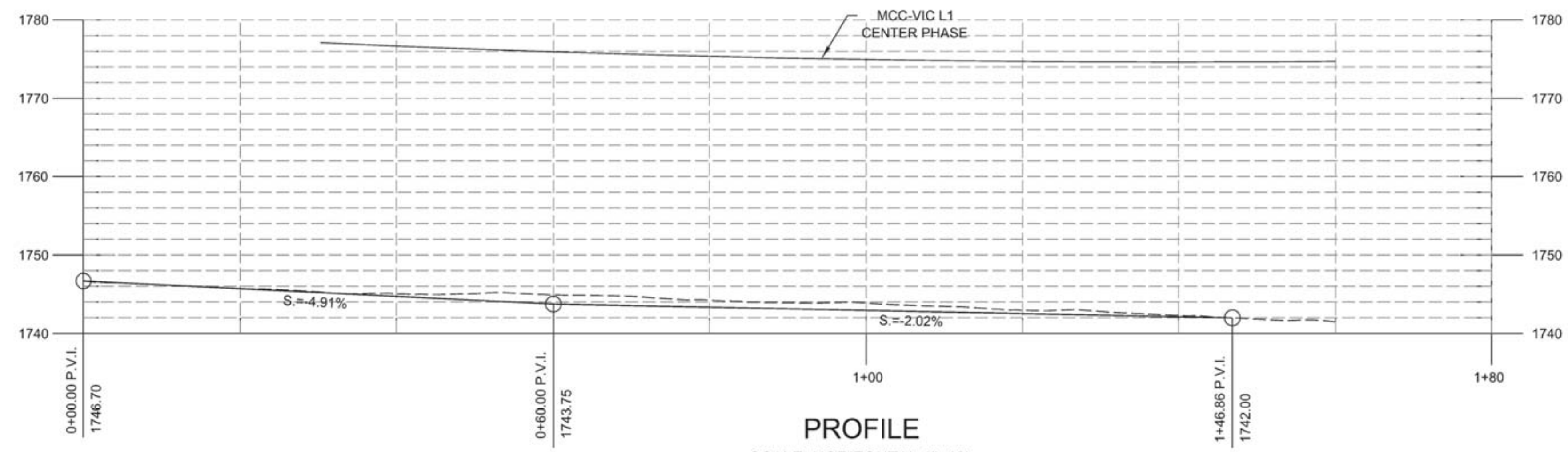
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

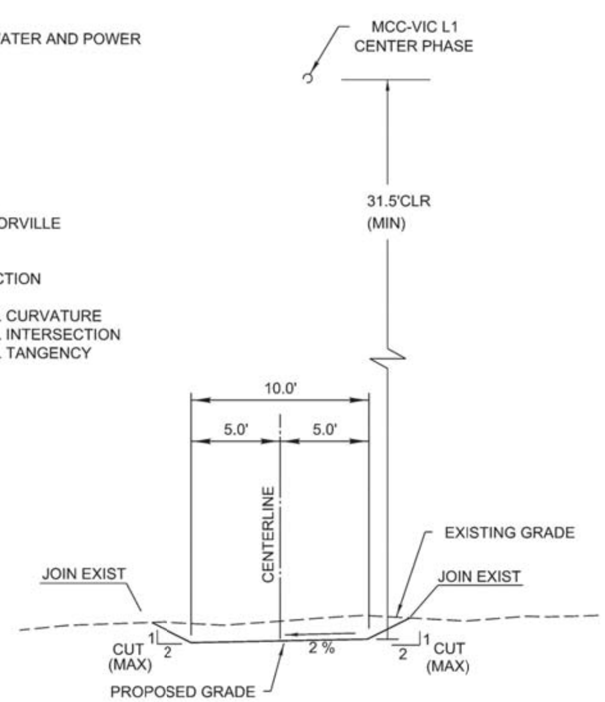
MAX WIDTH (FT)	16.5
MAX LENGTH (FT)	147
MAX DEPTH (FT)	1.3
AREA (SF)	1996

ABBREVIATIONS:

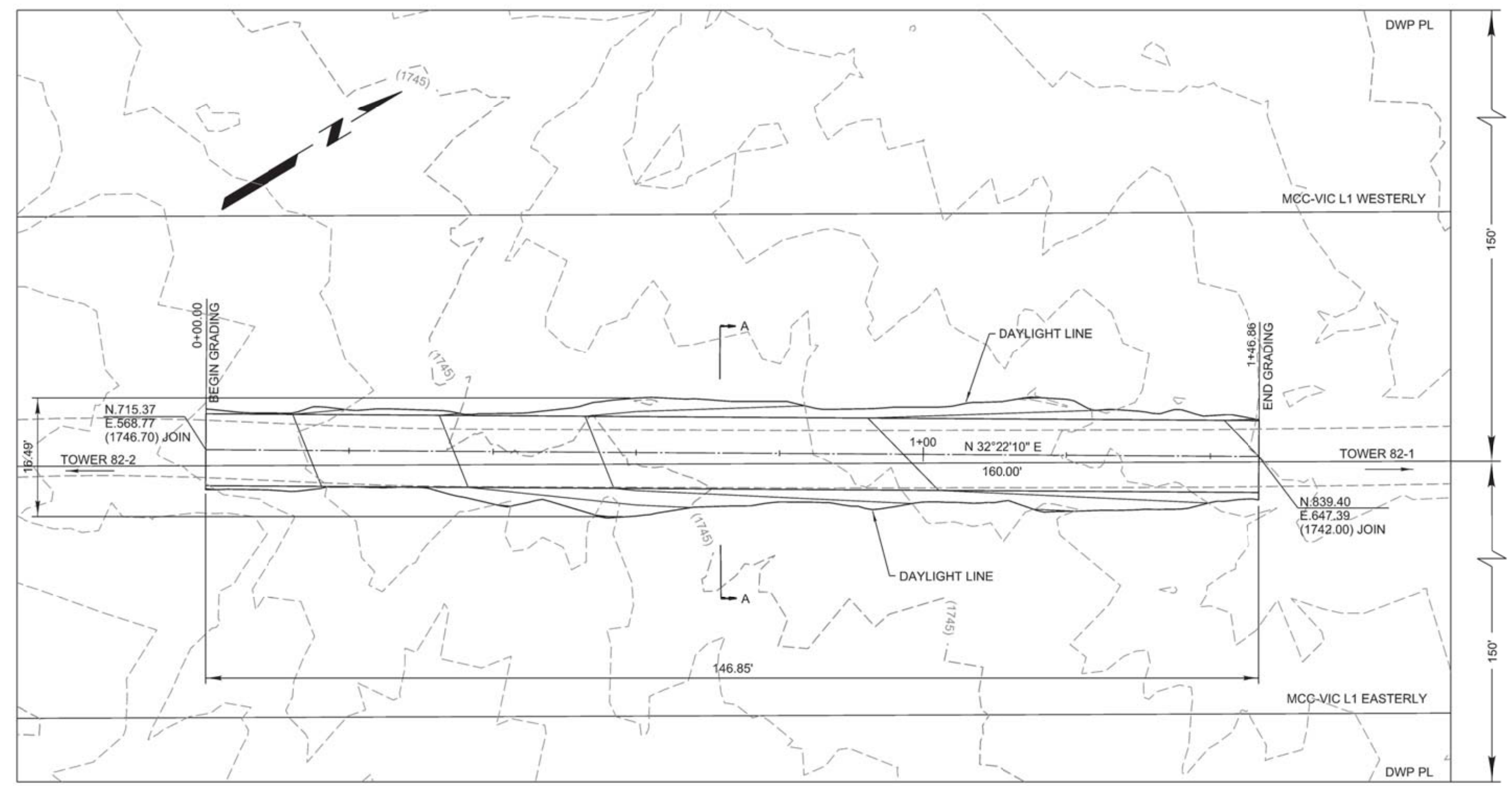
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
MCC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1"=10'

REVISIONS	
NO.	DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
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DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
J. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

PLAN, PROFILE, AND SECTIONS GRADING MCC-VICTORVILLE LINE 1 TWR 82-1, 82-2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV1-82-1-CA01
REV.

11-30-12

MVL1-82-1.dgn

GENERAL NOTES:

1. ADD 2290000 TO NORTHINGS AND 7071000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL, UNLESS NOTED OTHERWISE .
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. EXISTING TERRAIN CONTAINS NUMEROUS ROCK OUTCROPPING WHICH REQUIRE REMOVAL WITHIN THE GRADING AREA LIMITS.
13. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	230
FILL (CY)	230
IMPORT (CY)	0
EXPORT (CY)	0

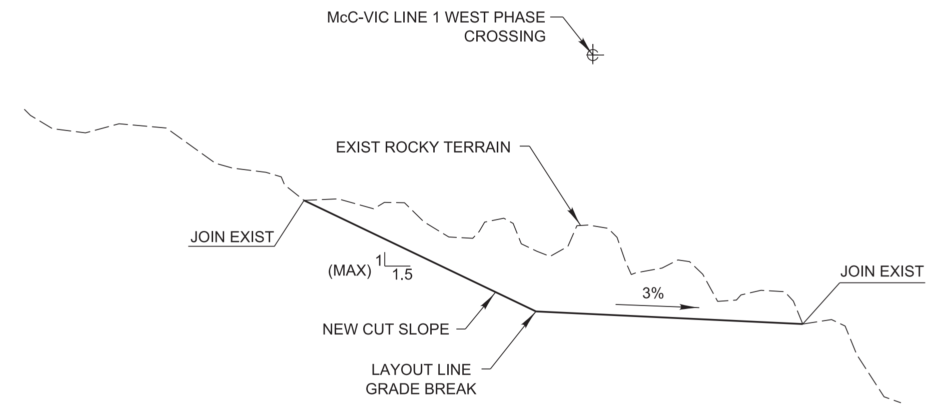
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

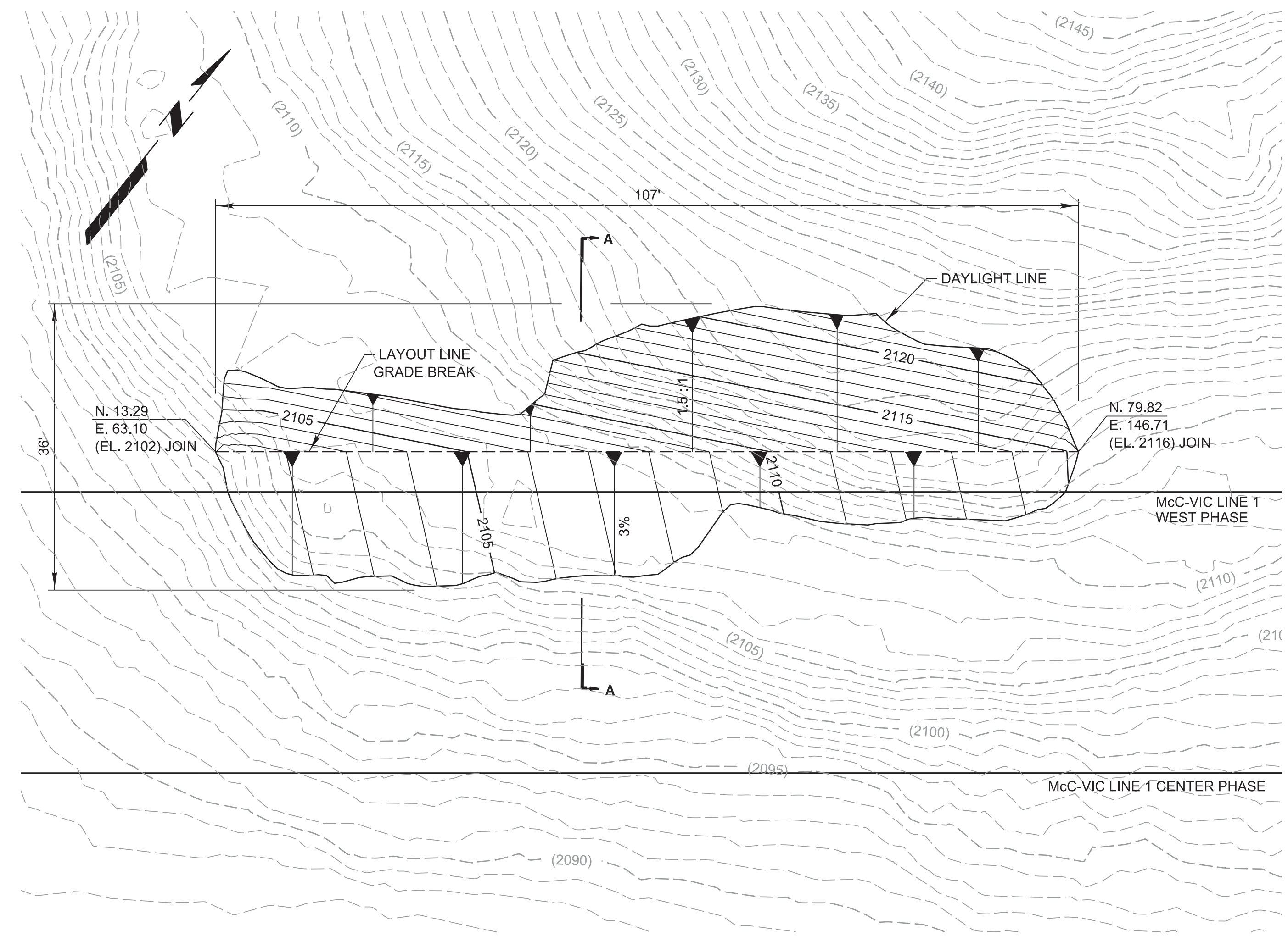
MAX WIDTH (FT)	36
MAX LENGTH (FT)	107
MAX DEPTH (FT)	4
AREA (SF)	2736

ABBREVIATIONS:

CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
S	SLOPE
SG	STRAIGHT GRADE
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number ____
DRAFTING RELEASE
DRAWN BY ____
CHECKED BY ____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
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DRAWN BY ____
CHECKED BY ____
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION, AND NOTES
GRADING
McCULLOUGH-VICTORVILLE LINE 1 TWR 84-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-84-5-CA01
REV.
01-17-13

mv1-84-5.dgn

GENERAL NOTES:

1. ADD 2288000 TO NORTHINGS AND 7068000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	382
FILL (CY)	382
IMPORT (CY)	0
EXPORT (CY)	0

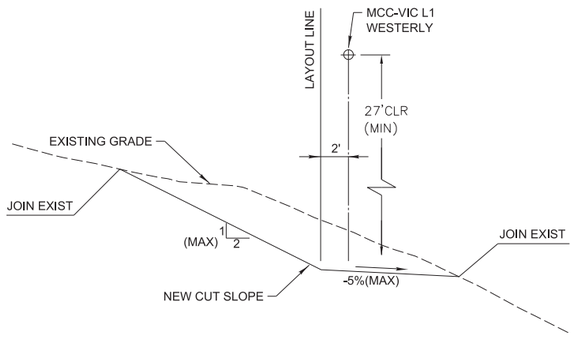
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

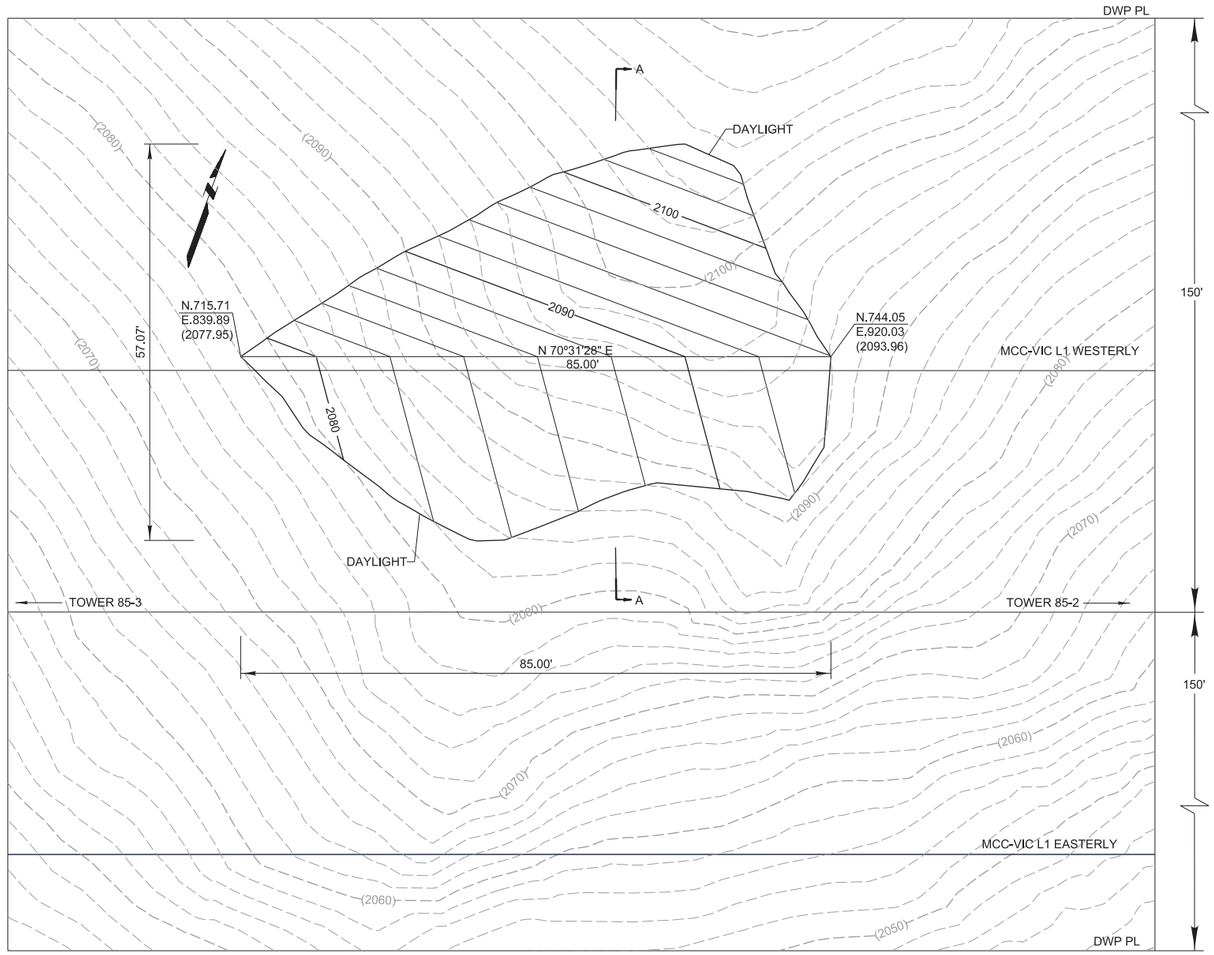
MAX WIDTH (FT)	57
MAX LENGTH (FT)	85
MAX DEPTH (FT)	7.0
AREA (SF)	3356

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
T. Alcocer CE 7073

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 85–2, 85–3

DWP
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-85-2-CA01
REV.

DRA

MV1-85-2-CA01.dgn

GENERAL NOTES:

1. ADD 2288000 TO NORTHINGS AND 7067000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	14
FILL (CY)	14
IMPORT (CY)	0
EXPORT (CY)	0

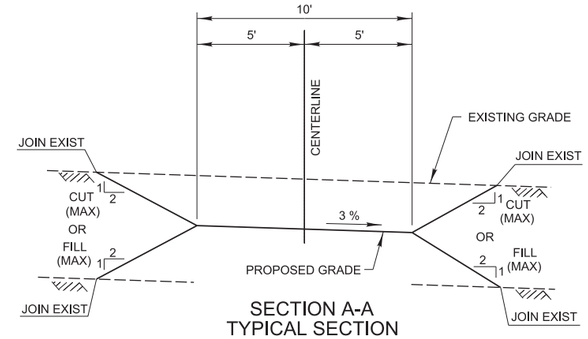
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

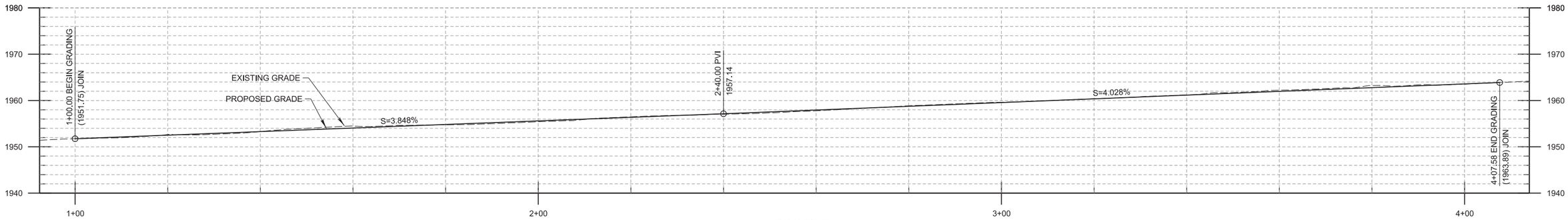
MAX WIDTH (FT)	15
MAX LENGTH (FT)	310
MAX DEPTH (FT)	1.25
AREA (SF)	3322

ABBREVIATIONS:

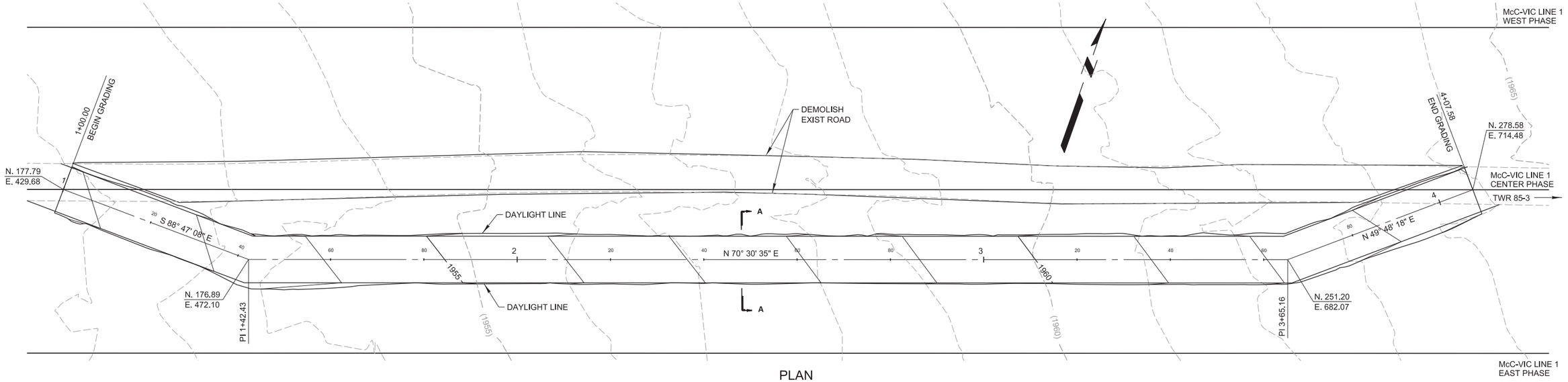
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
S	SLOPE
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

DES. ENGR. J. TONG CONST. ENGR. J. PANG M. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number _____ DRAFTING RELEASE DRAWN BY _____ CHECKED BY _____ ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY _____ CHECKED BY _____ ENGINEERING APPROVAL J. Tong CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, PROFILE, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 85-3 POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES DRAWING NUMBER MV1-85-3-CA01 REV.

01-23-13

mv1-85-3.dgn

GENERAL NOTES:

1. ADD 2287000 TO NORTHINGS AND 7065000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	19
FILL (CY)	19
IMPORT (CY)	0
EXPORT (CY)	0

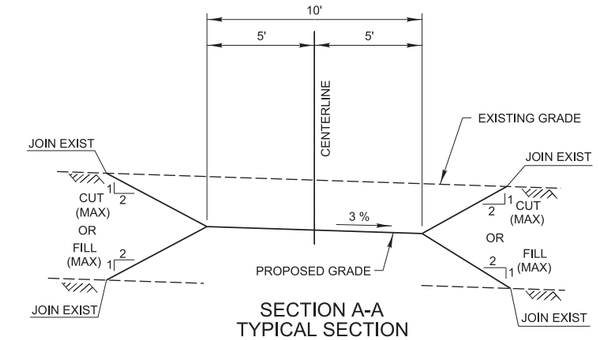
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

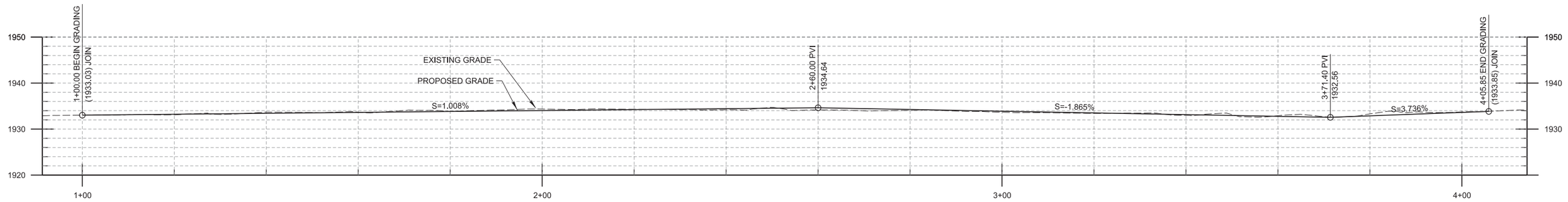
MAX WIDTH (FT)	15
MAX LENGTH (FT)	310
MAX DEPTH (FT)	1.25
AREA (SF)	3300

ABBREVIATIONS:

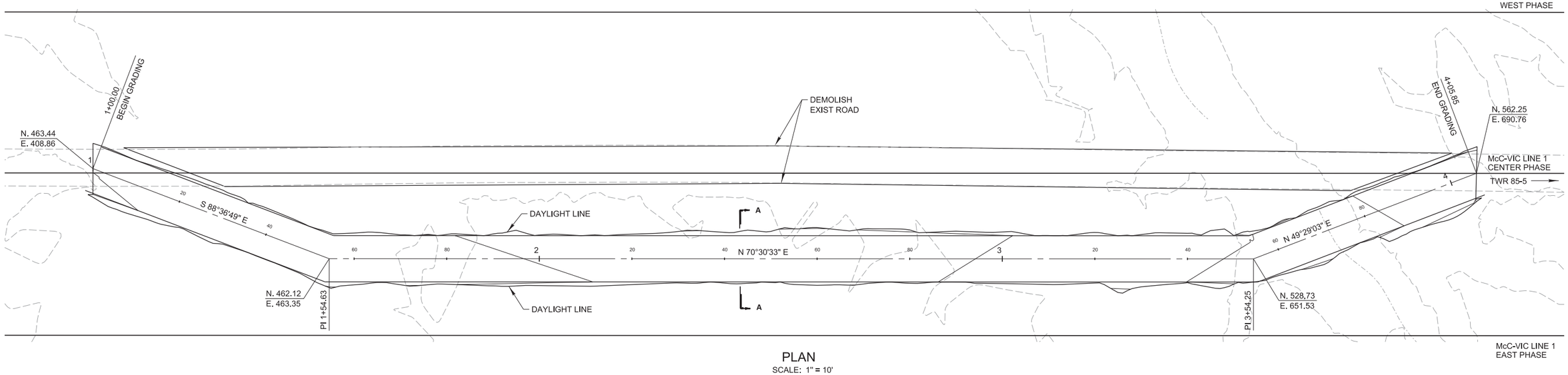
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
S	SLOPE
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

DES. ENGR. J. TONG DFT. ENGR. J. PANG J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J. Tong CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, PROFILE, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 85-5 POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES DRAWING NUMBER MV1-85-5-CA01 REV.

01-24-13

mv1-85-5.dgn

GENERAL NOTES:

1. ADD 2287000 TO NORTHINGS AND 7064000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	18
FILL (CY)	18
IMPORT (CY)	0
EXPORT (CY)	0

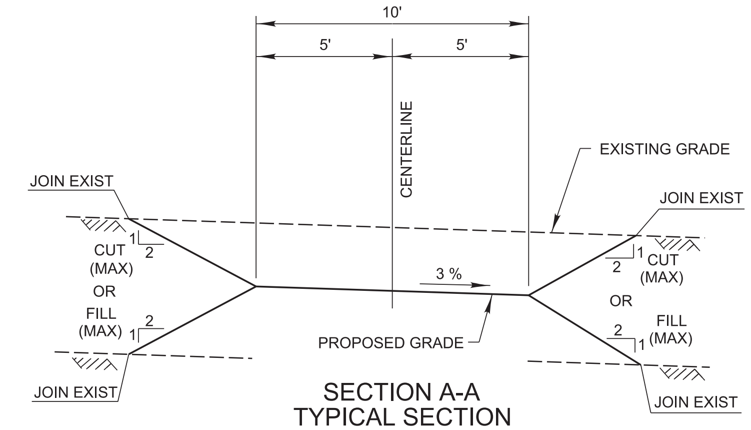
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

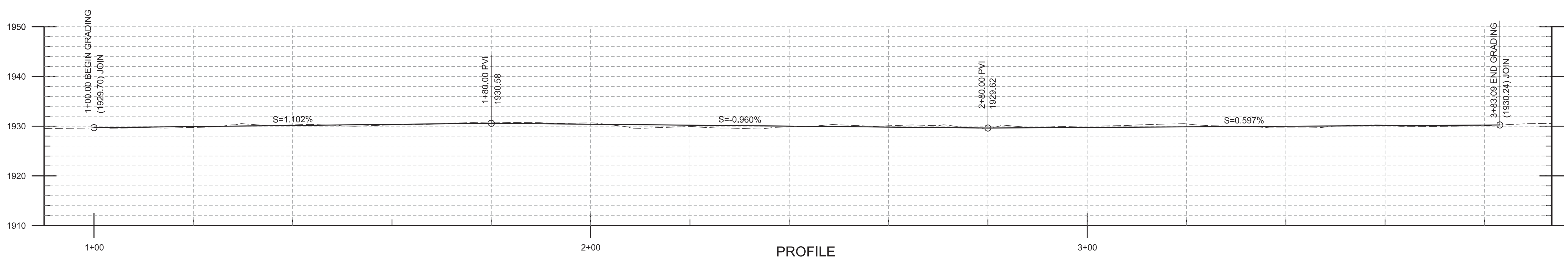
MAX WIDTH (FT)	15
MAX LENGTH (FT)	285
MAX DEPTH (FT)	1.25
AREA (SF)	3222

ABBREVIATIONS:

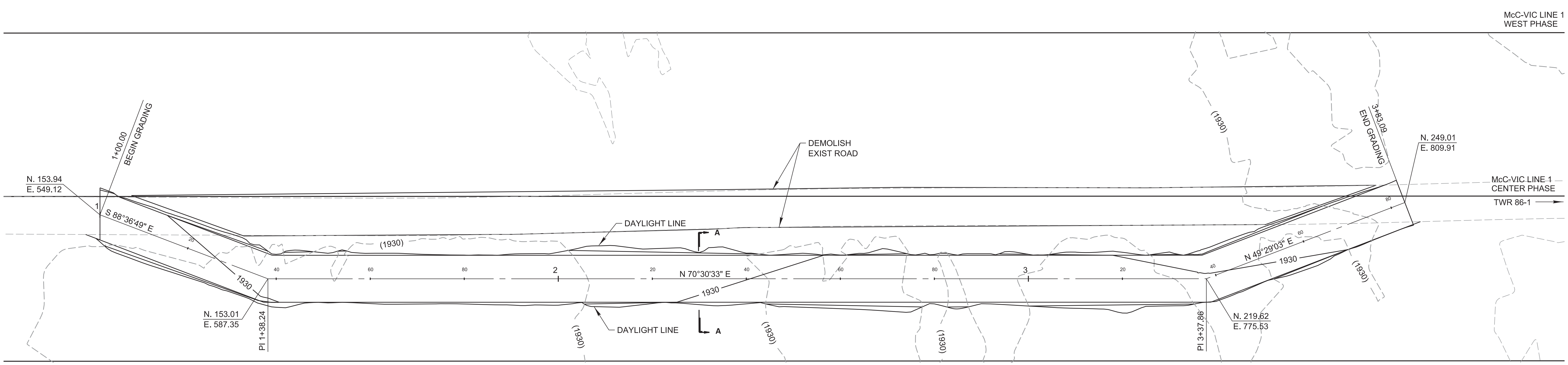
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
S	SLOPE
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

REVISIONS	
NO.	DESCRIPTION

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 86-1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-86-1-CA01
REV.

01-28-13

mv1-86-1.dgn

GENERAL NOTES:

1. ADD 2286000 TO NORTHINGS AND 7063000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	14
FILL (CY)	14
IMPORT (CY)	0
EXPORT (CY)	0

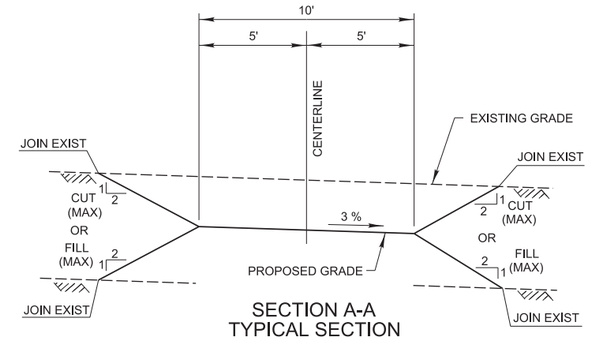
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

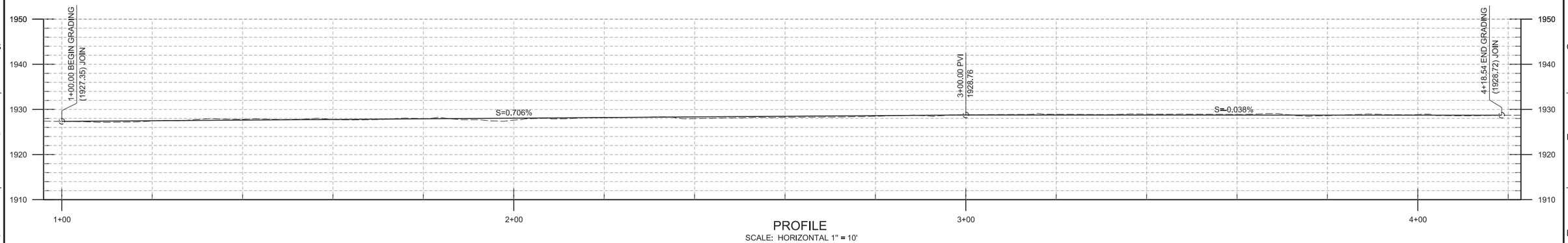
MAX WIDTH (FT)	15
MAX LENGTH (FT)	320
MAX DEPTH (FT)	1.25
AREA (SF)	3511

ABBREVIATIONS:

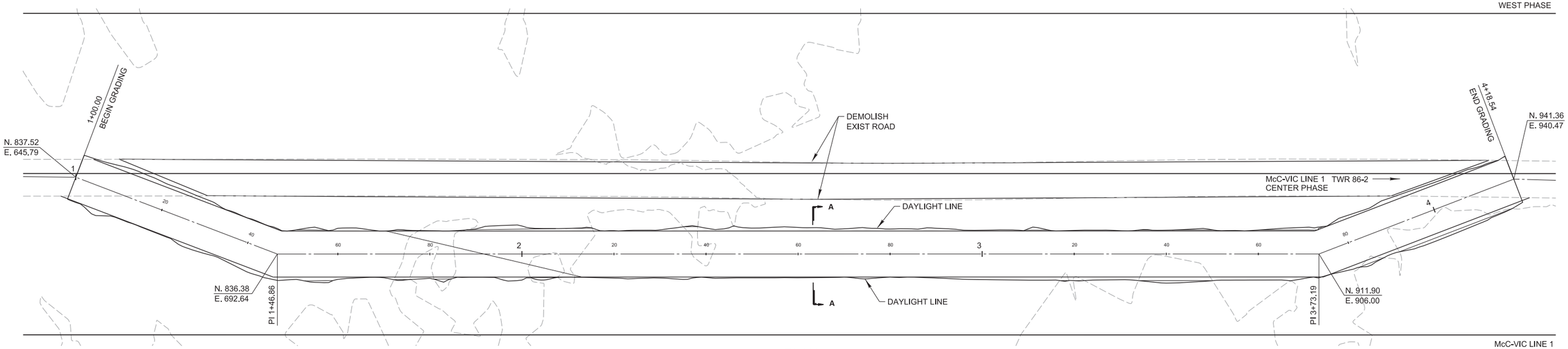
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
S	SLOPE
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

DES. ENGR. J. TONG
DRFT. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Tong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 86-2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-86-2-CA01
REV.

02-05-13

mv1-86-2.dgn

GENERAL NOTES:

1. ADD 2280000 TO NORTHINGS AND 7060000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	15
FILL (CY)	15
IMPORT (CY)	0
EXPORT (CY)	0

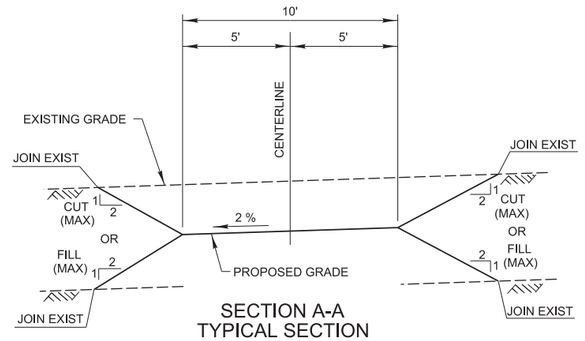
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

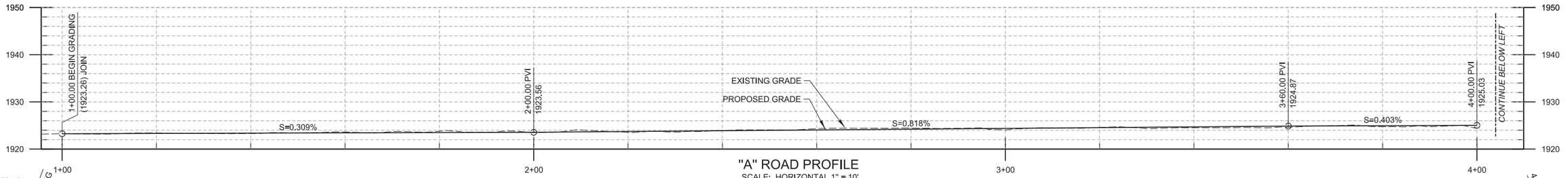
MAX WIDTH (FT)	15
MAX LENGTH (FT)	420
MAX DEPTH (FT)	1.25
AREA (SF)	4425

ABBREVIATIONS:

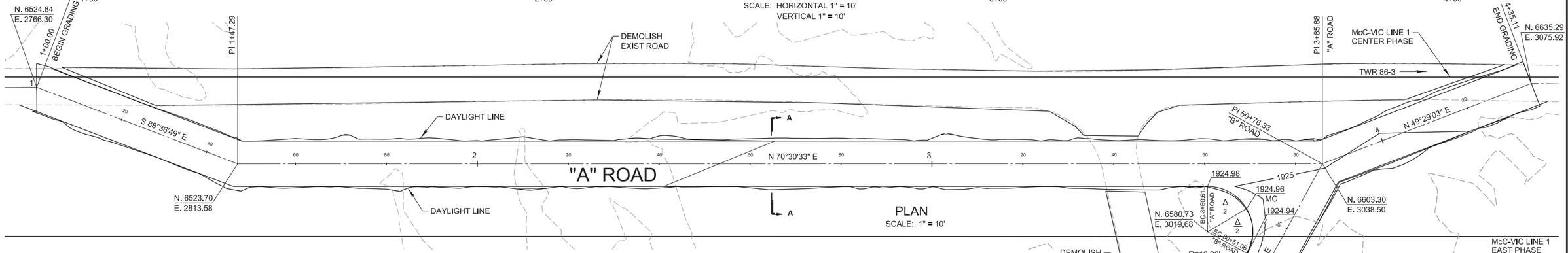
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
R	RADIUS
S	SLOPE
T	TANGENT
TYP.	TYPICAL
TWR	TOWER



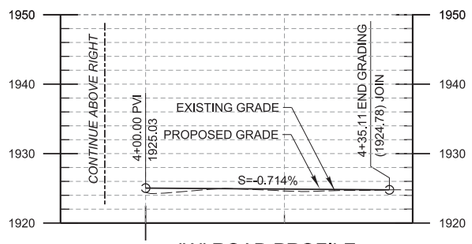
SECTION A-A
TYPICAL SECTION
NO SCALE



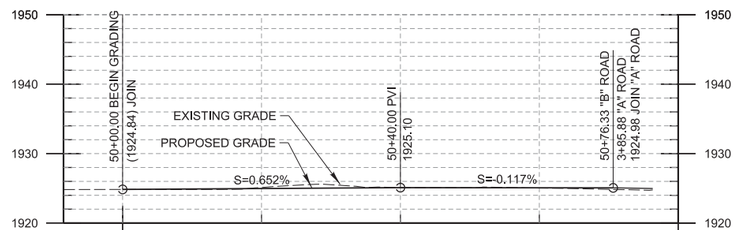
"A" ROAD PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'



"A" ROAD PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



"B" ROAD PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

DES. ENGR. J. TONG DRFT. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J. Tong CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, PROFILES, SECTION, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 86-3 POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES	DRAWING NUMBER MV1-86-3-CA01 REV.

02-11-13

mv1-86-3.dgn

GENERAL NOTES:

1. ADD 2280000 TO NORTHINGS AND 7060000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. DWP RIGHT-OF-WAY LIMITS ARE 150 FEET EAST AND WEST OF CENTER PHASE ALIGNMENT.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	96
FILL (CY)	96
IMPORT (CY)	0
EXPORT (CY)	0

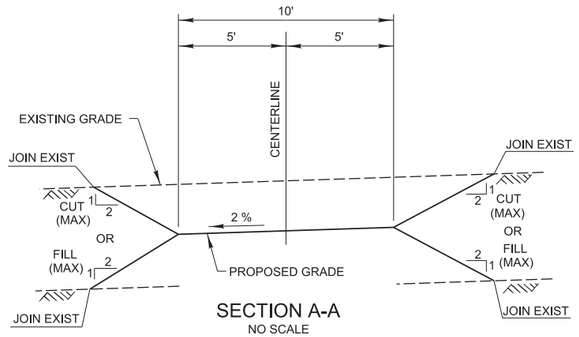
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

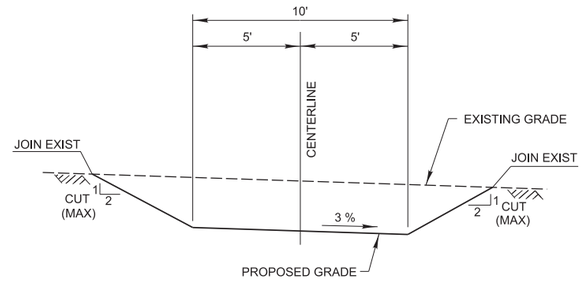
MAX WIDTH (FT)	30
MAX LENGTH (FT)	350
MAX DEPTH (FT)	2
AREA (SF)	7708

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
S	SLOPE
TYP.	TYPICAL
TWR	TOWER



SECTION A-A
NO SCALE



SECTION B-B
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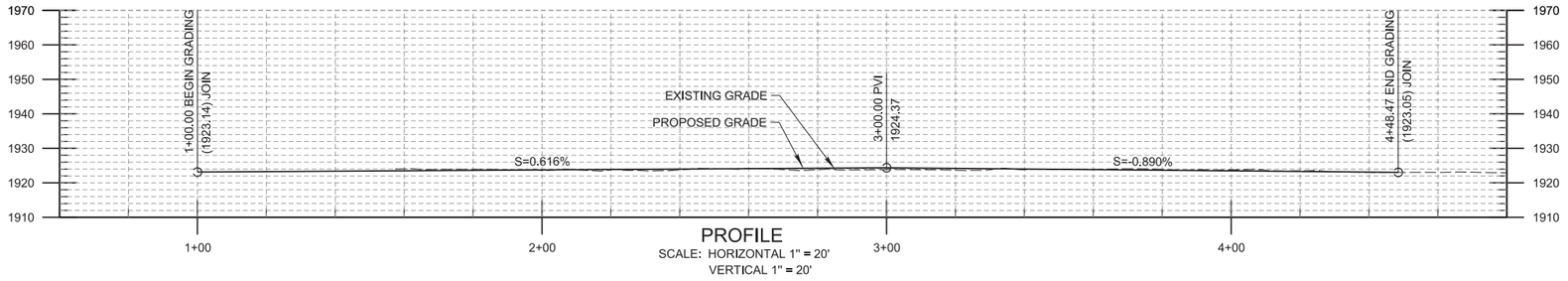
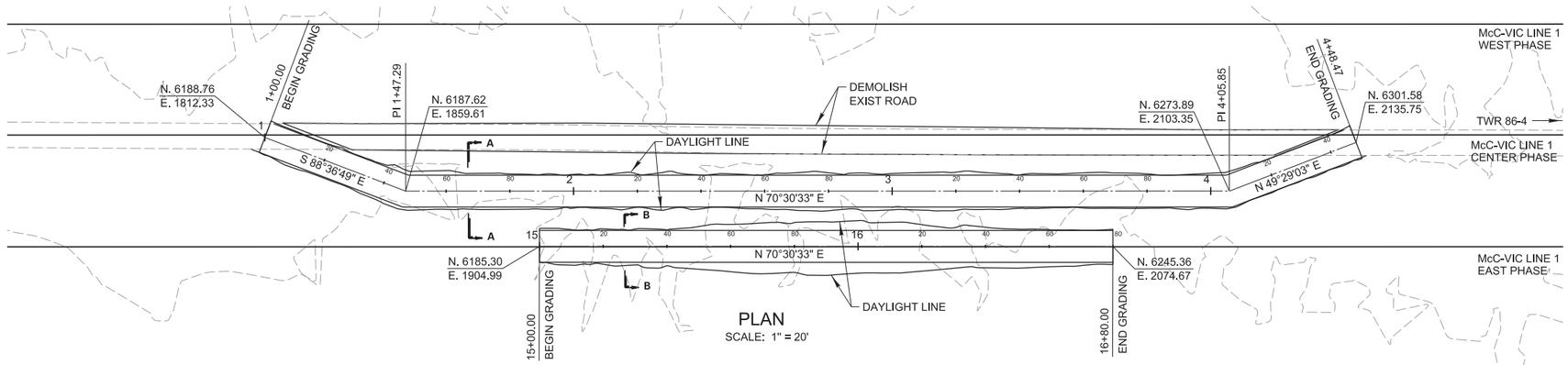
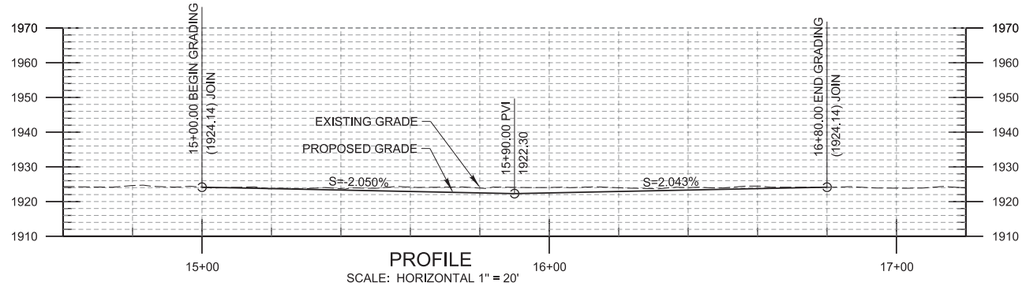


PROFILE
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 20'



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 20'

DES. ENGR. J. TONG
DRFT. ENGR. J. FANG

REVISIONS

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FINAL APPROVAL RELEASE SIGNATURE DATE

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CE 69632

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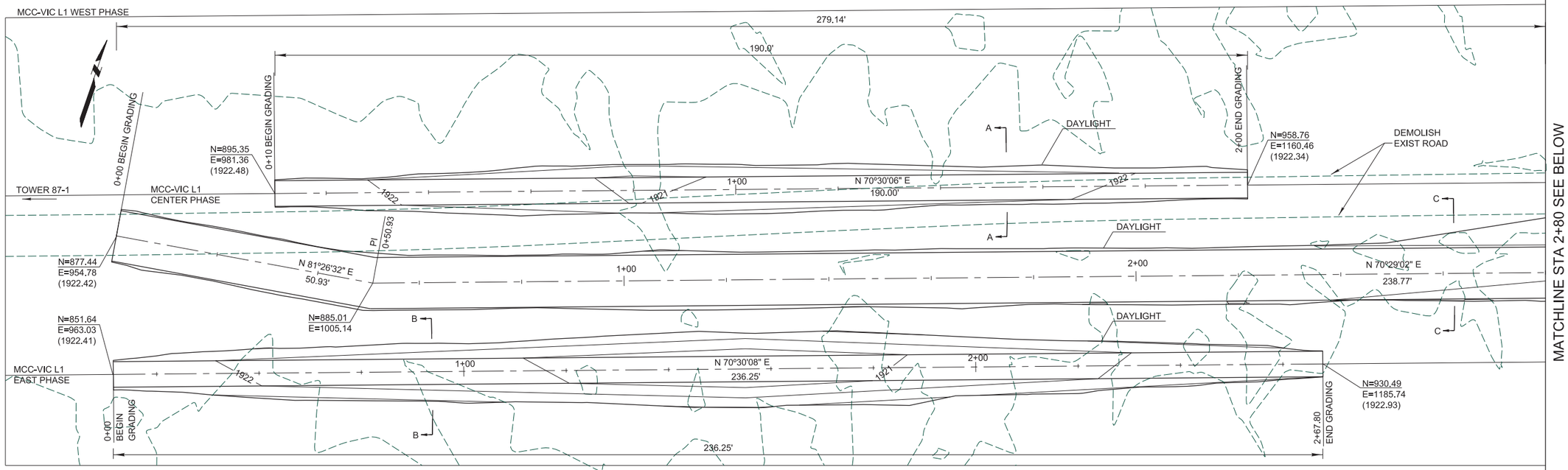
PLAN, PROFILES, SECTIONS, AND NOTES GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 86-4

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

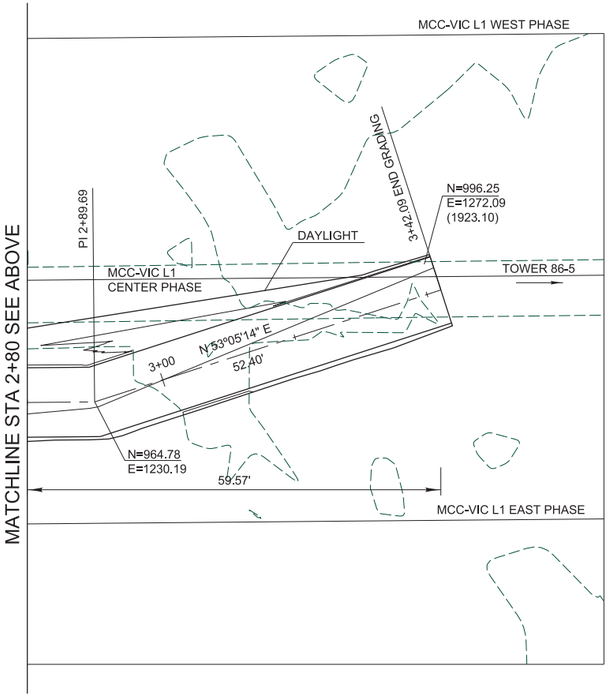
DRAWING NUMBER
MV1-86-4-CA01
REV.

03-05-13

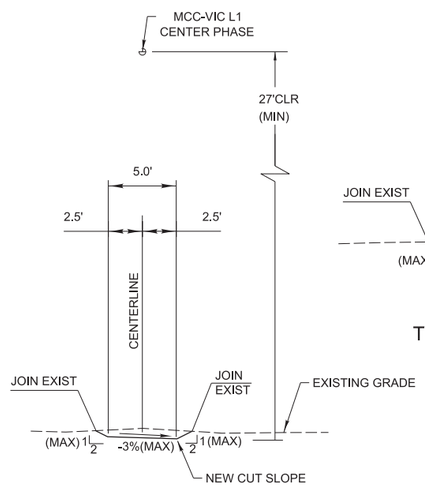
mv1-86-4.dgn



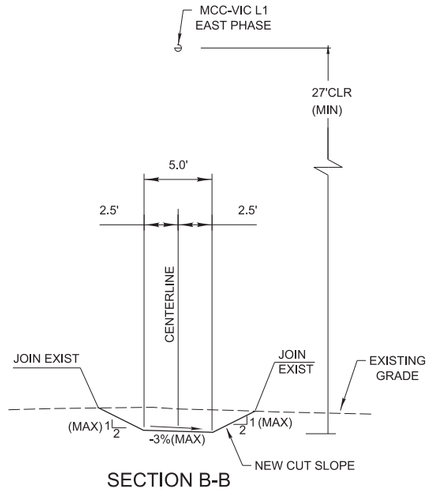
PLAN
SCALE: 1"=10'



* SEE PLAN MV1-86-5-CA02 FOR PROFILE AND CROSS SECTION.



SECTION A-A
TYPICAL SECTION
NO SCALE



SECTION B-B
TYPICAL SECTION
NO SCALE

ESTIMATED EARTHWORK
QUANTITIES: CENTER PHASE

CUT (CY)	34.8
FILL (CY)	0.2
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING
PARAMETERS: CENTER PHASE

MAX WIDTH (FT)	10
MAX LENGTH (FT)	190
MAX DEPTH (FT)	1.5
AREA (SF)	1580

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

GENERAL NOTES:

1. ADD 2285000 TO NORTHINGS AND 7060000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
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8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK
QUANTITIES: PATROL ROAD

CUT (CY)	9.7
FILL (CY)	15.9
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING
PARAMETERS: PATROL ROAD

MAX WIDTH (FT)	20
MAX LENGTH (FT)	340
MAX DEPTH (FT)	0.5
AREA (SF)	4100

ESTIMATED EARTHWORK
QUANTITIES: EAST PHASE

CUT (CY)	97.4
FILL (CY)	0.7
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING
PARAMETERS: EAST PHASE

MAX WIDTH (FT)	15
MAX LENGTH (FT)	236.25
MAX DEPTH (FT)	2.4
AREA (SF)	2755

DES. ENGR. F. ALCOCER
SUP. ENGR. J. PANG

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DRAWING REVISION RELEASE APPROVAL
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ENGINEERING APPROVAL
F. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

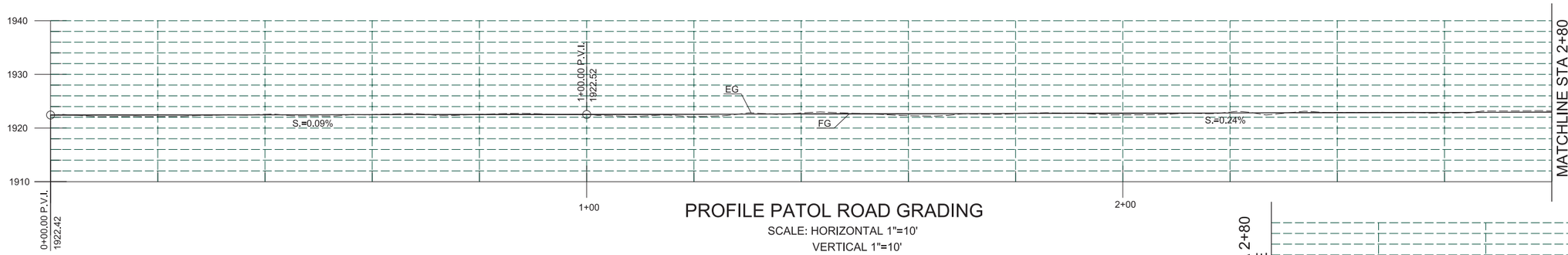
PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 86-5, 87-1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-86-5-CA01
REV.

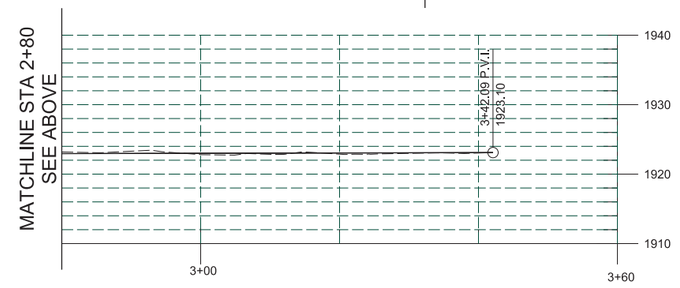
DRA

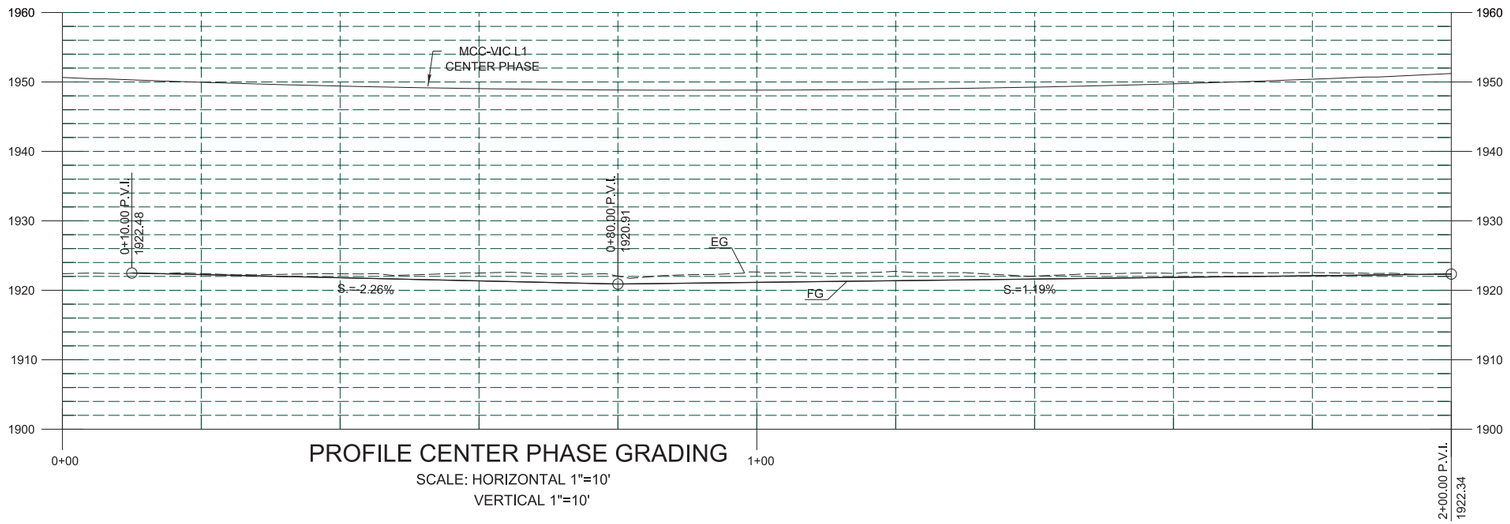
MV1-86-5-CA01.dgn



PROFILE PATOL ROAD GRADING

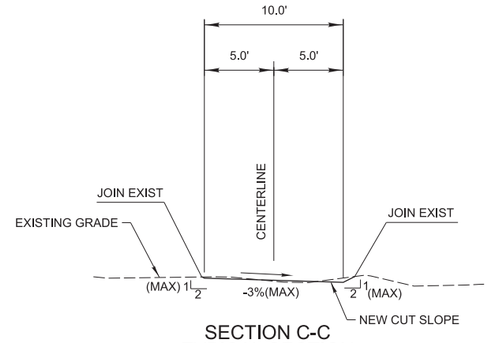
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'





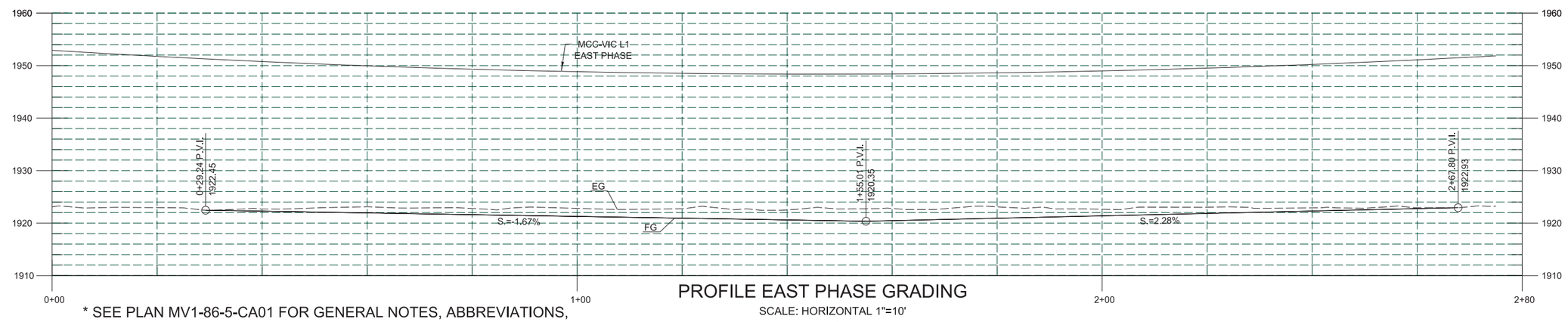
PROFILE CENTER PHASE GRADING

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



SECTION C-C
TYPICAL SECTION

NO SCALE



PROFILE EAST PHASE GRADING

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

* SEE PLAN MV1-86-5-CA01 FOR GENERAL NOTES, ABBREVIATIONS, AND SECTIONS.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS		
NO.	DESCRIPTION	

Revision Number _____

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CHECKED BY _____

ENGINEERING APPROVAL

OWNER/AGENT APPROVAL

DRAWING REVISION RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED

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CHECKED BY _____

ENGINEERING APPROVAL
F Alcocer CE 70713

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DRAWING RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 86-5, 87-1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-86-5-CA02
REV.

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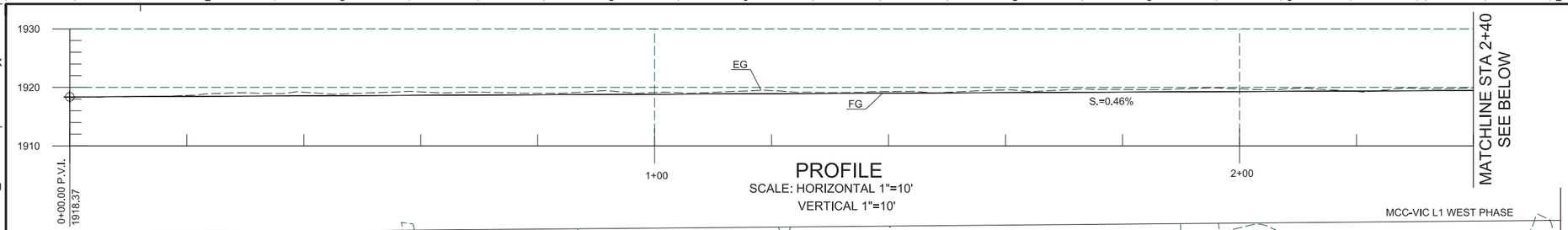
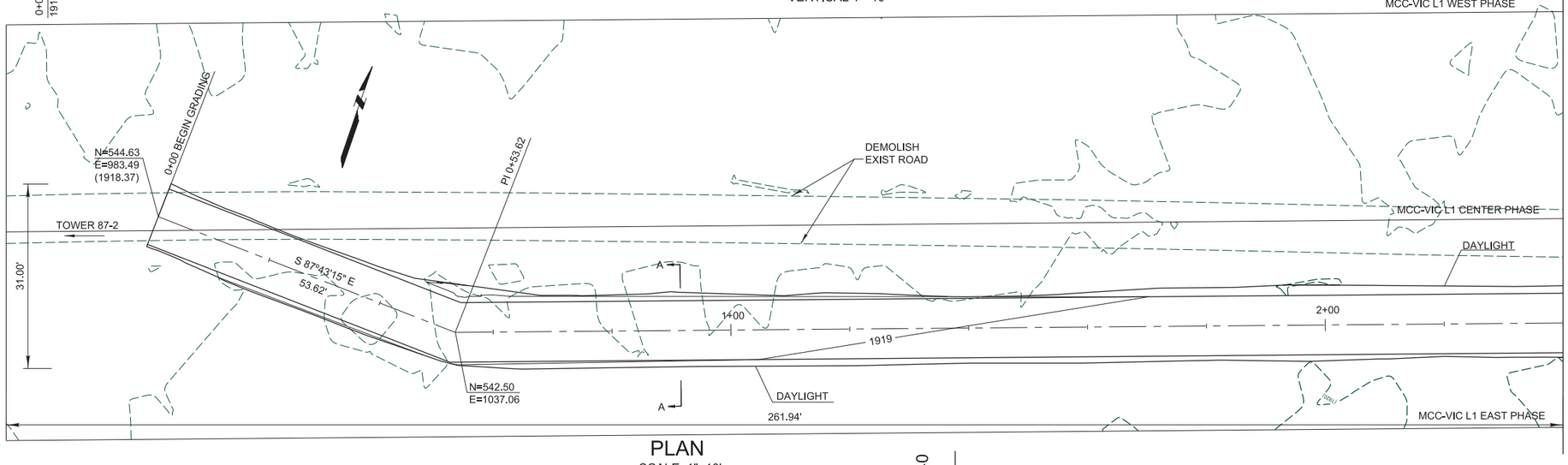
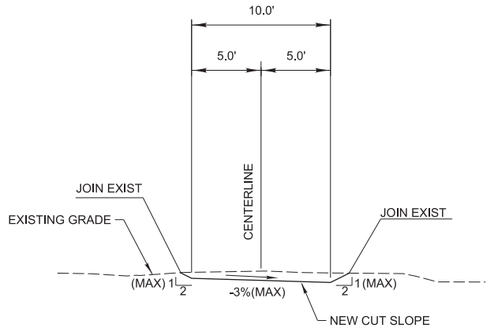
MV1-86-5-CA01.dgn



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1"=10'



SECTION A-A
TYPICAL SECTION
NO SCALE

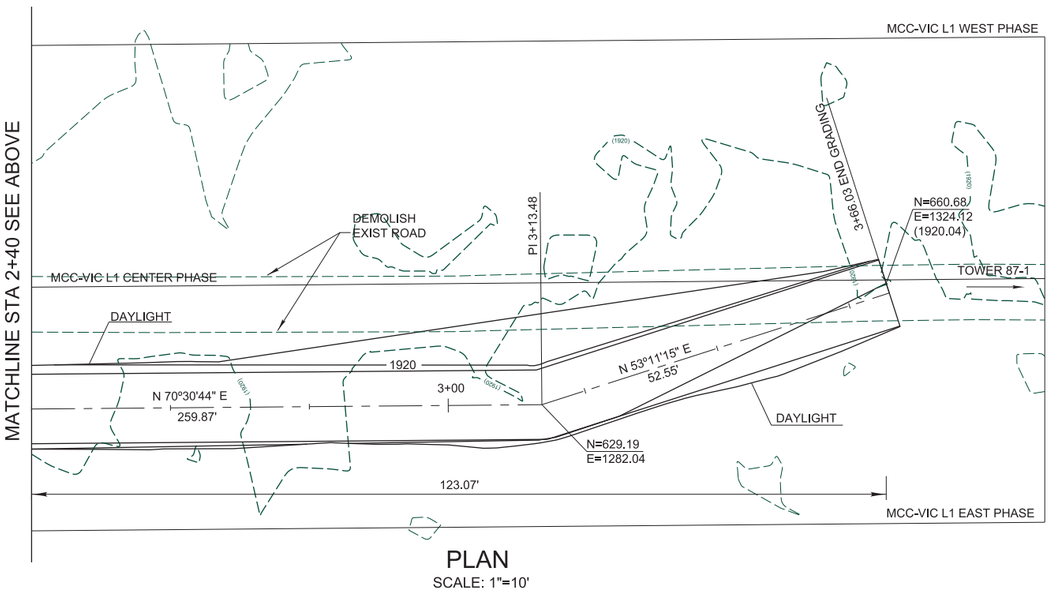
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	51.9
FILL (CY)	3.4
IMPORT (CY)	0
EXPORT (CY)	0

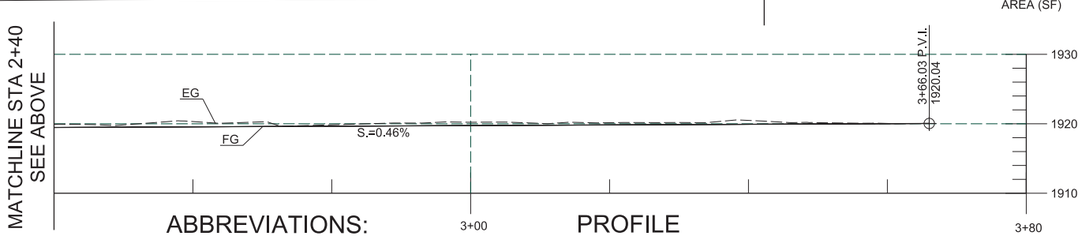
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	31
MAX LENGTH (FT)	385
MAX DEPTH (FT)	0.6
AREA (SF)	4770



PLAN
SCALE: 1"=10'



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

GENERAL NOTES:

1. ADD 2285000 TO NORTHINGS AND 7059000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

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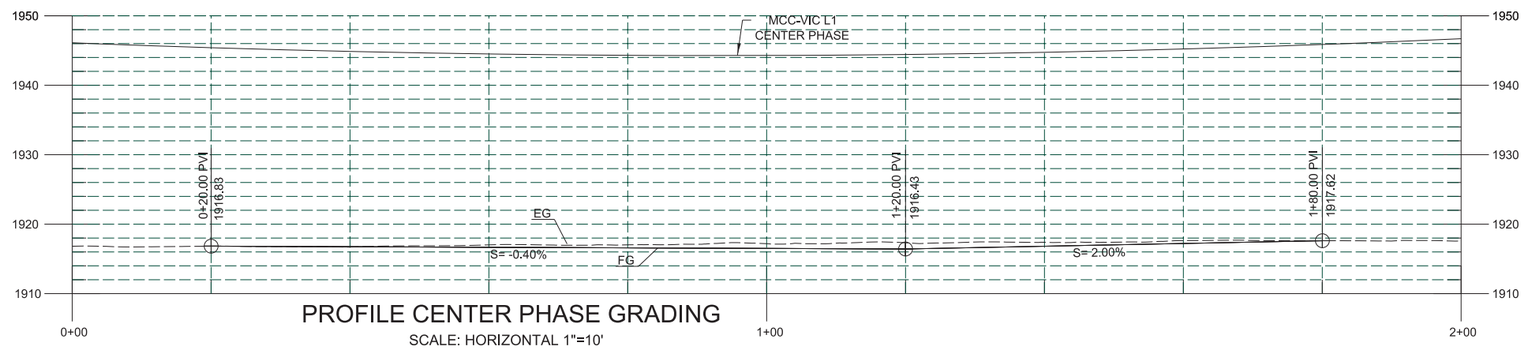
PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-2, 87-1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-87-1-CA01
REV.

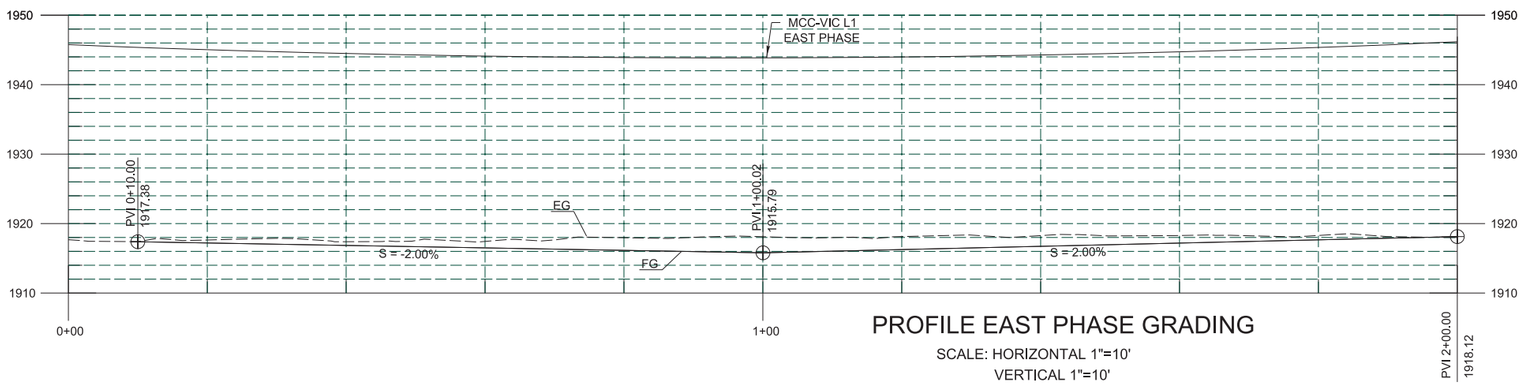
DRA

MV1-87-1-CA01.dgn



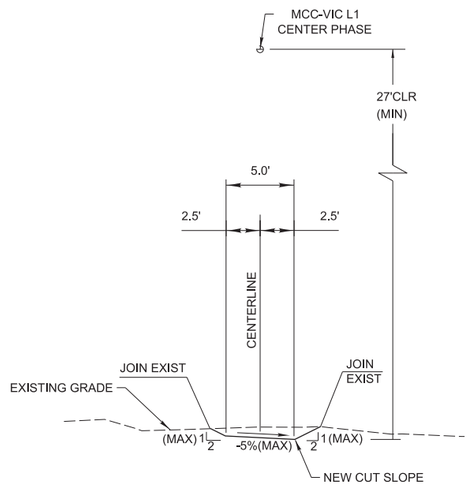
PROFILE CENTER PHASE GRADING

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



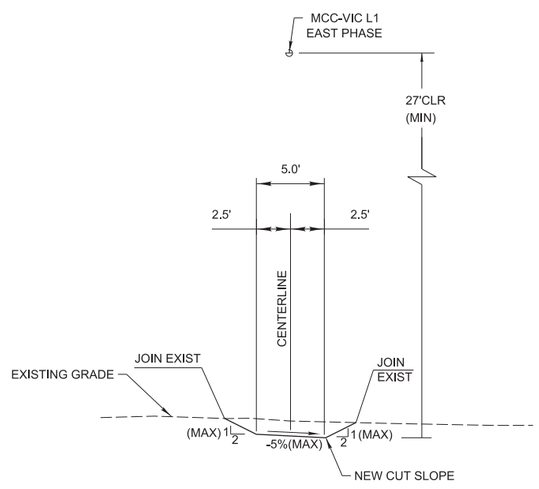
PROFILE EAST PHASE GRADING

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



SECTION B-B
TYPICAL SECTION

NO SCALE



SECTION C-C
TYPICAL SECTION

NO SCALE

ESTIMATED EARTHWORK QUANTITIES: CENTER PHASE

CUT (CY)	17.1
FILL (CY)	0.4
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS: CENTER PHASE

MAX WIDTH (FT)	9
MAX LENGTH (FT)	160
MAX DEPTH (FT)	1.0
AREA (SF)	1161

ESTIMATED EARTHWORK QUANTITIES: EAST PHASE

CUT (CY)	68.9
FILL (CY)	0.3
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS: EAST PHASE

MAX WIDTH (FT)	15
MAX LENGTH (FT)	190
MAX DEPTH (FT)	2.3
AREA (SF)	2060

ESTIMATED EARTHWORK QUANTITIES: PATROL ROAD

CUT (CY)	99
FILL (CY)	5.2
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS: PATROL ROAD

MAX WIDTH (FT)	26
MAX LENGTH (FT)	424
MAX DEPTH (FT)	1.2
AREA (SF)	5960

GENERAL NOTES:

1. ADD 2285000 TO NORTHINGS AND 7059000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

* SEE PLAN MV1-87-2-CA02 FOR PLAN, PROFILE AND SECTIONS.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

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PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-3, 87-2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-87-2-CA01
REV.

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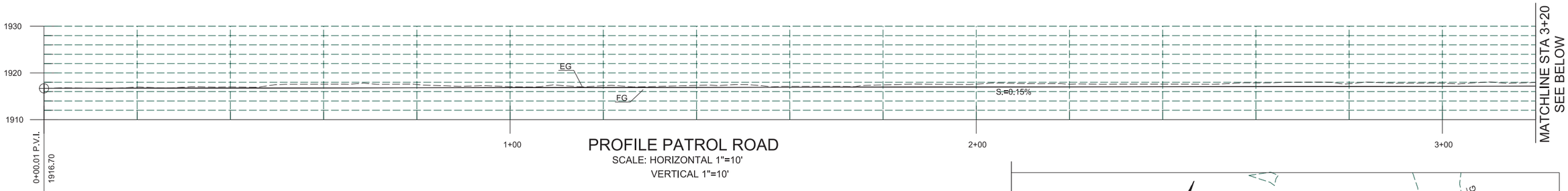
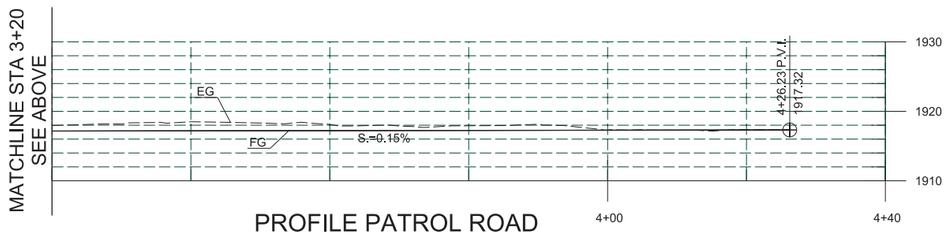
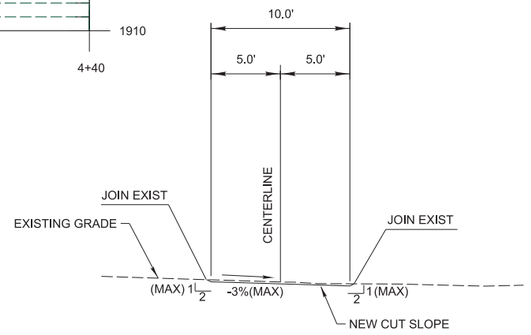
MV1-87-2-CA01.dgn



PROFILE PATROL ROAD
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

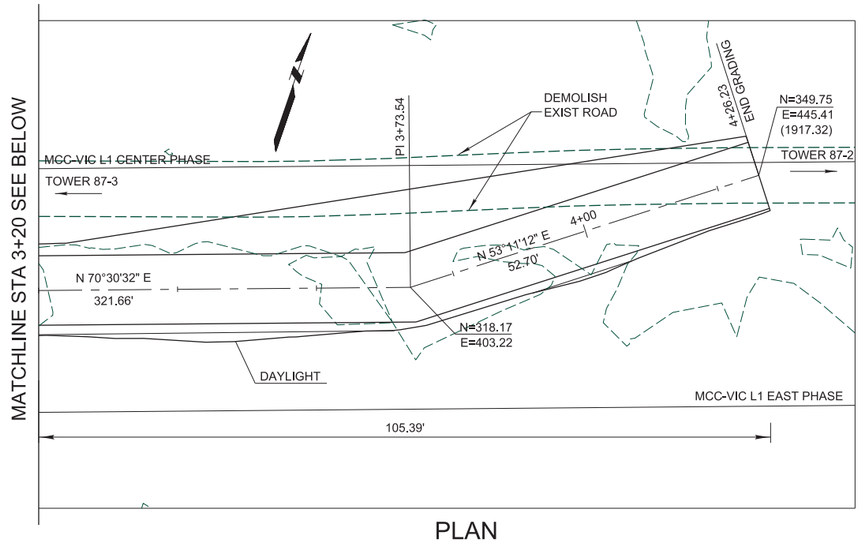


PROFILE PATROL ROAD
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



SECTION A-A
TYPICAL SECTION
NO SCALE

MCC-VIC L1
CENTER PHASE



PLAN
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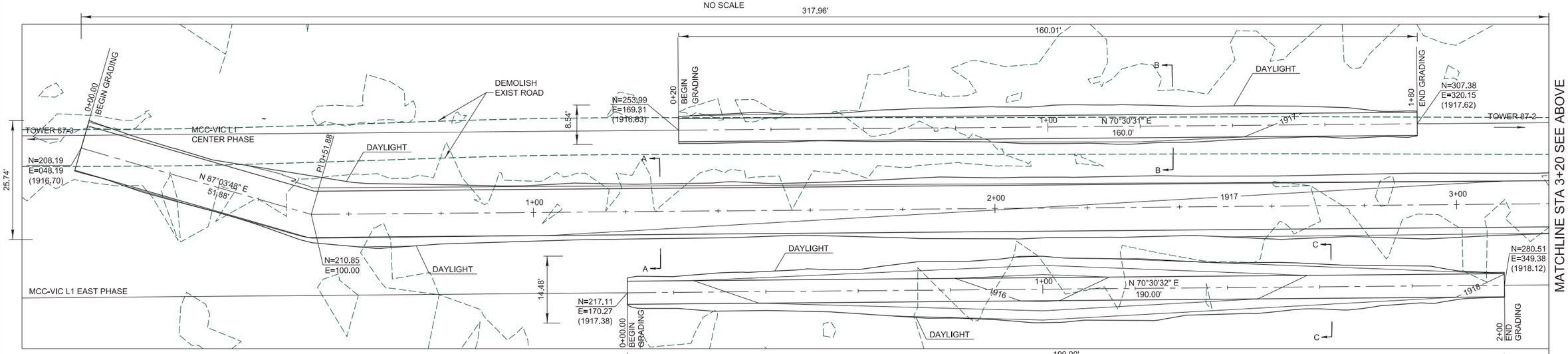

PLAN
SCALE: 1"=10'

* SEE PLAN MV1-87-2-CA01 FOR GENERAL NOTES, ABBREVIATIONS, PROFILE AND SECTIONS.

DES. ENGR.	F. ALCOCER
SUP. ENGR.	J. PANG

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PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-3, 87-2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
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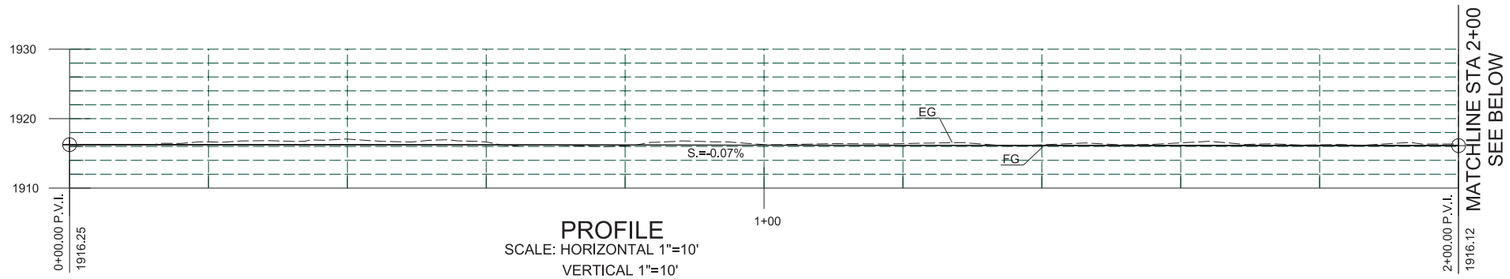

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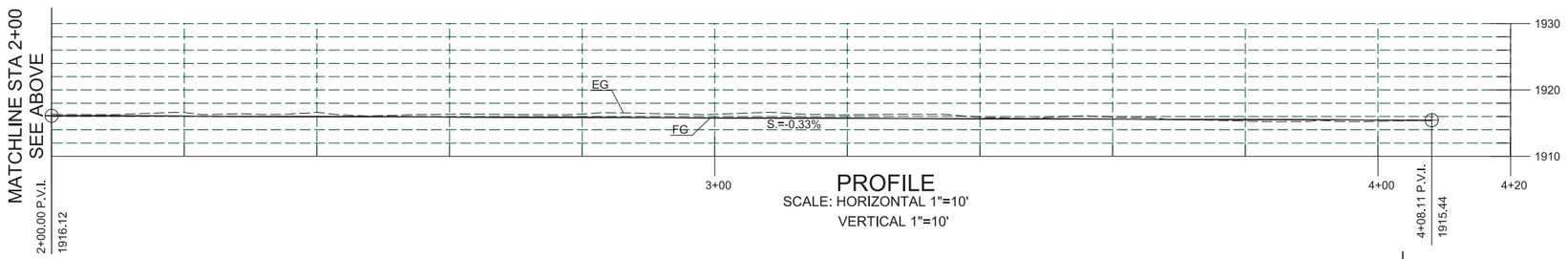

PROFILE
SCALE: HORIZONTAL 1"=10'
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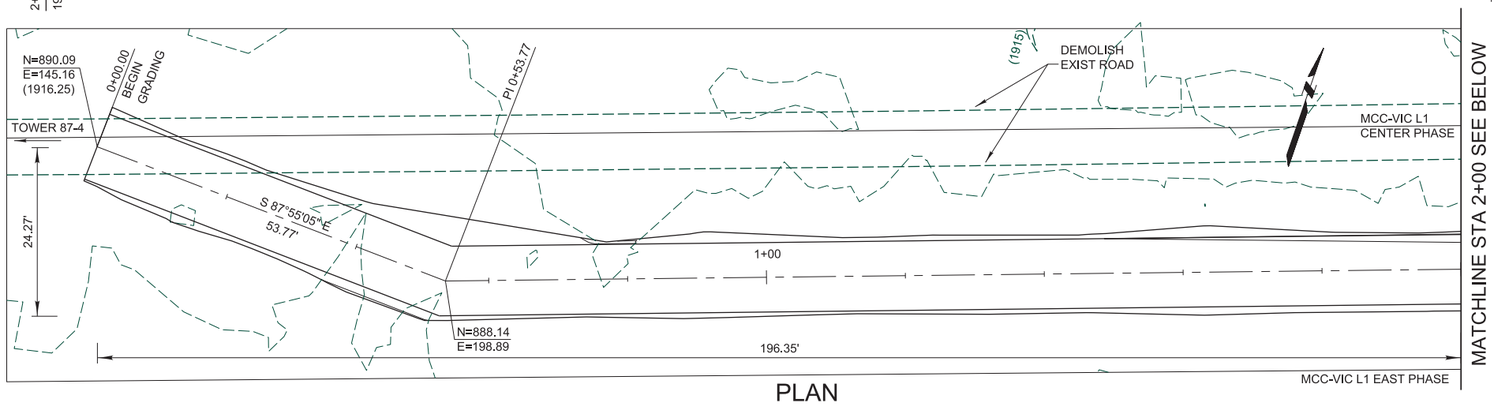
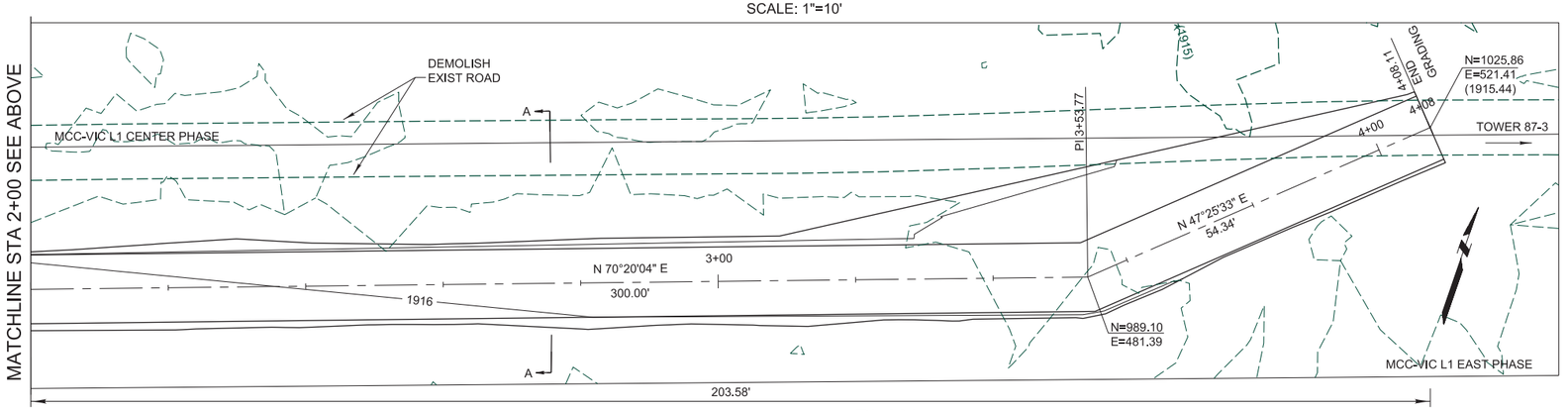


PLAN
SCALE: 1"=10'



PLAN
SCALE: 1"=10'

GENERAL NOTES:

1. ADD 2284000 TO NORTHINGS AND 7058000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
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11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES: EAST PHASE

CUT (CY)	52.1
FILL (CY)	7.6
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
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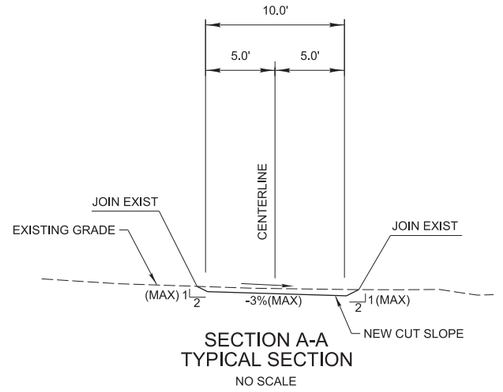
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

APPROXIMATE GRADING PARAMETERS: EAST PHASE

MAX WIDTH (FT)	25
MAX LENGTH (FT)	408
MAX DEPTH (FT)	1.0
AREA (SF)	5470

MCC-VIC L1
CENTER PHASE



SECTION A-A
TYPICAL SECTION
NO SCALE

DES. ENGR. F. ALCOCER
SUP. ENGR. J. PANG

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PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-4, 87-3

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-87-3-CA01
REV.

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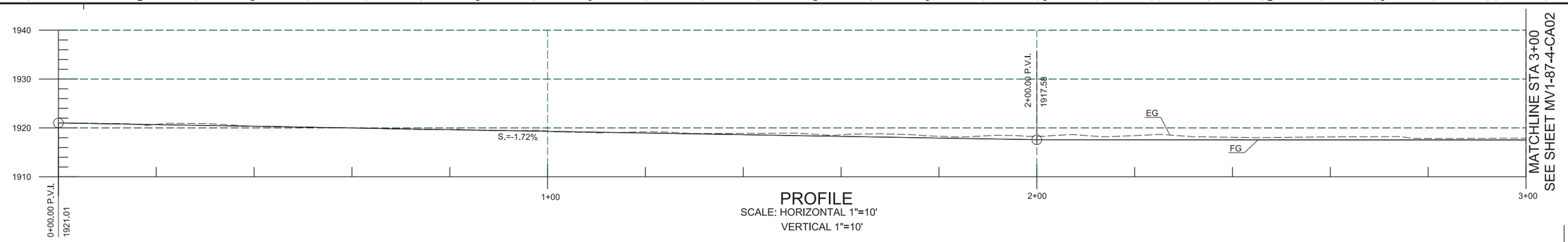
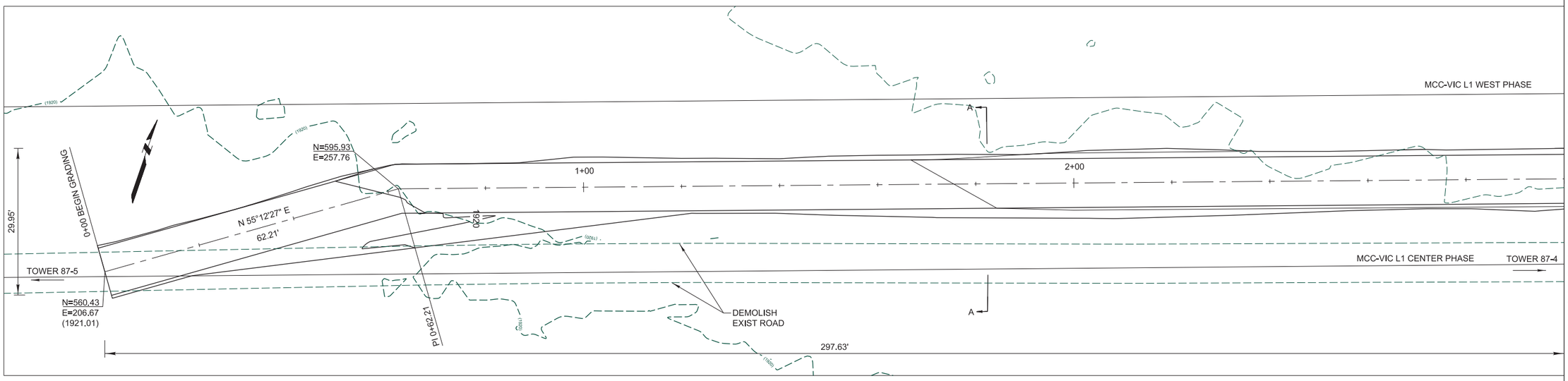


PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN

SCALE: 1"=10'

GENERAL NOTES:

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FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES: EAST PHASE

CUT (CY)	58.3
FILL (CY)	4.2
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS: EAST PHASE

MAX WIDTH (FT)	30
MAX LENGTH (FT)	450
MAX DEPTH (FT)	1.1
AREA (SF)	5870

* SEE PLAN MV1-87-4-CA02 FOR PLAN, PROFILE AND CROSS SECTION DETAIL.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

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PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-4, 87-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

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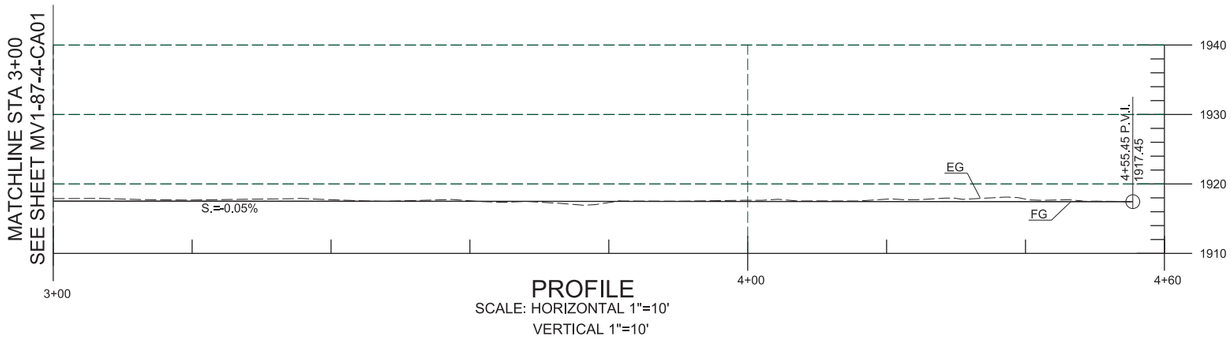
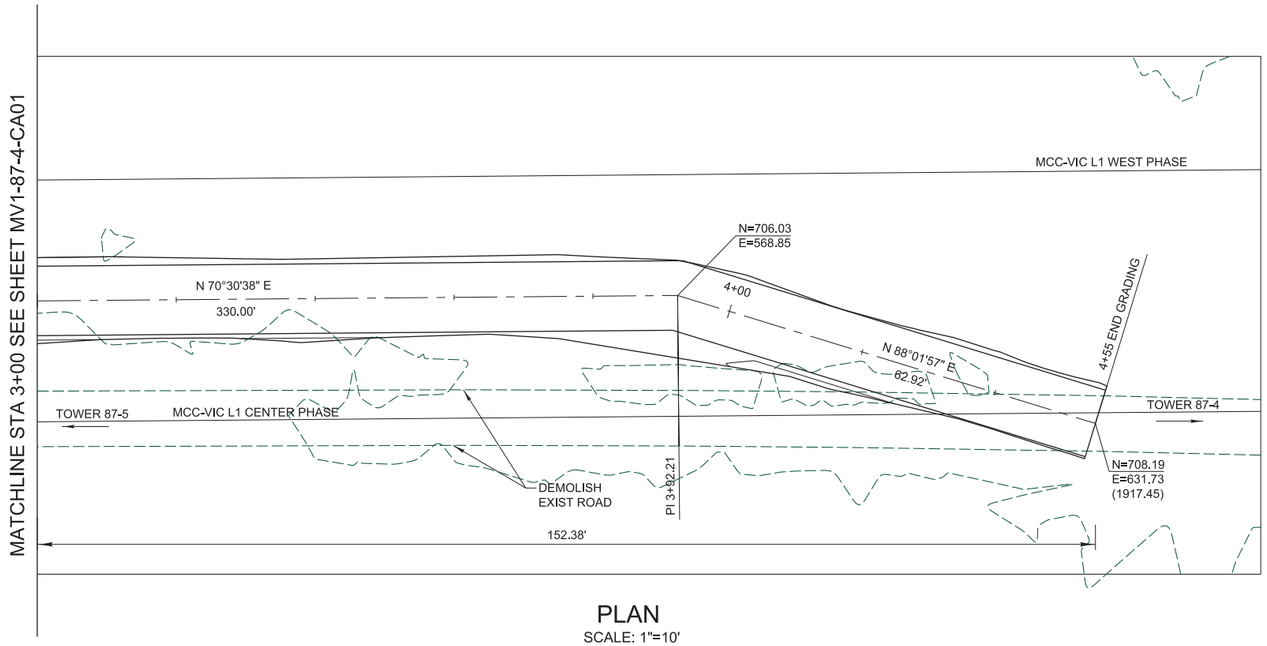
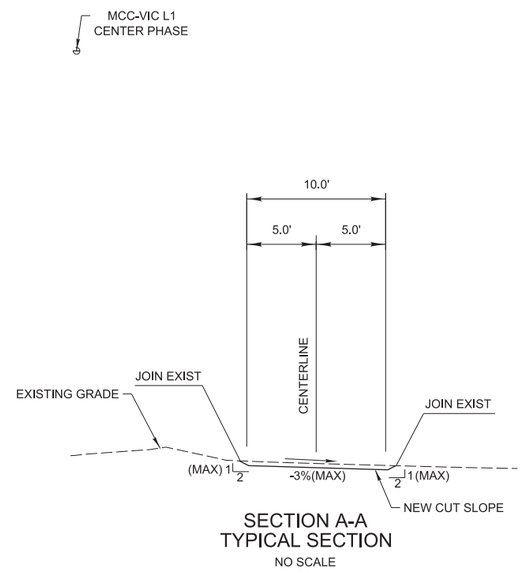


PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1"=10'



SECTION A-A
TYPICAL SECTION
NO SCALE

* SEE PLAN MV1-87-4-CA01 FOR GENERAL NOTES, AND ABBREVIATIONS.

DES. ENGR. F. ALCOCER
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PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-4, 87-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-87-4-CA02
REV.

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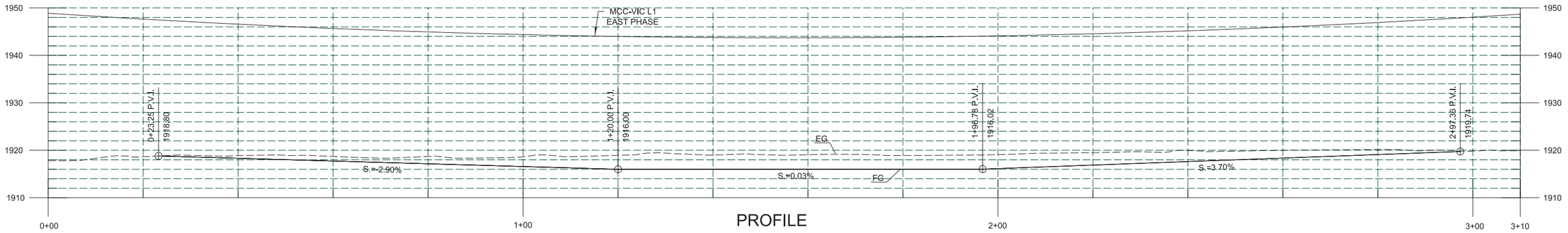
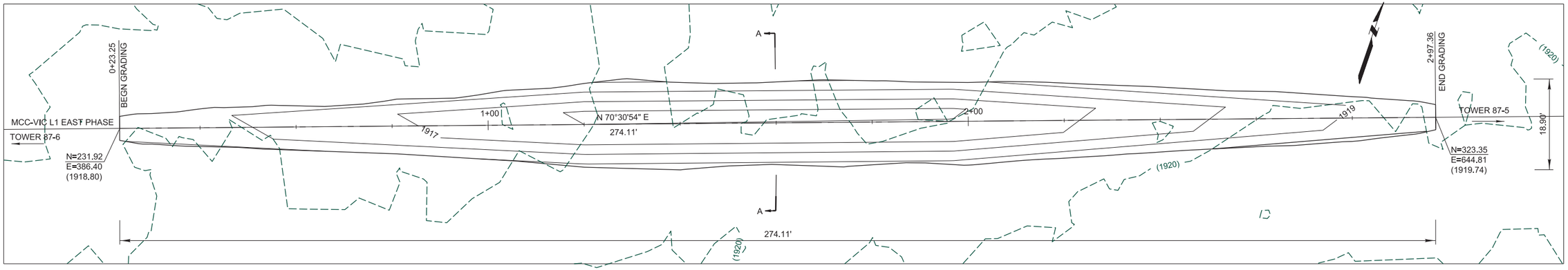


PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN

SCALE: 1"=10'

GENERAL NOTES:

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ABBREVIATIONS:

BC	BEGINNING OF CURVE
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N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES: EAST PHASE

CUT (CY)	204
FILL (CY)	0.4
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS: EAST PHASE

MAX WIDTH (FT)	20
MAX LENGTH (FT)	275
MAX DEPTH (FT)	3.0
AREA (SF)	3940

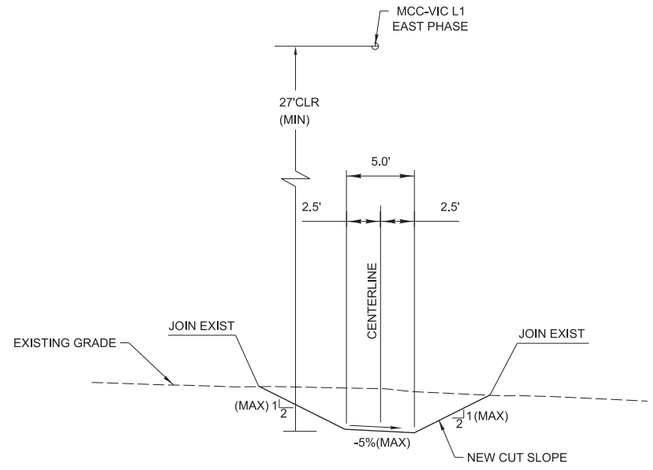
ESTIMATED EARTHWORK QUANTITIES: CENTER PHASE

CUT (CY)	71
FILL (CY)	0.3
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS: CENTER PHASE

MAX WIDTH (FT)	15
MAX LENGTH (FT)	202
MAX DEPTH (FT)	2.0
AREA (SF)	2260



SECTION A-A TYPICAL SECTION

NO SCALE

* SEE PLAN MV1-87-5-CA02 FOR PLAN, PROFILE AND SECTIONS.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

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PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-5, 87-6

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

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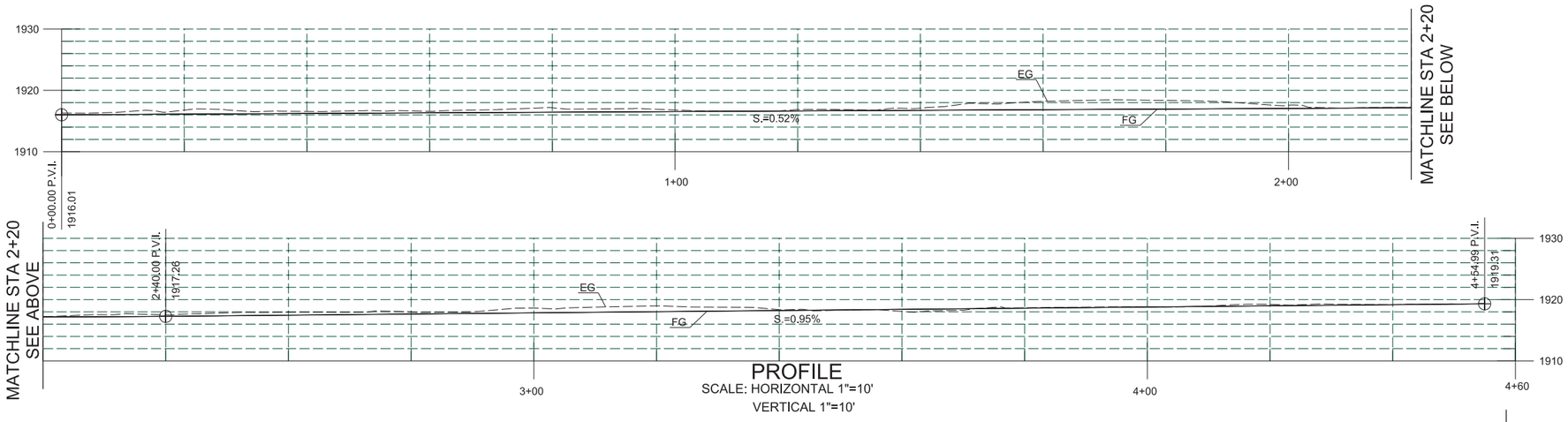
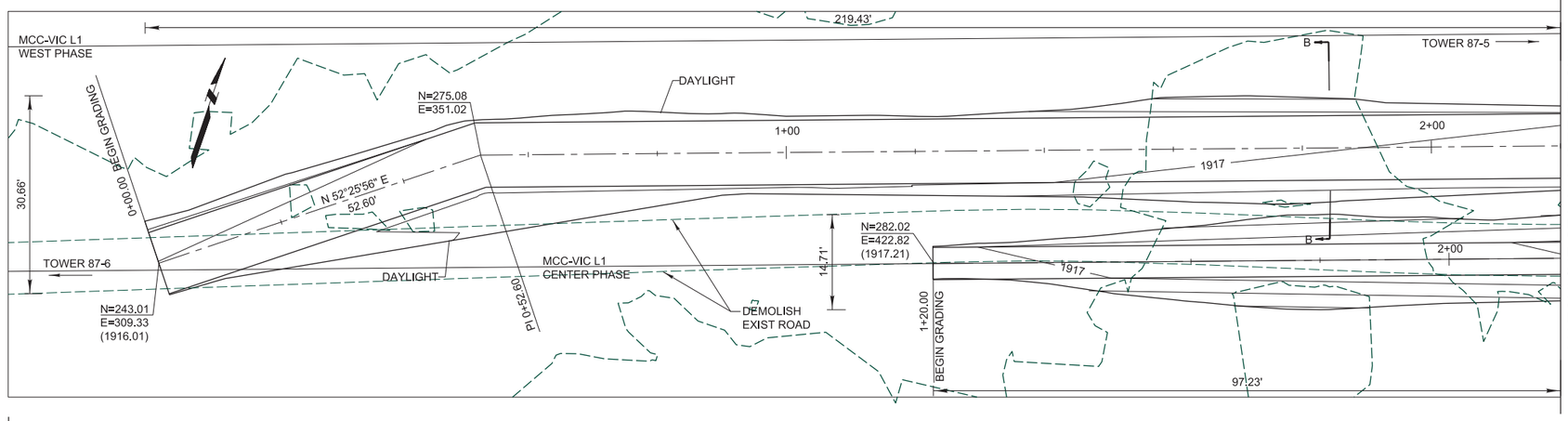


PROFILE

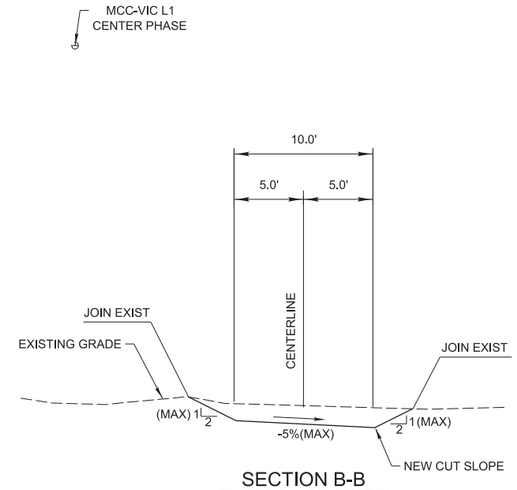
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN

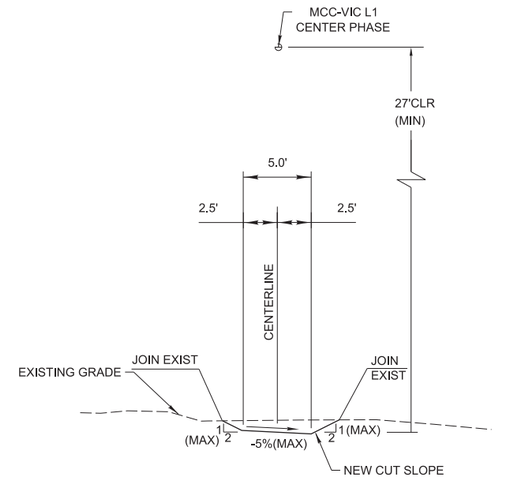
SCALE: 1"=10'

* SEE PLAN MV1-87-5-CA01 FOR GENERAL NOTES, AND ABBREVIATIONS.



SECTION B-B
TYPICAL SECTION

NO SCALE



SECTION C-C
TYPICAL SECTION

NO SCALE

ESTIMATED EARTHWORK QUANTITIES: ACCESS ROAD

CUT (CY)	88
FILL (CY)	6
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS: ACCESS ROAD

MAX WIDTH (FT)	31
MAX LENGTH (FT)	452
MAX DEPTH (FT)	1.5
AREA (SF)	6172

DES. ENGR. F. ALCOCER
SUP. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number

DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
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DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
F Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LINE 1 TWR 87-5, 87-6

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

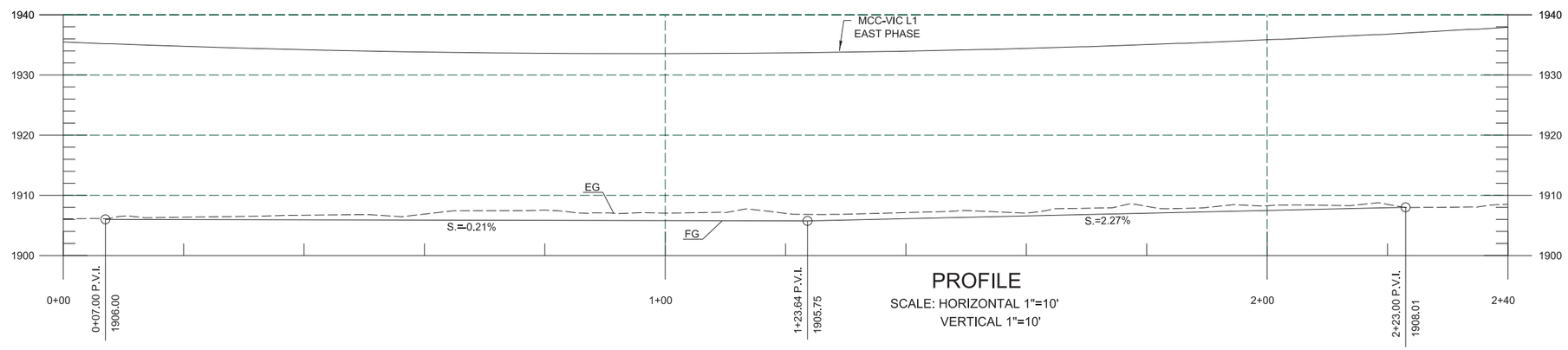
DRAWING NUMBER
MV1-87-5-CA02 REV.

DRA

MV1-87-5-CA01.dgn

GENERAL NOTES:

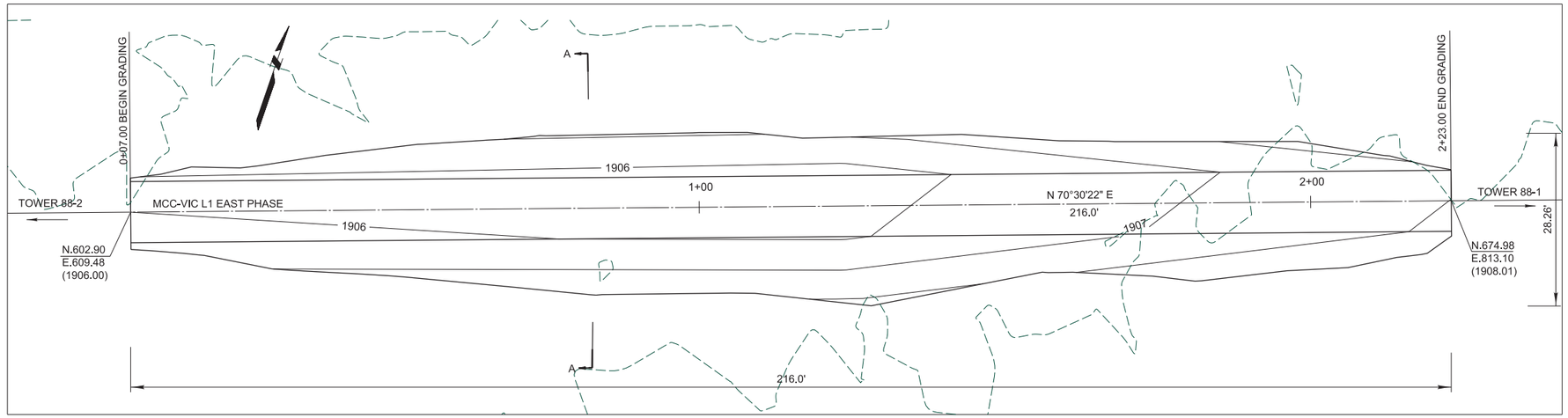
1. ADD 2283000 TO NORTHINGS AND 7054000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



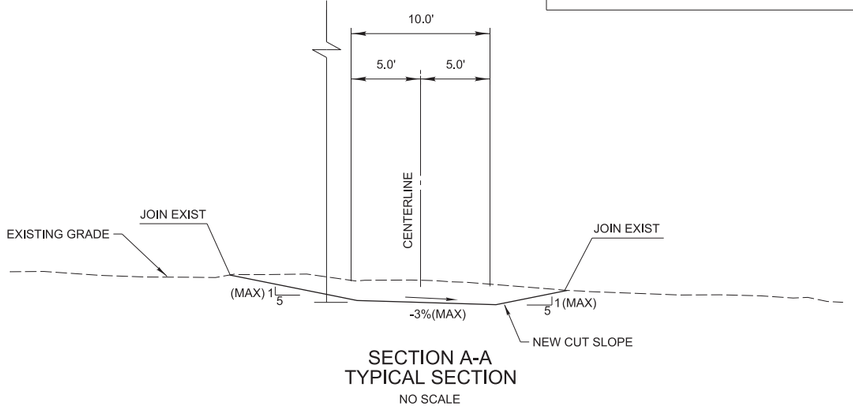
PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



PLAN
SCALE: 1" = 10'



SECTION A-A
TYPICAL SECTION
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	120
FILL (CY)	3.2
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	28.26
MAX LENGTH (FT)	216
MAX DEPTH (FT)	1.6
AREA (SF)	4800

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS
NO. | DESCRIPTION

Revision Number
DRAFTING RELEASE
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CHECKED BY
ENGINEERING APPROVAL

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FINAL APPROVAL RELEASE SIGNATURE | DATE

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CHECKED BY
ENGINEERING APPROVAL
CE 70713

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FINAL APPROVAL RELEASE SIGNATURE | DATE

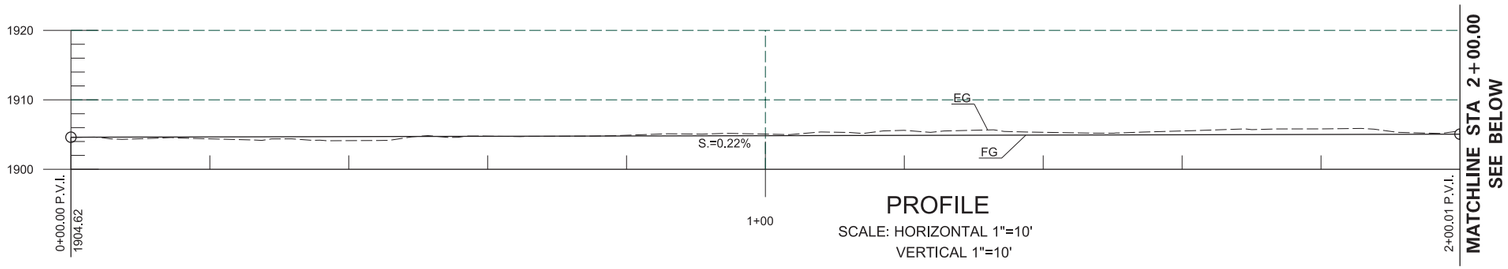
PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–1, 88–2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

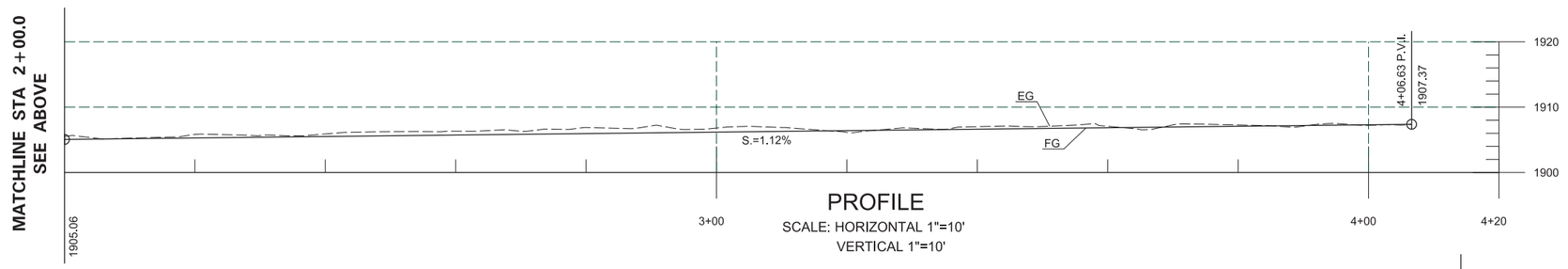
DRAWING NUMBER
MV1-88-1-CA01
REV.

DRA

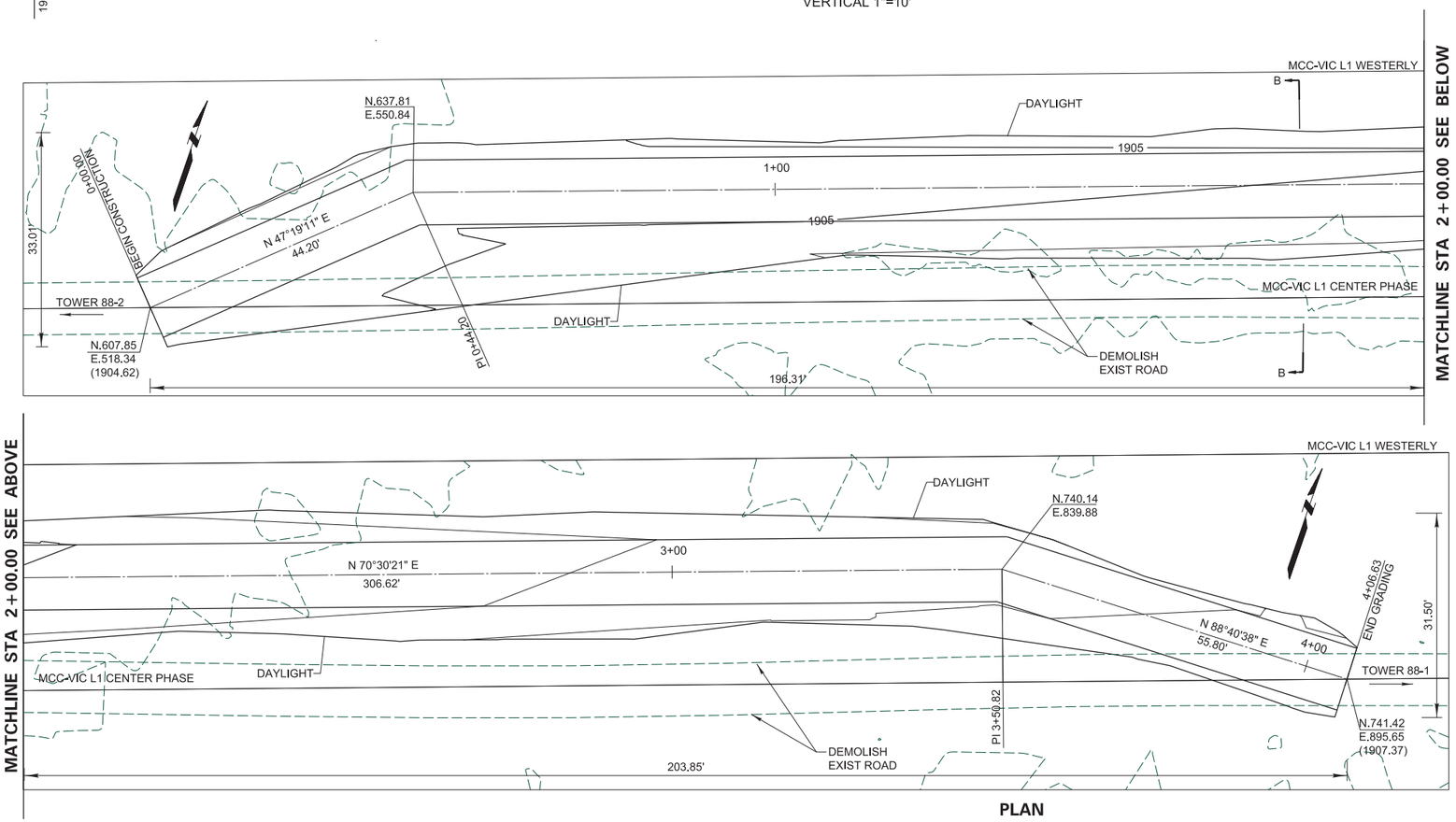
MV1-88-1-CA01.dgn



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1" = 10'

ESTIMATED EARTHWORK QUANTITIES:

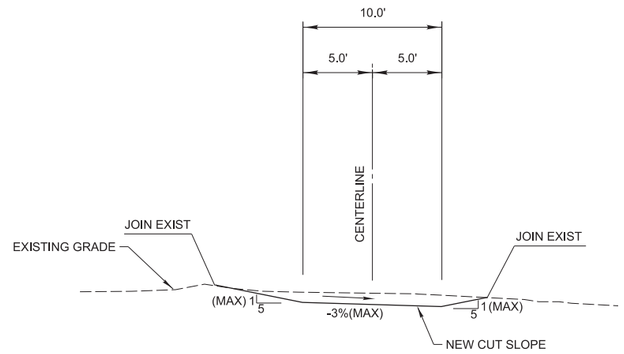
CUT (CY)	65
FILL (CY)	24
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	33
MAX LENGTH (FT)	400
MAX DEPTH (FT)	1.2
AREA (SF)	7600

MCC-VIC L1
CENTER PHASE



SECTION B-B
TYPICAL SECTION
NO SCALE

* SEE PLAN MV1-88-1-CA01 FOR GENERAL NOTES, AND ABBREVIATIONS.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
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DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
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DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Mercer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS
GRADING
MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–1, 88–2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-88-1-CA02
REV.

DRA

MV1-88-1-CA01.dgn

GENERAL NOTES:

1. ADD 2283000 TO NORTHINGS AND 7053000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

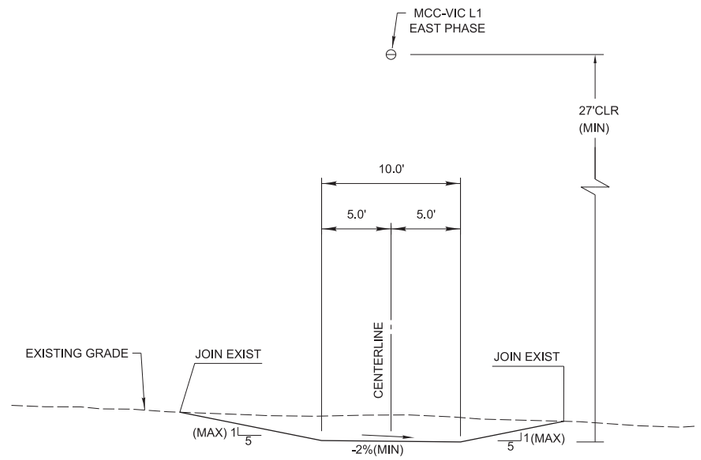
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	157/57.5
FILL (CY)	1/19.3
IMPORT (CY)	0
EXPORT (CY)	0

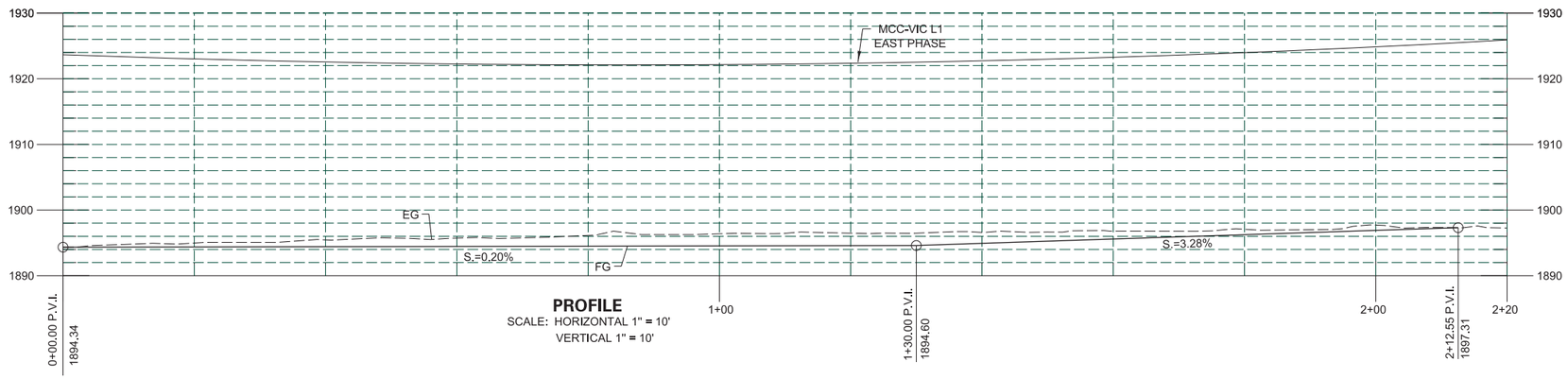
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

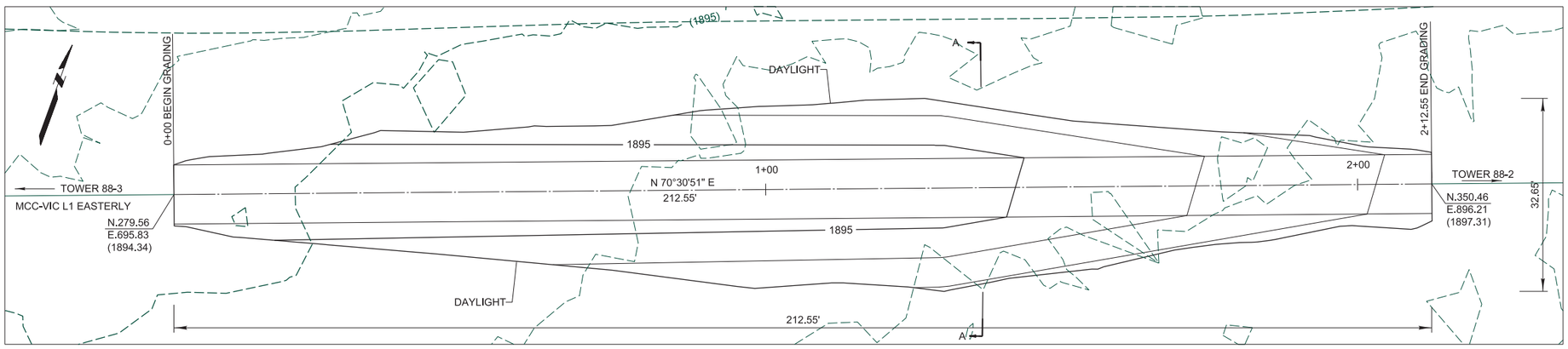
MAX WIDTH (FT)	33/35
MAX LENGTH (FT)	213/382
MAX DEPTH (FT)	1.9/0.65
AREA (SF)	4843/7150



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

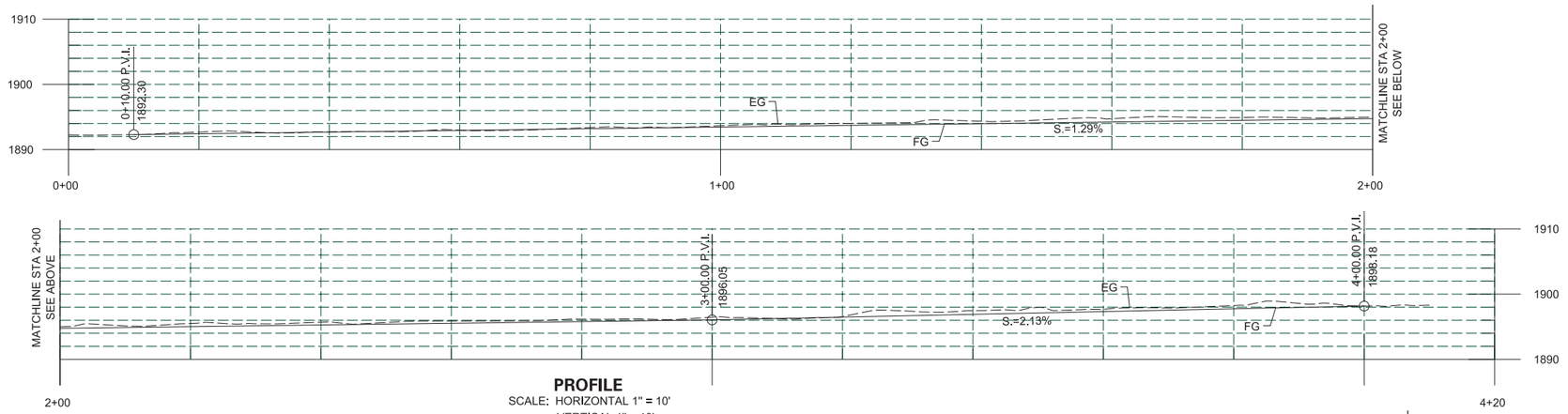


PLAN
SCALE: 1" = 10'

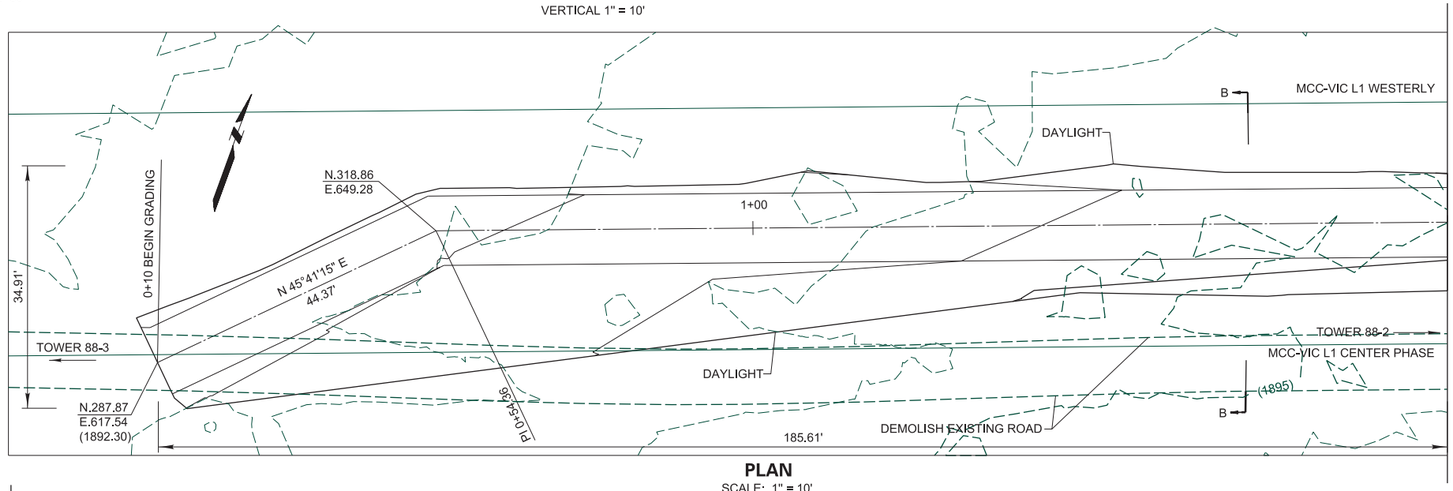
REVISIONS						
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–2, 88–3
		DRAFTING RELEASE		DRAFTING RELEASE		
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES
		CHECKED BY		CHECKED BY		DRAWING NUMBER MV1-88-2-CA01 REV.
		ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL: T. Mercer CE 7073	FINAL APPROVAL RELEASE SIGNATURE DATE	

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

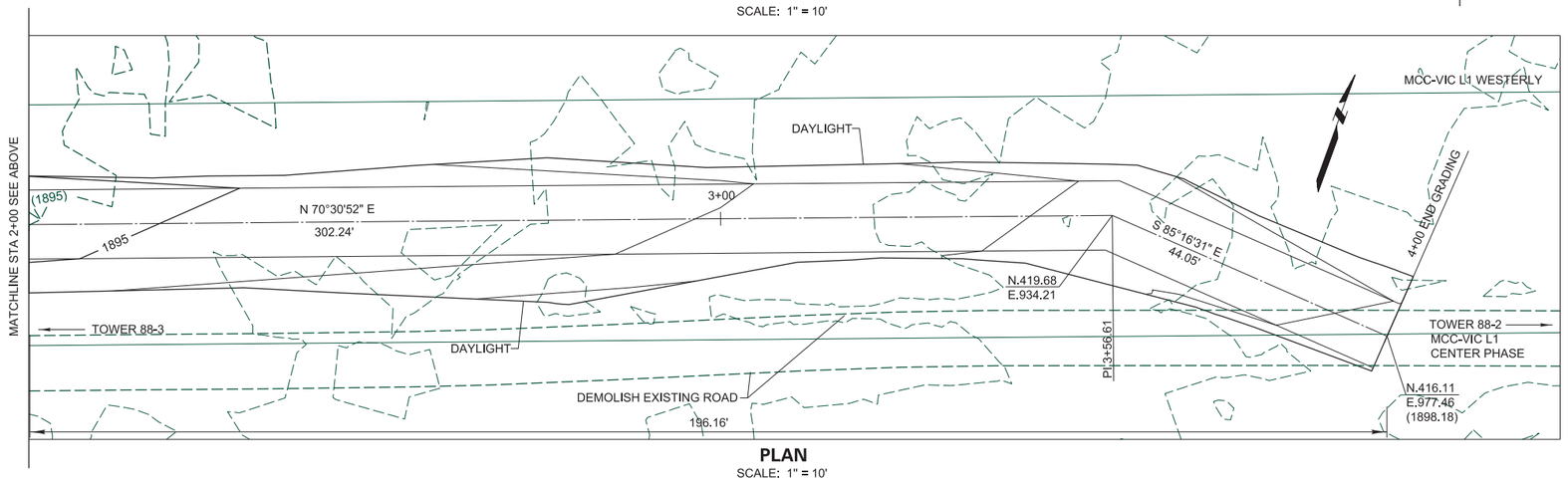
MV1-88-2-CA01.dgn



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

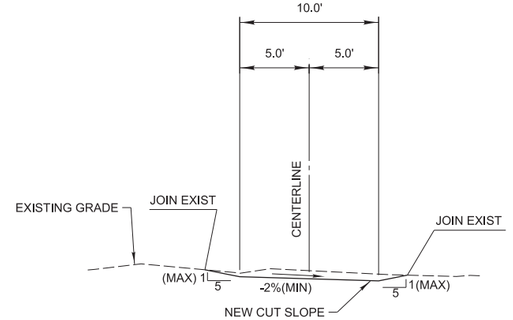


PLAN
SCALE: 1" = 10'



PLAN
SCALE: 1" = 10'

MCC-VIC L1
CENTER PHASE



SECTION B-B
TYPICAL SECTION
NO SCALE

* SEE PLAN MV1-88-2-CA01
FOR GENERAL NOTES, ABBREVIATIONS.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
T. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–2, 88–3

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-88-2-CA02
REV.

DRA

MV1-88-2-CA01.dgn

GENERAL NOTES:

1. ADD 2282000 TO NORTHINGS AND 7052000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

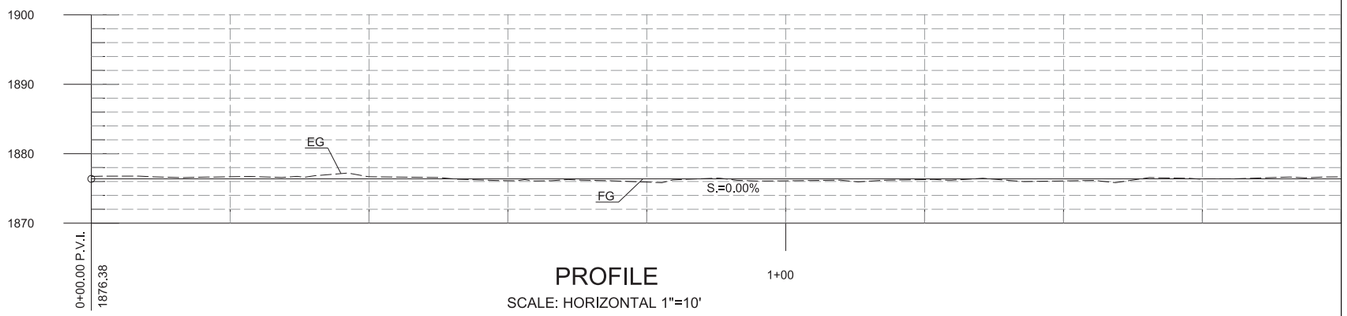
CUT (CY)	34
FILL (CY)	18
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)

* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	40
MAX LENGTH (FT)	428
MAX DEPTH (FT)	1.1
AREA (SF)	6903



PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
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EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
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MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
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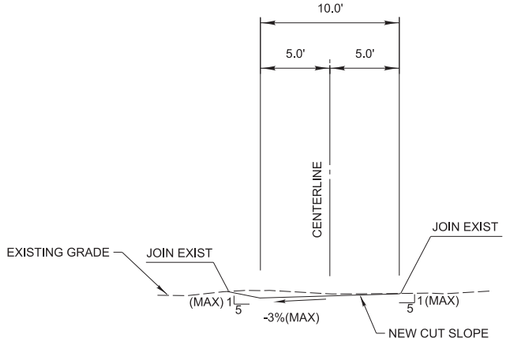
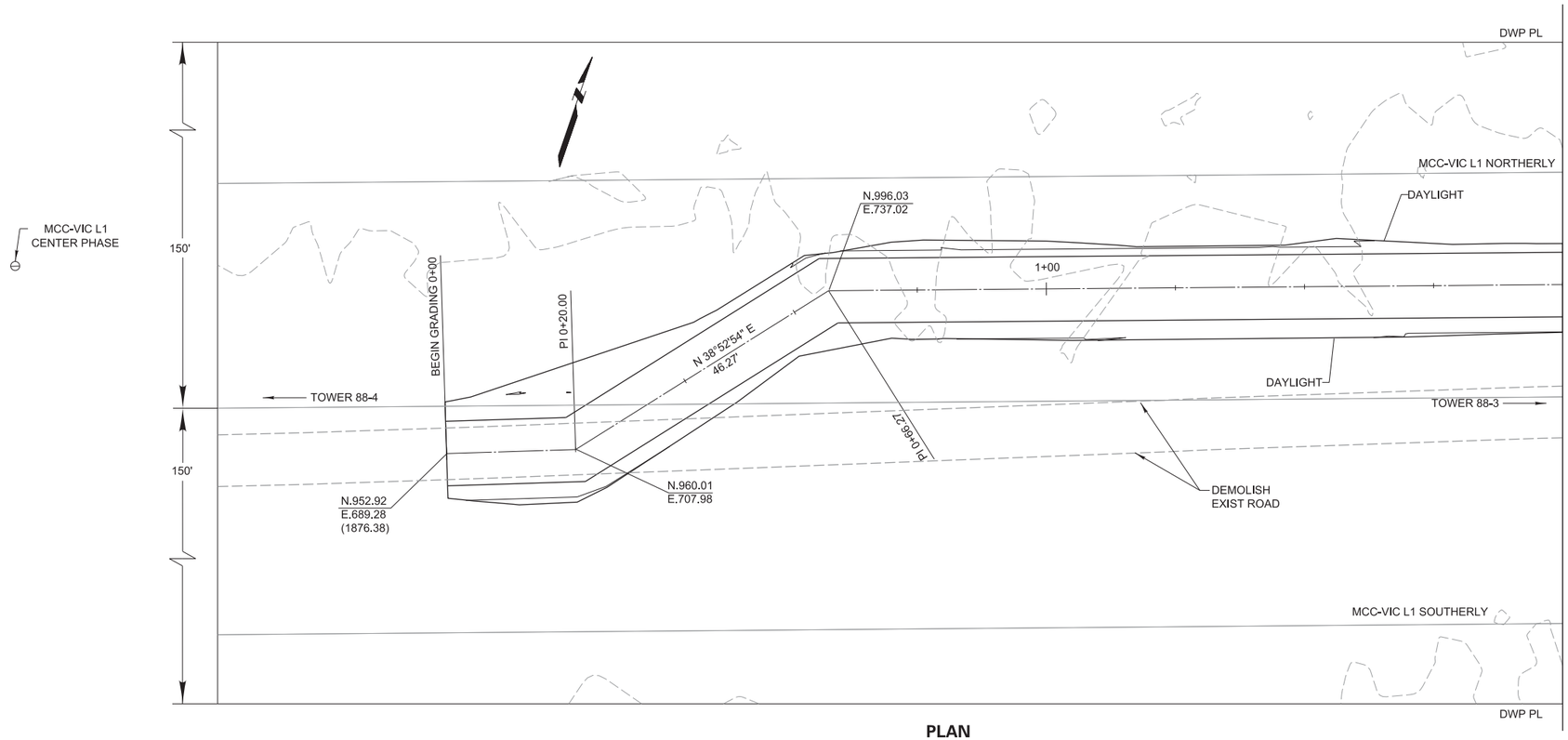
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

MATCHLINE STA 1+80.00 SEE SHEET MV1-88-3-CA02

MATCHLINE STA 1+80.00 SEE SHEET MV1-88-3-CA02

DES. ENGR. F.ALCOCER SUP. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J. Mercer CE 70713	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	**PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–3, 88–4**

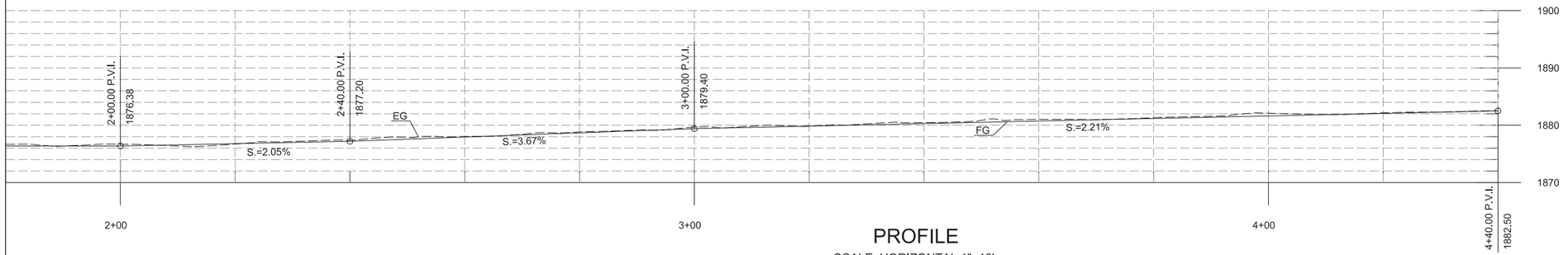
DWP POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-88-3-CA01** REV.

DRA

MV1-88-3-CA01.dgn

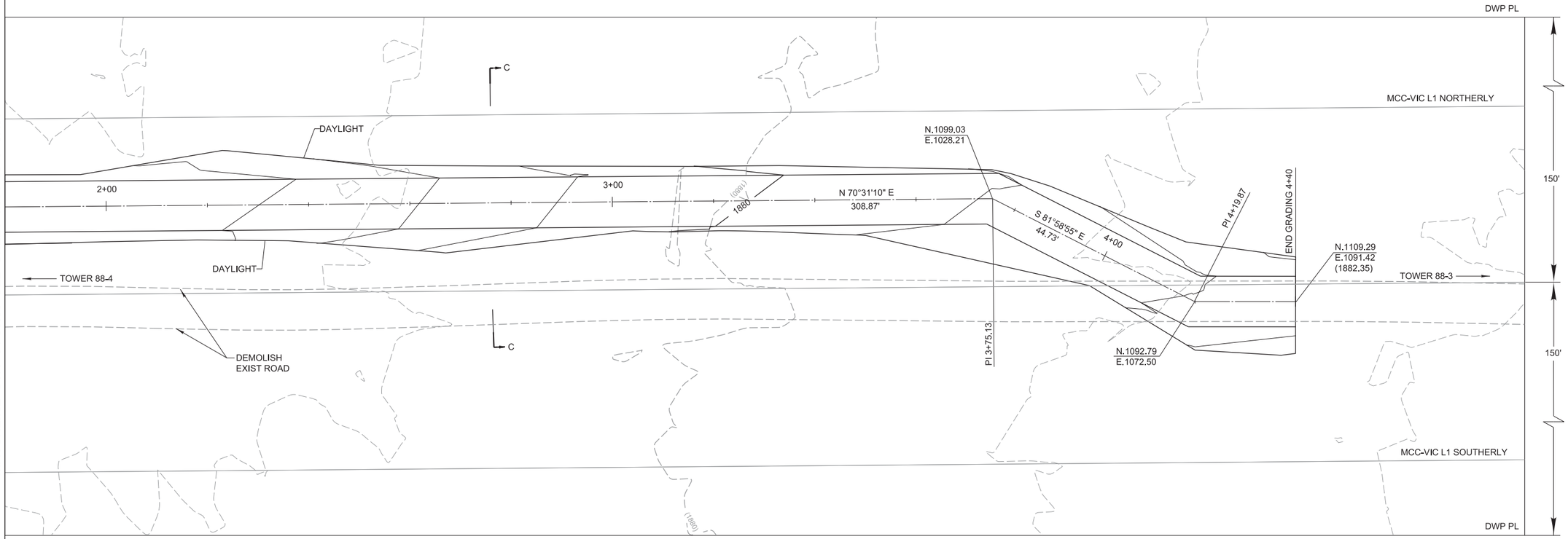
MATCHLINE STA 1+80.00 SEE SHEET MV1-88-3-CA01



PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

MATCHLINE STA 1+80.00 SEE SHEET MV1-88-3-CA01



* SEE PLAN MV1-88-3-CA01 FOR GENERAL NOTES, ABBREVIATIONS AND TYPICAL CROSS SECTION.

PLAN

SCALE: 1" = 10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number _____

DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL

DRAWING REVISION RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED

DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

J. Alcocer CE 70713

OWNER/AGENT APPROVAL

DRAWING RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–3, 88–4

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-88-3-CA02
REV.

DRA

MV1-88-3-CA01.dgn

GENERAL NOTES:

1. ADD 2282000 TO NORTHINGS AND 7050000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

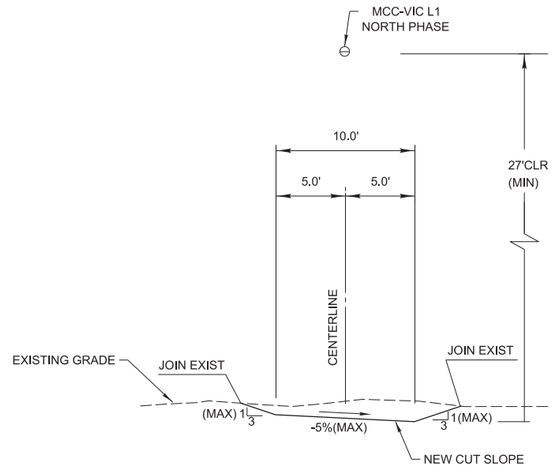
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	285
FILL (CY)	285
IMPORT (CY)	0
EXPORT (CY)	0

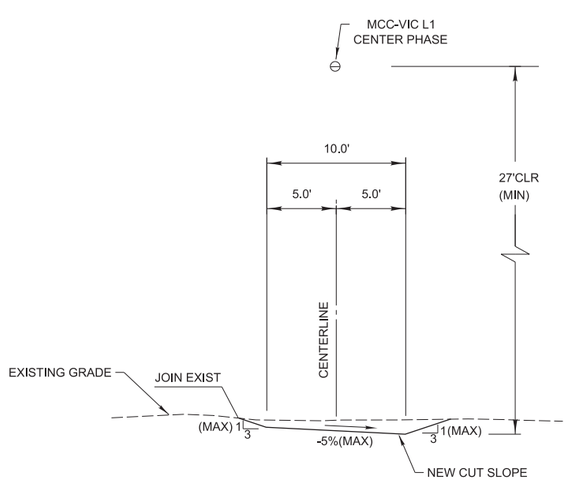
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

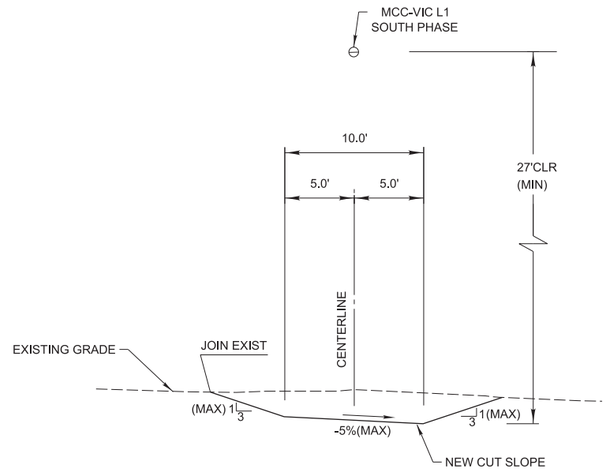
PHASE	NORTH	CENTER	SOUTH
MAX WIDTH (FT)	16.4	17	24
MAX LENGTH (FT)	154	156	281
MAX DEPTH (FT)	1.5	1.0	2.2
AREA (SF)	2188	2301	5440



SECTION A-A
TYPICAL SECTION
NO SCALE



SECTION B-B
TYPICAL SECTION
NO SCALE



SECTION C-C
TYPICAL SECTION
NO SCALE

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS
NO. | DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
F. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

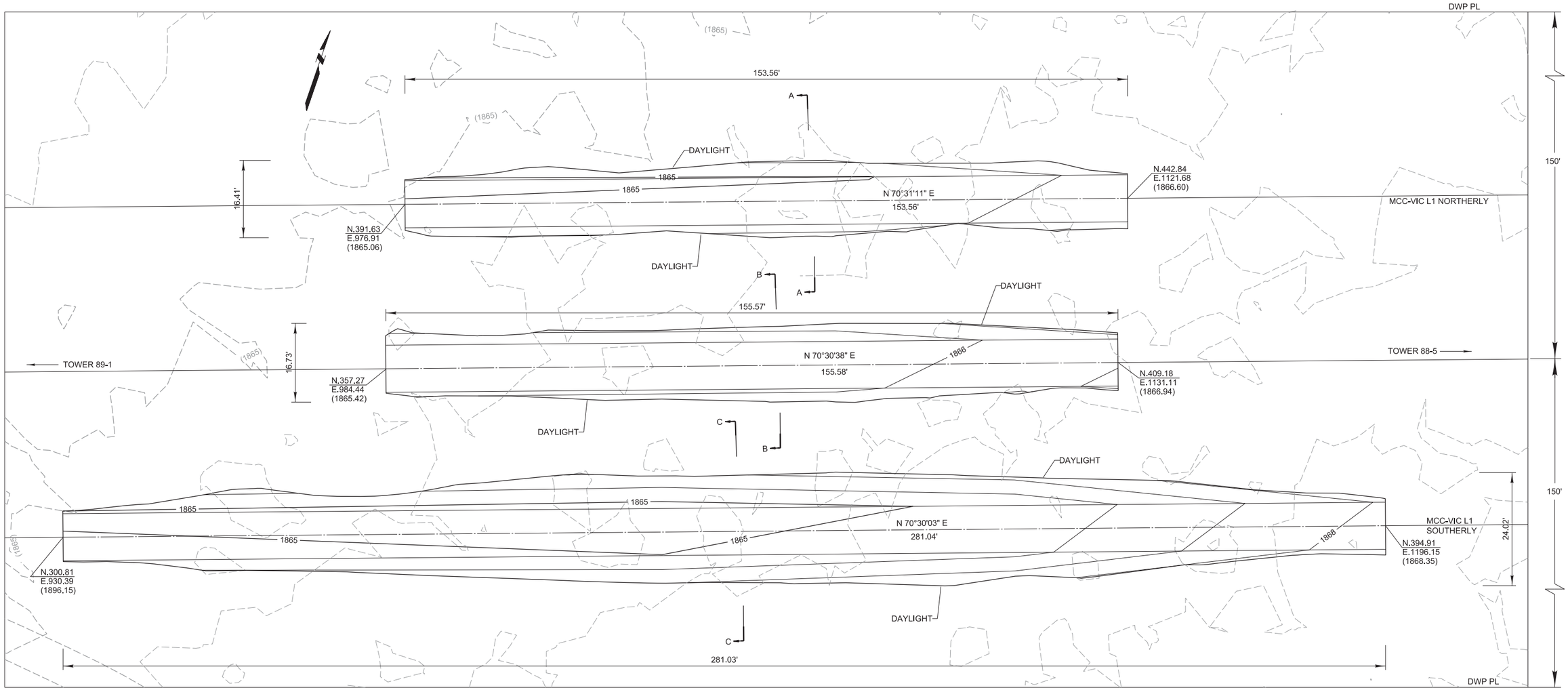
PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–5, 89–1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-88-5-CA01
REV.

DRA

MV1-88-5-CA01.dgn



PLAN
SCALE: 1" = 10'

* SEE PLAN MV1-88-CA01 FOR GENERAL NOTES, ABBREVIATIONS AND TYPICAL CROSS SECTION.

DES. ENGR. F. ALCOCER
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
F. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

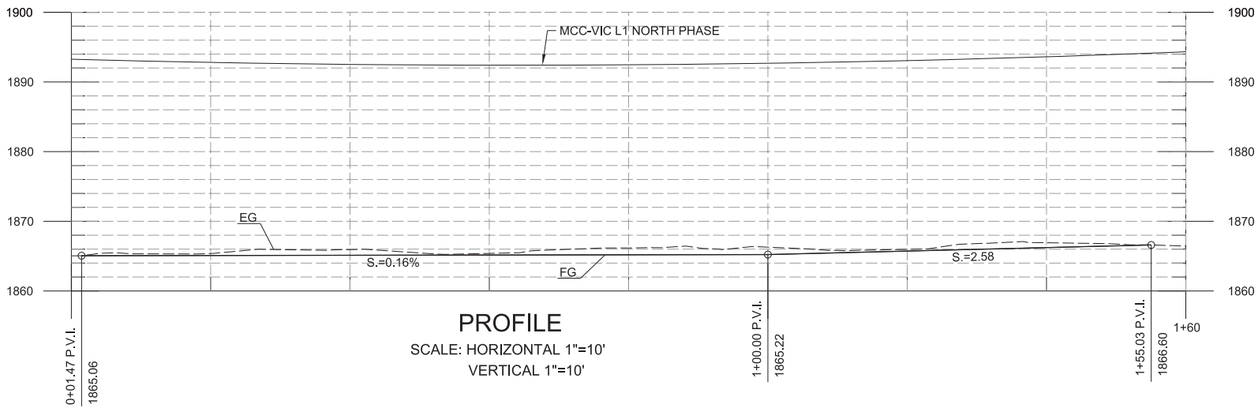
PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–5, 89–1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

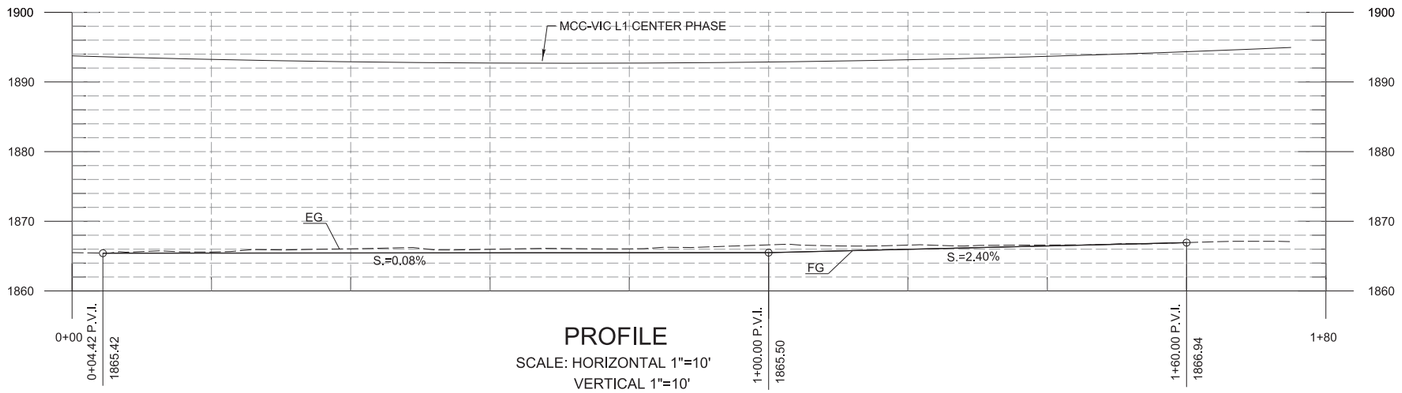
DRAWING NUMBER
MV1-88-5-CA02
REV.

DRA

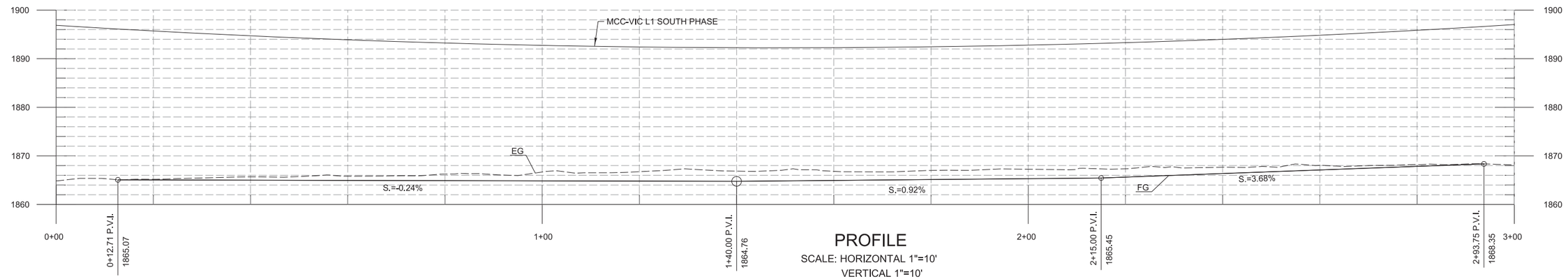
MV1-88-5-CA02.dgn



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

* SEE PLAN MV1-88-CA01 FOR GENERAL NOTES, ABBREVIATIONS.

DES. ENGR. F. ALCOCER
SUP. ENGR. J. PANG

REVISIONS
NO. | DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
T. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

PLAN, PROFILE, AND SECTIONS
GRADING
MCCULLOUGH–VICTORVILLE LINE 1 TWR 88–5, 89–1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-88-5-CA03
REV.

DRA

MV1-88-5-CA03.dgn

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PVC	POINT OF VERTICLE CURVATURE
PVI	POINT OF VERTICLE INTERSECTION
PVT	POINT OF VERTICLE TANGENCY
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	62.0
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

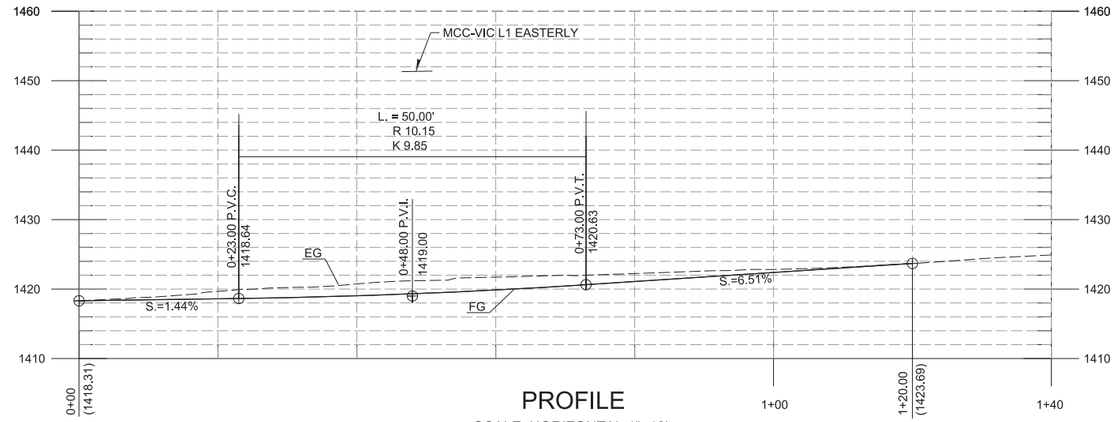
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

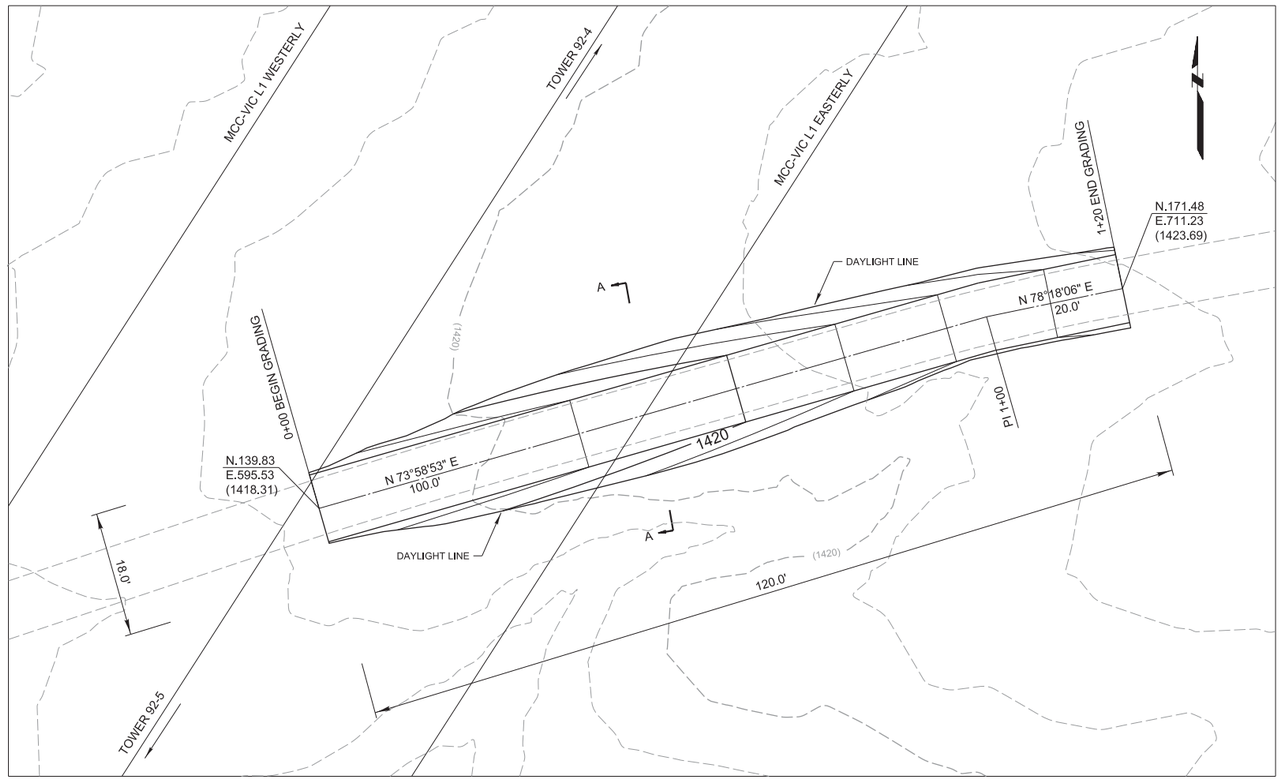
MAX WIDTH (FT)	18
MAX LENGTH (FT)	120
MAX DEPTH (FT)	2.0
AREA (SF)	1840

GENERAL NOTES:

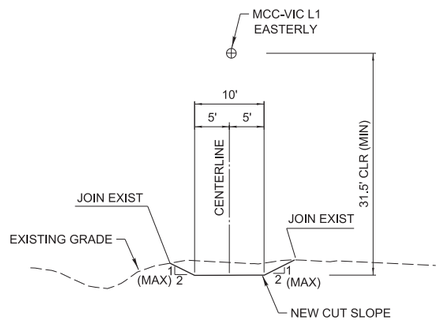
1. ADD 2266000 TO NORTHINGS AND 7039000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1" = 10'



SECTION A-A
TYPICAL SECTION
NO SCALE

REVISIONS						
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 92–4, 92–5
		DRAFTING RELEASE		DRAFTING RELEASE		
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES
		CHECKED BY		CHECKED BY		DRAWING NUMBER MV1-92-4-CA01 REV.
		ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	
				J. Alcocer CE 7073		

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

DRA

MV1-92-4-CA01.dgn

GENERAL NOTES:

1. ADD 2160000 TO NORTHINGS AND 6930000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

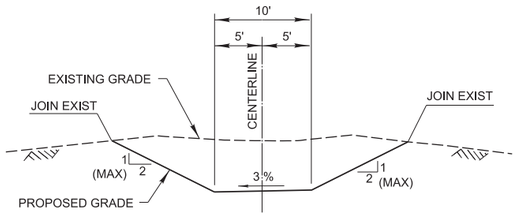
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	92
FILL (CY)	92
IMPORT (CY)	0
EXPORT (CY)	0

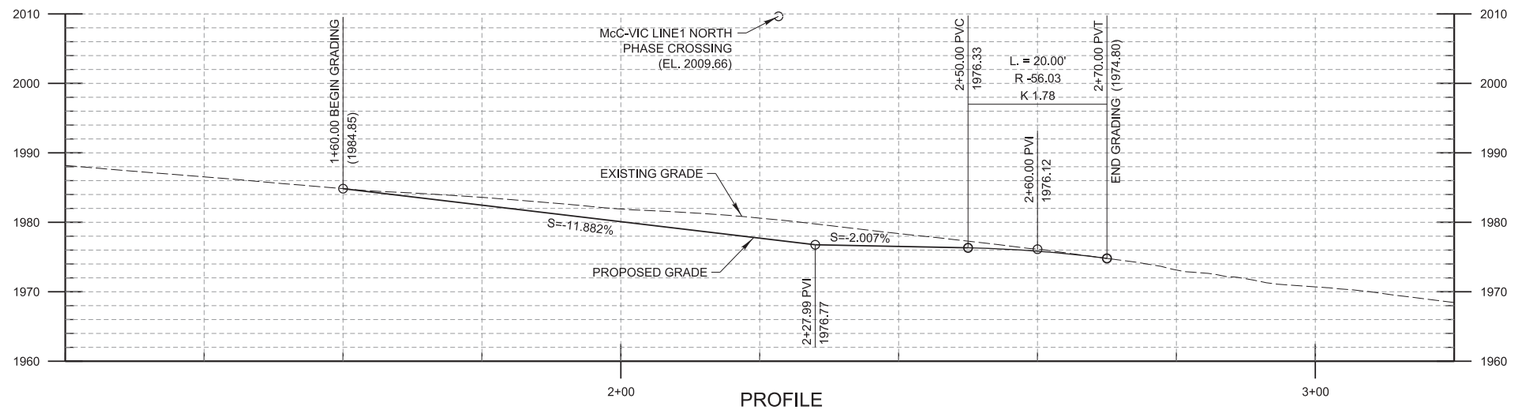
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

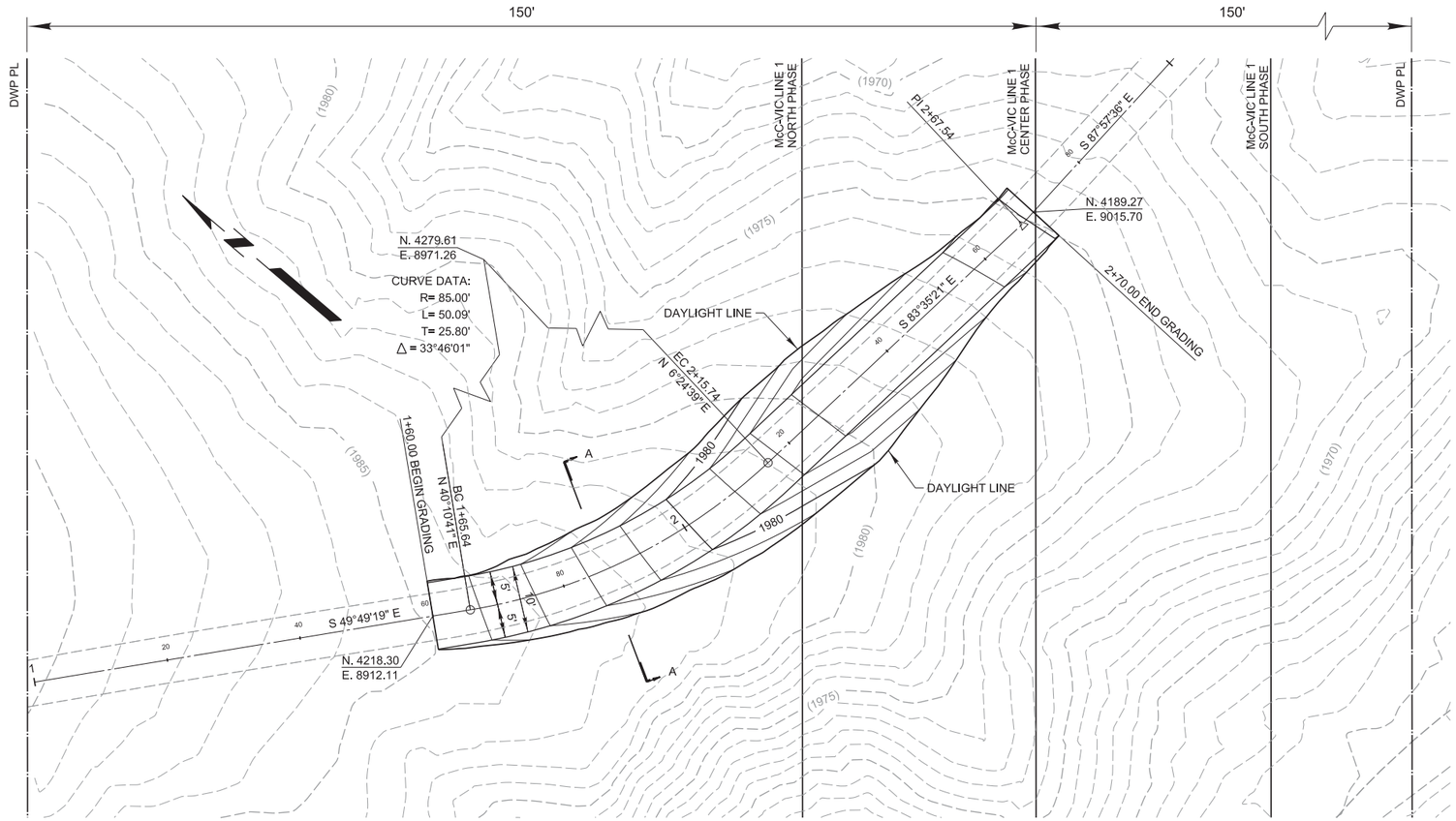
MAX WIDTH (FT)	21
MAX LENGTH (FT)	110
MAX DEPTH (FT)	3
AREA (SF)	1710



SECTION A-A
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

DES. ENGR. J. JONG	REVISIONS NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILE, AND SECTION GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 120-1
CHK. ENGR. J. PANG			DRAFTING RELEASE		DRAFTING RELEASE		
			DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES
			CHECKED BY		CHECKED BY		DRAWING NUMBER MV1-120-1-CA01 REV. 1
			ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL J. Fong CE 69632	FINAL APPROVAL RELEASE SIGNATURE DATE	01-07-13

mv1-120-1.dgn

GENERAL NOTES:

1. ADD 2131000 TO NORTHINGS AND 6905000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	580
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

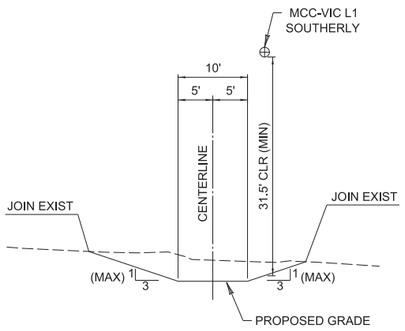
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

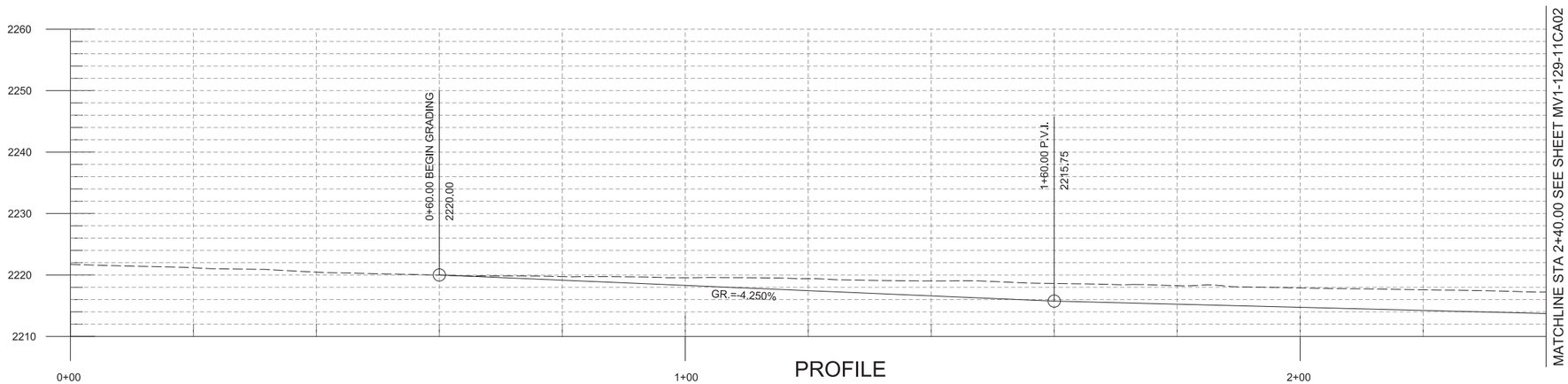
MAX WIDTH (FT)	38
MAX LENGTH (FT)	420
MAX DEPTH (FT)	3.7
AREA (SF)	10,641

ABBREVIATIONS:

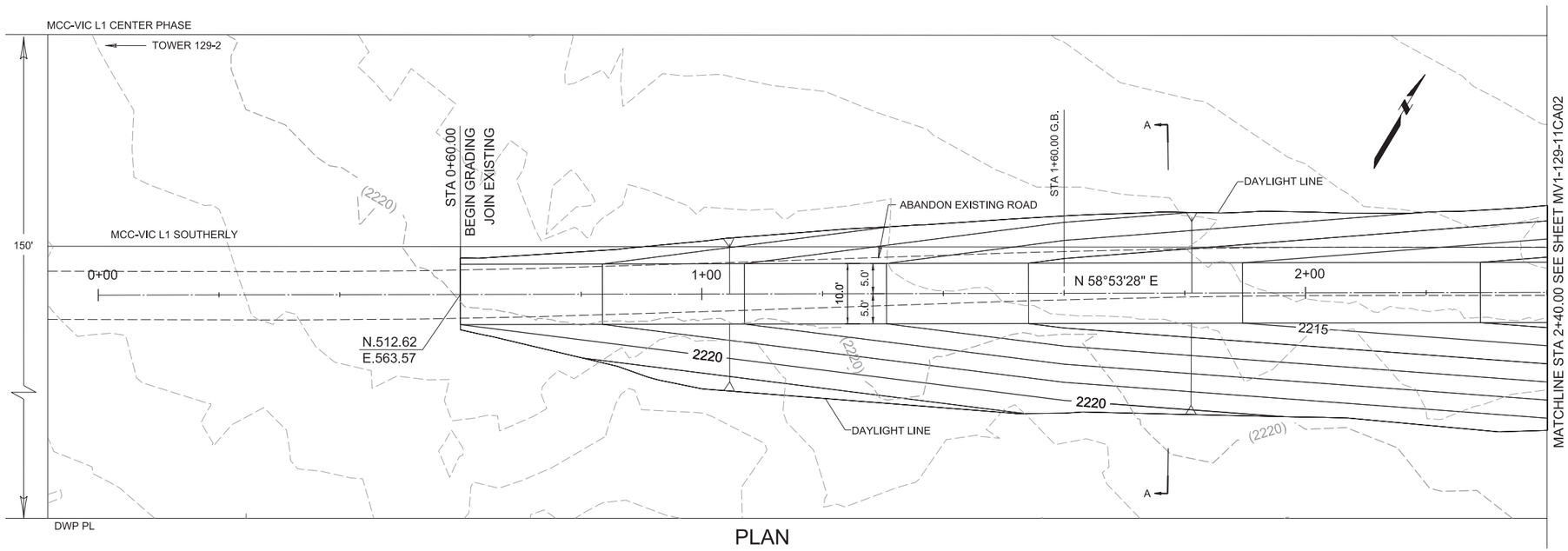
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1"=10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Alcocer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

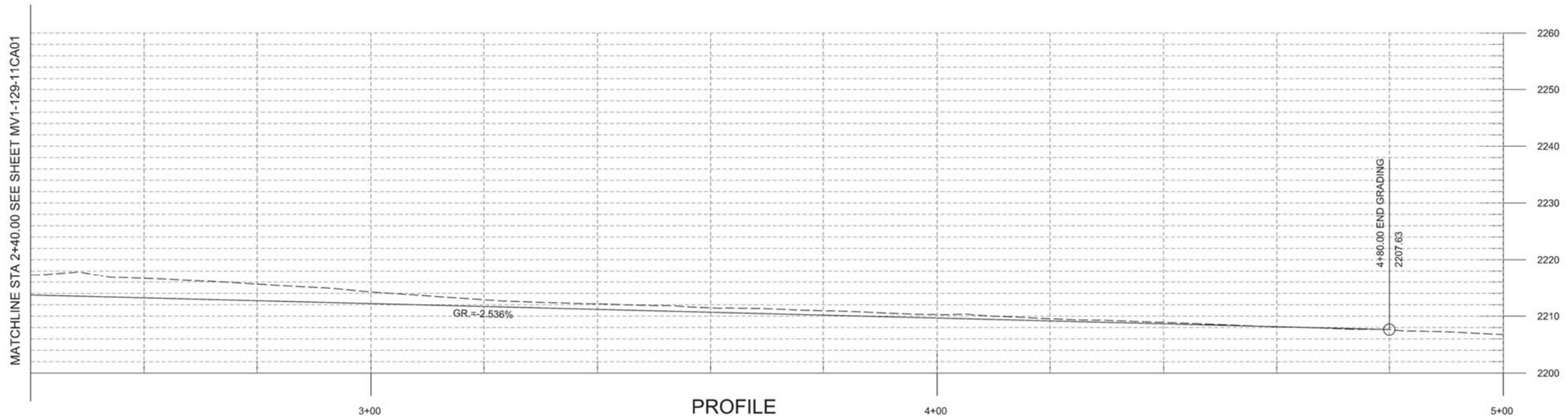
PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 129–1, 129–2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-129-1-CA01
REV.

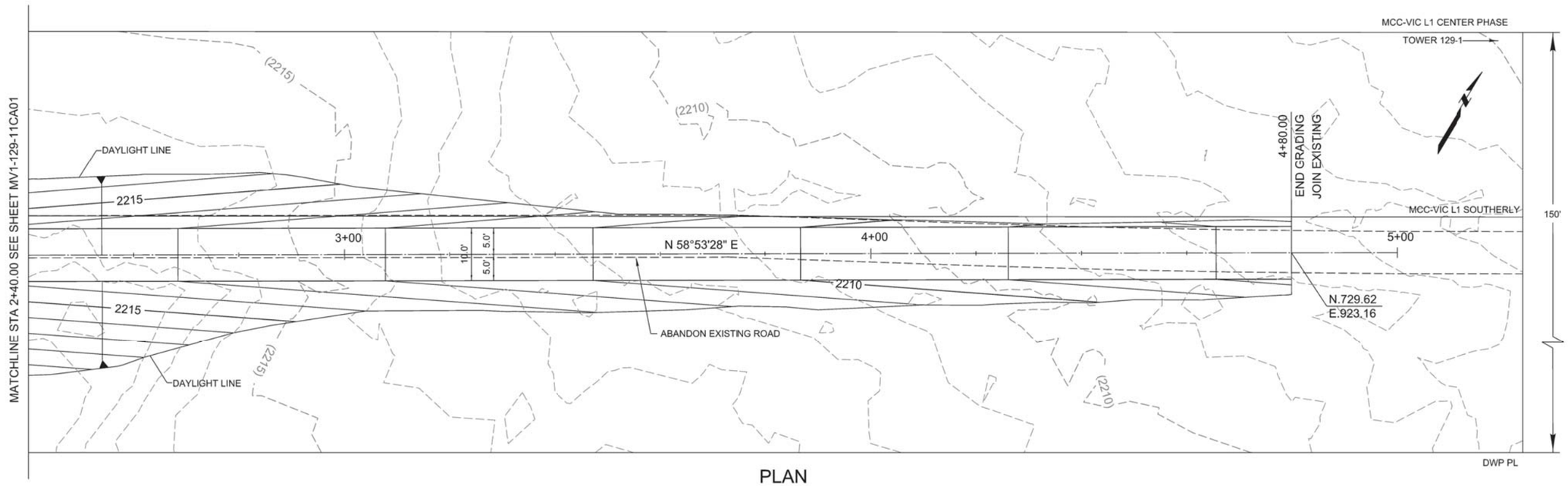
DRA

MV1-129-CA01.dgn



PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN

SCALE: 1"=10'

* SEE PLAN MV1-129-1-CA01 FOR GENERAL NOTES, ABBREVIATIONS AND TYPICAL CROSS SECTION.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS							
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 1 TWR 129–1, 129–2	
		DRAFTING RELEASE		DRAFTING RELEASE			
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL		
		CHECKED BY		CHECKED BY			
		ENGINEERING APPROVAL		ENGINEERING APPROVAL			
			FINAL APPROVAL RELEASE SIGNATURE DATE	J. Mercer CE 70713	FINAL APPROVAL RELEASE SIGNATURE DATE		

DWP — POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV1-129-1-CA02 REV.

DRA

XXXX

GENERAL NOTES:

1. ADD 2410000 TO NORTHINGS AND 7270000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

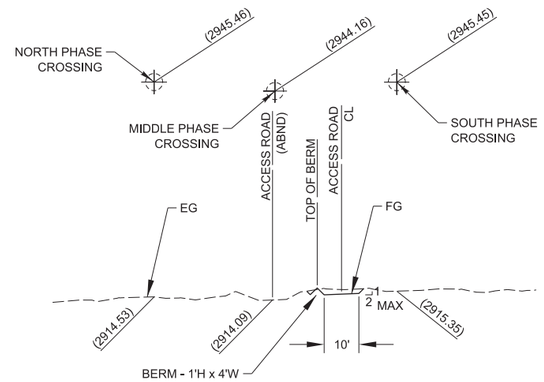
ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	41
FILL (CY)	65
IMPORT (CY)	24
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK AND SHRINKAGE FACTORS)

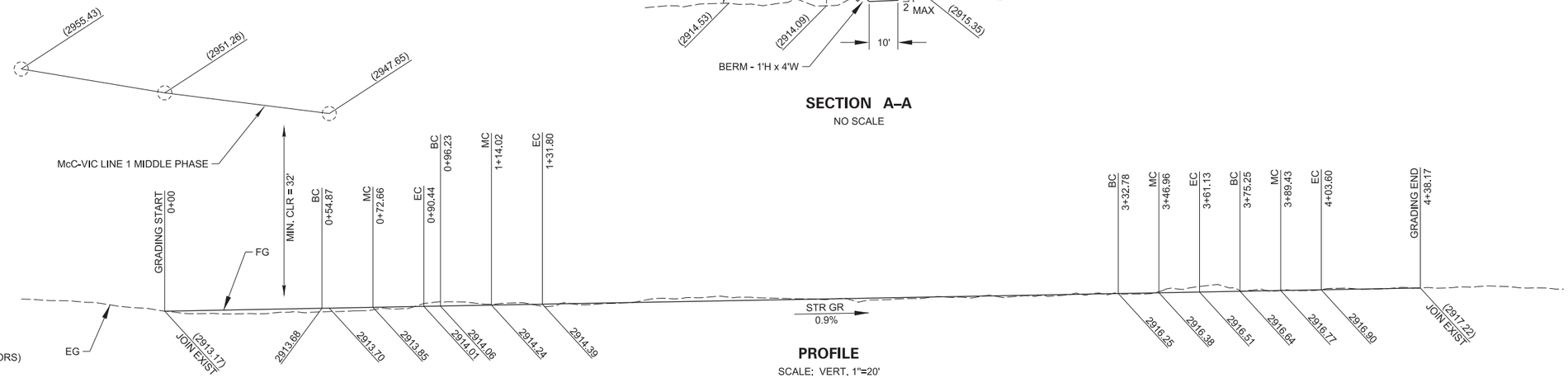


SECTION A–A
NO SCALE

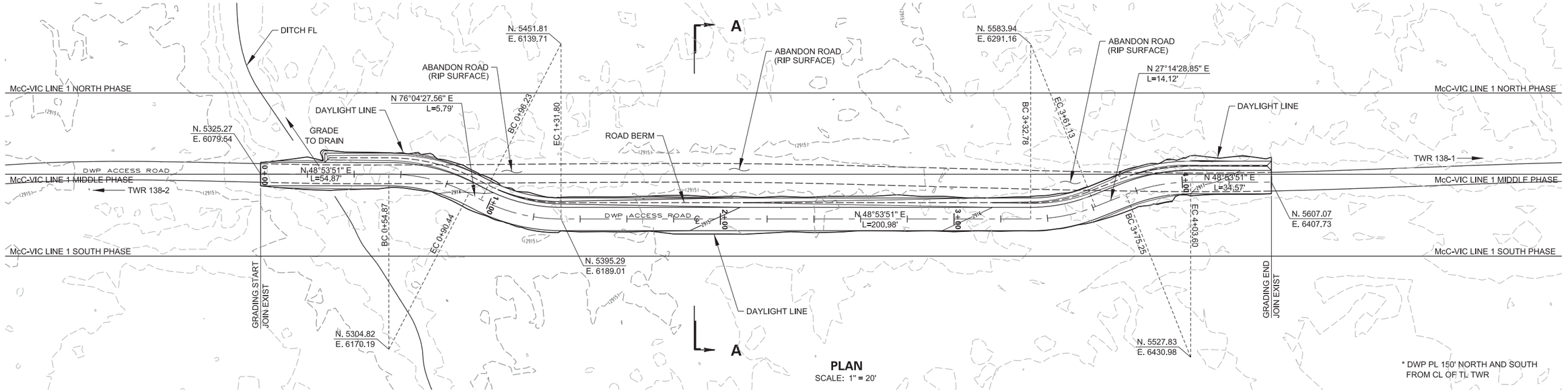
CURVE DATA					PI	
	R	L	T	Δ	N.	E.
①	75'	35.57'	18.13'	27°10'35.55"	5373.26	6134.54
②	75'	35.57'	18.13'	27°10'35.55"	5383.38	6175.35
③	75'	28.35'	14.35'	21°39'22.16"	5536.85	6351.27
④	75'	28.35'	14.35'	21°39'22.16"	5574.91	6370.87

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	30
MAX LENGTH (FT)	440
MAX DEPTH (FT)	1
AREA (SF)	11530



PROFILE
SCALE: VERT. 1"=20'
HORT. 1"=10'



PLAN
SCALE: 1" = 20'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. L. MALCOM

REVISIONS

NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J Pang CE 65962

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 138–1

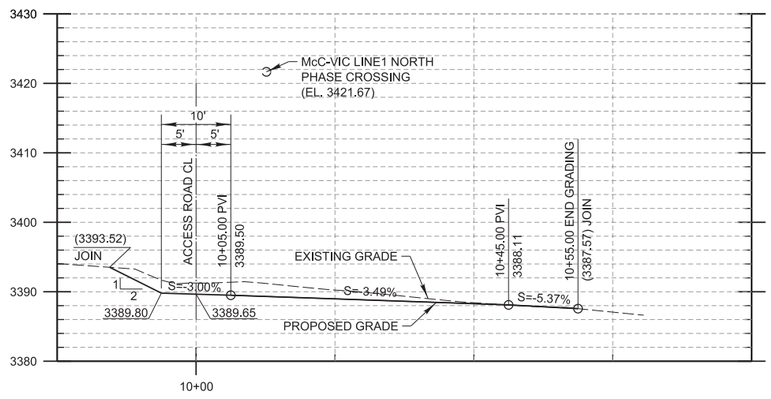
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-138-1-CA01** REV. 1

10-13-12

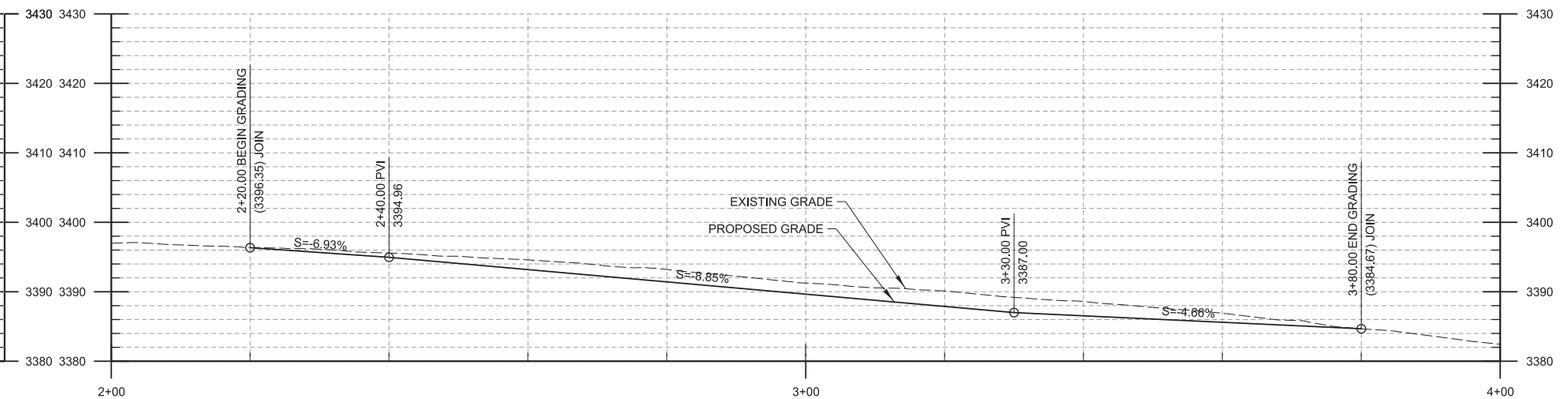
DRA

mv138-1.dgn



LATERAL ROAD PROFILE

SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



ACCESS ROAD PROFILE

SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

GENERAL NOTES:

1. ADD 2085000 TO NORTHINGS AND 6834000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
S	SLOPE
SG	STRAIGHT GRADE
TYP.	TYPICAL

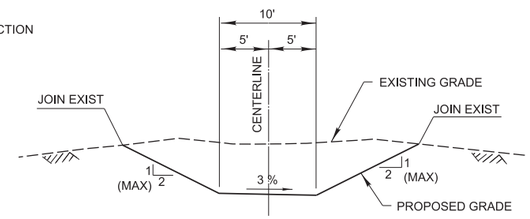
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	201
FILL (CY)	201
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

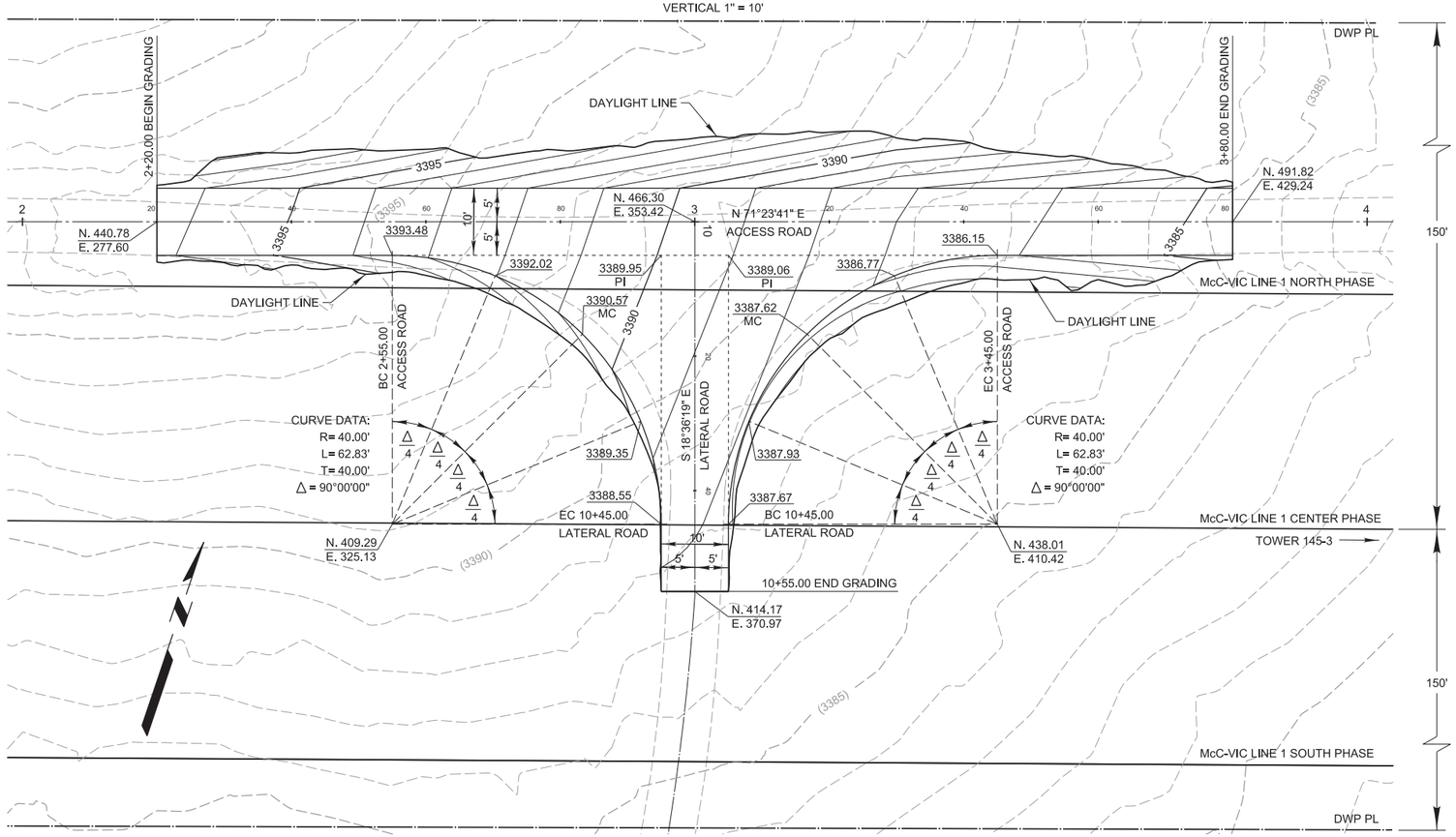
APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	70
MAX LENGTH (FT)	160
MAX DEPTH (FT)	2.5
AREA (SF)	4236



TYPICAL SECTION

NO SCALE



PLAN

SCALE: 1" = 10'

DES. ENGR. J. TONG	REVISIONS NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILES, AND SECTION GRADING McCULLOUGH-VICTORVILLE LINE 1 TWR 145-3
ASST. DES. ENGR. J. PANG			DRAFTING RELEASE		DRAFTING RELEASE		
			DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	
			CHECKED BY		CHECKED BY		
			ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL J. Tong CE 69632	FINAL APPROVAL RELEASE SIGNATURE DATE	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES

DRAWING NUMBER MV1-145-3-CA01 REV. 1

01-07-13

mv1-145-3.dgn

GENERAL NOTES:

1. ADD 2070000 TO NORTHINGS AND 6810000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

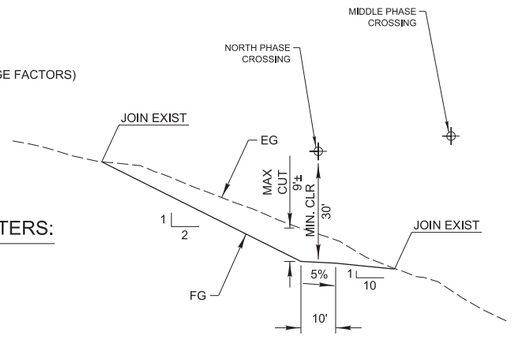
CUT (CY)	1080
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	1080

(ESTIMATE BASED ON 10% BULK AND SHRINKAGE FACTORS)

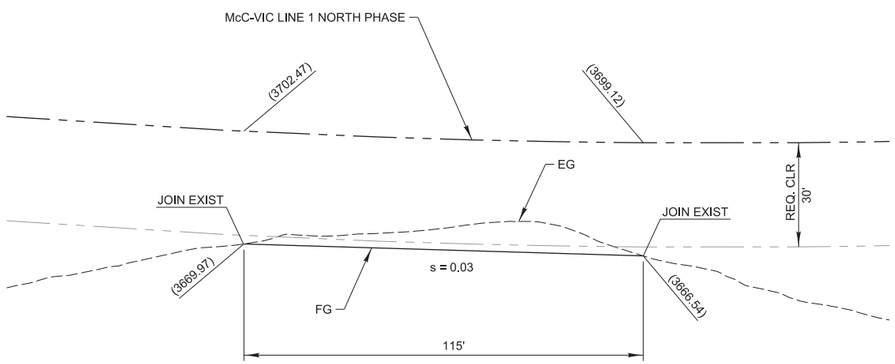
* CUT MATERIAL MAY BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

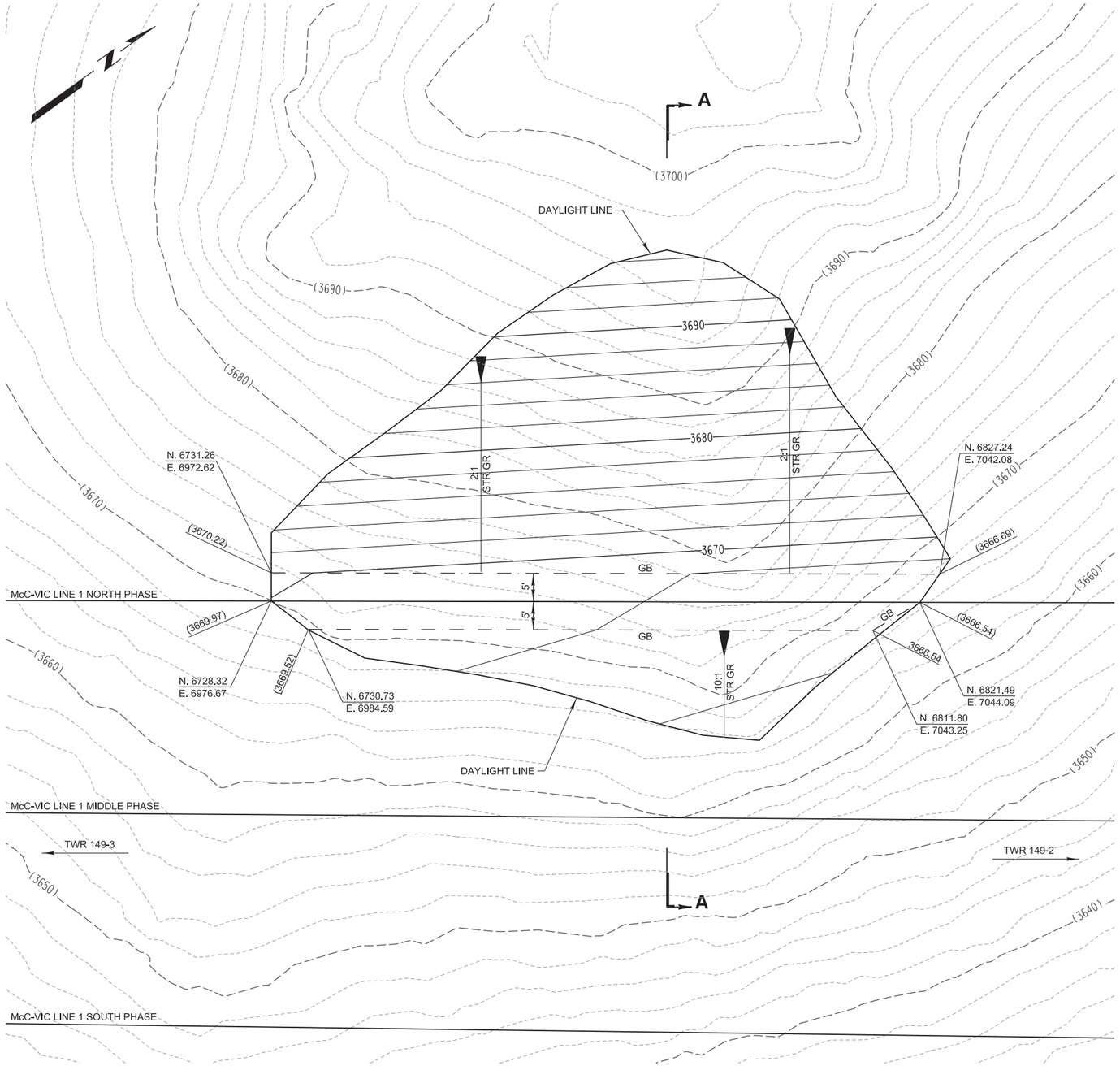
MAX WIDTH (FT)	90
MAX LENGTH (FT)	115
MAX DEPTH (FT)	9
AREA (SF)	7060



SECTION A–A
SCALE: 1" = 20'



PROFILE – NORTH PHASE
SCALE: 1"=20'



PLAN
SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. PANG SUP. ENGR. E. MALACON	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J Pang CE 65962	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	**PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 149–2** POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES	DRAWING NUMBER MV1-149-2-CA01 REV. 1

10-16-12

DRA

mv149-2.dgn

GENERAL NOTES:

1. ADD 2060000 TO NORTHINGS AND 6800000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

ESTIMATED EARTHWORK QUANTITIES:

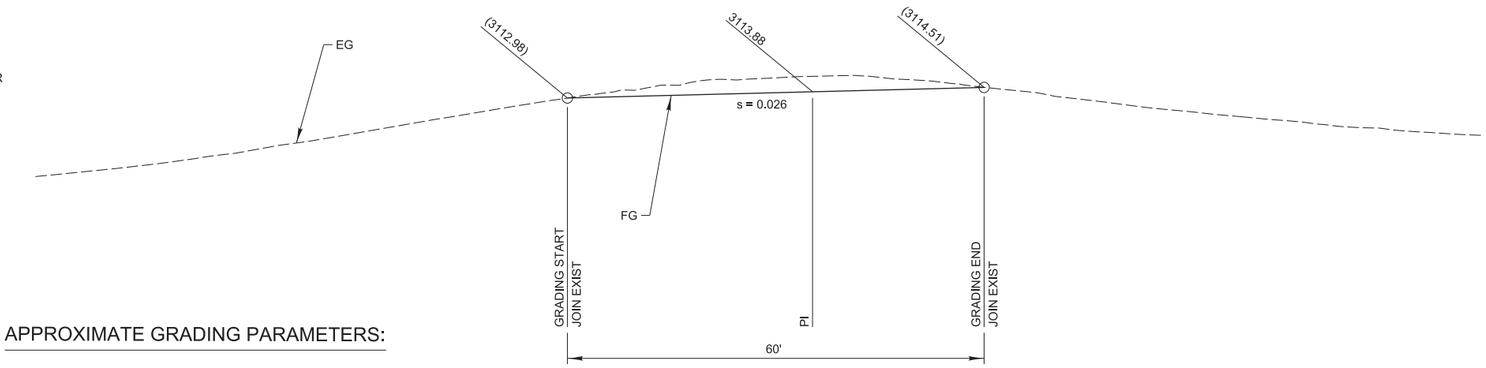
CUT (CY)	77
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK AND SHRINKAGE FACTORS)

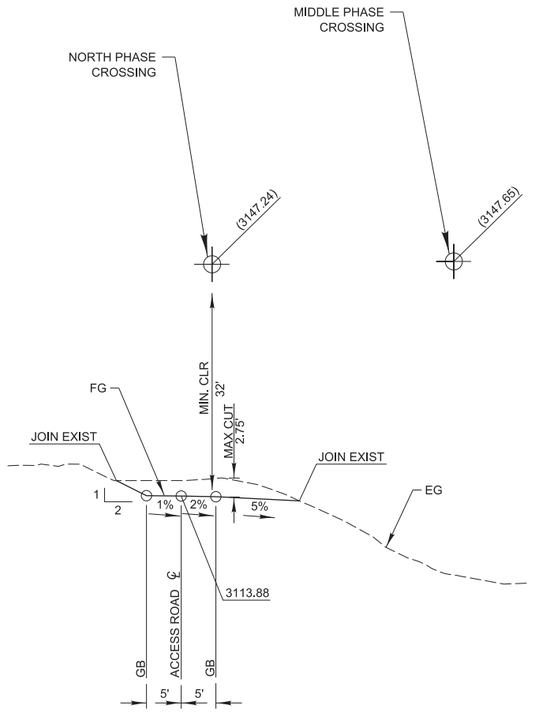
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

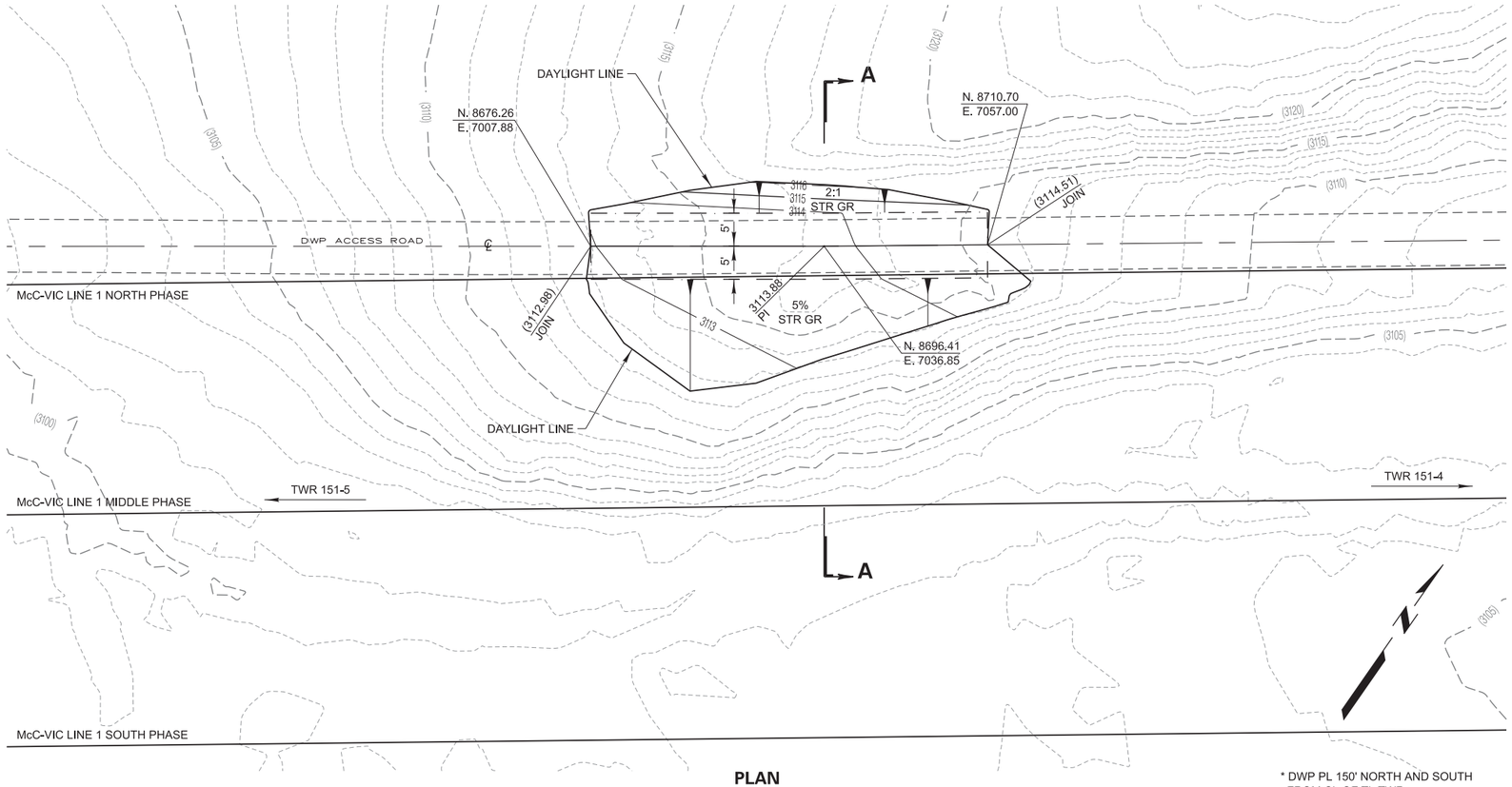
MAX WIDTH (FT)	25
MAX LENGTH (FT)	60
MAX DEPTH (FT)	2.75
AREA (SF)	1525



PROFILE – ACCESS ROAD
SCALE: 1"=10'



SECTION A–A
SCALE: 1" = 10'



PLAN
SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. E. MALACON

REVISIONS NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Pang CE 65962

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 1 TWR 151–4

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MV1-151-4-CA01 REV. 1

10-19-12

DRA

mv151-4.dgn

Appendix C.2

McCullough-Victorville Line 2 Drawings

GENERAL NOTES:

1. ADD 2271000 TO NORTHINGS AND 7043000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	320
FILL (CY)	320
IMPORT (CY)	0
EXPORT (CY)	0

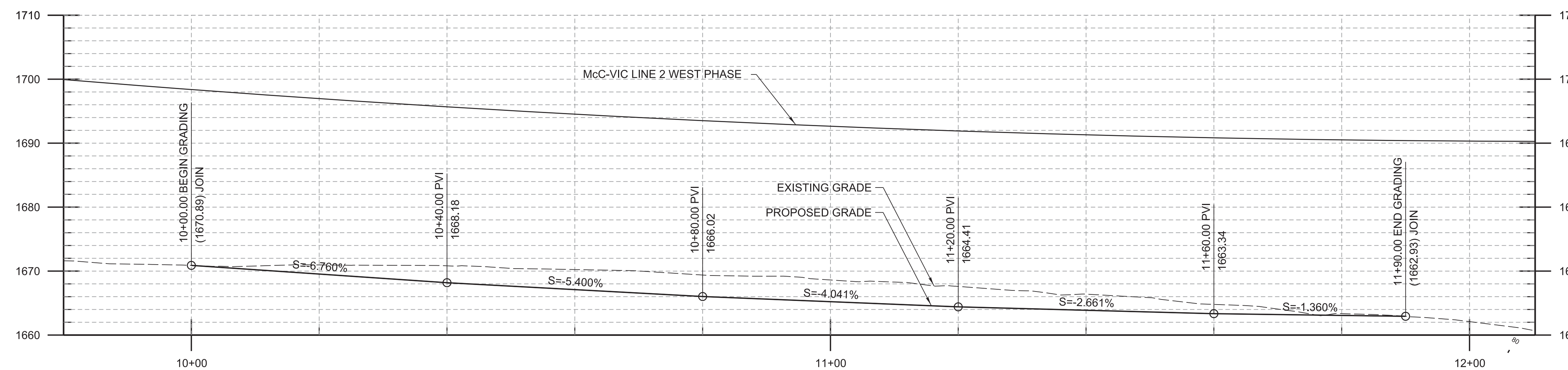
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

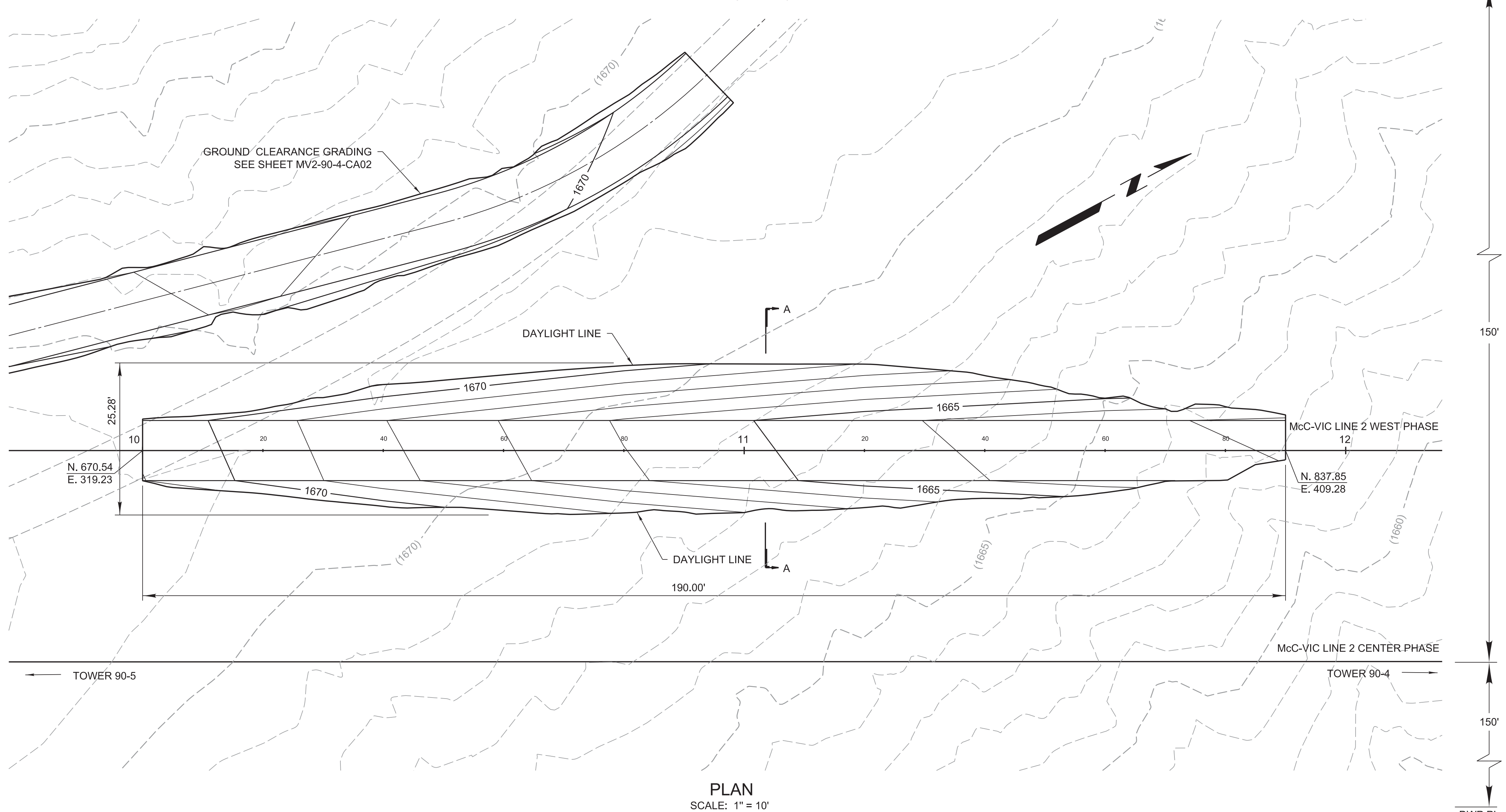
MAX WIDTH (FT)	45
MAX LENGTH (FT)	365
MAX DEPTH (FT)	4
AREA (SF)	11,900

ABBREVIATIONS:

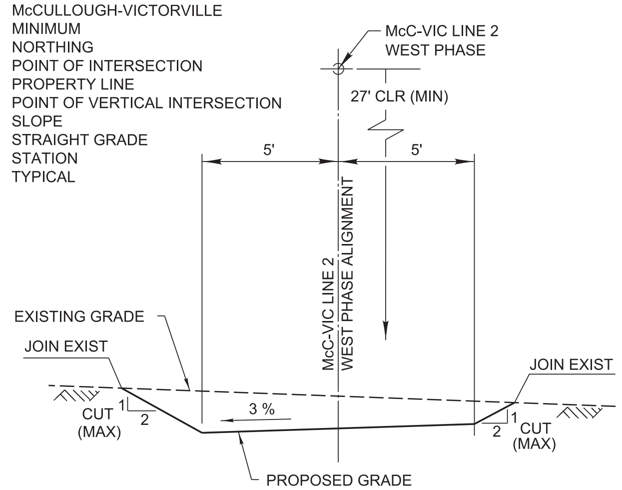
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
MC	MIDDLE OF CURVE
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
S	SLOPE
SG	STRAIGHT GRADE
STA.	STATION
TYP.	TYPICAL



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'



SECTION A-A
TYPICAL SECTION
NO SCALE

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

NO.	REVISIONS DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

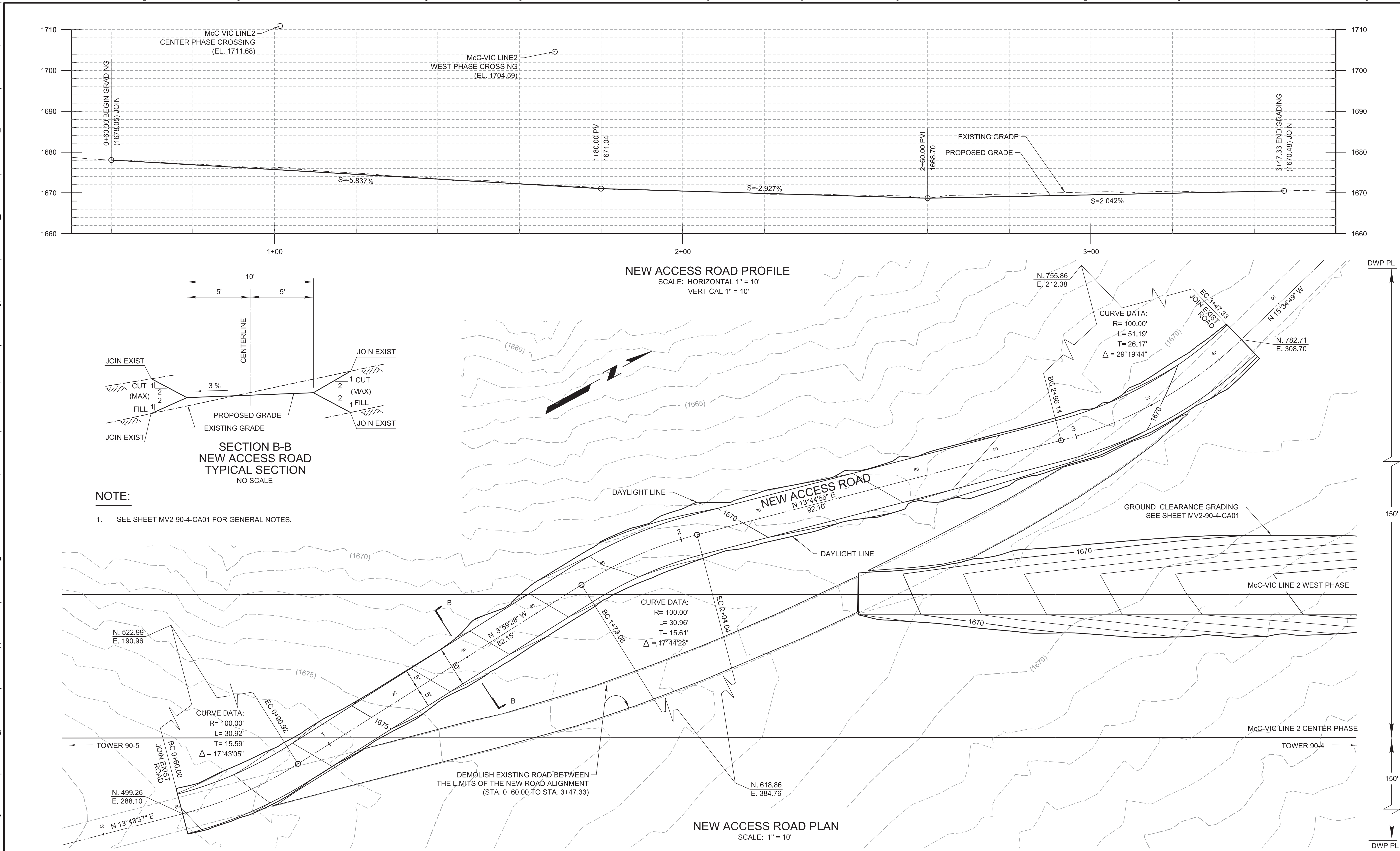
PLAN, PROFILE, AND SECTION GRADING McCULLOUGH-VICTORVILLE LINE 2 TWR 90-4

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MV2-90-4-CA01 REV. 1

01-07-13

mv2-90-4.dgn



DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTION
ACCESS ROAD GRADING
McCULLOUGH-VICTORVILLE LINE 2 TWR 90-4

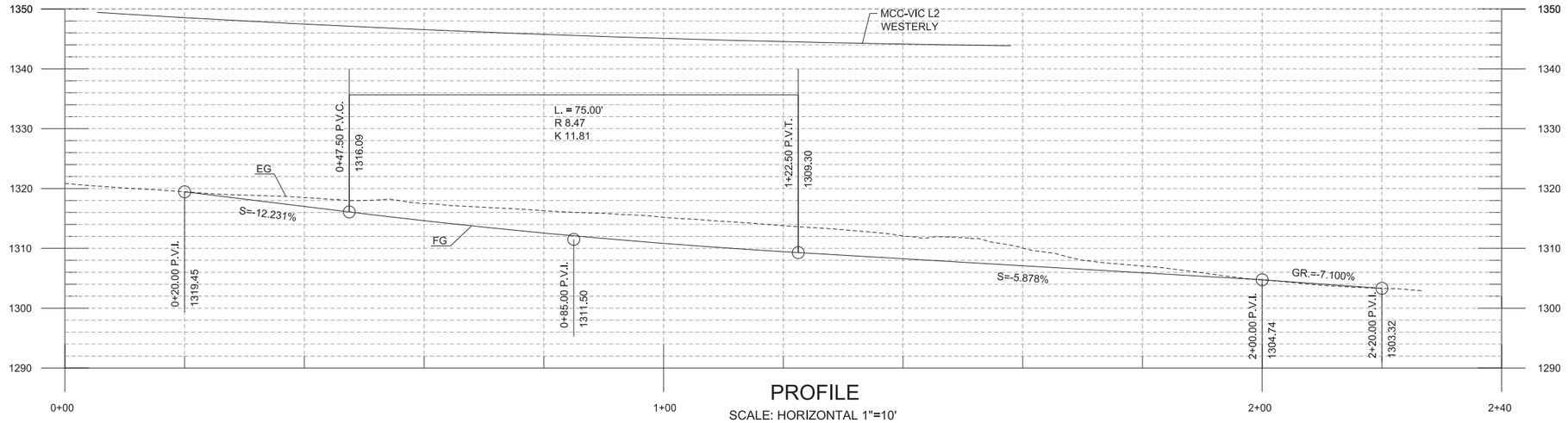
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV2-90-4-CA02
REV.

10-20-12
mv2-90-4.dgn

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PVC	POINT OF VERTICLE CURVATURE
PVI	POINT OF VERTICLE INTERSECTION
PVT	POINT OF VERTICLE TANGENCY
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	89
MAX LENGTH (FT)	162
MAX DEPTH (FT)	4.8
AREA (SF)	5,877

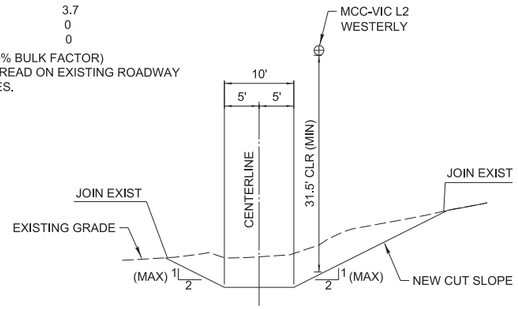
GENERAL NOTES:

1. ADD 2250000 TO NORTHINGS AND 7030000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

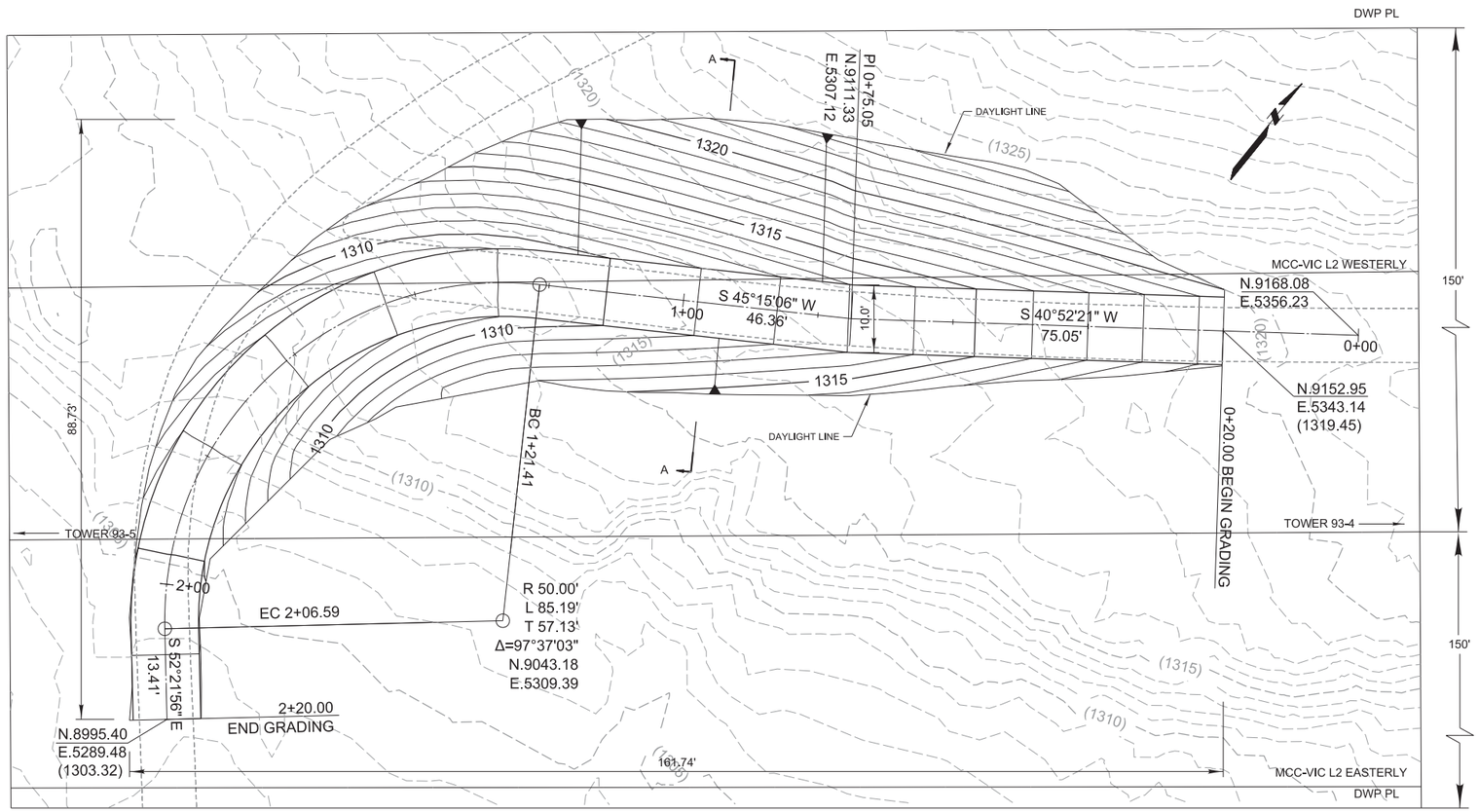
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	452.3
FILL (CY)	3.7
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Mercer CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 2 TWR 93–4, 93–5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV2-93-4-CA01** REV.

DRA

MV2-93-4-CA01.dgn

GENERAL NOTES:

1. ADD 2240000 TO NORTHINGS AND 7020000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	73
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK AND SHRINKAGE FACTORS)

* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

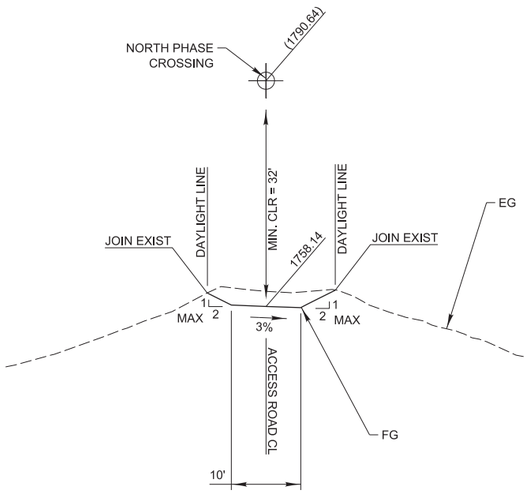
APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	25
MAX LENGTH (FT)	200
MAX DEPTH (FT)	2.25
AREA (SF)	1522

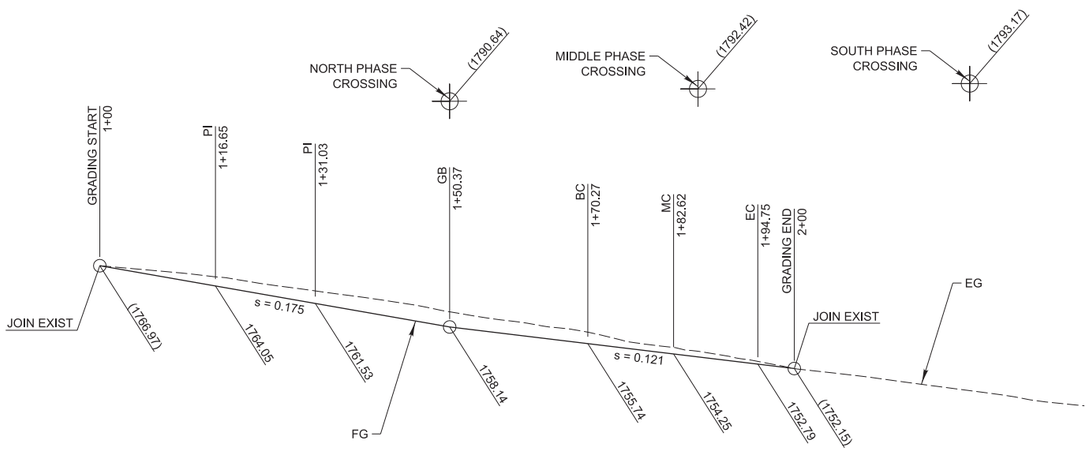
ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

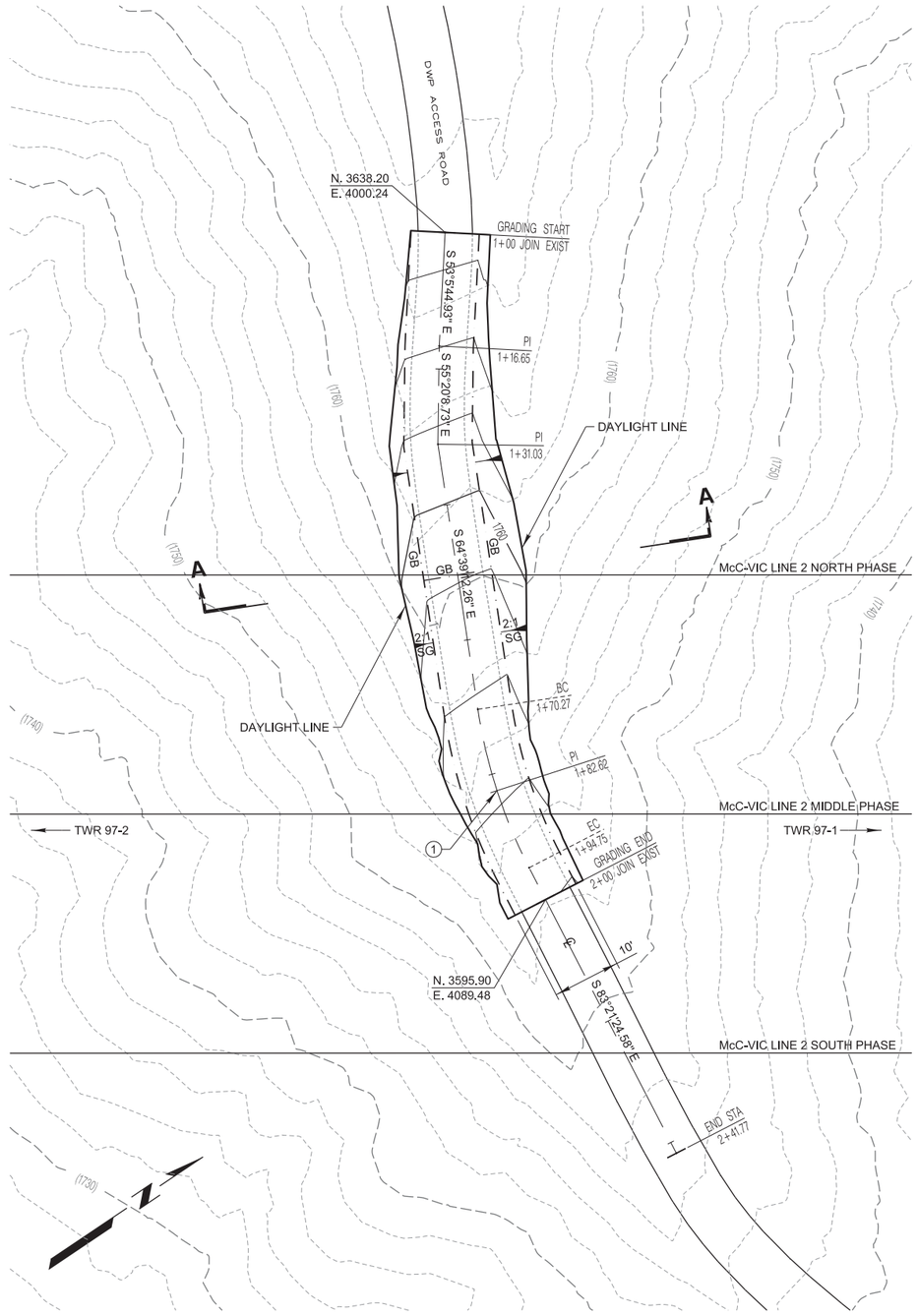
CURVE DATA					PI	
	R	L	T	Δ	N.	E.
①	75'	24.48'	12.35'	18°42'12.33"	3597.94	4072.00



SECTION A–A (GB)
SCALE: 1" = 10'



PROFILE – ACCESS ROAD
SCALE: 1"=10'



PLAN
SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. PANG
SUP. ENGR. E. MALACON

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J Pang CE 65962
FINAL APPROVAL RELEASE SIGNATURE DATE

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 2 TWR 97–1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV2-97-1-CA01
REV. 1

10-27-12

DRA

mv2_97-1.dgn

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PVC	POINT OF VERTICLE CURVATURE
PVI	POINT OF VERTICLE INTERSECTION
PVT	POINT OF VERTICLE TANGENCY
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

GENERAL NOTES:

1. ADD 2230000 TO NORTHINGS AND 7020000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

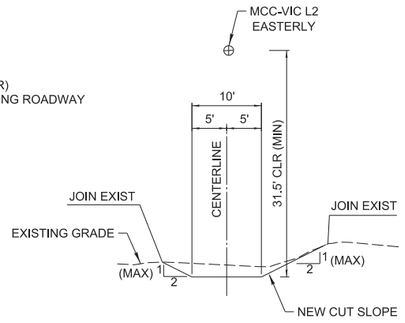
APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	26
MAX LENGTH (FT)	181
MAX DEPTH (FT)	1.7
AREA (SF)	2674

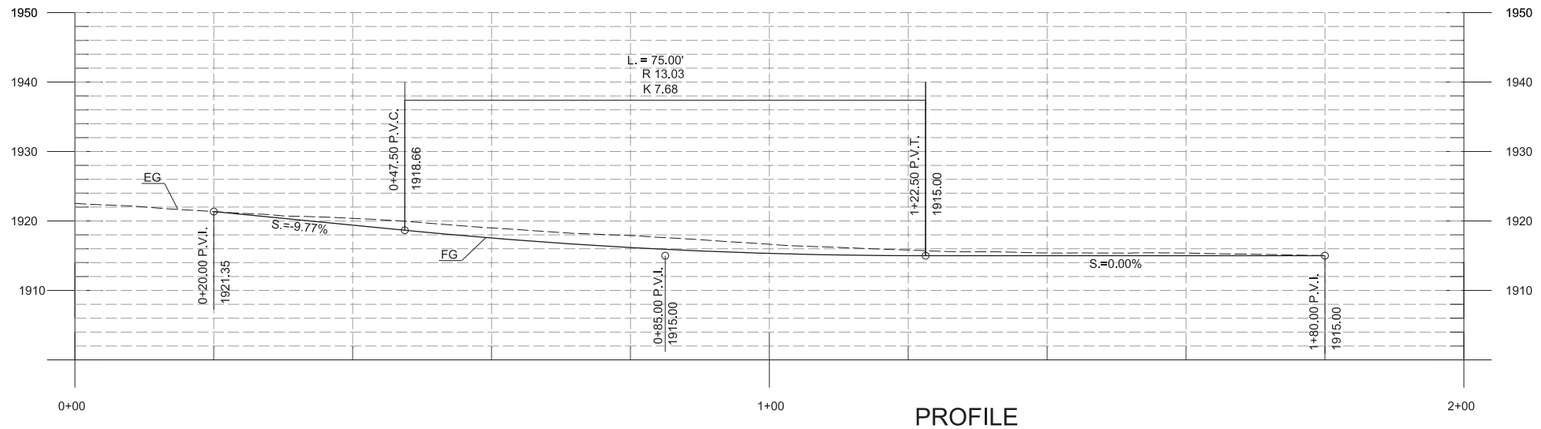
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	82.0
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

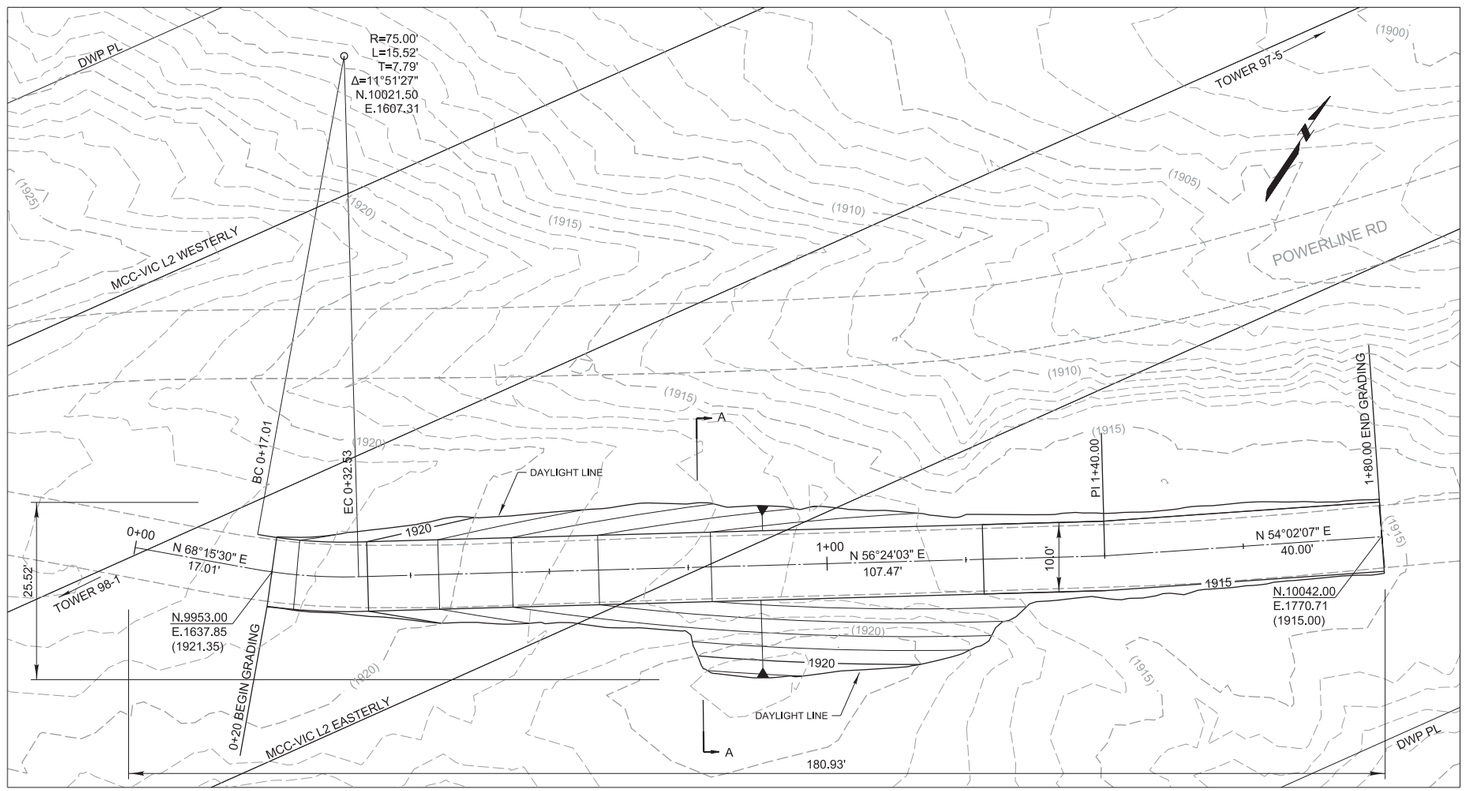


SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1" = 10'

REVISIONS						
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH–VICTORVILLE LINE 2 TWR 98–1, 97–5
		DRAFTING RELEASE		DRAFTING RELEASE		
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	
		CHECKED BY		CHECKED BY		
		ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL: J. Mercer CE 70713	FINAL APPROVAL RELEASE SIGNATURE DATE	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES

DES. ENGR. F.ALCOCER
SUP. ENGR. J.PANG

DRAWING NUMBER: MV2-97-5-CA01 REV.

MV2-97-2-CA01.dgn

GENERAL NOTES:

1. ADD 2220000 TO NORTHINGS AND 7010000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	27
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK AND SHRINKAGE FACTORS)

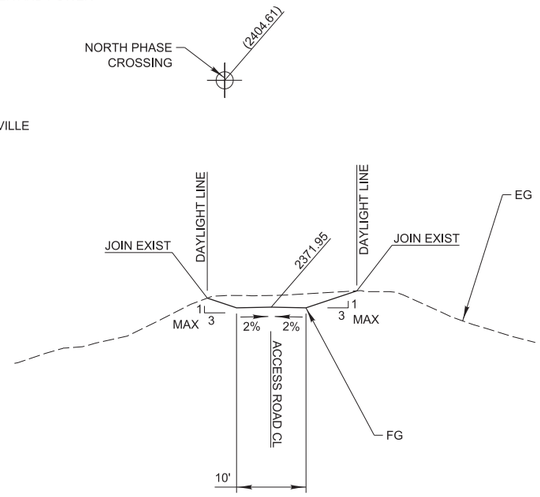
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

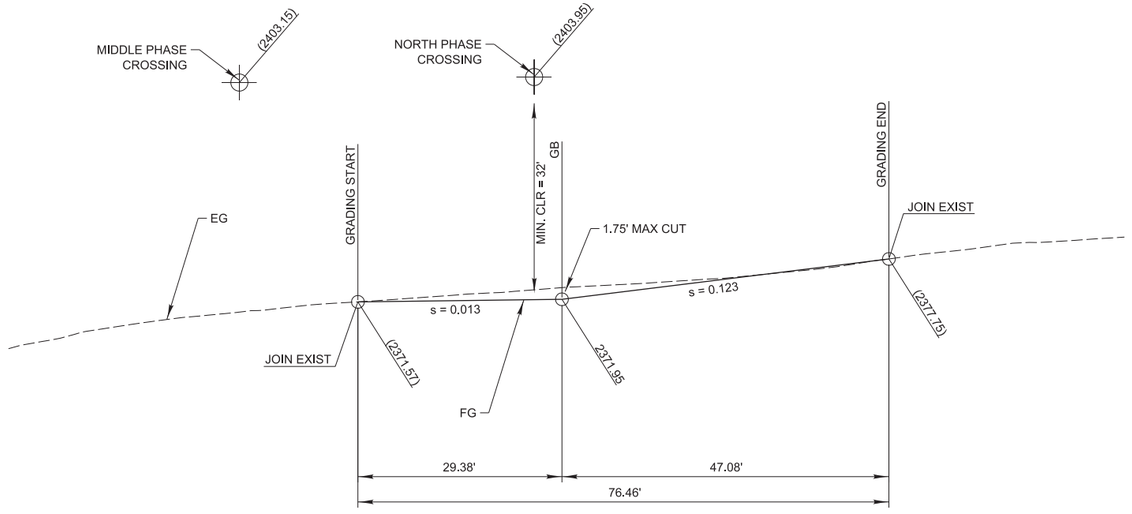
MAX WIDTH (FT)	20
MAX LENGTH (FT)	77
MAX DEPTH (FT)	1.75
AREA (SF)	1125

ABBREVIATIONS:

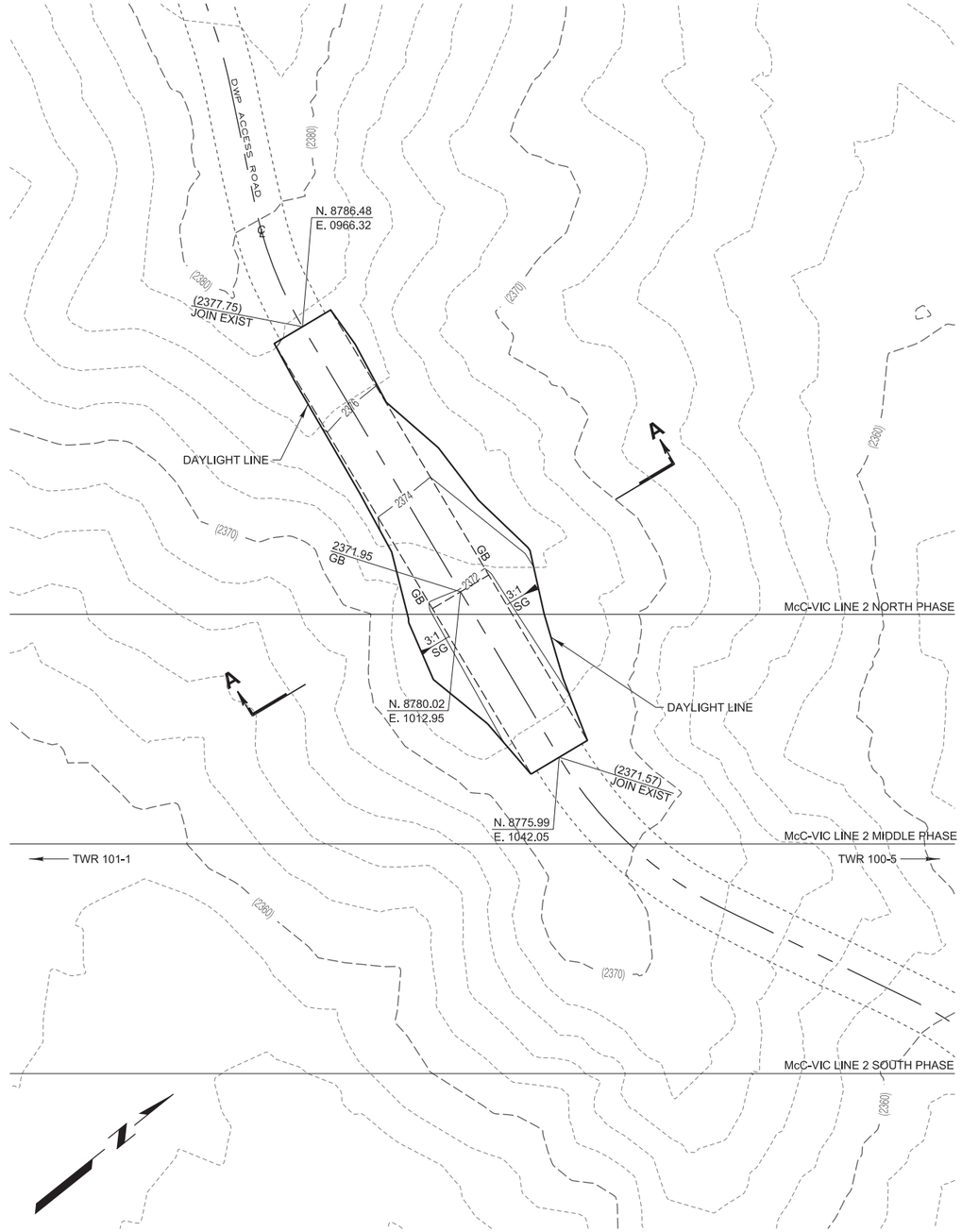
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A–A (GB)
SCALE: 1" = 10'



PROFILE – ACCESS ROAD
SCALE: 1"=10'



PLAN
SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. FANG SURV. ENGR. E. MALLCON	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J Fang CE 65962	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 2 TWR 100–5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV2-100-5-CA01** REV. 1

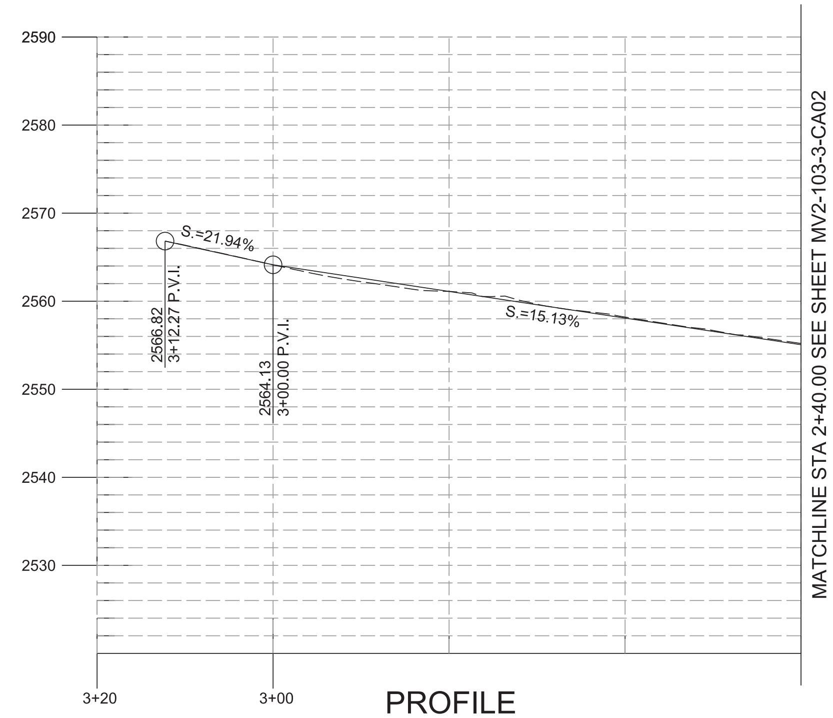
11-02-12

DRA

mv2_100-5.dgn

GENERAL NOTES:

1. ADD 2218000 TO NORTHINGS AND 7002000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



PROFILE

SCALE: HORIZONTAL 1"=10'

VERTICAL 1"=10'

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	271
FILL (CY)	7
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)

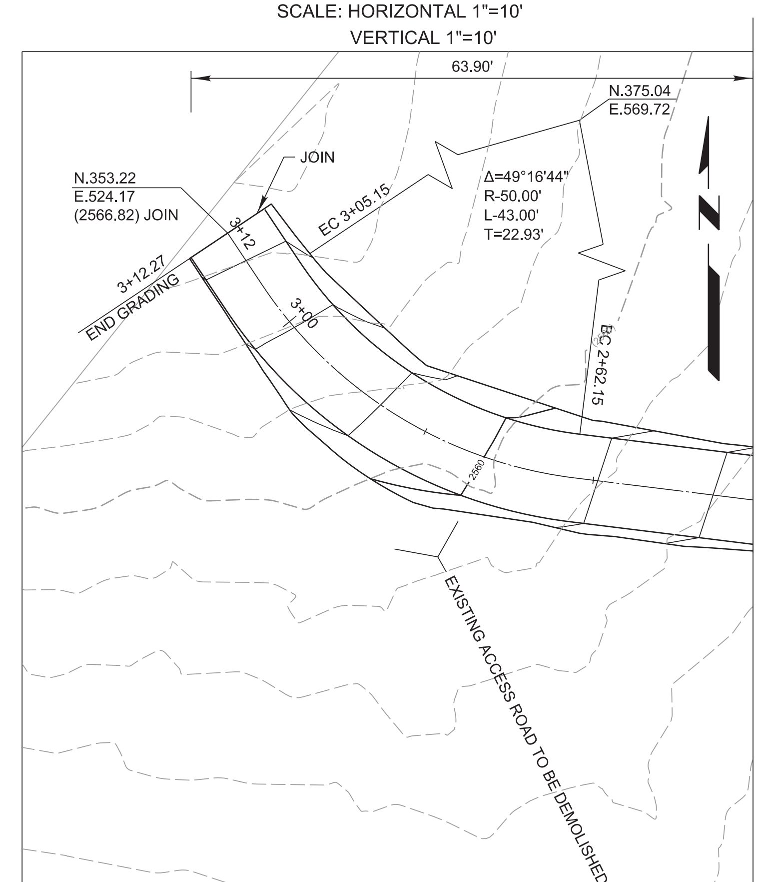
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	55
MAX LENGTH (FT)	316
MAX DEPTH (FT)	3.2
AREA (SF)	8,030

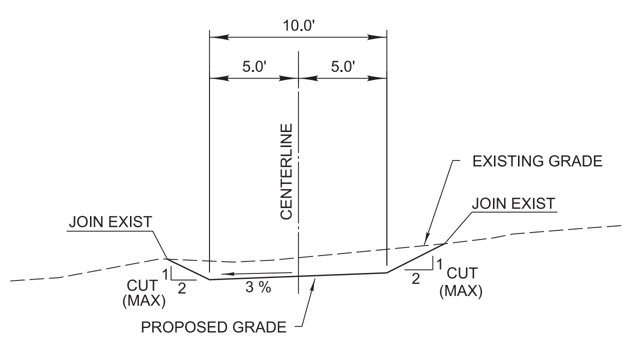
ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
MCC-VIC	MCCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



PLAN

SCALE: 1"=10'



SECTION A-A

TYPICAL SECTION

SEE MV2-103-3-CA02

NO SCALE

DES. ENGR. F.ALCOCER

SUP. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number

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DRAWING REVISION RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

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CHECKED BY

ENGINEERING APPROVAL

F. Alcocer CE 70713

OWNER/AGENT APPROVAL

DRAWING RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LN 2 TWR 103-3, 103-4

POWER SYSTEM

DEPARTMENT OF WATER AND POWER

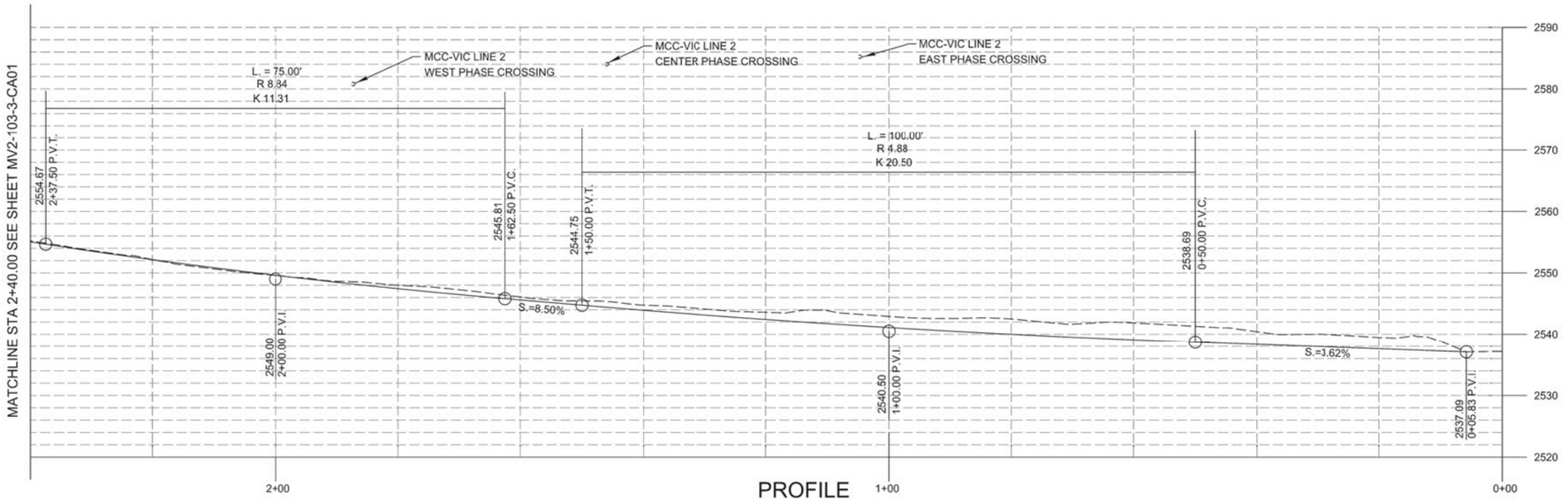
CITY OF LOS ANGELES

DRAWING NUMBER MV2-103-3-CA01

REV.

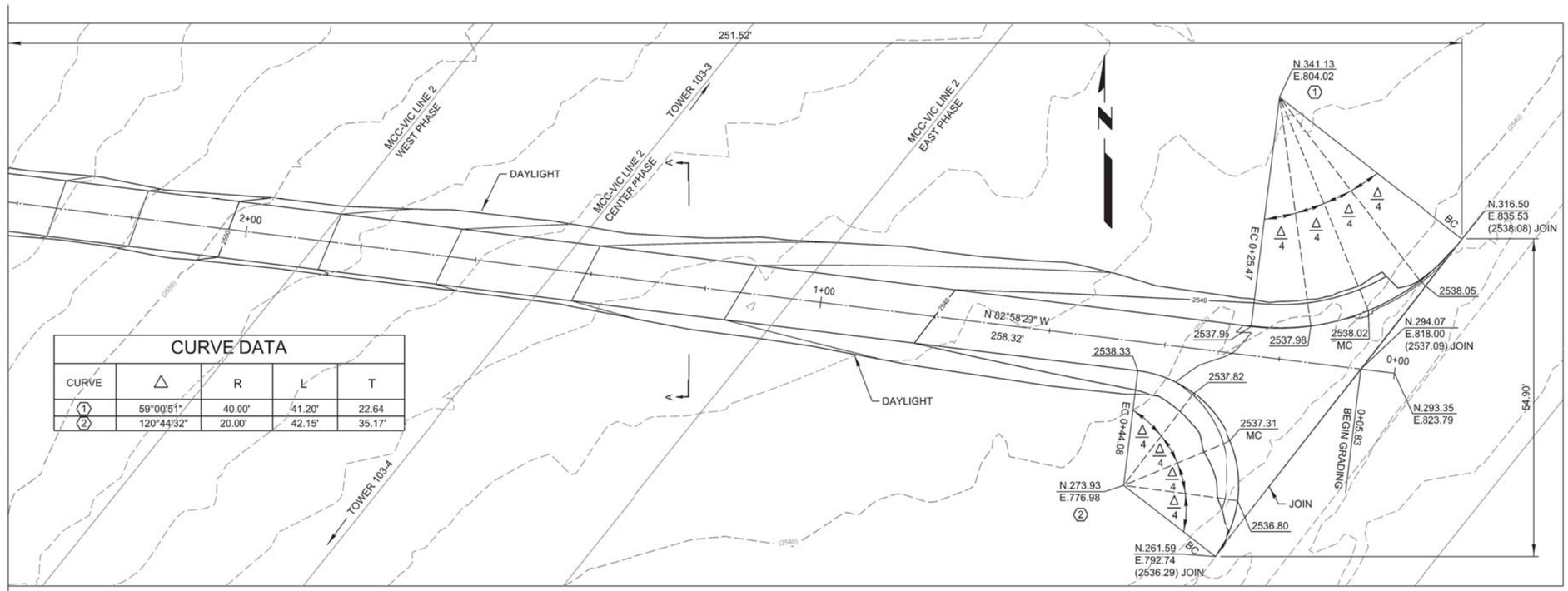
11-20-12

mv2-103-3.dgn



PROFILE

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



CURVE DATA				
CURVE	△	R	L	T
①	59°00'51"	40.00'	41.20'	22.64
②	120°44'32"	20.00'	42.15'	35.17'

PLAN

SCALE: 1"=10'

* SEE PLAN MV2-103-3-CA01 FOR GENERAL NOTES, ABBREVIATIONS AND TYPICAL CROSS SECTION.

DES. ENGR.
E.ALCOTA
SUP. ENGR.
J. PANG

REVISIONS

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FINAL APPROVAL RELEASE SIGNATURE DATE

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J. Mercer CE 70713

OWNER/AGENT APPROVAL

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FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS GRADING MCCULLOUGH-VICTORVILLE LN 2 TWR 103-3, 103-4

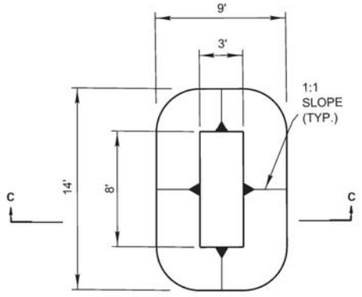
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV2-103-3-CA02

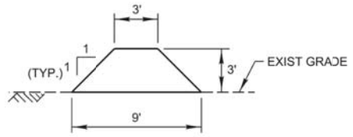
REV.

11-20-12

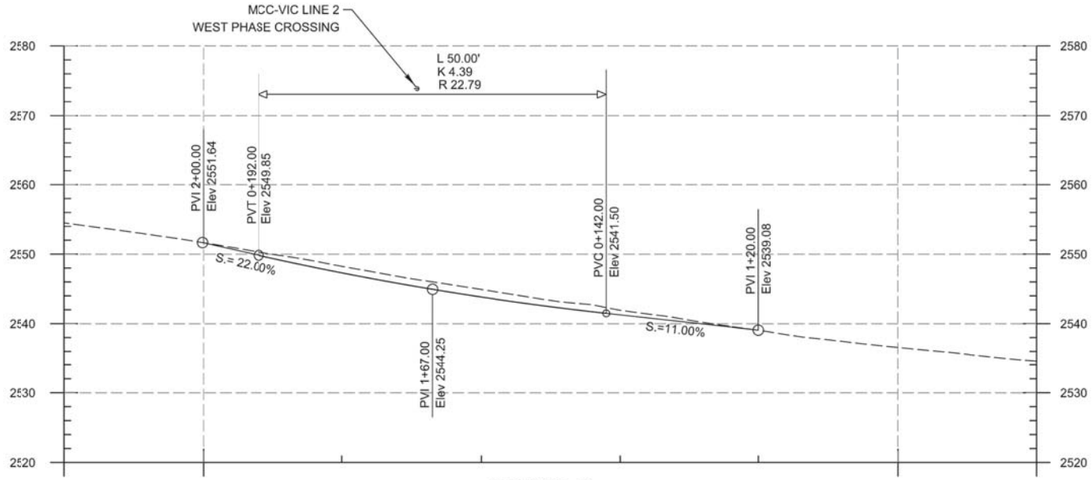
mv2-103-3.dgn



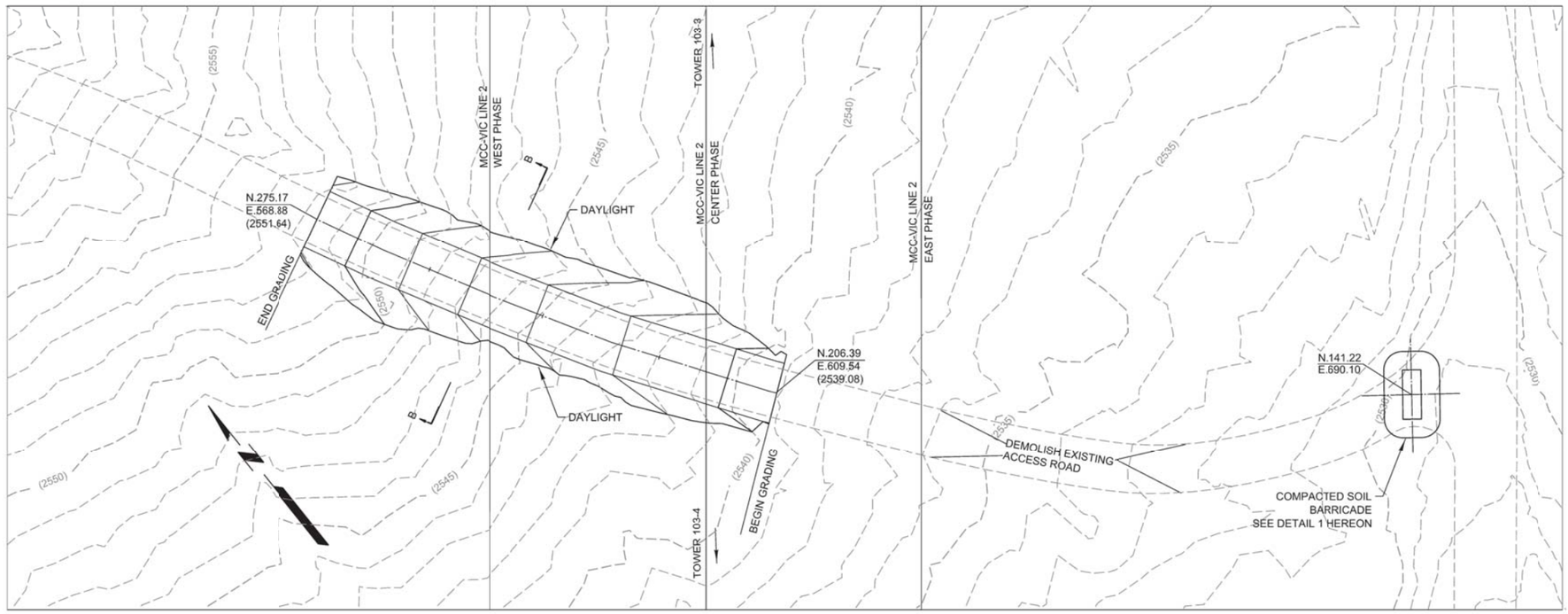
COMPACTED SOIL BARRICADE
DETAIL 1
NO SCALE



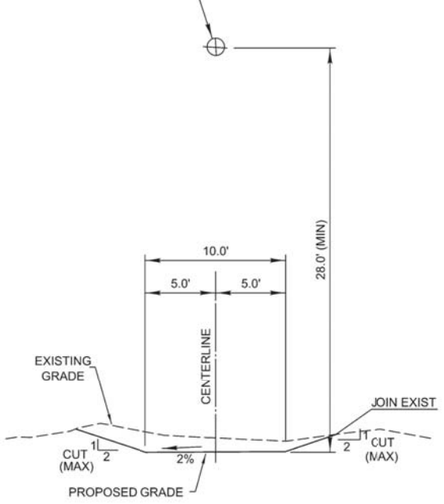
SECTION C-C
NO SCALE



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1"=10'



SECTION B-B
TYPICAL SECTION
NO SCALE

* SEE PLAN MV2-103-3-CA01 FOR GENERAL NOTES AND ABBREVIATIONS

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
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OWNER/AGENT APPROVAL
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FINAL APPROVAL RELEASE SIGNATURE DATE

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T. Meyer CE 70713

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DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS
GRADING
MCCULLOUGH-VICTORVILLE LN 2 TWR 103-3, 103-4

DWP
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV2-103-3-CA03
REV.

11-20-12

mv2-103-3.dgn

GENERAL NOTES:

1. ADD 2213000 TO NORTHINGS AND 6996000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	8
FILL (CY)	8
IMPORT (CY)	0
EXPORT (CY)	0

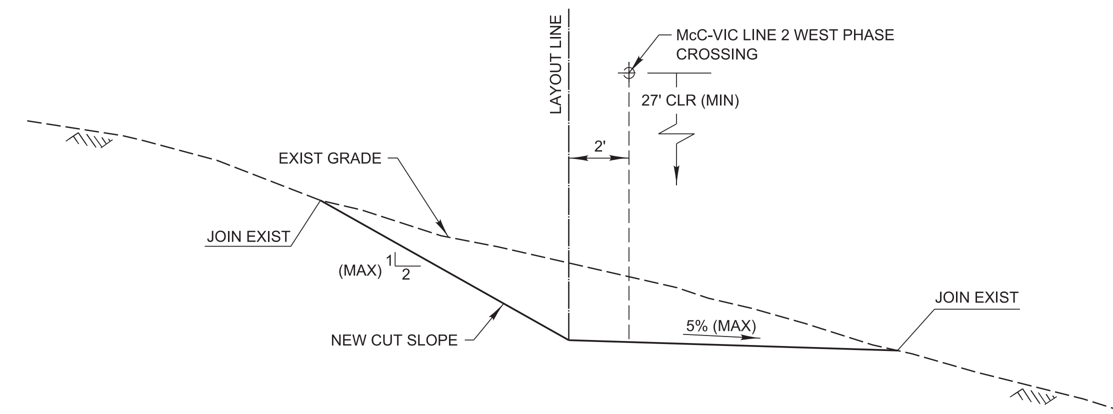
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

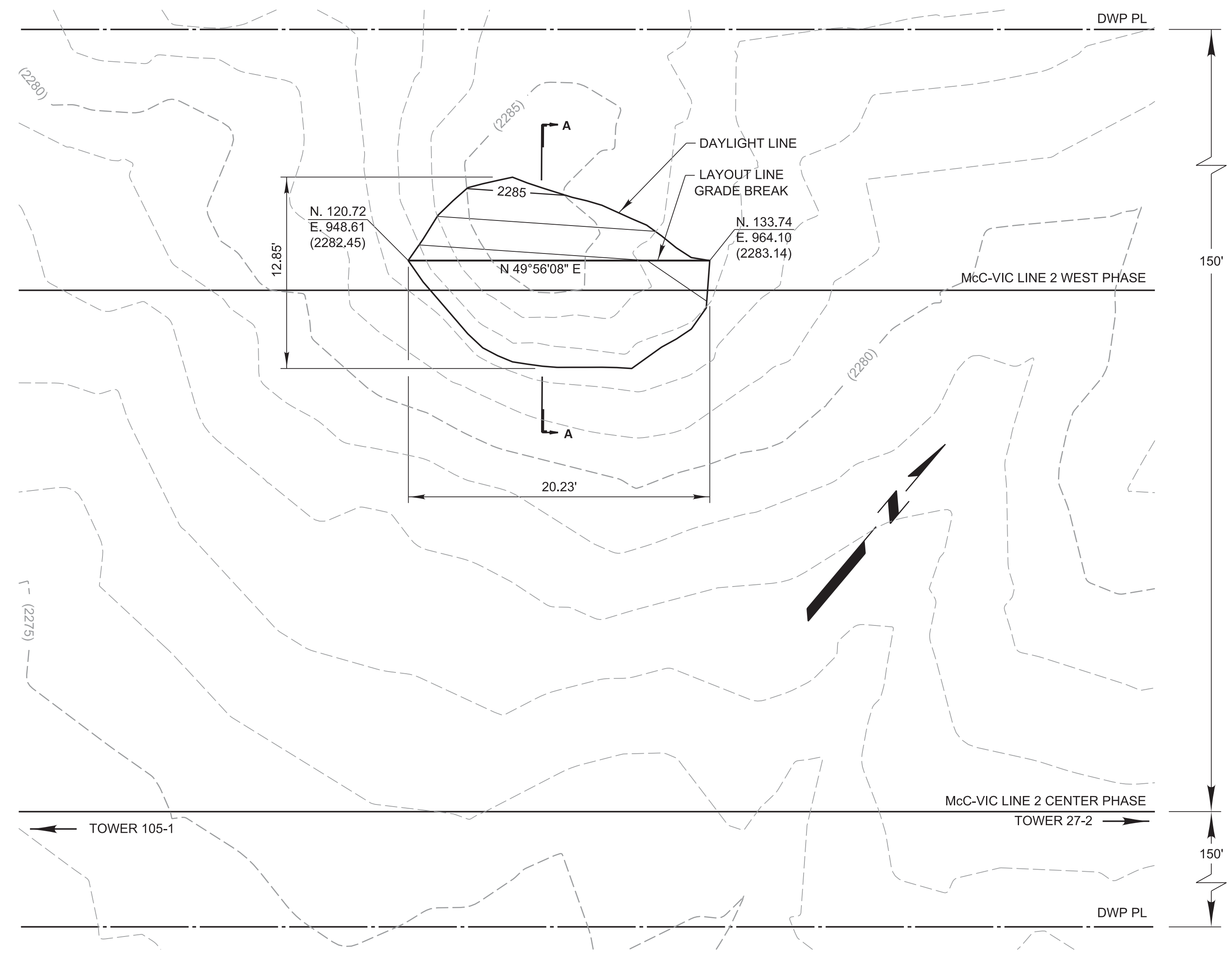
MAX WIDTH (FT)	12
MAX LENGTH (FT)	21
MAX DEPTH (FT)	3
AREA (SF)	210

ABBREVIATIONS:

CLR	Clearance
CY	Cubic Yard
DWP	Department of Water and Power
E.	Easting
EXIST	Existing
MAX	Maximum
McC-VIC	McCullough-Victorville
MIN	Minimum
N.	Northing
PL	Property Line
TL	Transmission Line
TWR	Tower



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 5'

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number
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DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

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CHECKED BY
ENGINEERING APPROVAL
J Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN AND SECTION GRADING McCULLOUGH–VICTORVILLE LINE 2 TWR 104–5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MV2-104-5-CA01
REV. 1

01-07-13

mv2-104-5.dgn

GENERAL NOTES:

1. ADD 2060000 TO NORTHINGS AND 6800000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO NON DRIVING SURFACE OF ANY CUT OR FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	91
FILL (CY)	0
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK AND SHRINKAGE FACTORS)

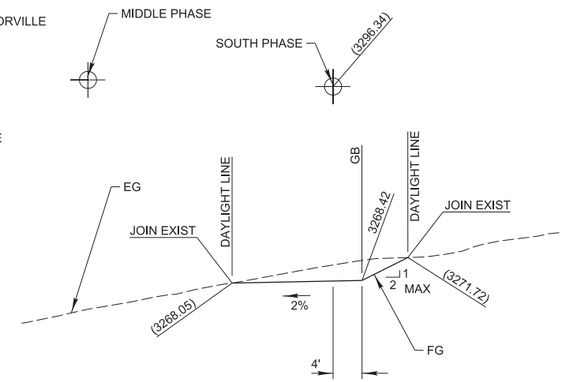
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	35
MAX LENGTH (FT)	70
MAX DEPTH (FT)	3.25
AREA (SF)	1685

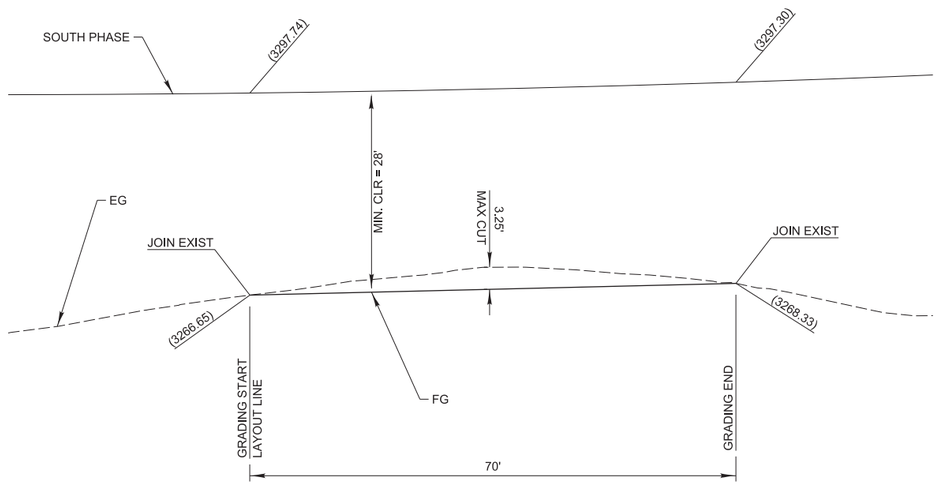
ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
McC-VIC	McCULLOUGH-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
N/O	NORTH OF
PL	PROPERTY LINE
REQ.	REQUIRED
s	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



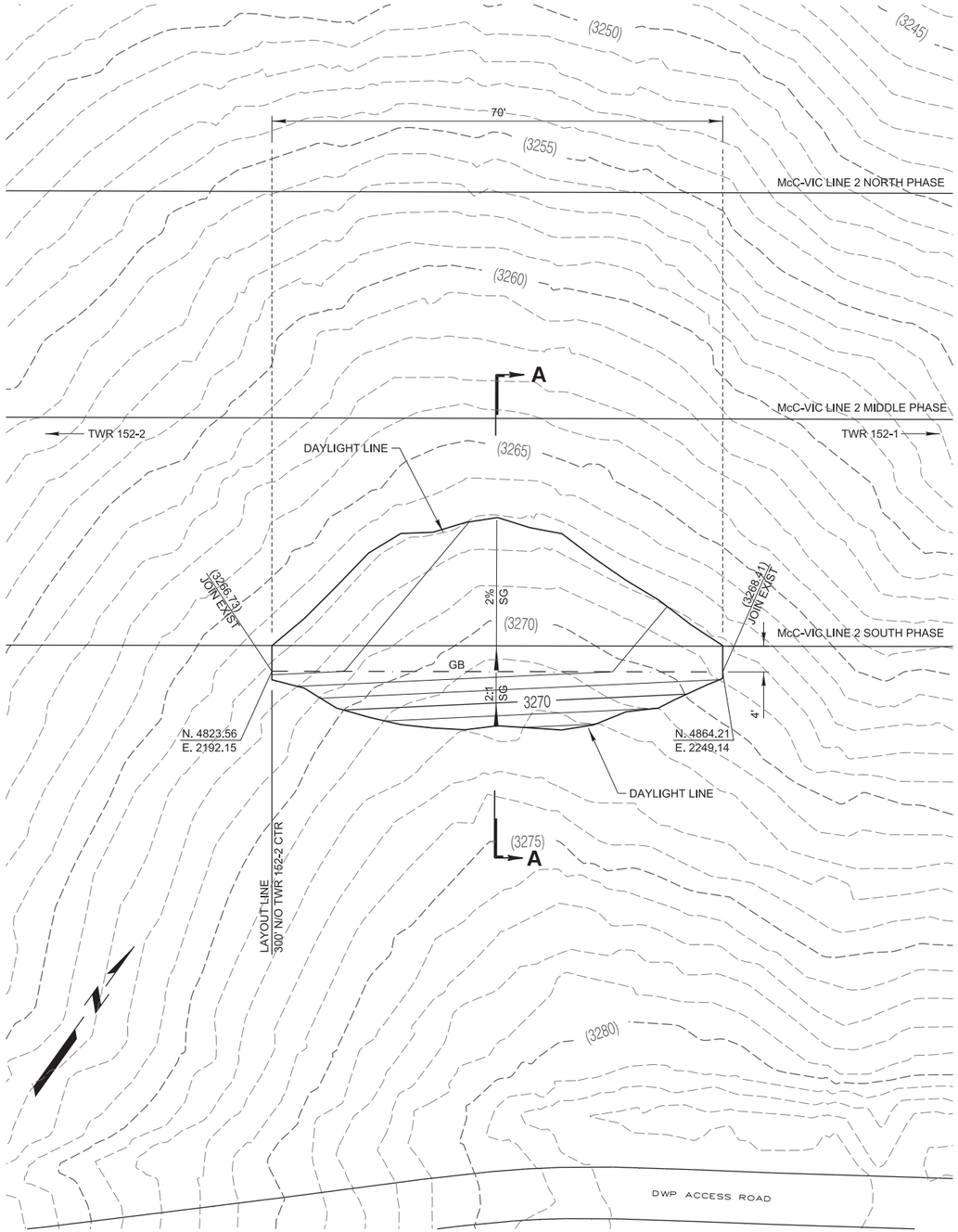
SECTION A–A
(35' N/O LAYOUT LINE)

SCALE: 1" = 10'



PROFILE – SOUTH PHASE

SCALE: 1"=10'



PLAN

SCALE: 1" = 10'

* DWP PL 150' NORTH AND SOUTH FROM CL OF TL TWR

DES. ENGR. J. FANG
SUPT. ENGR. E. MALACON

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
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FINAL APPROVAL RELEASE SIGNATURE DATE

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ENGINEERING APPROVAL
J. Fang CE 65962

OWNER/AGENT APPROVAL

DRAWING RELEASE APPROVAL

FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, SECTION AND PROFILE GRADING McCULLOUGH–VICTORVILLE LINE 2 TWR 152–1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV2-152-1-CA01
REV. 1

11-16-12

DRA

mv2_152-1.dgn

Appendix B.3

Mead-Victorville Line 1 Drawings

GENERAL NOTES:

1. ADD 2278000 TO NORTHINGS AND 7047000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	71
FILL (CY)	71
IMPORT (CY)	0
EXPORT (CY)	0

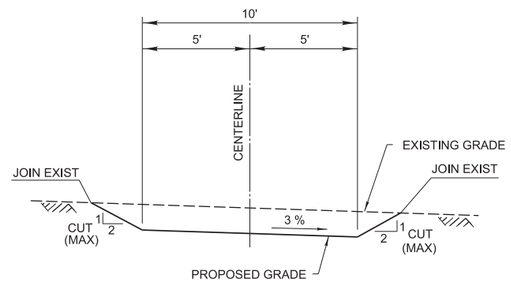
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

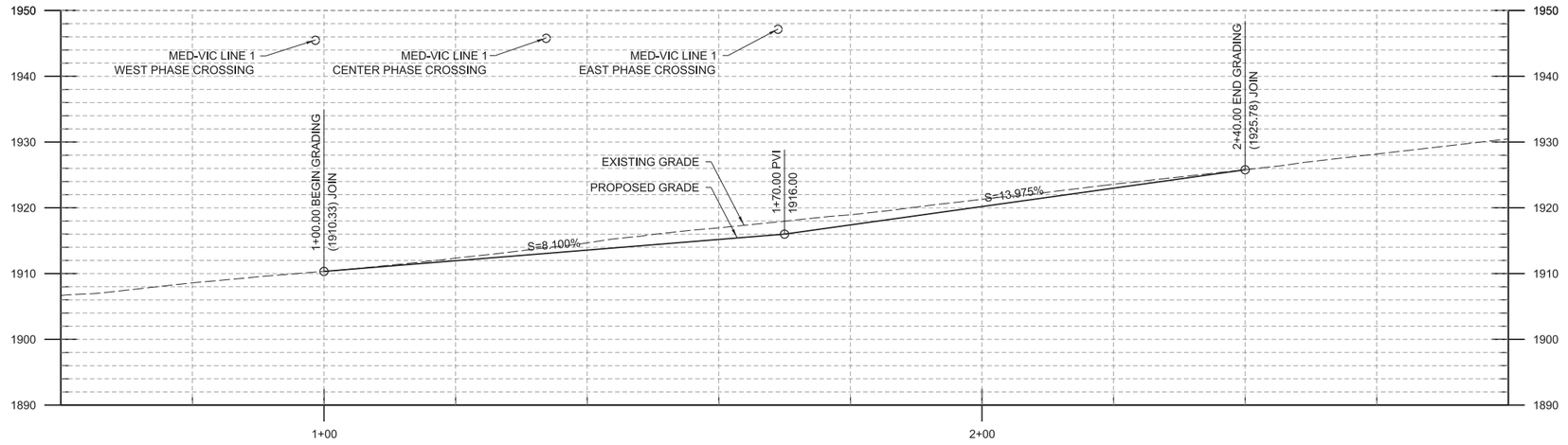
MAX WIDTH (FT)	19
MAX LENGTH (FT)	140
MAX DEPTH (FT)	2
AREA (SF)	2300

ABBREVIATIONS:

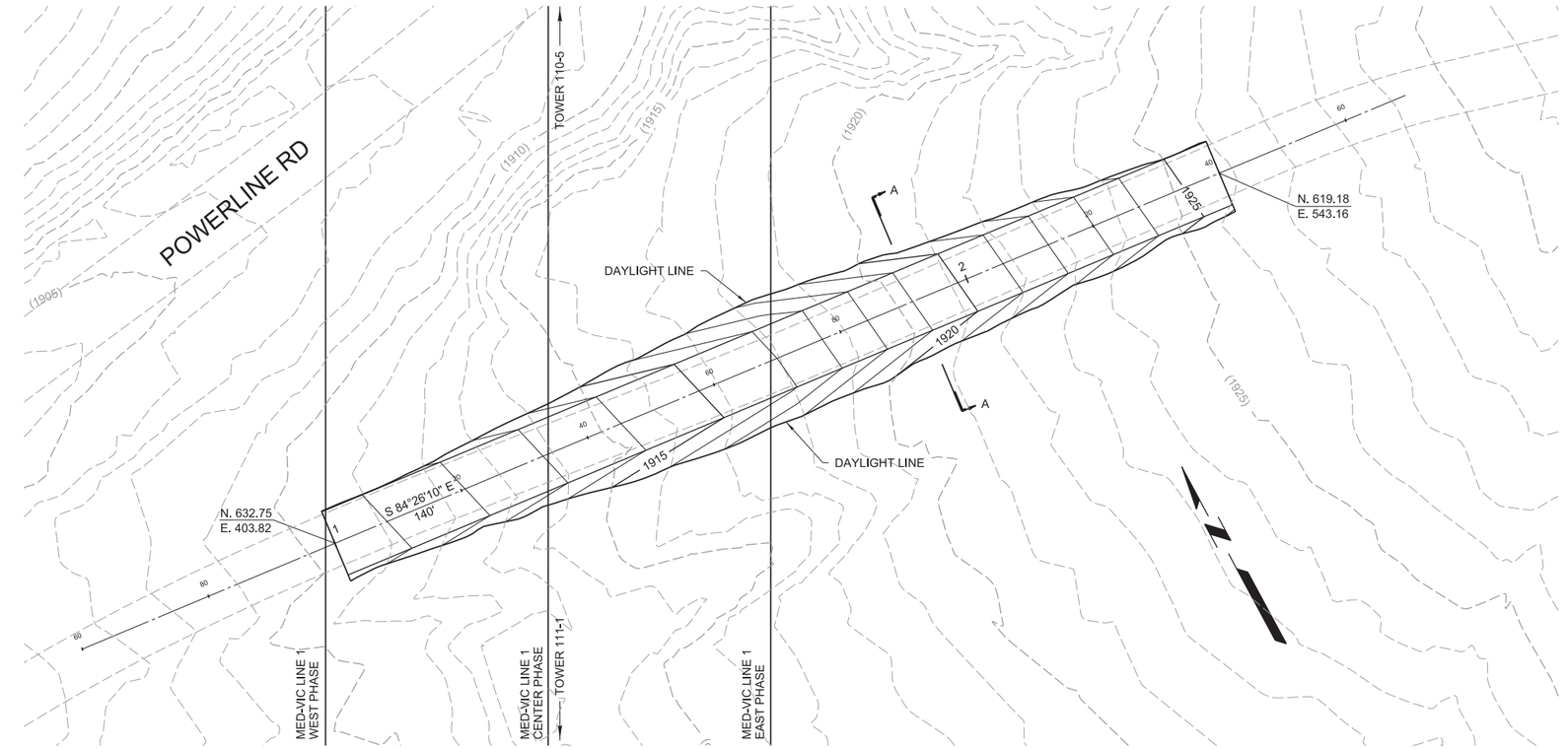
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
S	SLOPE
STA.	STATION
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

REVISIONS							
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, PROFILE, AND SECTION GRADING MEAD-VICTORVILLE LINE 1 TWR 110-5	
		DRAFTING RELEASE		DRAFTING RELEASE			
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL		
		CHECKED BY		CHECKED BY			
		ENGINEERING APPROVAL		ENGINEERING APPROVAL			
			FINAL APPROVAL RELEASE SIGNATURE DATE	J. Fong CE 69632	FINAL APPROVAL RELEASE SIGNATURE DATE	POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES	DRAWING NUMBER MDV1-110-5-CA01 REV. 1

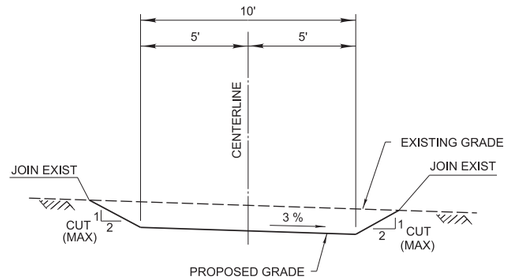
DES. ENGR. J. FONG
SUP. ENGR. J. PANG

01-04-13

mdv1-110-5.dgn

GENERAL NOTES:

1. ADD 2270000 TO NORTHINGS AND 7040000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. SEE MDV1-111-1-CA02 FOR PLAN AND PROFILE.



SECTION A-A
TYPICAL SECTION
ON MDV1-111-1-CA02
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	314
FILL (CY)	314
IMPORT (CY)	0
EXPORT (CY)	0

(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	115
MAX LENGTH (FT)	270
MAX DEPTH (FT)	3.5
AREA (SF)	9000

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL

DES. ENGR. J. CHONG
W.P. ENGR. J. PANG

REVISIONS
NO. | DESCRIPTION

Revision Number
DRAFTING RELEASE
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CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
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CHECKED BY
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

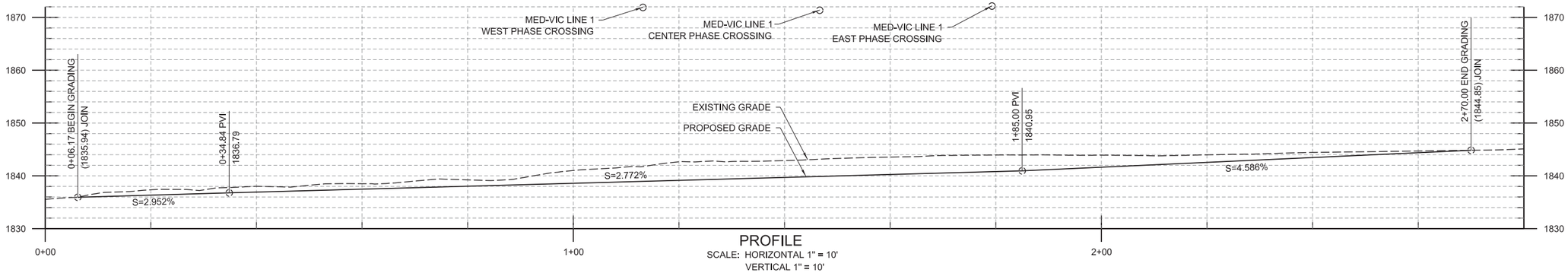
GENERAL NOTES AND SECTION GRADING MEAD-VICTORVILLE LINE 1 TWR 111-1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MDV1-111-1-CA01 REV. 1

01-04-13

mdv1-111-1.dgn



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

CURVE DATA				
CURVE	△	R	L	T
1	85°42'52"	20.00'	29.92'	18.56'
2	61°30'36"	40.00'	42.94'	23.80'
3	22°41'04"	200.00'	79.18'	40.12'

PLAN
SCALE: 1" = 10'

NOTE: SEE MDV1-111-1-CA01 FOR GENERAL NOTES, ABBREVIATIONS, AND SECTION.

DES. ENGR. J. FONG
M.P. ENGR. J. PANG

REVISIONS	
NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN AND PROFILE GRADING MEAD-VICTORVILLE LINE 1 TWR 111-1

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

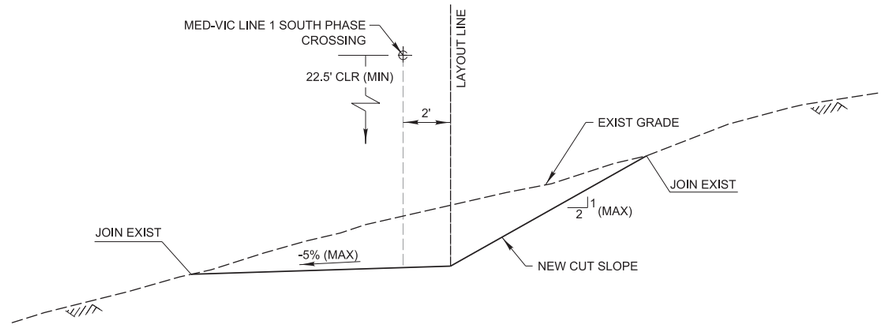
DRAWING NUMBER
MDV1-111-1-CA02
REV.

11-10-12

mdv1-111-1.dgn

GENERAL NOTES:

1. ADD 2202000 TO NORTHINGS AND 6984000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.



SECTION A-A
TYPICAL SECTION
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	15
FILL (CY)	15
IMPORT (CY)	0
EXPORT (CY)	0

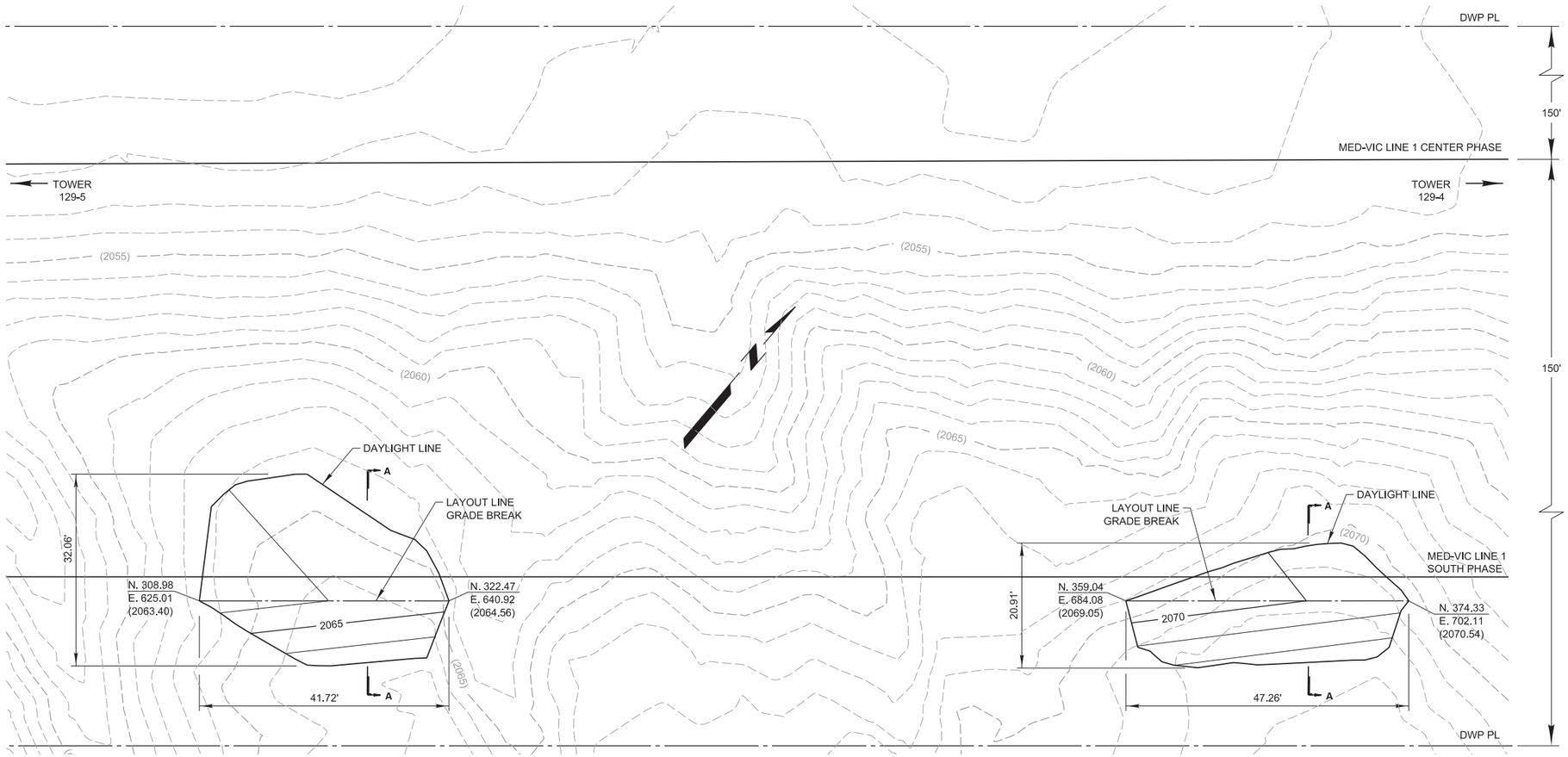
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	32
MAX LENGTH (FT)	90
MAX DEPTH (FT)	2.5
AREA (SF)	445

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



PLAN
SCALE: 1" = 5'

REVISIONS						
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL	PLAN, SECTION, AND NOTES GRADING MEAD-VICTORVILLE LINE 1 TWR 129-4
		DRAFTING RELEASE		DRAFTING RELEASE		
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL	
		CHECKED BY		CHECKED BY		
		ENGINEERING APPROVAL		ENGINEERING APPROVAL		POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES
			FINAL APPROVAL RELEASE SIGNATURE DATE	J. Fang CE 69632	FINAL APPROVAL RELEASE SIGNATURE DATE	DRAWING NUMBER MDV1-129-4-CA01 REV. 1

DES. ENGR. J. FONG
CHK. ENGR. J. PANG

01-04-13

mdv1-129-4.dgn

GENERAL NOTES:

1. ADD 2137000 TO NORTHINGS AND 6915000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

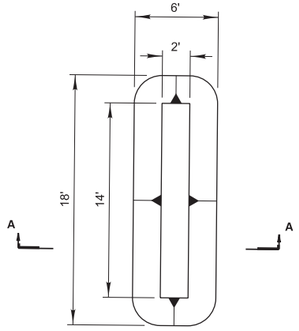
ABBREVIATIONS:

CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
MAX	MAXIMUM
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
TYP.	TYPICAL

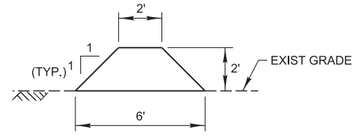
ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	9
FILL (CY)	9
IMPORT (CY)	0
EXPORT (CY)	0

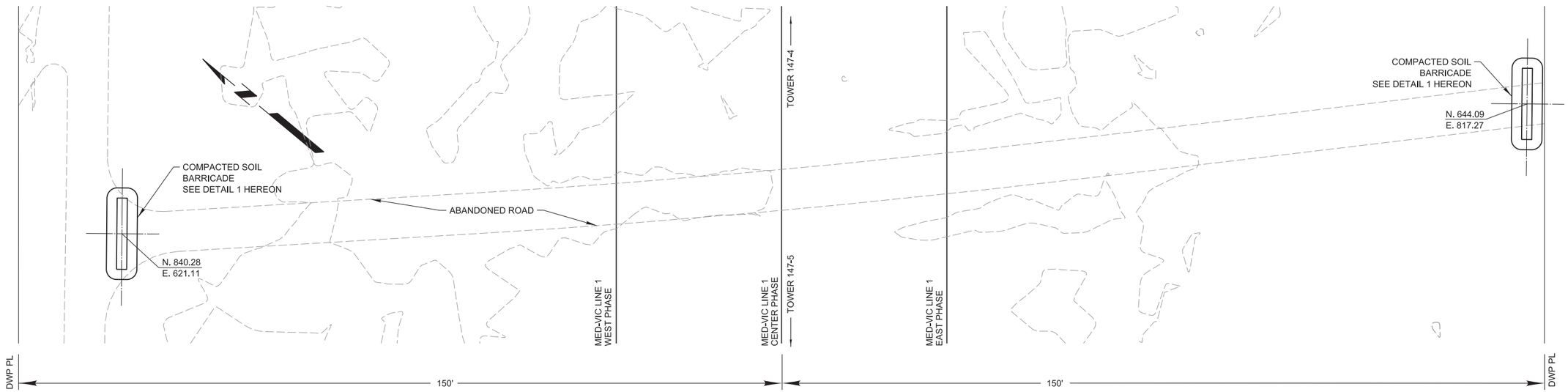
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.



COMPACTED SOIL BARRICADE
DETAIL 1
NO SCALE



SECTION A-A
NO SCALE



PLAN
SCALE: 1" = 10'

DES. ENGR. J. CHO M.P. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J. Fong CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, DETAIL, SECTION, AND NOTES GRADING MEAD-VICTORVILLE LINE 1 TWR 147-4	11-19-12

DWP — POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER: MDV1-147-4-CA01 REV.

mdv1-147-4.dgn

GENERAL NOTES:

1. ADD 2129000 TO NORTHINGS AND 6903000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	242
FILL (CY)	242
IMPORT (CY)	0
EXPORT (CY)	0

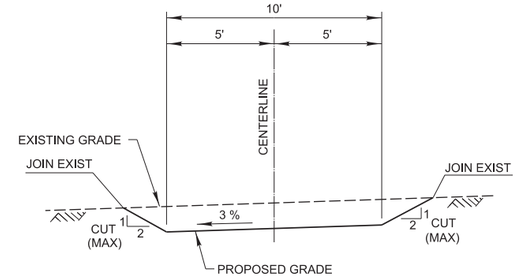
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

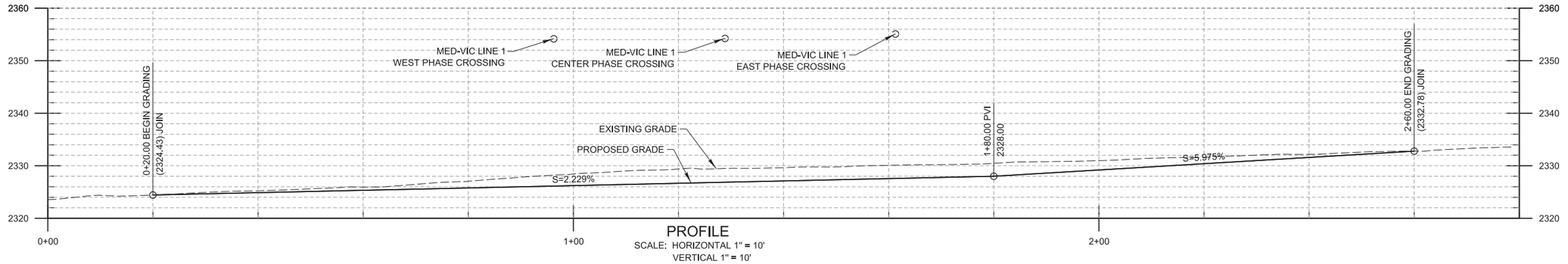
MAX WIDTH (FT)	27
MAX LENGTH (FT)	240
MAX DEPTH (FT)	3
AREA (SF)	5240

ABBREVIATIONS:

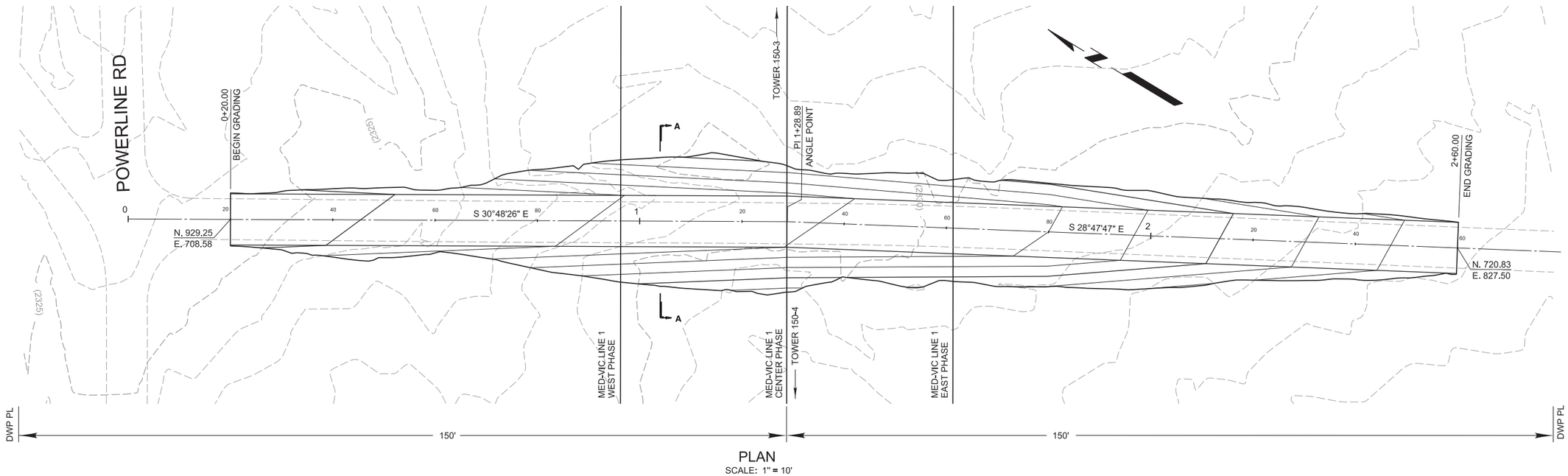
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
S	SLOPE
SG	STRAIGHT GRADE
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



PLAN
SCALE: 1" = 10'

DES. ENGR. J. FONG SUP. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL J. Fong CE 69632	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, DETAIL, SECTION, AND NOTES GRADING MEAD-VICTORVILLE LINE 1 TWR 150-3 POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES DRAWING NUMBER: MDV1-150-3-CA01 REV. 1

01-04-13

mdv1-150-3.dgn

GENERAL NOTES:

1. ADD 2129000 TO NORTHINGS AND 6902000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	121
FILL (CY)	121
IMPORT (CY)	0
EXPORT (CY)	0

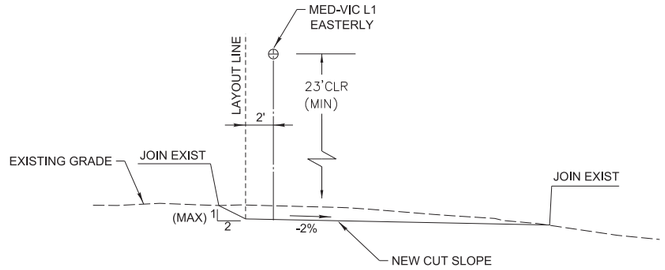
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

ABBREVIATIONS:

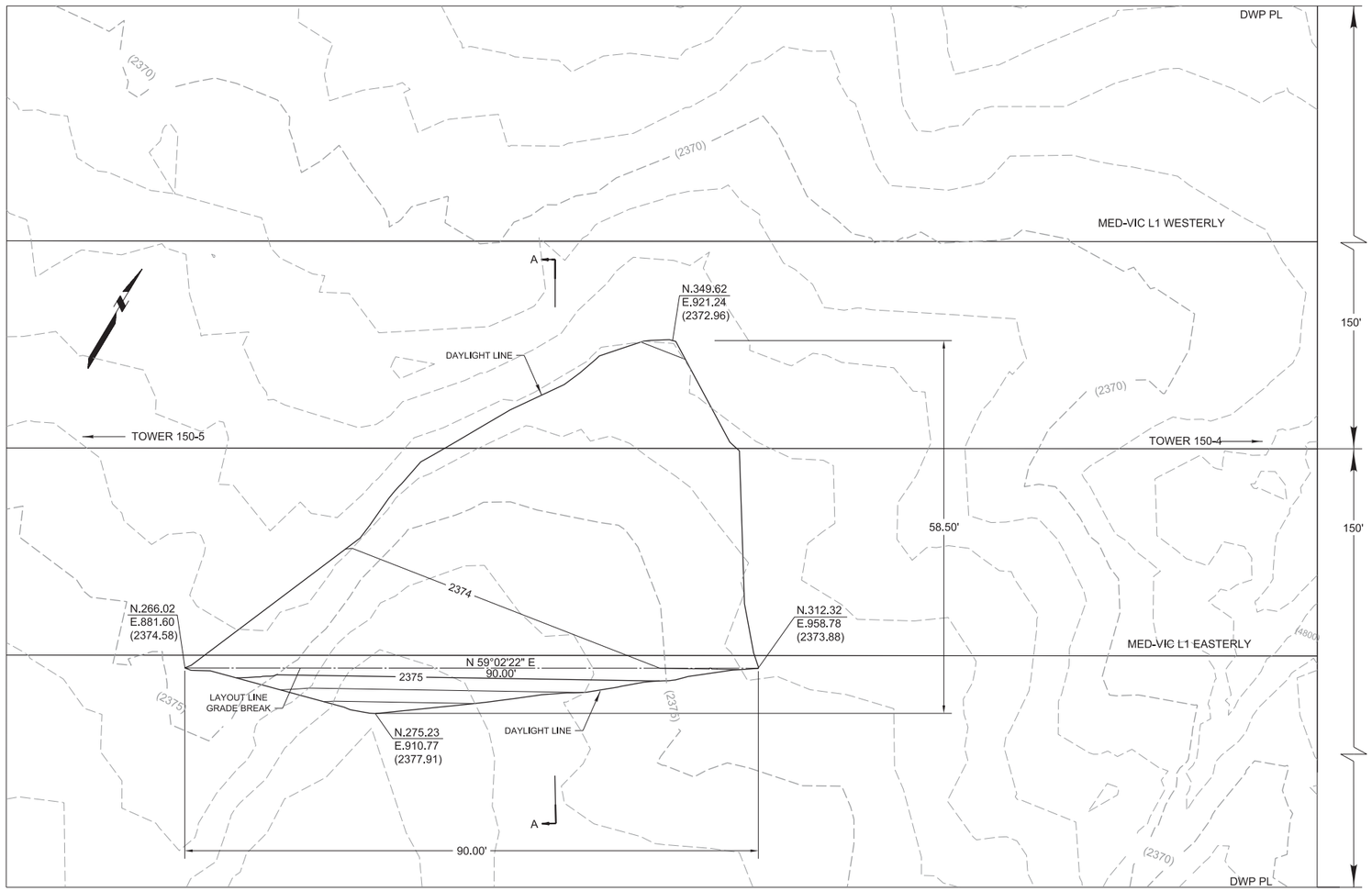
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	90
MAX LENGTH (FT)	59
MAX DEPTH (FT)	2.0
AREA (SF)	3,081



SECTION A-A
TYPICAL SECTION
NO SCALE



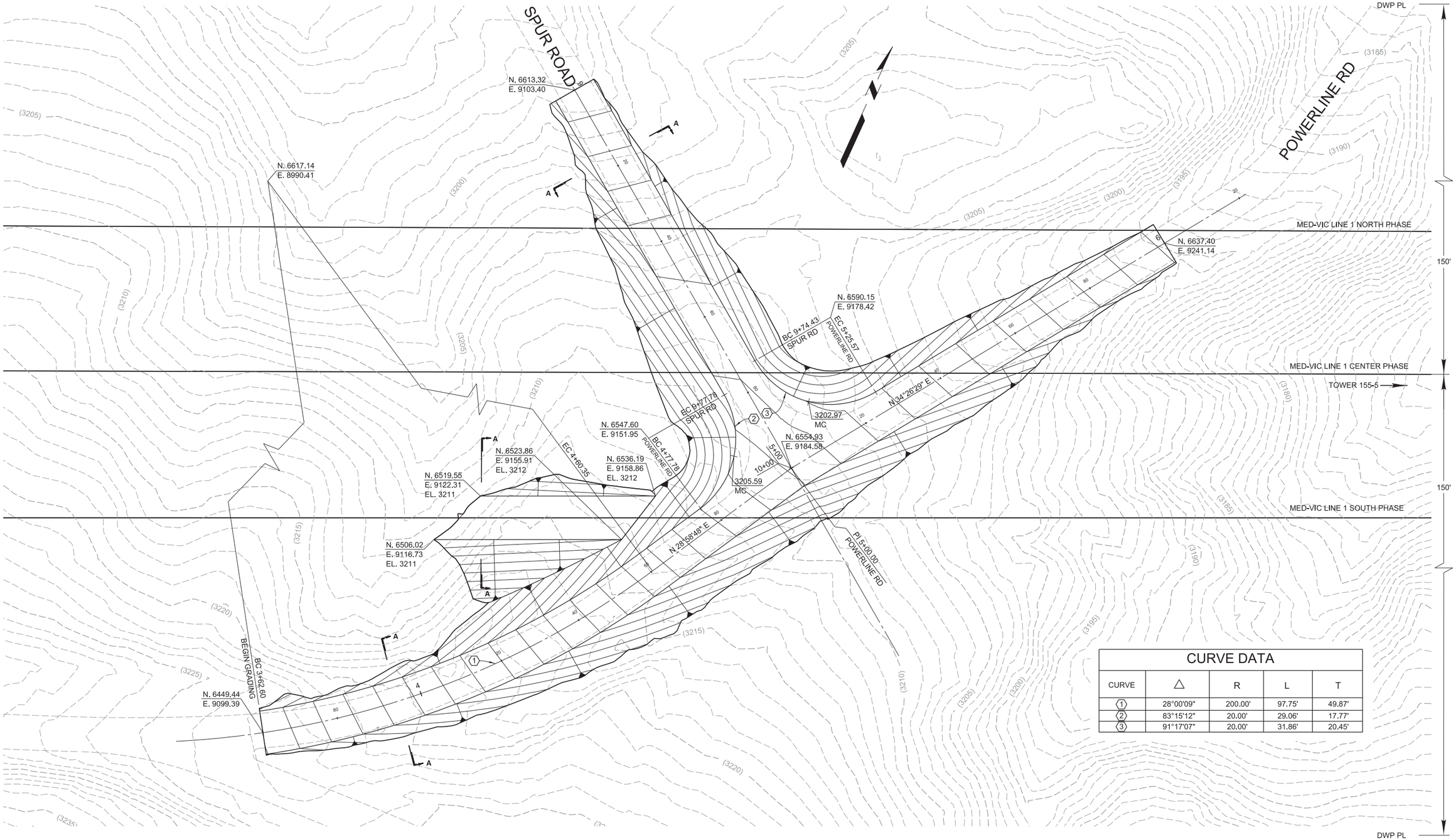
PLAN
SCALE: 1" = 10'

DES. ENGR. F.ALCOCER SUP. ENGR. J. PANG	REVISIONS NO. / DESCRIPTION	Revision Number DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY CHECKED BY ENGINEERING APPROVAL T. Mercer CE 70713	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, PROFILE, AND SECTIONS GRADING MEAD–VICTORVILLE LINE 1 TWR 150–4, 150–5	DRAWING NUMBER MV1-150-4-CA01 REV.

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

11-21-12

MV1-150-4-CA01.DGN



CURVE DATA

CURVE	△	R	L	T
1	28°00'09"	200.00'	97.75'	49.87'
2	83°15'12"	20.00'	29.06'	17.77'
3	91°17'07"	20.00'	31.86'	20.45'

PLAN
SCALE: 1" = 10'

NOTE: SEE MDV1-155-5-CA02 FOR PROFILES, GENERAL NOTES, ABBREVIATIONS, AND SECTION.

DES. ENGR. J. FONG
DRAFT. ENGR. J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number _____
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY _____
CHECKED BY _____
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN
GRADING
MEAD-VICTORVILLE LINE 1 TWR 155-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

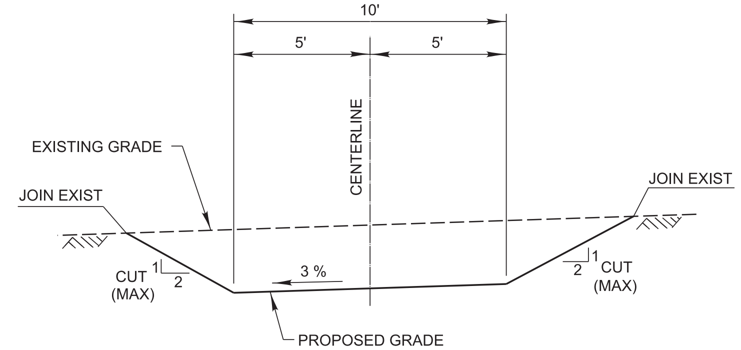
DRAWING NUMBER
MDV1-155-5-CA01
REV.

12-4-12

mdv1-155-5.dgn

GENERAL NOTES:

1. ADD 2110000 TO NORTHINGS AND 6870000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.
12. SEE MDV1-155-5-CA01 FOR PLAN.



SECTION A-A
TYPICAL SECTION
NO SCALE

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	731
FILL (CY)	731
IMPORT (CY)	0
EXPORT (CY)	0

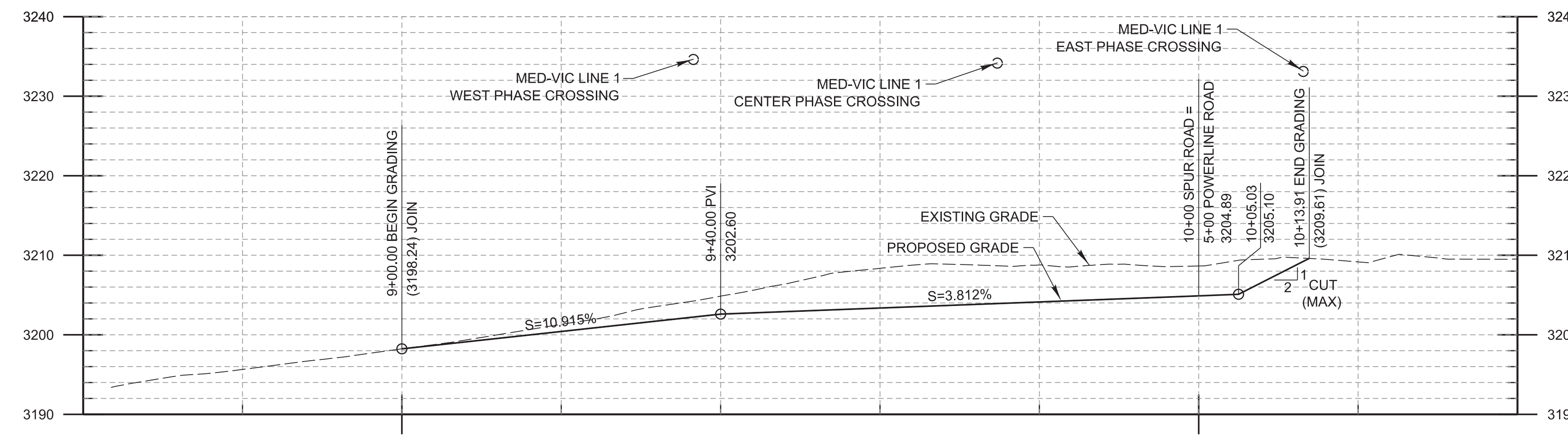
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

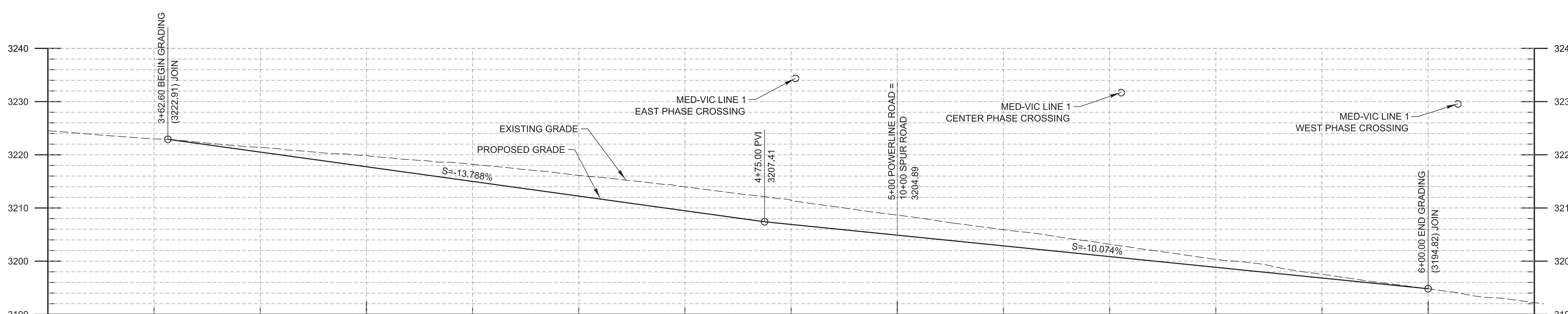
MAX WIDTH (FT)	76
MAX LENGTH (FT)	247
MAX DEPTH (FT)	3.2
AREA (SF)	7987

ABBREVIATIONS:

CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
MAX	MAXIMUM
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVI	POINT OF VERTICAL INTERSECTION
RD	ROAD
S	SLOPE
SG	STRAIGHT GRADE
TYP.	TYPICAL



SPUR ROAD PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



POWERLINE ROAD PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'

DES. ENGR. J. FONG
SUP. ENGR. J. PANG

REVISIONS
NO. | DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
J. Fong CE 69632

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PROFILES, SECTION, AND NOTES
GRADING
MEAD-VICTORVILLE LINE 1 TWR 155-5

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER MDV1-155-5-CA02 REV. 1

01-07-13

mdv1-155-5.dgn

GENERAL NOTES:

1. ADD 2105000 TO NORTHINGS AND 6866000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	280
FILL (CY)	280
IMPORT (CY)	0
EXPORT (CY)	0

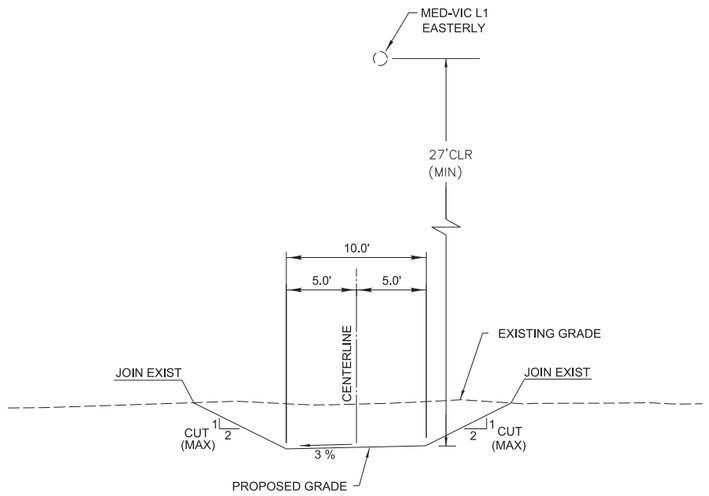
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

MAX WIDTH (FT)	76
MAX LENGTH (FT)	247
MAX DEPTH (FT)	3.2
AREA (SF)	5,155

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVC	POINT VERTICAL CURVE
PVI	POINT VERTICAL INTERSECTION
PVT	POINT VERTICAL TANGENT
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
SEE MV1-158-6-CA02
NO SCALE

DES. ENGR. F.ALCOCER
SUP. ENGR. J.PANG

REVISIONS
NO. | DESCRIPTION

Revision Number
DRAFTING RELEASE
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ENGINEERING APPROVAL

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FINAL APPROVAL RELEASE SIGNATURE | DATE

SCALE: (UNLESS NOTED) AS NOTED
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CHECKED BY
ENGINEERING APPROVAL
CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE | DATE

PLAN, PROFILE, AND SECTIONS GRADING MEAD–VICTORVILLE LINE 1 TWR 159–1, 158–6

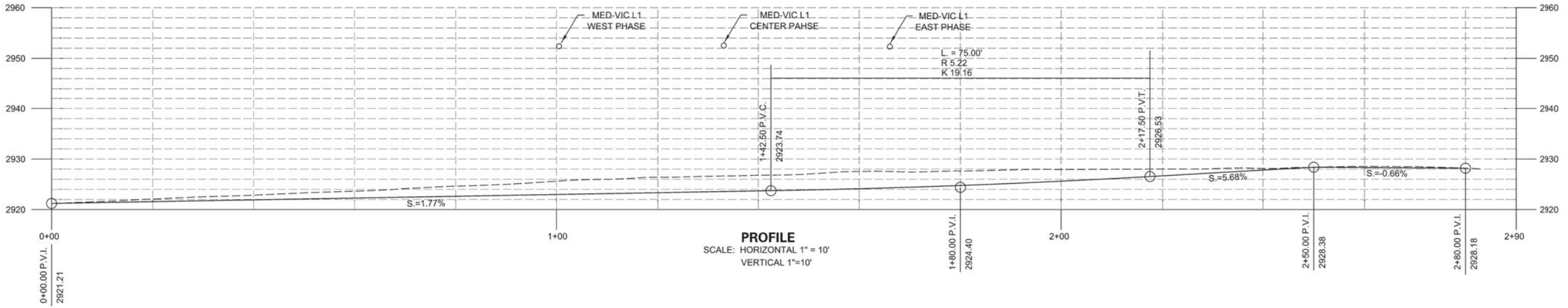
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-158-6-CA01
REV.

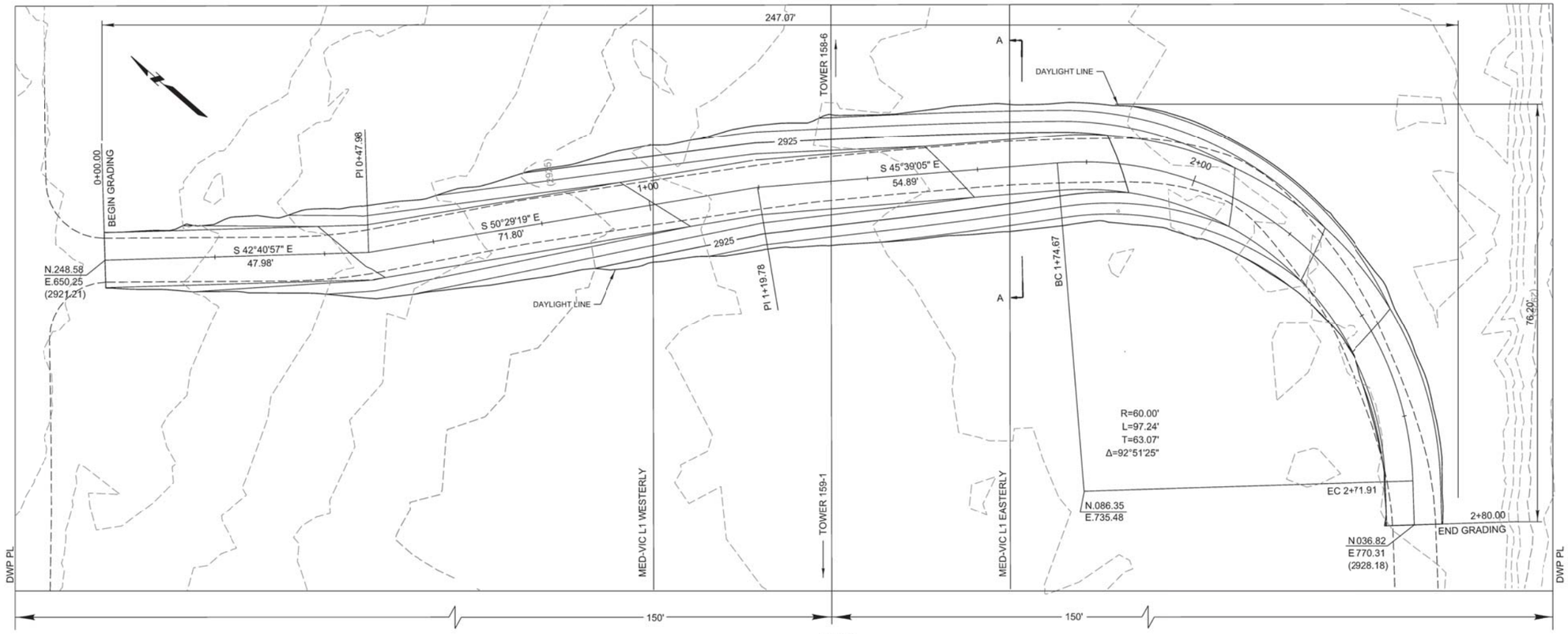
11-26-12

DRA

MV1-158-6-CA01.DGN



PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1"=10'



PLAN
SCALE: 1" = 10'

* SEE MV1-158-6-CA01 FOR GENERAL NOTES, ABBREVIATIONS AND CROSS SECTION.

DES. ENGR. F.ALCOCER
SUP. ENGR. J. PANG

REVISIONS					
NO.	DESCRIPTION	Revision Number	OWNER/AGENT APPROVAL	SCALE: (UNLESS NOTED) AS NOTED	OWNER/AGENT APPROVAL
		DRAFTING RELEASE		DRAFTING RELEASE	
		DRAWN BY	DRAWING REVISION RELEASE APPROVAL	DRAWN BY	DRAWING RELEASE APPROVAL
		CHECKED BY		CHECKED BY	
		ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE	ENGINEERING APPROVAL	FINAL APPROVAL RELEASE SIGNATURE DATE
				T. Mercer CE 70713	

PLAN, PROFILE, AND SECTIONS
GRADING
MEAD–VICTORVILLE LINE 1 TWR 159–1, 158–6

DWP
POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER **MV1-158-6-CA02** REV.

11-26-12

MV1-158-6-CA01.DGN

GENERAL NOTES:

1. ADD 2104000 TO NORTHINGS AND 6865000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	68
FILL (CY)	68
IMPORT (CY)	0
EXPORT (CY)	0

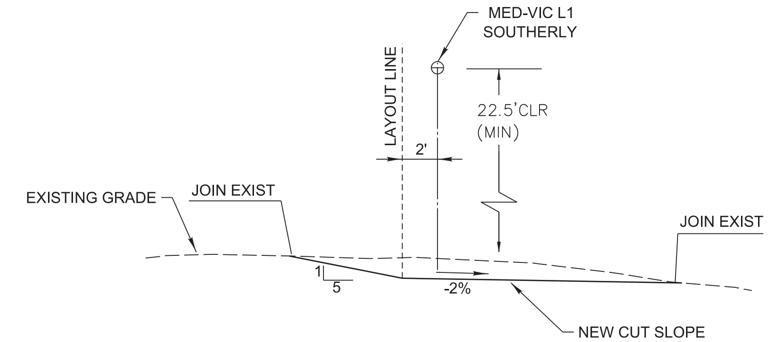
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON EXISTING ROADWAY NOT TO EXCEED 8 INCHES.

APPROXIMATE GRADING PARAMETERS:

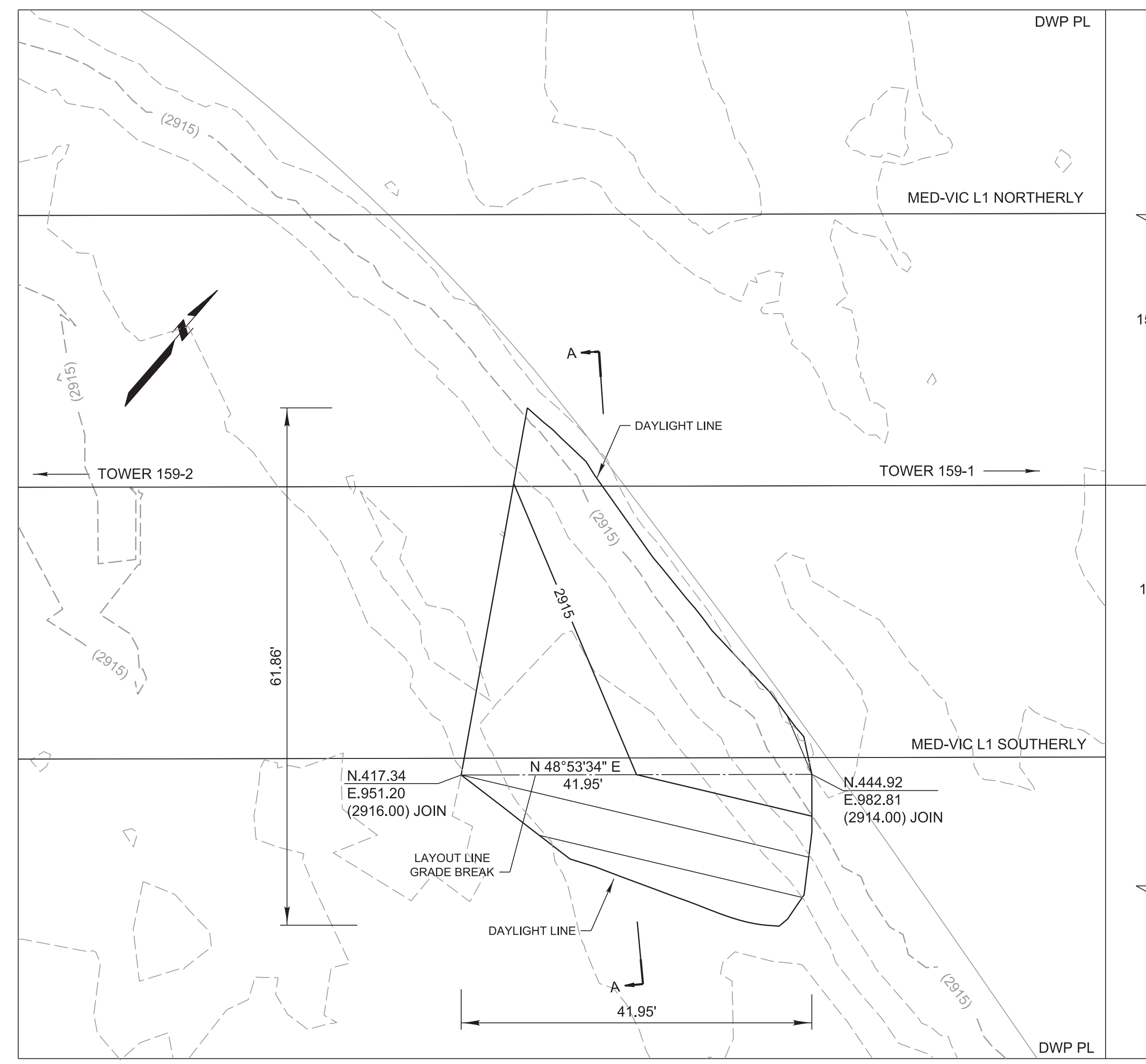
MAX WIDTH (FT)	42
MAX LENGTH (FT)	62
MAX DEPTH (FT)	2.3
AREA (SF)	1,490

ABBREVIATIONS:

BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
MAX	MAXIMUM
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PL	PROPERTY LINE
REQ.	REQUIRED
S	SLOPE
SG	STRAIGHT GRADE
TL	TRANSMISSION LINE
TWR	TOWER
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PLAN
SCALE: 1" = 10'

DES. ENGR.	F.ALCOCER
SUP. ENGR.	J. PANG

REVISIONS

NO.	DESCRIPTION

Revision Number
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL

OWNER/AGENT APPROVAL
DRAWING REVISION RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

SCALE: (UNLESS NOTED) AS NOTED
DRAFTING RELEASE
DRAWN BY
CHECKED BY
ENGINEERING APPROVAL
CE 70713

OWNER/AGENT APPROVAL
DRAWING RELEASE APPROVAL
FINAL APPROVAL RELEASE SIGNATURE DATE

PLAN, PROFILE, AND SECTIONS
GRADING
MEAD–VICTORVILLE LINE 1 TWR 159–1, 159–2

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER
MV1-159-1-CA01
REV.

11-29-12

DRA

MV1-159-1-CA01.DGN

GENERAL NOTES:

1. ADD 2081000 TO NORTHINGS AND 6823000 TO EASTINGS.
2. ELEVATIONS SHOWN IN PARENTHESIS ARE EXISTING.
3. DASHED CONTOUR LINES INDICATE EXISTING GRADE.
4. ALL WORK SHALL CONFROM TO THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" AS LAST REVISED.
5. ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, CONSTRUCTION SAFETY ORDERS.
6. THE DEPARTMENT'S CORPORATE ENVIRONMENTAL SERVICES SECTION SHALL BE CONTACTED IMMEDIATELY AT (213) 367-0403 IF SOIL OF A QUESTIONABLE ENVIRONMENTAL QUALITY IS ENCOUNTERED DURING CONSTRUCTION.
7. ALL AREAS TO BE GRADED SHALL BE GRUBBED PRIOR TO BEGINNING OF GRADING OPERATION.
8. REMOVE AND STOCKPILE 6" OF TOPSOIL WITH EXISTING NATIVE VEGETATION PRIOR TO EXCAVATION. RE-APPLY TOPSOIL TO THE SURFACE OF THE FILL LOCATION.
9. ALL CUT OR FILL SLOPE SHALL COMPLY WITH THE DRAWINGS, NO PERMANENT SLOPE SHALL BE GREATER THAN TWO HORIZONTAL TO ONE VERTICAL.
10. FILL MATERIAL SHALL BE COMPACTED IN LIFTS NO MORE THAN 8-INCH, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
11. EMPLOY FIELD-ADJUSTED SLOPE BLENDING WHEREVER POSSIBLE TO PROVIDE A MORE NATURAL BLEND TO THE EXISING ADJACENT TOPOGRAPHY.

ESTIMATED EARTHWORK QUANTITIES:

CUT (CY)	253
FILL (CY)	253
IMPORT (CY)	0
EXPORT (CY)	0

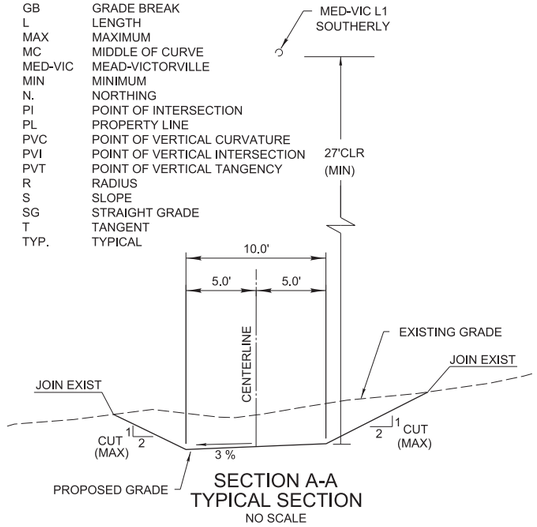
(ESTIMATE BASED ON 10% BULK FACTOR)
* CUT MATERIAL TO BE SPREAD ON ADJACENT TRANSMISSION LINE RIGHT-OF-WAY.

APPROXIMATE GRADING PARAMETERS:

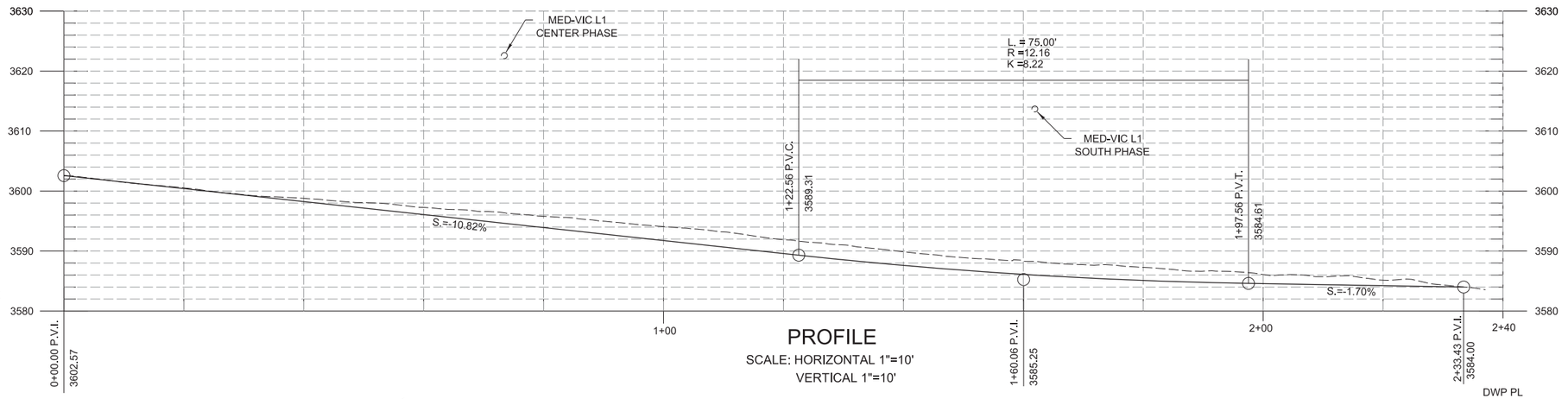
MAX WIDTH (FT)	216
MAX LENGTH (FT)	66
MAX DEPTH (FT)	3.0
AREA (SF)	4,840

ABBREVIATIONS:

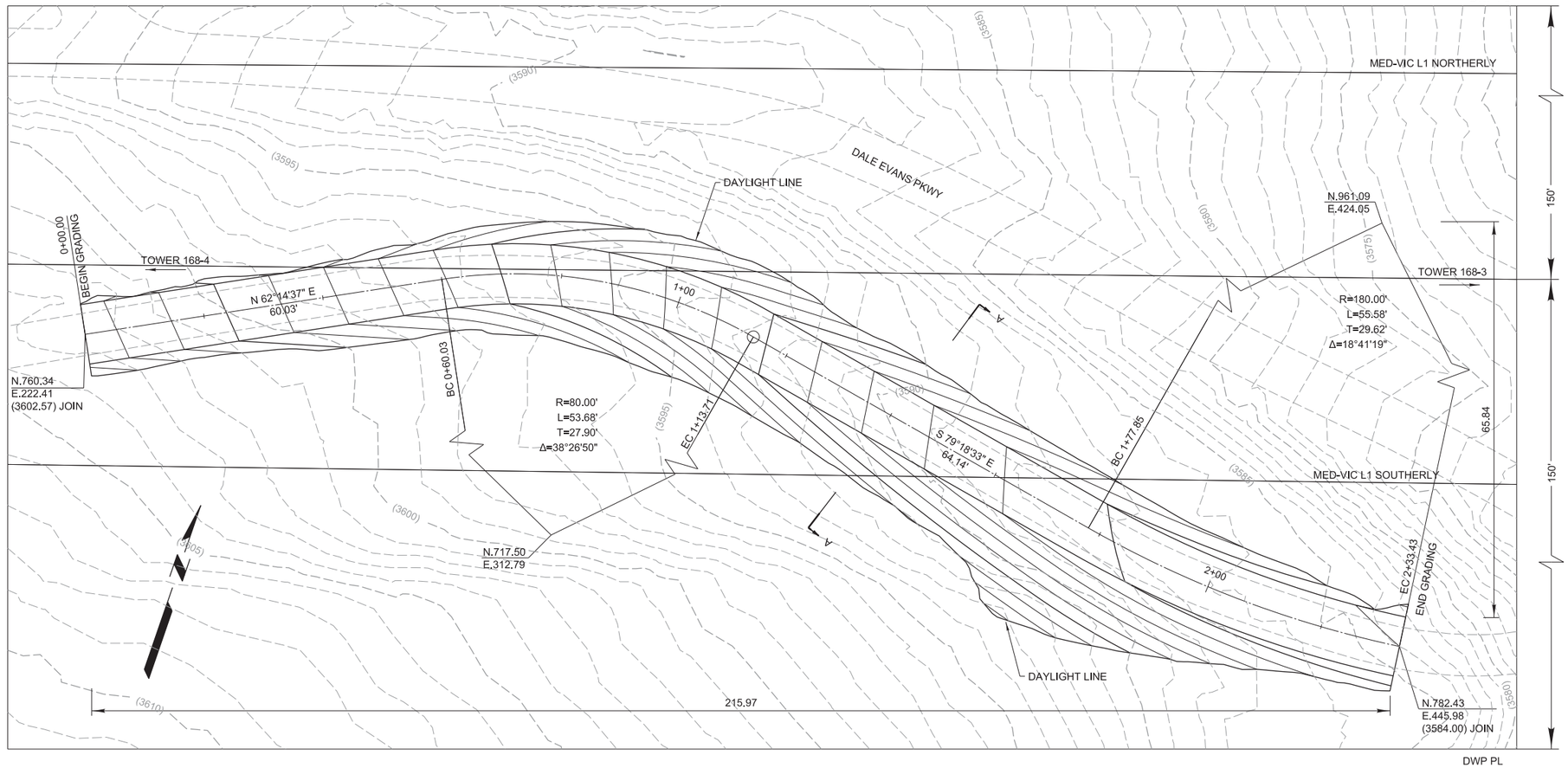
BC	BEGINNING OF CURVE
CL	CENTER LINE OR CHAINLINK
CLR	CLEARANCE
CY	CUBIC YARD
DWP	DEPARTMENT OF WATER AND POWER
E.	EASTING
EC	END OF CURVE
EG	EXISTING GRADE
EL.	ELEVATION
EXIST	EXISTING
GB	GRADE BREAK
L	LENGTH
MAX	MAXIMUM
MC	MIDDLE OF CURVE
MED-VIC	MEAD-VICTORVILLE
MIN	MINIMUM
N.	NORTHING
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
S	SLOPE
SG	STRAIGHT GRADE
T	TANGENT
TYP.	TYPICAL



SECTION A-A
TYPICAL SECTION
NO SCALE



PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'



PLAN
SCALE: 1"=10'

DES. ENGR. E. ALCOCER	REVISIONS NO. / DESCRIPTION	Revision Number _____ DRAFTING RELEASE DRAWN BY _____ CHECKED BY _____ ENGINEERING APPROVAL	OWNER/AGENT APPROVAL DRAWING REVISION RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	SCALE: (UNLESS NOTED) AS NOTED DRAFTING RELEASE DRAWN BY _____ CHECKED BY _____ ENGINEERING APPROVAL T. Alcocer CE 70713	OWNER/AGENT APPROVAL DRAWING RELEASE APPROVAL FINAL APPROVAL RELEASE SIGNATURE / DATE	PLAN, PROFILE, AND SECTIONS GRADING MEAD-VICTORVILLE LINE 1 TWR 168-3, 168-4
SUP. ENGR. J. PANG						POWER SYSTEM DEPARTMENT OF WATER AND POWER CITY OF LOS ANGELES
						DRAWING NUMBER MV1-168-3-CA01 REV.

11-27-12

MVL1-168-3.dgn