

Demolition Assumptions for

TRR West: Transmission Li 10

Code	# of Structures Demolished	Demolition per day (sf)
No Demolition		

Construction Schedule for

TRR West: Transmission Lines for WAPA Connectio.

10

Subpackage

Phase	Code	Start Date	End Date	Working Days	Days/Week
10 Transmission Lines for WAPA Connection	TRR West: Transmission Lines for WAPA Connection-10				
10.01 Funks to WAPA Connection	TRR West: Transmission Lines for WAPA Connection-1001	10/8/2026	6/8/2027	174	5
10.02 Funks to TRR	TRR West: Transmission Lines for WAPA Connection-1002	6/8/2027	7/26/2028	296	5

01

02

Offroad Equipment (Fossil Fuel) Inventory for

TRR West: Transmission Lines for W/10

Code	Equipment Name	General Equipment Category	#/day	Hours/day/ equipment	Fuel Type	Engine Horsepower (if known)	Fuel (gal/day) (if known)
TRR West: Transmission Lines for WAPA Connection-1001	auger, truck-mounted, for caissons, water wells	Other Construction Equipment	0.17	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	Tractors/Loaders/Backhoes	0.17	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	crane truck mounted, hydraulic, 12 ton capacity	Cranes	0.17	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	Tractors/Loaders/Backhoes	0.17	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	forklift, for rough terrain, 42' lift, 35' reach, 9000 lb., 110 H.P.	forklifts	0.17	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	crane truck mount, cable 8x4 drive 90 ton, 15' radius	Cranes	0.17	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	crane truck mounted, hydraulic, 12 ton capacity	Cranes	0.17	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	dozer, crawler, torque converter, diesel 200 HP	Rubber Tired Dozers	0.09	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	trailer with cable reel for high voltage line work	Other Construction Equipment	0.09	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	trailer with cable tensioning rig, for high voltage line work	Other Construction Equipment	0.09	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	trailer with cable pulling rig, for high voltage line work	Other Construction Equipment	0.09	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1001	crane truck mount, cable 8x4 drive 40 ton, 12' radius	Cranes	0.09	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	auger, truck-mounted, for caissons, water wells	Other Construction Equipment	0.30	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	Tractors/Loaders/Backhoes	0.30	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	crane truck mounted, hydraulic, 12 ton capacity	Cranes	0.30	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	Tractors/Loaders/Backhoes	0.30	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	forklift, for rough terrain, 42' lift, 35' reach, 9000 lb., 110 H.P.	forklifts	0.30	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	crane truck mount, cable 8x4 drive 90 ton, 15' radius	Cranes	0.30	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	crane truck mounted, hydraulic, 12 ton capacity	Cranes	0.30	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	dozer, crawler, torque converter, diesel 200 HP	Rubber Tired Dozers	0.20	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	trailer with cable reel for high voltage line work	Other Construction Equipment	0.20	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	trailer with cable tensioning rig, for high voltage line work	Other Construction Equipment	0.20	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	trailer with cable pulling rig, for high voltage line work	Other Construction Equipment	0.20	8	Diesel		
TRR West: Transmission Lines for WAPA Connection-1002	crane truck mount, cable 8x4 drive 40 ton, 12' radius	Cranes	0.20	8	Diesel		

Note:

1. Number of equipment/day = Total Equipment Hours / 8 hours per day / Total number of days of the Sub-package.
2. Number of equipment in this table represents averages throughout each sub-package. It does not represent a typical day or peak day conditions.

Jacobs Calculations for #/days

Package	Equipment	Total number of hrs (Calculated)	hours per day	total equipment days (Engineering data)	total number of working days/phase	Number of equipment/day @ listed hours per day
	auger, truck-mounted, for caissons, water wells	240	8	30	174	0.17
	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	240	8	30	174	0.17
	crane truck mounted, hydraulic, 12 ton capacity	240	8	30	174	0.17
	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	240	8	30	174	0.17
	forklift, for rough terrain, 42' lift, 35' reach, 9000 lb., 110 H.P.	240	8	30	174	0.17
	crane truck mount, cable 8x4 drive 90 ton, 15' radius	240	8	30	174	0.17
	crane truck mounted, hydraulic, 12 ton capacity	240	8	30	174	0.17
	dozer, crawler, torque converter, diesel 200 HP	120	8	15	174	0.09
	trailer with cable reel for high voltage line work	120	8	15	174	0.09
	trailer with cable tensioning rig, for high voltage line work	120	8	15	174	0.09
	trailer with cable pulling rig, for high voltage line work	120	8	15	174	0.09
	crane truck mount, cable 8x4 drive 40 ton, 12' radius	120	8	15	174	0.09
	auger, truck-mounted, for caissons, water wells	720	8	90	296	0.30
	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	720	8	90	296	0.30
	crane truck mounted, hydraulic, 12 ton capacity	720	8	90	296	0.30
	backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	720	8	90	296	0.30
	forklift, for rough terrain, 42' lift, 35' reach, 9000 lb., 110 H.P.	720	8	90	296	0.30
	crane truck mount, cable 8x4 drive 90 ton, 15' radius	720	8	90	296	0.30
	crane truck mounted, hydraulic, 12 ton capacity	720	8	90	296	0.30
	dozer, crawler, torque converter, diesel 200 HP	480	8	60	296	0.20
	trailer with cable reel for high voltage line work	480	8	60	296	0.20
	trailer with cable tensioning rig, for high voltage line work	480	8	60	296	0.20
	trailer with cable pulling rig, for high voltage line work	480	8	60	296	0.20
	crane truck mount, cable 8x4 drive 40 ton, 12' radius	480	8	60	296	0.20

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Jacobs Equipment Types

Equipment	General Type	Fuel Type
Asphalt Paver, 130 H.P.	Pavers	Diesel
Horz. Boring Csg. Mch.	Bore/Drill Rigs	Diesel
Hyd. Excavator, 1.5 C.Y.	Excavators	Diesel
Hyd. Excavator, 2.5 C.Y.	Excavators	Diesel
Backhoe Loader, 48 H.P.	Tractors/Loaders/Backhoes	Diesel
Crawler Crane, 75 Ton	Cranes	Diesel
Hydraulic Crane, 25 ton	Cranes	Diesel
Hyd. Crane, 55 Ton	Cranes	Diesel
S.P. Crane, 4x4, 12 Ton	Cranes	Diesel
Grader, 30,000 Lbs.	Graders	Diesel
Concrete Pump (Small)	Pumps	Diesel
Grout Pump, 50 C.F./hr.	Pumps	Diesel
Roller, Vibratory, 25 Ton	Rollers	Diesel
Tandem Roller, 10 Ton	Rollers	Diesel
Roller, Pneum. Whl., 12 Ton	Rollers	Diesel
Sheepsfoot Roller, 240 H.P.	Rollers	Diesel
S.P. Scraper, 14 C.Y.	Scrapers	Diesel
Dozer, 200 H.P.	Rubber Tired Dozers	Diesel
Dozer, 300 H.P.	Rubber Tired Dozers	Diesel
F.E. Loader, Crl, 1.5 C.Y.	Tractors/Loaders/Backhoes	Diesel
F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	Diesel
Dump Truck, 12 C.Y., 400 H.P.	Off-Highway Trucks	Diesel
Water Tank Trailer, 5000 Gal.	Off-Highway Trucks	Diesel
Dump Trailer, 20 C.Y.	Off-Highway Trucks	Diesel
Truck Tractor, 220 H.P.	Off-Highway Tractors	Diesel
Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	Diesel
Truck Tractor, 6x4, 450 H.P.	Off-Highway Tractors	Diesel
Gas Engine Vibrator	Other Construction Equipment	Gasoline
Welder, Electric, 300 amp	Welders	Electric
Welder, Gas Engine, 300 amp	Welders	Gasoline
Rammer/Tamper, Gas, 15"	Other Construction Equipment	Diesel
Trowel, 48" Walk-Behind	Other Construction Equipment	Diesel
Lattice Boom Crane, 40 Ton	Cranes	Diesel
Tandem Roller, 5 Ton	Rollers	Diesel
Clamshell Bucket, .5 C.Y.	Other Construction Equipment	Diesel
Crawler Crane, 15 Ton	Cranes	Diesel
20' Suction Hose, 6"	Pumps	Diesel
50' Discharge Hose, 6"	Pumps	Diesel
Centr. Water Pump, 6"	Pumps	Diesel
Clamshell Bucket, 1 C.Y.	Other Construction Equipment	Diesel
Crawler Crane, 25 Ton	Cranes	Diesel
Crawler Loader, 3 C.Y.	Tractors/Loaders/Backhoes	Diesel
Dist. Tanker, 3000 Gallon	Off-Highway Trucks	Diesel
Dump Truck, 8 C.Y., 220 H.P.	Off-Highway Trucks	Diesel
Dump Truck, Off Hwy., 65 Ton	Off-Highway Trucks	Diesel
Hyd. Crane, 12 Ton	Cranes	Diesel
Hyd. Excavator, .75 C.Y.	Excavators	Diesel
Lattice Boom Crane, 90 Ton	Cranes	Diesel
S.P. Crane, 4x4, 5 Ton	Cranes	Diesel
S.P. Scraper, 21 C.Y.	Scrapers	Diesel
Vibratory Roller, Towed, 23 Ton	Rollers	Diesel
auger, truck-mounted, for caissons, water wells	Other Construction Equipment	Diesel
backhoe-loader wheel type 112 HP, 1-1/2 CY capacity	Tractors/Loaders/Backhoes	Diesel
crane truck mount, cable 8x4 drive 40 ton, 12' radius	Cranes	Diesel
crane truck mount, cable 8x4 drive 90 ton, 15' radius	Cranes	Diesel
crane truck mounted, hydraulic, 12 ton capacity	Cranes	Diesel
dozer, crawler, torque converter, diesel 200 HP	Rubber Tired Dozers	Diesel
forklift, rough terrain, 42' lift, 35' reach, 9000 lb., 110 H.P.	forklifts	Diesel
puller with cable pulling rig, for high voltage line work	Other Construction Equipment	Diesel
trailer with cable reel for high voltage line work	Other Construction Equipment	Diesel
trailer with cable tensioning rig, for high voltage line work	Other Construction Equipment	Diesel

A.T. Forklift, 31' reach, 45' lift	Forklifts	Diesel
Earth Auger, Truck-Mtd.	Other Construction Equipment	Diesel
Flatbed Trailer, 25 Ton	Off-Highway Trucks	Diesel
Flatbed Truck, Gas, 1.5 Ton	Off-Highway Trucks	Diesel
Flatbed Truck, Gas, 3 Ton	Off-Highway Trucks	Diesel
Hyd. Crane, 100 Ton (Daily)	Cranes	Diesel
Hyd. Crane, 25 Ton (Daily)	Cranes	Diesel
Lowbed Trailer, 75 Ton	Off-Highway Trucks	Diesel
Manual Fence Post Auger, Gas	Other Construction Equipment	Gasoline
Pickup Truck, 4x4, 3/4 Ton	Off-Highway Trucks	Diesel

Vehicle Inventory for

TRR West: Transmission Lines for WAPA Connection

Code

Vehicle

TRR West: Transmission Lines for WAPA Connection-1001	Equipment Hauling Trucks
TRR West: Transmission Lines for WAPA Connection-1002	Equipment Hauling Trucks

Note:

1. Onsite water truck and dump truck numbers and miles per trip were set to 1.
2. The one-way trips/day were estimated by dividing the total number of trips by the number of days of the sub-package.
3. Number of trips per day in this table represents averages throughout each sub-package. It does not represent a typical day or peak day co

Primary Trip Purpose/Location (within construction footprint vs. offsite)	# of Vehicles	One-Way Trips/Day	Miles per Trip	Fuel Type	Fuel (gal/day) (if known)
Offsite/Haul	1	0.20	500	Diesel	
Offsite/Haul	1	0.33	500	Diesel	

nditions.

Jacobs Assumptions

Equipment	total hours (Engineering Data)	total number of working days/phase	average hours/day	Miles/day (assume 10 miles/hour)
	Amount	Assumption	Total One-way Trips	Total number of days
	17	Large equipment	34.00	174
	49	Large equipment	98.00	296

Employees Required to Construct**TRR West: Transmission Lines 10**

Code	Vehicle Type	# of Employees/Day	One-Way Trips/Day	Miles per Trip
TRR West: Transmission Lines for WAPA Connection-1001	Employee	7	14	60.0
TRR West: Transmission Lines for WAPA Connection-1002	Employee	11	22	60.0

Note:

1. Worker trips assumed that the trips would be from Sacramento (68 miles), Willows (19 miles), Williams (9 miles), and Red Bluff (60 miles). One-way distance of 60 miles was used for all trips.
2. Number of trips per day in this table represents averages throughout each sub-package. It does not represent a typical day or peak day conditions.

Jacobs Calculations

Subpackage	Total labor hours (Engineering Data)	Hours per employee/day	Total days of construction	#employees/d ay	one-way Trips/day
01	8831	8	174	7	14
02	25231	8	296	11	22

Earthmoving/Paving Assumptions for

TRR West: Transmissi 10

Code	Daily		
	Stripping or Grading (acres/day)	Borrow/Excavate (cy/day)	Dredge (cy/day)
Negligible earthmoving activities			

Note:

Earthmoving related to transmission line are assumed to be negligible compared to other earthmoving activities of the proje

<i>Total</i>				
Paving (sf/day)	Stripping or Grading (total acres)	Borrow/Excavate (total cy)	Dredge (total cy)	Paving (total sf)

ect.

Jacobs Calculations

Total # days/subpackage	Total # days/earthmoving -paving