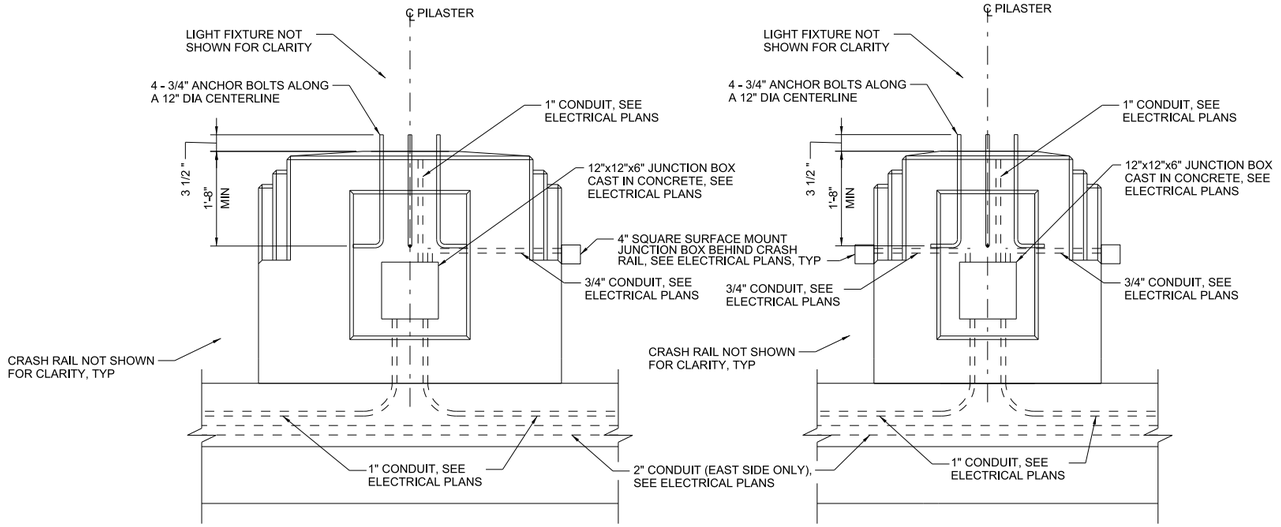
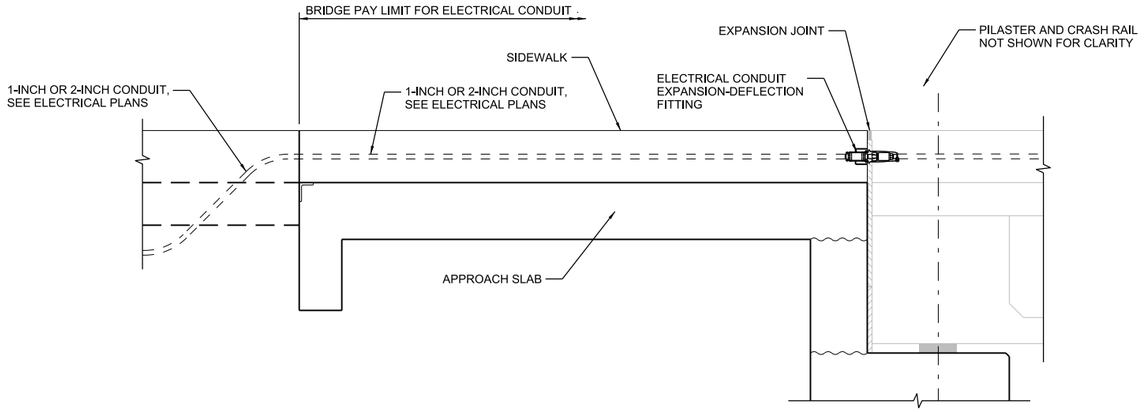


ELECTRICAL AT END PILASTER

3/4" = 1'-0"

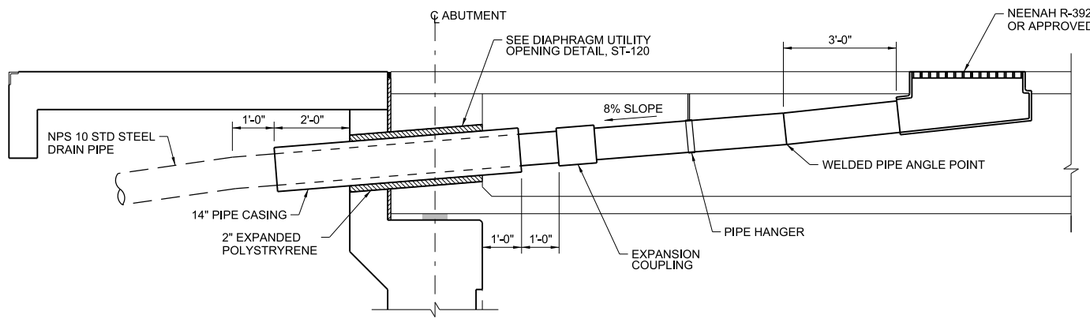
ELECTRICAL AT INTERMEDIATE PILASTER

3/4" = 1'-0"



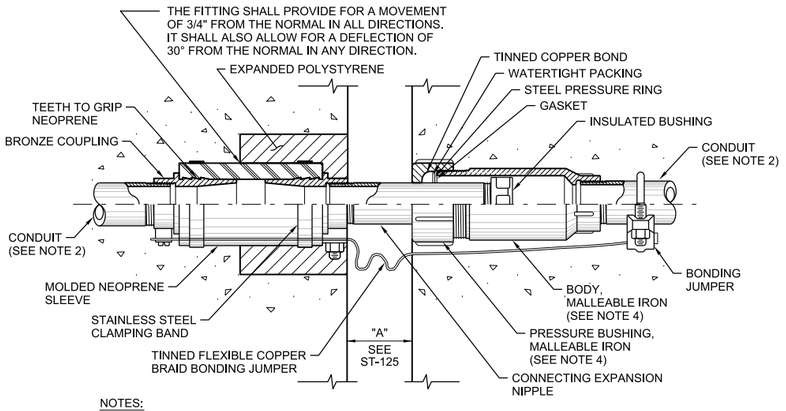
SIDEWALK ELECTRICAL CONDUIT TRANSITION DETAIL

3/4" = 1'-0"



DECK DRAIN DETAIL

1/2" = 1'-0"

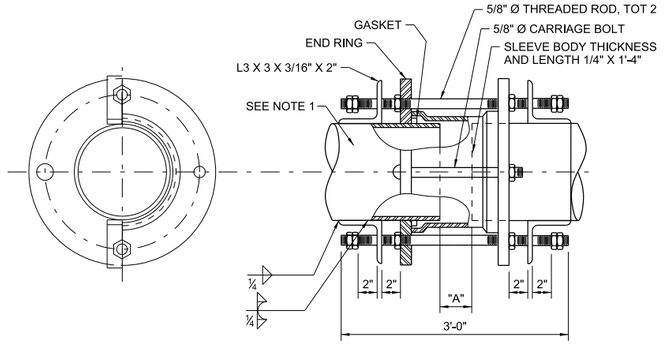


NOTES:

1. EXPANSION-DEFLECTION FITTINGS ARE INCIDENTAL TO THE CONDUIT COSTS (NO DIRECT PAYMENT).
2. PVC CONDUIT INSTALLATIONS SHALL HAVE 1'-6" MINIMUM LENGTH OF GRS CONDUIT EACH SIDE.
3. CENTER FITTING ACROSS JOINT AS SHOWN.
4. ALL MALLEABLE, DUCTILE IRON, AND STEEL PARTS ARE TO BE HOT-DIPPED GALVANIZED.

1-INCH OR 2-INCH CONDUIT EXPANSION-DEFLECTION FITTING

NTS

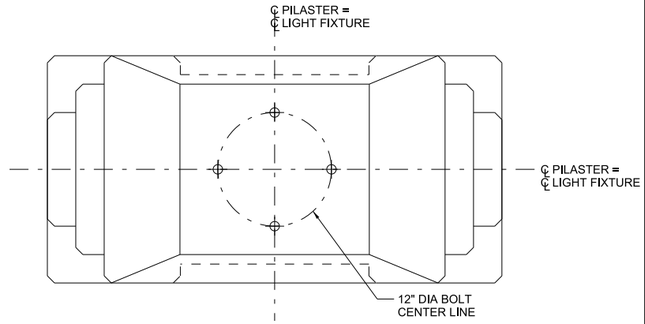


EXPANSION COUPLING

1" = 1"

NOTES:

1. FOR "A" DIMENSION AND PIPE DIAMETER, SEE EXPANSION JOINT DETAILS SHEET.
2. EXPANSION COUPLING WITH 4 BOLTS SHOWN, COUPLING WITH A GREATER NUMBER OF BOLTS ALLOWED.
3. ADJUST DIMENSION TO SUIT COUPLER END RING BOLT CIRCLE.



ANCHOR BOLT PATTERN FOR LIGHT FIXTURE ON PILASTER

1 1/2" = 1'-0"

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	REVISION	CHK	APVD	BY	APVD
	N. STALDER	DR	P. WALKER	M. BRADY		R. COOMES	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

SIERRA STREET BRIDGE (B-3405)
MISCELLANEOUS DETAILS NO. 1

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

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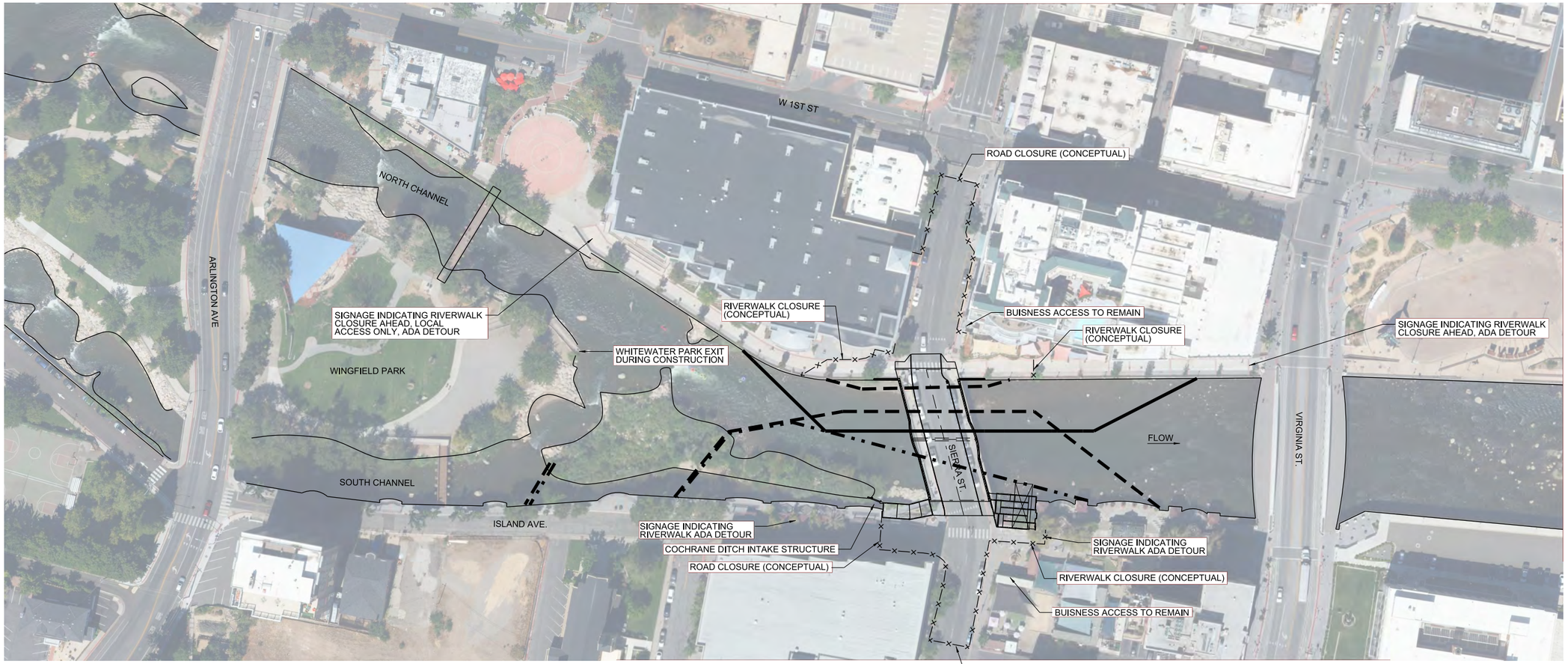
AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-138
SHEET	



PLAN

LEGEND:

- STAGE 1 DIVERSION
- STAGE 2 DIVERSION
- STAGE 3 DIVERSION
- CLOSURE (CONCEPTUAL)
- RIVER INGRESS/EGRESS

DIVERSION NOTES:

1. DIVERSION OF THE RIVER SHALL BE COMPLETED PRIOR PRIOR TO ANY DEMOLITION WORK. DIVERSION CANNOT BE INSTALLED EARLIER THAN JULY 1ST.
2. MAINTAIN A MINIMUM FLOW OF 1.5 CFS AND A MAXIMUM FLOW OF 5.0 CFS INTO THE COCHRANE DITCH AT ALL TIMES. FLOW IS EXPECTED TO BE PUMPED. NO ADDITIONAL DIVERSION STRUCTURES MAY BE INTRODUCED OUTSIDE OF THIS PLAN.
3. THE DIVERSION MUST BE REMOVED BY OCTOBER 31ST UNLESS THE IN-WATER WORK PERIOD IS EXTENDED BY THE CARSON-TRUCKEE WATER CONSERVANCY DISTRICT (CTWCD). ANY REQUEST TO EXTEND THE IN-WATER WORK PERIOD MUST BE SUBMITTED TO CTWD NO LATER THAN SEPTEMBER 15TH. NOVEMBER 30TH IS THE LATEST THAT THE DIVERSION COULD REMAIN IN PLACE WHEN AN EXTENSION IS GRANTED.
4. EXACT REQUIREMENTS FOR HAZARDOUS MATERIALS HANDLING AND GROUND WATER PUMPING TO BE PER NDEP TEMPORARY AUTHORIZATION TO DISCHARGE PERMITS.
5. IMPORTED ROCK AND SAND, INCLUDING SANDBAG FILLER, MUST BE CLEANED BEFORE BEING BROUGHT ON-SITE AND PLACED. CLEANED IS DEFINED AS BEING FREE OF PARTICLES (I.E. SILT, ORGANICS, ETC.) LESS THAN 1/8 INCHES IN DIAMETER.ANY IMPORTED GRAVEL USED WITHIN THE RIVER CHANNEL AS PART OF ANY TEMPORARY WORK SHALL RANGE FROM 3/8-INCH TO 3-INCH IN DIAMETER AND BE OF A ROUNDED NATURE. 10-MIL PLASTIC SHEETING OR GEOFABRIC SHALL BE PLACED BETWEEN NATIVE SOIL AND ANY IMPORT SOIL. ALL IMPORTED SOIL AND ROCK, OTHER THAN RIPRAP PER SECTION 610 OF THESE SPECIFICATIONS, SHALL BE REMOVED FROM THE RIVERBED PRIOR TO REMOVING DIVERSIONS. NO PLASTIC SHEETING OR GEOFABRIC SHALL BE ALLOWED TO REMAIN.
6. ALL CONSTRUCTION VEHICLES MUST BE STEAM CLEANED OFF-SITE TO ELIMINATE ANY POLLUTANTS (I.E. GREASE, OIL, GASOLINE, ETC.) THAT MAY BE PRESENT ON VEHICLES OR EQUIPMENT. ALL MAINTENANCE AND FUELING WILL BE PERFORMED IN A CONTROLLED AREA WITH A MEANS OF INTERCEPTING AND CONTAINING ANY SPILLED OR LEAKED POLLUTANTS, OR OFF-SITE SO AS TO MINIMIZE CONTAMINATION. FOR STATIONARY EQUIPMENT (I.E. GENERATORS, PUMPS, ETC.) A CONTAINMENT PAD SHOULD BE CONSTRUCTED BENEATH THEM TO CONTROL SPILLS AND LEAKS OF POLLUTANTS.
7. ANY TREE OR BRUSH CLEARED FOR THIS INSTALLATION OF THE RIVER DIVERSION SHALL BE COMPLETELY REMOVED AND DISPOSED OF OUTSIDE THE RIVER CHANNEL.
8. UPON COMPLETION OF THE PROJECT, ALL ELEMENTS OF THE DIVERSION SYSTEM SHALL BE REMOVED FROM THE RIVER AND RETURNED AND DISPOSED OF OUTSIDE THE RIVER CHANNEL.
9. THE DETAILS AND NOTES ARE FOR GENERAL GUIDANCE PURPOSES. DIVERSION AND DEWATERING SHOULD REFER TO ENVIRONMENTAL PERMIT CONDITIONS FOR ADDITIONAL GUIDANCE AND REQUIREMENTS.
10. ACCESS RAMPS WILL BE FIELD FIT.

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	N. STALDER		P. WALKER	M. BRADY		R. COOMES	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT
SIERRA STREET BRIDGE (B-3405)
DIVERSION PLAN

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
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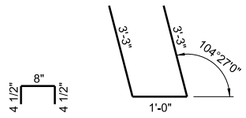
NTS
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-139
SHEET	



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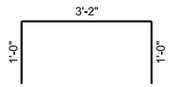

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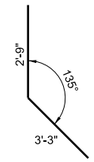

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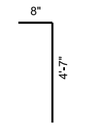

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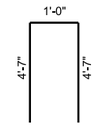

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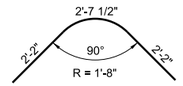

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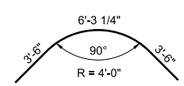

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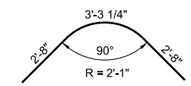

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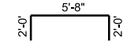

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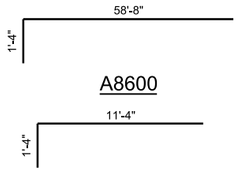

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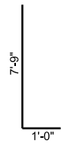

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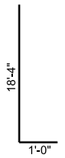

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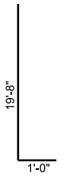

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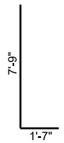

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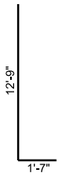

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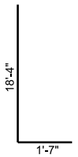

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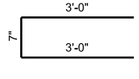

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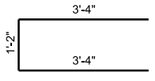

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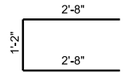

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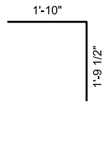

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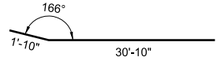

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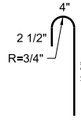

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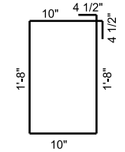

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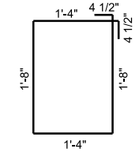

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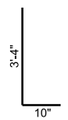

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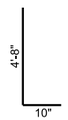

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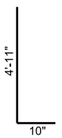

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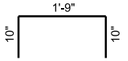

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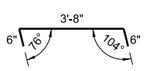

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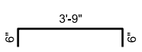

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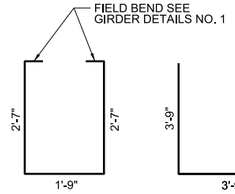

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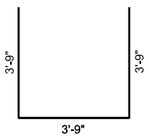

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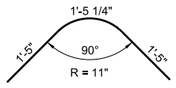

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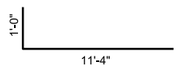
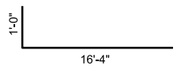
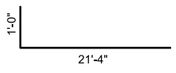


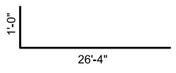
G6124



G6174



G6224



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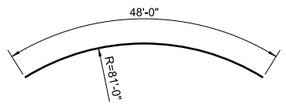
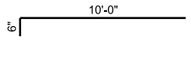


D5480E



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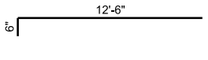
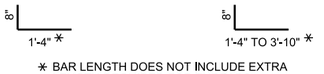


D5132E



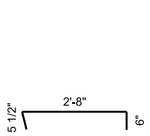
D5020

* BAR LENGTH DOES NOT INCLUDE EXTRA LENGTH REQUIRED FOR THREADS

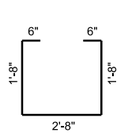
**1 SET D5020 TO D5046

(40 BARS PER SET)

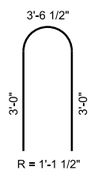
** BARS VARY ALONG CURVED EDGE OF OVERLOOK (NOT LINEAR)



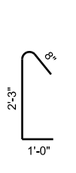
P5038



P5070

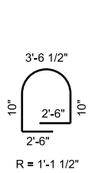


P6097

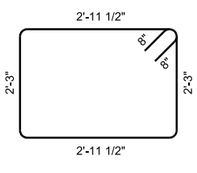


P60311

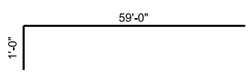
P6048



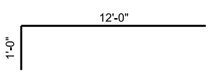
P6103



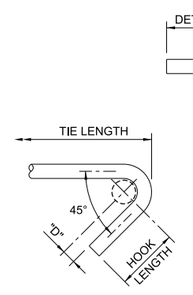
P6119



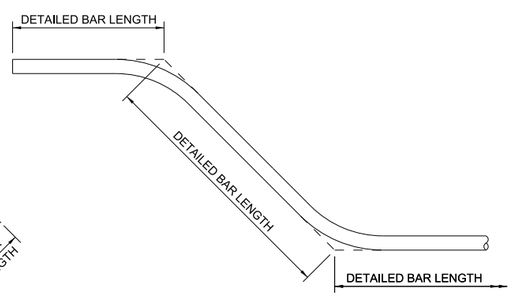
P6600



P6130



* 135° HOOK DETAIL



TYPICAL BENT BARS

DRAFT PS&E
NOT FOR
CONSTRUCTION

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NO.	DATE	DSGN	DR	CHK	APVD	BY	APVD
REVISION		N. STALDER	P. WALKER	M. BRADY		R. COOMES	

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REUSE OF DOCUMENTS:

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

SIERRA STREET BRIDGE (B-3405)
BENT BAR DETAILS NO. 1

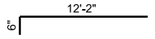
Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NTS

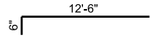
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

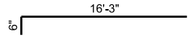
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-140
SHEET	



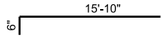
SW4128E



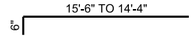
SW4130E



SW4169E

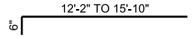


SW4164E



1 SET SW4160E TO SW41410E

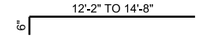
(7 BARS PER SET)



** 1 SET SW4128E TO SW4164E

(26 BARS PER SET)

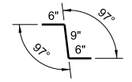
** BARS VARY LENGTH ALONG CURVED EDGE OF SIDEWALK



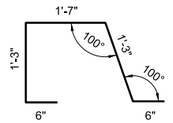
** 1 SET SW5128E TO SW5152E

(79 BARS PER SET EA SIDE OF BRIDGE)

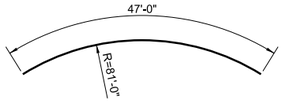
** BARS VARY ALONG CURVED EDGE OF OVERLOOK (NOT LINEAR)



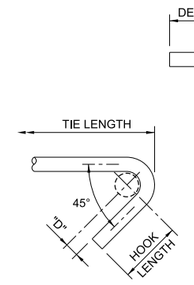
SW5019E



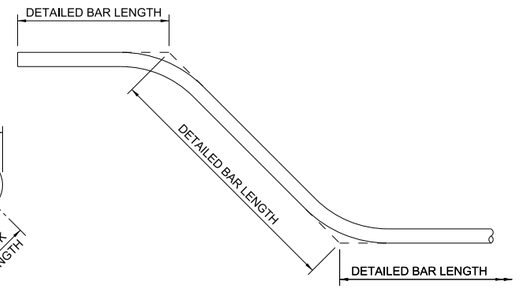
SW5051E



SW5470E



* 135° HOOK DETAIL



TYPICAL BENT BARS

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	APVD
		N. STALDER	P. WALKER	M. BRADY		R. COOMES	

REVISION

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REUSE OF DOCUMENTS:

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

SIERRA STREET BRIDGE (B-3405)
BENT BAR DETAILS NO. 2

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NTS	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-141
SHEET	

LOCATION / BAR DESIGNATION										SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
ABUTMENT 1 FOOTING & WALL													
MK	BAR	FT	IN	E/S	MK	BAR	FT	IN	E/S				
A	4	01	5							4	66	62	
A	4	04	9							4	66	209	
A	4	07	7							4	6	30	
	4	03	2							4	6	13	
A	5	06	0							5	66	413	
A	5	02	6	E						5	66	172	
A	5	04	2							5	116	504	
A	5	07	0							5	16	117	
A	5	10	3							5	10	107	
A	5	05	3							5	10	55	
	5	60	0							5	13	814	
	5	04	6							5	16	75	
	5	07	5							5	8	62	
	6	07	10							6	2	24	
A	6	06	3							6	66	620	
A	6	10	7							6	17	270	
A	6	08	9							6	65	854	
A	6	09	8							6	66	958	
A	6	12	0							6	6	108	
A	6	19	4							6	8	232	
	6	05	3							6	4	32	
	6	15	6	TO	6	16	0		(33 Bars/Sets)	6	(1 Sets)	781	
	6	13	0	TO	6	13	6		(33 Bars/Sets)	6	(1 Sets)	657	
	6	16	0	TO	6	15	3		(33 Bars/Sets)	6	(1 Sets)	774	
	6	13	6	TO	6	12	9		(33 Bars/Sets)	6	(1 Sets)	651	
	6	60	0							6	4	360	
	8	07	10							8	4	84	
	8	60	0							8	12	1,922	
	8	12	8							8	12	406	
A	8	08	7							8	4	92	
A	9	19	11							9	8	542	
A	9	15	6	TO	9	16	0		(33 Bars/Sets)	9	(1 Sets)	1,767	
A	9	10	6	TO	9	10	0		(33 Bars/Sets)	9	(1 Sets)	1,150	
	9	16	0	TO	9	15	3		(33 Bars/Sets)	9	(1 Sets)	1,753	
	9	11	0	TO	9	10	3		(33 Bars/Sets)	9	(1 Sets)	1,192	
	9	60	0							9	16	3,264	
	9	09	9							9	8	265	
	9	11	3							9	8	306	
A	9	09	4							9	66	2,094	
A	9	14	4							9	65	3,168	

Reinforcing Steel	26,787 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	172 LBS
Class AA Concrete, Modified (Major)	43.4 CUYD
Class DA Concrete, Modified (Major)	108.5 CUYD
Class EA Concrete, Modified (Major)	0.0 CUYD

LOCATION / BAR DESIGNATION										SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
ABUTMENT 2 FOOTING & WALL													
MK	BAR	FT	IN	E/S	MK	BAR	FT	IN	E/S				
A	4	01	5							4	66	62	
A	4	07	7							4	6	30	
A	5	02	6	E						5	66	172	
A	5	06	0							5	66	413	
	4	03	2							4	6	13	
	4	04	9							4	66	209	
A	5	04	2							5	116	504	
A	5	07	0							5	20	146	
A	5	10	3							5	10	107	
A	5	05	3							5	10	55	
	5	04	6							5	20	94	
	8	06	1							8	4	65	
	5	60	0							5	47	2,941	
	5	07	5							5	42	325	
A	6	06	3							6	66	620	
A	6	08	9							6	65	854	
A	6	09	8							6	132	1,917	
A	6	20	8							6	4	124	
	6	05	3							6	4	32	
	6	06	1							6	2	18	
	6	60	0							6	4	360	
	6	16	9	TO	6	17	5		(33 Bars/Sets)	6	(1 Sets)	847	
	6	14	3	TO	6	14	11		(33 Bars/Sets)	6	(1 Sets)	723	
	6	17	5	TO	6	14	11		(33 Bars/Sets)	6	(1 Sets)	801	
A	8	60	0							8	12	1,922	
A	8	12	8							8	12	406	
A	8	08	7							8	4	92	
A	9	09	4							9	66	2,094	
A	9	14	4							9	65	3,168	
A	9	21	3							9	4	289	
	9	09	9							9	8	265	
	9	11	3							9	8	306	
	9	60	0							9	16	3,264	
	9	16	9	TO	9	17	5		(33 Bars/Sets)	9	(1 Sets)	1,917	
	9	11	9	TO	9	12	5		(33 Bars/Sets)	9	(1 Sets)	1,356	
	9	17	5	TO	9	16	10		(33 Bars/Sets)	9	(1 Sets)	1,921	
	9	12	5	TO	9	11	10		(33 Bars/Sets)	9	(1 Sets)	1,360	

Reinforcing Steel	29,620 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	172 LBS
Class AA Concrete, Modified (Major)	43.4 CUYD
Class DA Concrete, Modified (Major)	117.2 CUYD
Class EA Concrete, Modified (Major)	0.0 CUYD

LOCATION / BAR DESIGNATION										SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
PIER FOOTING & WALL													
MK	BAR	FT	IN	E/S	MK	BAR	FT	IN	E/S				
P	5	09	1	E						5	60	568	
P	5	03	8							5	66	252	
P	5	07	0							5	66	482	
	5	10	2							5	4	42	
	5	60	0							5	4	250	
	6	08	3							6	34	421	
	6	60	0							6	42	3,785	
P	6	09	7							6	34	489	
P	6	11	0							6	204	3,370	
P	6	03	11							6	408	2,400	
P	6	04	8							6	204	1,430	
P	6	60	0							6	12	1,081	
P	6	13	0							6	12	234	
P	6	09	5							6	136	1,924	
	6	16	4							6	90	2,208	
	6	24	10							6	22	821	
P	8	05	3	E						8	120	1,682	
	8	60	0							8	4	641	
	8	10	3							8	4	109	
	10	26	6							10	120	13,684	

Reinforcing Steel	33,623 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	2,250 LBS
Class AA Concrete, Modified (Major)	45.3 CUYD
Class DA Concrete, Modified (Major)	137.9 CUYD
Class EA Concrete, Modified (Major)	0.0 CUYD

LOCATION / BAR DESIGNATION										SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
NORTH FLOOD WALLS AND BARRIER RAIL													
MK	BAR	FT	IN	E/S	MK	BAR	FT	IN	E/S				
	5	25	4	E						5	3	79	
	5	26	6	E						5	3	83	
	6	07	0							6	81	852	
Reinforcing Steel - H=16' Type 1a Walls												12,585	
Reinforcing Steel - H=22' Type 1a (Mod) Wall												19,137	
Reinforcing Steel - Return Walls												4,459	

Reinforcing Steel (Total)	37,033 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	162 LBS
Class AA Concrete, Modified (Major)	0.0 CUYD
Class DA Concrete, Modified (Major)	241.4 CUYD
Class EA Concrete, Modified (Major)	0.0 CUYD

LOCATION	BAR DESIGNATION									SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
BRIDGE DECK													
MK	BAR	FT	IN	E/S	MK	BAR	FT	IN	E/S				
	5	60	0	E						5	456	28,536	
D	5	02	0							5	210	438	
	5	02	0		TO	5	04	6	(40 Bars/Sets)	5	(2 Sets)	271	
	5	30	1	E						5	228	7,154	
D	5	10	6	E						5	280	3,066	
D	5	13	2	E						5	280	3,845	
D	5	48	0	E						5	6	300	
	5	19	5	E	TO	5	31	11	E (7 Bars/Sets)	5	(2 Sets)	375	
	5	12	6	E						5	280	3,651	
	5	10	0	E						5	280	2,920	
	5	47	3	E						5	412	20,304	
	5	52	4	E						5	152	8,297	
	9	42	0	E						9	78	11,138	

Reinforcing Steel	709 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	89,586 LBS
Class AA Concrete, Modified (Major)	0.0 CUYD
Class DA Concrete, Modified (Major)	0.0 CUYD
Class EA Concrete, Modified (Major)	239.4 CUYD

LOCATION	BAR DESIGNATION									SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
SIDEWALKS													
MK	BAR	FT	IN	E/S	MK	BAR	FT	IN	E/S				
	4	04	5	E						4	1	3	
	4	03	11	E						4	1	3	
	4	06	9	E						4	9	41	
	4	08	0	E						4	1	5	
	4	08	5	E						4	1	6	
	4	05	0	E						4	1	3	
	4	08	10	E						4	1	6	
	4	11	4	E						4	1	8	
	4	12	5	E						4	1	8	
	4	12	8	E						4	1	8	
	4	15	7	E						4	1	10	
	4	05	5	E	TO	4	01	0	E (7 Bars/Sets)	4	(1 Sets)	15	
	4	07	0	E	TO	4	15	0	E (6 Bars/Sets)	4	(1 Sets)	44	
SW	4	13	0	E						4	32	278	
SW	4	16	4	E						4	10	109	
SW	4	16	9	E						4	7	78	
SW	4	12	8	E						4	156	1,320	
SW	5	47	0	E						5	8	392	
SW	4	05	1	E	TO	4	01	0	E (7 Bars/Sets)	4	(1 Sets)	14	
SW	4	16	0	E	TO	4	14	10	E (7 Bars/Sets)	4	(1 Sets)	72	
SW	4	12	8	E	TO	4	14	4	E (26 Bars/Sets)	4	(1 Sets)	234	
	5	30	0	E						5	30	939	
	5	06	9	E						5	11	77	
	5	15	0	E						5	1	16	
	5	14	8	E						5	29	444	
	5	15	0	E						5	1	16	
	5	20	3	E						5	1	21	
	5	36	3	E						5	1	38	
	5	60	0	E						5	60	3,755	
	5	07	6	E	TO	5	14	2	E (6 Bars/Sets)	5	1 Sets)	68	
SW	5	01	9	E						5	353	644	
SW	5	12	8	E	TO	5	15	2	E (79 Bars/Sets)	5	(2 Sets)	2,293	
SW	5	05	1	E						5	348	1,845	

Reinforcing Steel	0 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	12,813 LBS
Class AA Concrete, Modified (Major)	0.0 CUYD
Class DA Concrete, Modified (Major)	0.0 CUYD
Class EA Concrete, Modified (Major)	115.0 CUYD

*BAR LENGTHS VARY ALONG CURVED EDGES OF PIER OVERLOOK (NOT LINEAR)

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NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	N. STALDER	P. WALKER	M. BRADY			R. COOMES	

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

SIERRA STREET BRIDGE (B-3405)
BILL OF MATERIALS NO. 1

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

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NTS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-142
SHEET	

LOCATION	BAR DESIGNATION										SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
SOUTH APPROACH SLAB 1														
MK	BAR	FT	IN	E/S		MK	BAR	FT	IN	E/S				
	4	15	1	E							4	45	453	
	4	15	1	E	TO	4	14	8	E	(12 Bars/Sets)	4	1 Sets)	119	
	4	60	0	E							4	8	321	
	4	07	5	E							4	6	30	
	4	03	2	E	TO	4	01	6	E	(6 Bars/Sets)	4	1 Sets)	9	
	4	39	6	E							4	2	53	
	4	42	4	E	TO	4	36	2	E	(6 Bars/Sets)	4	1 Sets)	157	
	4	21	3	E							4	32	454	
	4	35	8	E							4	31	739	
	4	21	8	E	TO	4	27	11	E	(6 Bars/Sets)	4	(1 Sets)	99	
	4	01	1	E	TO	4	02	7	E	(6 Bars/Sets)	4	(1 Sets)	7	
	4	06	5	E							4	2	9	
AS	5	03	8	E							5	158	604	
AS	5	05	7	E							5	10	58	
	7	15	1	E							7	90	2,775	
	7	03	2	E	TO	7	01	6	E	(13 Bars/Sets)	7	1 Sets)	62	
	7	15	1	E	TO	7	14	8	E	(24 Bars/Sets)	7	(1 Sets)	730	
	7	15	2	E							7	6	186	
	7	11	2	E							7	6	137	
	7	01	1	E	TO	7	02	7	E	(13 Bars/Sets)	7	1 Sets)	49	
	8	10	0	E							8	6	160	

Reinforcing Steel	0 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	7,211 LBS
Class AA Concrete, Modified (Major)	0.0 CUYD
Class DA Concrete, Modified (Major)	0.0 CUYD
Class EA Concrete, Modified (Major)	37.4 CUYD

LOCATION	BAR DESIGNATION										SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
NORTH APPROACH SLAB 2														
MK	BAR	FT	IN	E/S		MK	BAR	FT	IN	E/S				
	4	06	6	E							4	8	35	
	4	35	8	E							4	12	286	
	4	01	7	E	TO	4	05	2	E	(2 Bars/Sets)	4	1 Sets)	5	
	4	06	10	E		4	12	4	E	(6 Bars/Sets)	4	1 Sets)	38	
	4	15	2	E	TO	4	14	8	E	(31 Bars/Sets)	4	1 Sets)	309	
	4	12	9	E	TO	4	14	7	E	(2 Bars/Sets)	4	(1 Sets)	18	
	4	13	9	E	TO	4	07	0	E	(6 Bars/Sets)	4	(1 Sets)	42	
	4	06	9	E							4	10	45	
	4	42	4	E	TO	4	36	2	E	(6 Bars/Sets)	4	(1 Sets)	157	
	4	60	0	E							4	3	120	
	4	07	5	E							4	3	15	
	4	27	3	E	TO	4	24	0	E	(19 Bars/Sets)	4	1 Sets)	325	
	4	20	10	E	TO	4	19	6	E	(18 Bars/Sets)	4	1 Sets)	242	
	4	09	1	E	TO	4	09	4	E	(19 Bars/Sets)	4	1 Sets)	117	
	4	34	4	E	TO	4	33	2	E	(3 Bars/Sets)	4	1 Sets)	68	
AS	4	32	8	E							4	2	44	
AS	5	03	8	E							5	134	512	
AS	5	05	7	E							5	10	58	
	7	06	6	E							7	16	213	
	7	01	7	E	TO	7	05	2	E	(3 Bars/Sets)	7	(1 Sets)	21	
	7	06	10	E	TO	7	12	4	E	(12 Bars/Sets)	7	(1 Sets)	235	
	7	15	2	E	TO	7	14	8	E	(62 Bars/Sets)	7	(1 Sets)	1,890	
	7	12	9	E	TO	7	14	7	E	(4 Bars/Sets)	7	(1 Sets)	112	
	7	13	9	E	TO	7	13	9	E	(12 Bars/Sets)	7	1 Sets)	337	
	7	06	9	E							7	21	290	
	7	11	2	E							7	6	137	
	7	15	2	E							7	6	186	
	8	10	0	E							8	6	160	

Reinforcing Steel	0 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	6,017 LBS
Class AA Concrete, Modified (Major)	0.0 CUYD
Class DA Concrete, Modified (Major)	0.0 CUYD
Class EA Concrete, Modified (Major)	27.6 CUYD

LOCATION	BAR DESIGNATION										SIZE	QUANTITY	MASS (LBS)	SUBTOTALS
PILASTERS														
MK	BAR	FT	IN	E/S		MK	BAR	FT	IN	E/S				
B	4	05	9	E							4	72	277	
B	4	07	10	E							4	64	335	
B	4	06	7	E							4	56	246	
B	5	06	0	E							5	96	601	
B	5	05	9	E							5	16	96	
B	5	05	6	E							5	16	92	
B	3	02	3	E							3	208	176	
B	5	05	9	E							5	16	96	
B	5	05	6	E							5	16	92	
B	4	06	6	E							4	64	278	
B	4	06	7	E							4	56	246	
	4	05	0	E							4	8	27	
B	5	04	2	E							5	32	139	
B	4	06	9	E							4	40	180	

Reinforcing Steel	0 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	2,881 LBS
Class AA Concrete, Modified (Major)	0.0 CUYD
Class DA Concrete, Modified (Major)	7.9 CUYD
Class EA Concrete, Modified (Major)	0.0 CUYD

GRAND TOTALS	
Reinforcing Steel	127,772 LBS
Reinforcing Steel (Doweled)	0 LBS
Reinforcing Steel (Epoxy Coated)	121,264 LBS
Class AA Concrete, Modified (Major)	133 CUYD
Class DA Concrete, Modified (Major)	613 CUYD
Class EA Concrete, Modified (Major)	420 CUYD

DRAFT PS&E
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CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		N. STALDER	P. WALKER	M. BRADY	APVD	R. COOMES	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

SIERRA STREET BRIDGE (B-3405)
BILL OF MATERIALS NO. 2

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

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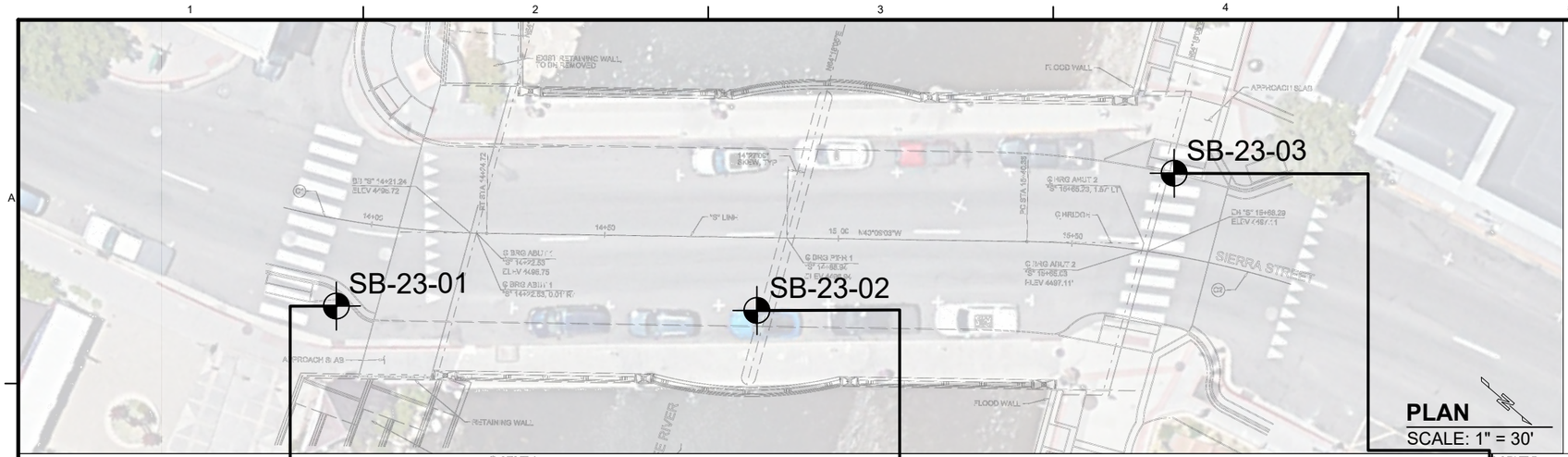
NTS
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

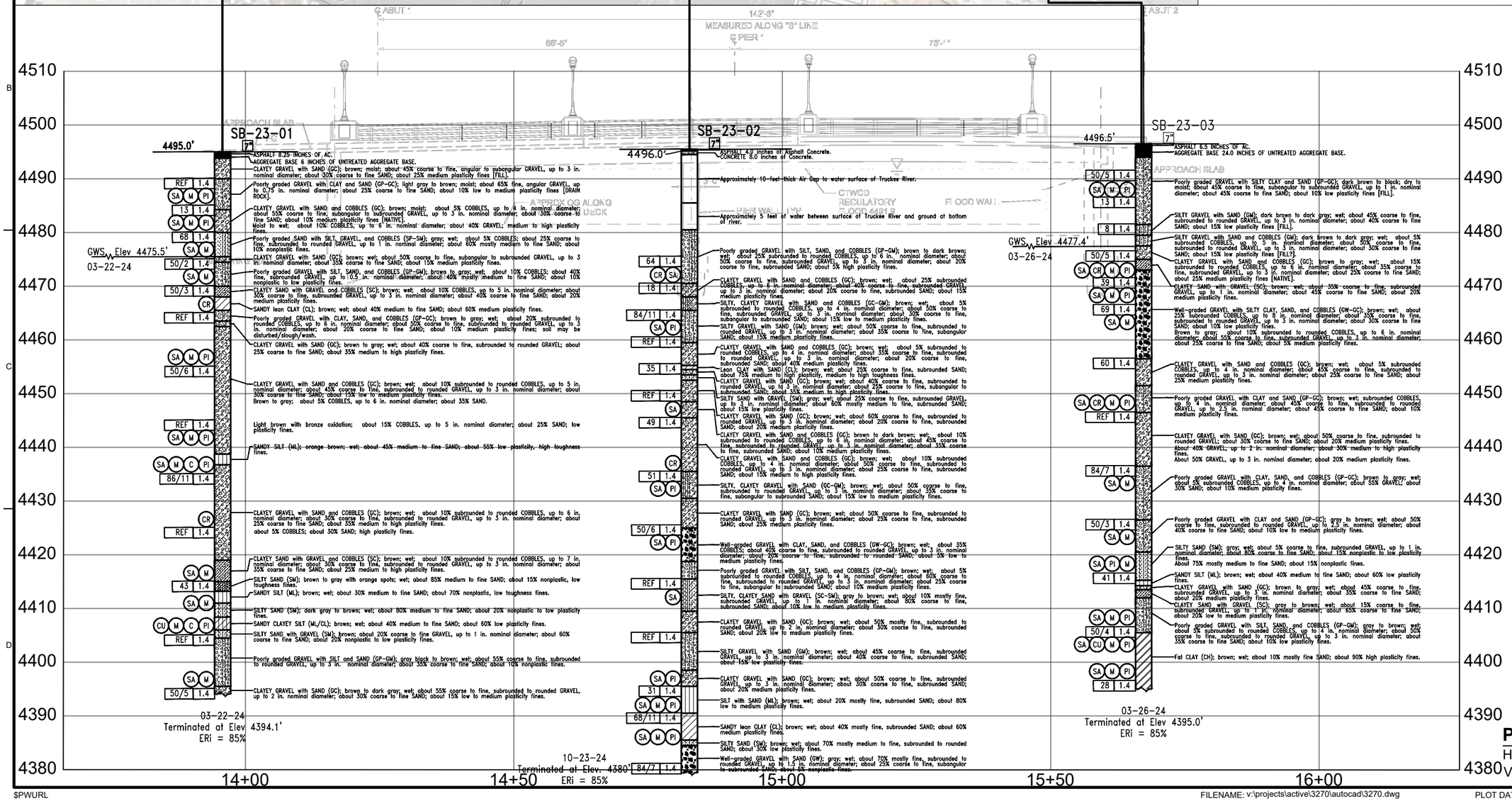
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-143
SHEET	



PLAN
SCALE: 1" = 30'

NOTES:

1. FIELD CLASSIFICATION OF SOIL WAS IN ACCORDANCE WITH ASTM D2488-17 "DESCRIPTION AND IDENTIFICATION OF SOILS (VISUAL-MANUAL PROCEDURE).
2. STANDARD PENETRATION TESTS WERE PERFORMED IN ACCORDANCE WITH ASTM D1586-18 USING A HAMMER OPERATED WITH AN AUTOMATED DROP SYSTEM. DRILL RODS WERE 1 5/8-INCH DIAMETER "A"-RODS; SPT SAMPLER WAS AN UPSET WALL SAMPLER.
3. SPT HAMMER ENERGY RATIO (ETR) MEASUREMENTS INDICATE AN ETR=85% AS OF 04/17/2023.
4. IF LABORATORY TESTS ARE NOT SHOWN AS BEING PERFORMED, THE SOIL DESCRIPTIONS PRESENTED IN THE LOTB ARE BASED SOLELY ON THE VISUAL PRACTICES DESCRIBED IN THE ABOVE REFERENCED STANDARD (REFER TO NOTE 1).
5. THE LENGTH OF EACH SAMPLED INTERVAL IS SHOWN GRAPHICALLY ON THE BORING LOG. WHOLE NUMBER BLOW COUNTS ("N") REPRESENT THE "STANDARD PENETRATION RESISTANCE" INTERVAL IN ACCORDANCE WITH ASTM D1586-18. WHERE LESS THAN 0.5 FEET OF PENETRATION RESISTANCE IS ACHIEVED, THE BLOW COUNT SHOWN IS FOR THAT FRACTION OF THE "STANDARD PENETRATION RESISTANCE" INTERVAL ACTUALLY PENETRATED.
6. GROUNDWATER SURFACE (GWS) ELEVATIONS IN THE BORINGS INDICATED ON THE LOG OF TEST BORING SHEETS REFLECT THE FLUID LEVEL IN THE BORINGS ON THE SPECIFIED DATE.
7. GROUNDWATER SURFACE ELEVATIONS ARE SUBJECT TO SEASONAL FLUCTUATIONS AND MAY OCCUR AT HIGHER OR LOWER ELEVATIONS DEPENDING ON THE CONDITIONS AT ANY PARTICULAR TIME.
8. DRILLING METHOD WAS ROTARY SONIC DRILLING USING 6-INCH NOMINAL DIAMETER CORE AND 7-INCH NOMINAL DIAMETER CASING.



PROFILE
HOR: 1" = 20'
VERT: 1" = 20'

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NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
	C. JONES	C. JONES	C. JONES	N. ANDERSON	APVD	N. ANDERSON	

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300 SIERRA MANOR DRIVE, SUITE 1
RENO, NV 89511
(775) 851-8205
INFO@CMENV.COM

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PR202-23-063 FHWA PIN: BR-0191-(343) NDOT EA: 74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

BRIDGE (B-3405)
LOG OF TEST BORINGS (LOTB)

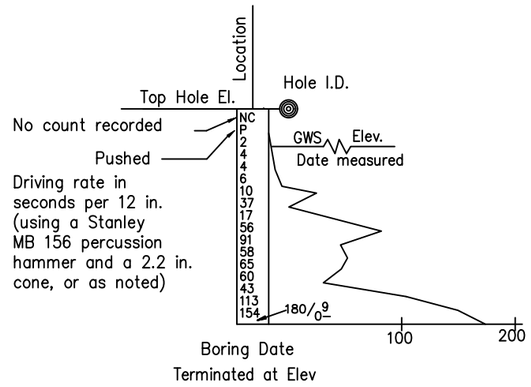
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-144
SHEET	

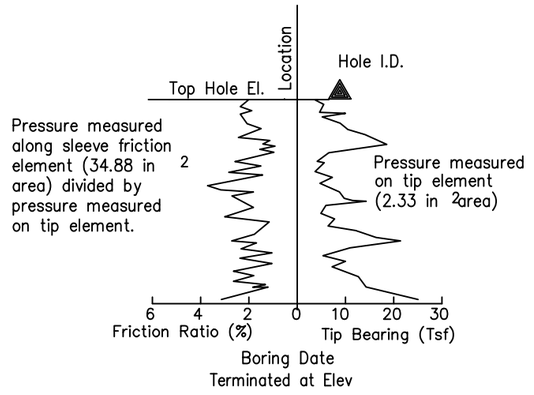
CONSISTENCY OF COHESIVE SOILS				
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 – 0.25	0.25 – 0.5	0.12 – 0.25	0.12 – 0.25
Medium Stiff	0.25 – 0.5	0.5 – 1	0.25 – 0.5	0.25 – 0.5
Stiff	0.5 – 1	1 – 2	0.5 – 1	0.5 – 1
Very Stiff	1 – 2	2 – 4	1 – 2	1 – 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2

CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

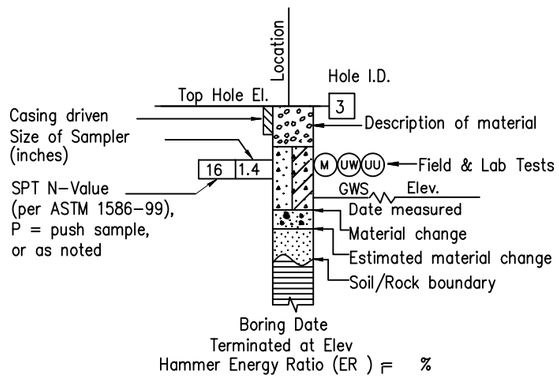
BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R RW RC P	Rotary drilled boring (conventional) Rotary drilled with self–casing wire–line Rotary core with continuously–sampled, self–casing wire–line Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD HA	Hand driven (1–inch soil tube) Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778)
	O	Other (note on LOTB)
Note: Size in inches.		



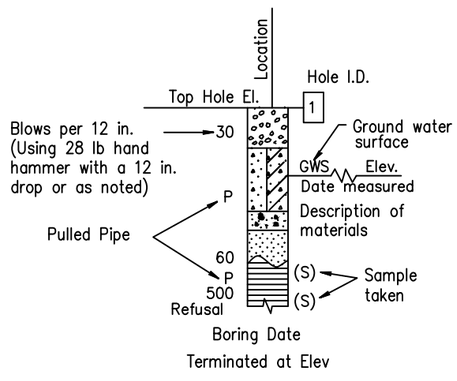
DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING



ROTARY BORING



HAND BORING

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
	C. JONES	C. JONES	C. JONES	N. ANDERSON	APVD	N. ANDERSON	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PR202-23-063 FHWA PIN: BR-0191-(343) NDOT EA: 74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

BRIDGE (B-3405)
LOTB SOIL LEGEND 1 OF 2

CME CONSTRUCTION MATERIALS ENGINEERS, INC.
300 SIERRA MANOR DRIVE, SUITE 1
RENO, NV 89511
(775) 851-8205
INFO@CMENV.COM

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-145
SHEET	

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names
GW	Well–graded GRAVEL Well–graded GRAVEL with SAND
GP	Poorly–graded GRAVEL Poorly–graded GRAVEL with SAND
GW–GM	Well–graded GRAVEL with SILT Well–graded GRAVEL with SILT and SAND
GW–GC	Well–graded GRAVEL with CLAY (or SILTY CLAY) Well–graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GP–GM	Poorly–graded GRAVEL with SILT Poorly–graded GRAVEL with SILT and SAND
GP–GC	Poorly–graded GRAVEL with CLAY (or SILTY CLAY) Poorly–graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GM	SILTY GRAVEL SILTY GRAVEL with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND
GC–GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND
SW	Well–graded SAND Well–graded SAND with GRAVEL
SP	Poorly–graded SAND Poorly–graded SAND with GRAVEL
SW–SM	Well–graded SAND with SILT Well–graded SAND with SILT and GRAVEL
SW–SC	Well–graded SAND with CLAY (or SILTY CLAY) Well–graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SP–SM	Poorly–graded SAND with SILT Poorly–graded SAND with SILT and GRAVEL
SP–SC	Poorly–graded SAND with CLAY (or SILTY CLAY) Poorly–graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SM	SILTY SAND SILTY SAND with GRAVEL
SC	CLAYEY SAND CLAYEY SAND with GRAVEL
SC–SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL
PT	PEAT
	COBBLES COBBLES and BOULDERS BOULDERS

Graphic/Symbol	Group Names
CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
CL–ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (ASTM D 1557)
- (CR) Corrosivity Testing (Varies)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content–% (ASTM D 2974)
- (P) Permeability (Varies)
- (SA) Particle Size Analysis (ASTM D 6913)
- (PI) Plasticity Index / Liquid Limt (ASTM D 4318)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R–Value (ASTM D 2844)
- (SE) Sand Equivalent (ASTM D 4219)
- (SG) Specific Gravity (ASTM D 854)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression–Soil (ASTM D 2166)
Unconfined Compression–Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (UW) Unit Weight (ASTM D 4767)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 – 5
Loose	5 – 10
Medium Dense	10 – 30
Dense	30 – 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% – 10%
Little	15% – 25%
Some	30% – 45%
Mostly	50% – 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 – 12
Gravel	Coarse	3/4 – 3
	Fine	1/5 – 3/4
Sand	Coarse	1/16 – 1/5
	Medium	1/64 – 1/16
	Fine	1/300 – 1/64
Silt and Clay		Less than 1/300

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		C. JONES	C. JONES	N. ANDERSON	APVD	N. ANDERSON	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PR202-23-063 FHWA PIN: BR-0191-(343) NDOT EA: 74508

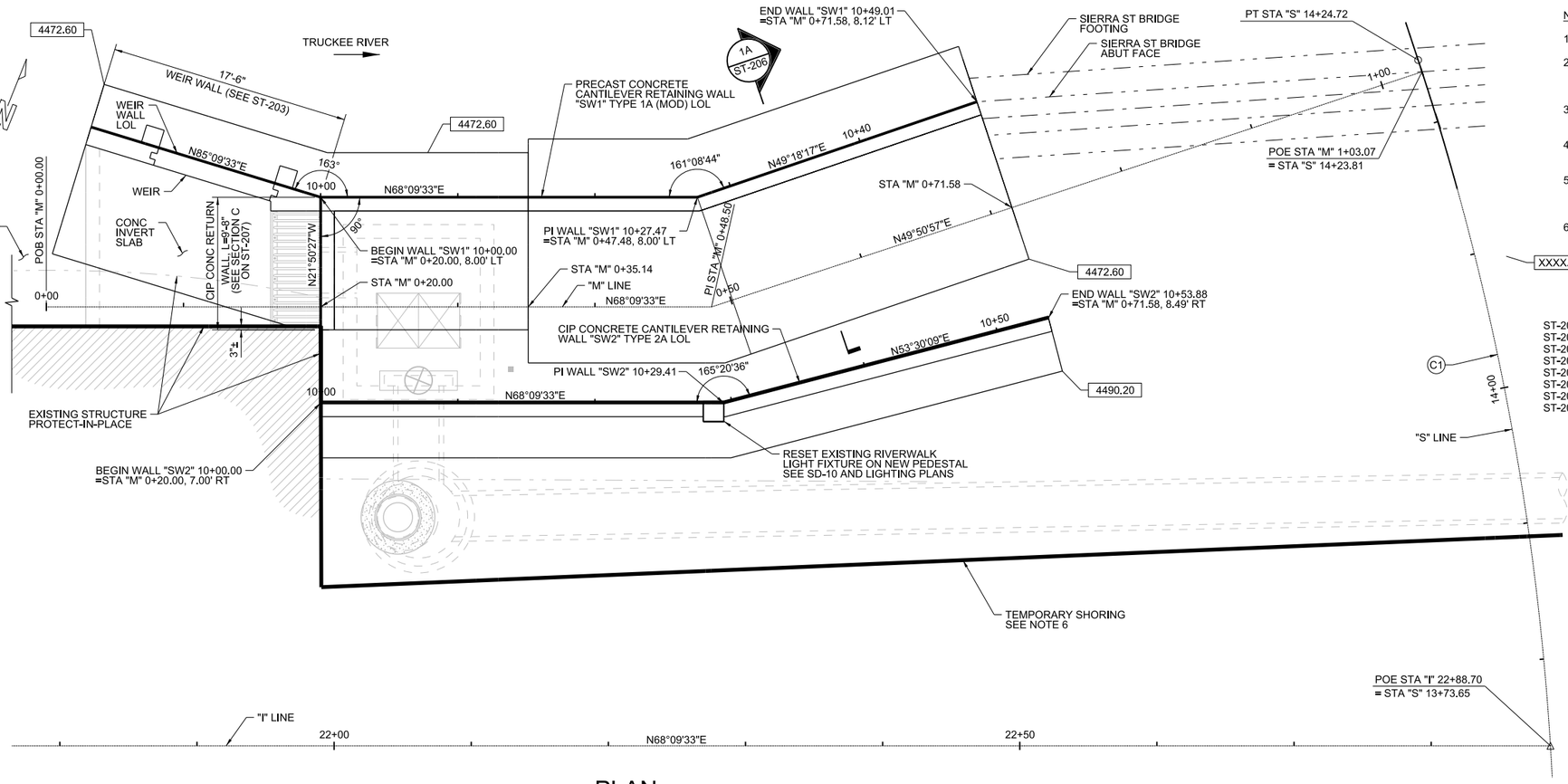
SIERRA STREET BRIDGE REPLACEMENT PROJECT

BRIDGE (B-3405)
LOTB SOIL LEGEND 2 OF 2

CONSTRUCTION MATERIALS ENGINEERS, INC.
CME
300 SIERRA MANOR DRIVE, SUITE 1
RENO, NV 89511
(775) 851-8205
INFO@CMENV.COM

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-146
SHEET	



PLAN
1" = 5'

NOTES:

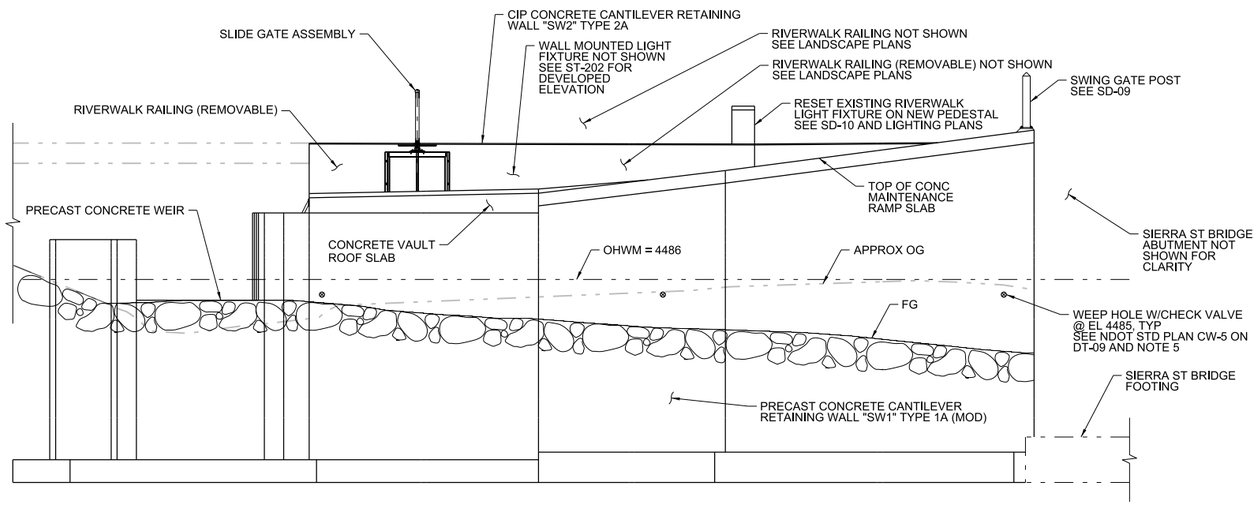
1. FOR COCHRANE DITCH PLAN & ELEVATION, SEE CD-01.
2. FOR TYPE 2A CONCRETE CANTILEVER RETAINING WALL DETAILS, SEE NDOT STD PLANS CW-3 THROUGH CW-6 ON DT-08 & DT-09.
3. FOR RIVERWALK RAILING AND SWING GATE, SEE LANDSCAPE PLANS.
4. FOR DEVELOPED WALL ELEVATIONS, GENERAL NOTES & QUANTITIES, SEE ST-202.
5. WEEP HOLES SHALL HAVE A ONE-WAY CHECK VALVE TO PREVENT FLOW OF RIVER WATER BEHIND RETAINING WALL. WEEP HOLE VALVE SHALL BE JET MODEL JF4SSCVLV, OR APPROVED EQUAL.
6. SEE ST-103 FOR TEMPORARY SHORING LAYOUT. NO DIRECT PAYMENT FOR TEMPORARY SHORING.

XXXX.XX DENOTES BOTTOM OF FOOTING ELEVATION

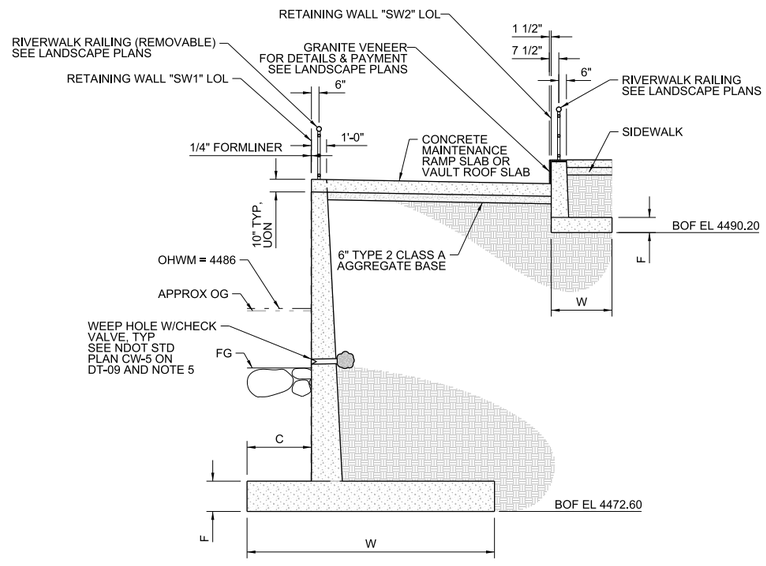
DRAWING LIST

ST-201 PLAN, ELEVATION & TYPICAL SECTION
ST-202 GENERAL NOTES, QUANTITIES & DEVELOPED WALL ELEVATIONS
ST-203 DETAILS NO. 1
ST-204 DETAILS NO. 2
ST-205 DETAILS NO. 3
ST-206 PRECAST CONCRETE RETAINING WALL TYPE 1A (MOD)
ST-207 PRECAST CONCRETE RETAINING WALL DETAILS
ST-208 ACCESS VAULT DETAILS

C1 CURVE DATA
△ = 25°01'03"
R = 198.00'
L = 86.45'
T = 43.93'



ELEVATION (MIRRORED)
1" = 5'



NOTE: ALL DIMENSIONS SHOWN ARE NORMAL TO WALL LOL

TYPICAL SECTION
1" = 5'

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NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T. VESCO	P. WALKER	R. COOMES	R. COOMES	R. COOMES	

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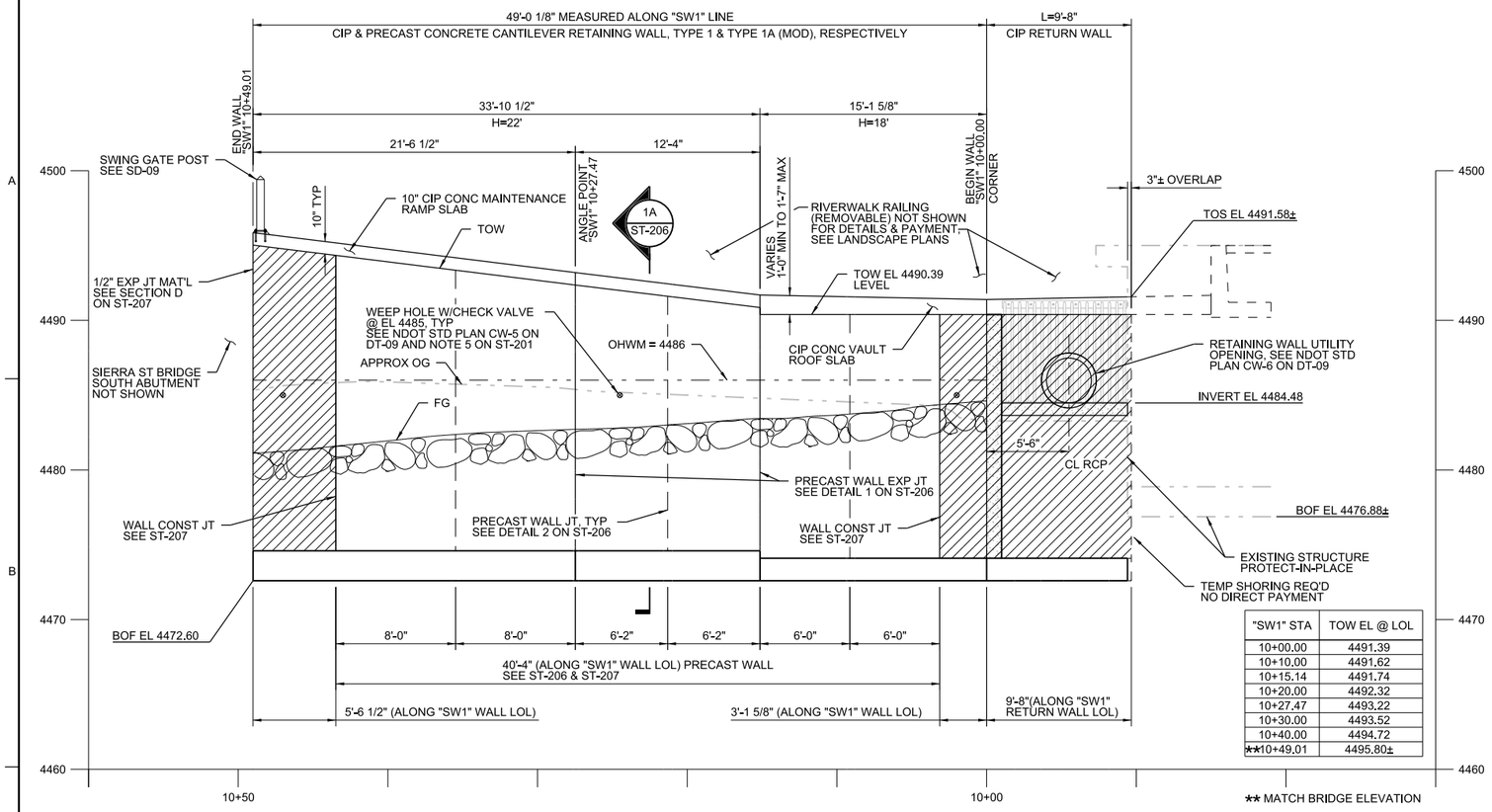
RENO, NV 89501
PH (775) 329-7300

SIERRA STREET BRIDGE REPLACEMENT PROJECT

COCHRANE DITCH MAINTENANCE ACCESS PLAN, ELEVATION & TYPICAL SECTION

1" = 5'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-201
SHEET	



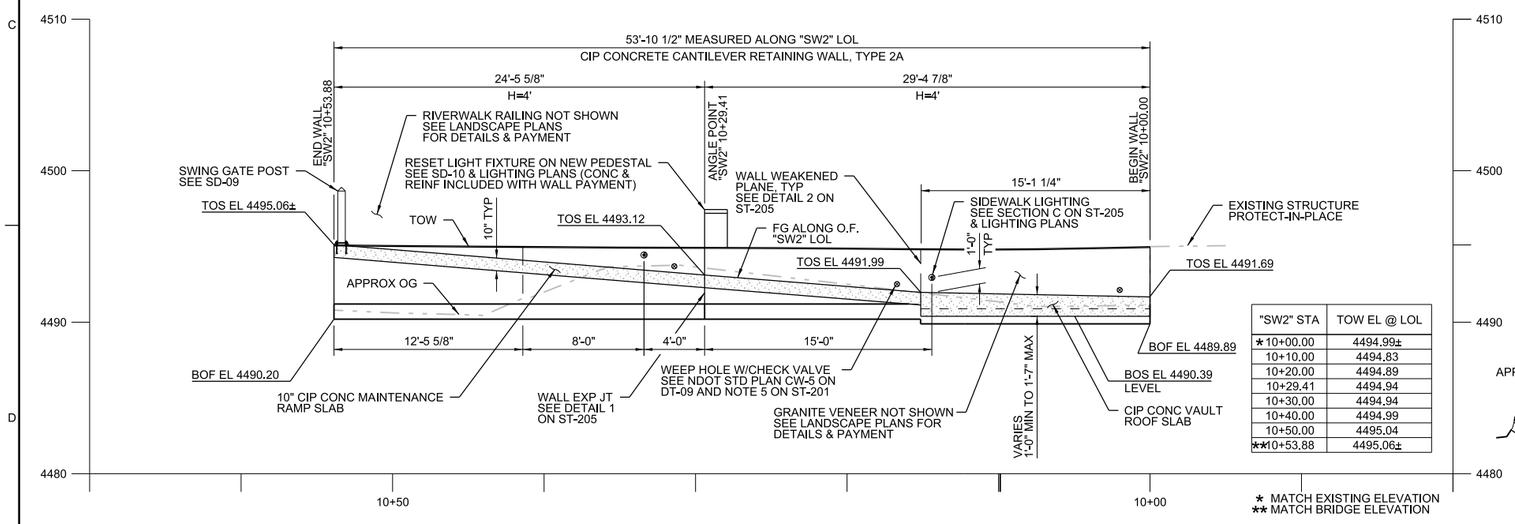
"SW1" STA	TOW EL @ LOL
10+00.00	4491.39
10+10.00	4491.62
10+15.14	4491.74
10+20.00	4492.32
10+27.47	4493.22
10+30.00	4493.52
10+40.00	4494.72
**10+49.01	4495.80±

LEGEND:
CIP WALL CLOSURE SEE ST-207

"SW1" WALL DEVELOPED ELEVATION

1" = 5'

(LOOKING SOUTH)



"SW2" STA	TOW EL @ LOL
*10+00.00	4494.99±
10+10.00	4494.83
10+20.00	4494.89
10+29.41	4494.94
10+30.00	4494.94
10+40.00	4494.99
10+50.00	4495.04
**10+53.88	4495.06±

"SW2" WALL DEVELOPED ELEVATION

1" = 5'

(LOOKING SOUTH)

GENERAL NOTES:

1. DESIGN SPECIFICATIONS: "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS", 9TH EDITION, 2020. NDOT "STRUCTURES MANUAL", 2008 WITH REVISIONS THROUGH 2019.
2. STANDARD PLANS: NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION", 2024.
3. CONSTRUCTION SPECIFICATIONS: NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2014", EXCEPT AS NOTED BELOW AND IN THE CONTRACT REVISIONS TO NDOT SPECIFICATIONS.
4. LIVE LOAD: SEE NOTE 2 ON NDOT STANDARD PLAN CW-4 ON DT-08.
5. SEISMIC ACCELERATION: PGA=0.51g, DESIGN FOR 1/2 OF PGA.
6. SOIL PROPERTIES: K_{ae}=0.369 AND EQUIVALENT PASSIVE FLUID PRESSURE (SEISMIC)=0.322 kcf. FOR ALL OTHER SOIL PROPERTIES, SEE NOTE 5 ON NDOT STANDARD PLAN CW-4 ON DT-08.
7. SURFACE FINISH: WALL "SW1" & COCHRANE DITCH WEIR WALL FACE OF CONCRETE SHALL RECIEVE A BOARD FORMLINER. WALL "SW2" SHALL RECIEVE A GRANITE VENEER (SEE LANDSCAPE PLANS).
8. GRAFFITI RESISTANT COATING: WALL "SW1" & COCHRANE DITCH WEIR WALL FACE OF CONCRETE SHALL RECEIVE GRAFFITI RESISTANT COATING. COATING SHALL BE APPLIED TO 2 FEET BELOW FINISHED GRADE.
9. CONCRETE: ALL CIP & PRECAST CONCRETE FOR RETAINING WALLS SHALL BE CLASS DA MODIFIED (MAJOR) WITH 3/8" GRADING AND f'c = 4 ksi AT 28 DAYS. MAINTENANCE ACCESS RAMP AND VAULT ROOF SLAB CONCRETE SHALL BE CLASS AA MODIFIED (MAJOR) WITH f'c = 4 ksi AT 28 DAYS.
10. REINFORCING STEEL: SEE NOTE 4 ON NDOT STANDARD PLAN CW-4 ON DT-08.
LAP SPLICE TABLE:

BAR SIZE	(A) MINIMUM LAP SPLICE (INCHES)			
	UNCOATED BARS		EPOXY COATED BARS	
	TYP BARS	(B) TOP HORIZ BARS	TYP BARS	(B) TOP HORIZ BARS
#4	20	26	24	32
#5	24	32	30	39
#6	30	39	34	45
#7	38	50	45	59
#8	48	63	57	75
#9	60	78	72	94
#10	76	99	91	119
#11	94	123	112	146

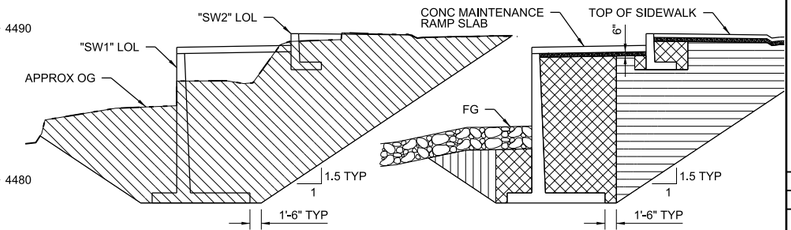
LAP SPLICE NOTES:
A. LAP SPLICE LENGTHS BASED ON A MINIMUM f'c OF 4 ksi @ 28 DAYS, UNCOATED BARS SPACED 4 INCHES OR MORE WITH A CLEAR COVER OF 1.5 INCHES OR MORE, EPOXY COATED BARS SPACED AT 6 BAR DIAMETERS OR MORE WITH A CLEAR COVER OF 3 BAR DIAMETERS OR MORE, AND NORMAL WEIGHT CONCRETE.
B. A TOP BAR IS ANY HORIZONTAL BAR WITH 12" OR MORE OF FRESH CONCRETE CAST DIRECTLY BENEATH IT.

11. FOUNDATIONS: RETAINING WALLS TO BE FOUNDED ON SPREAD FOOTINGS, DESIGN AND CONSTRUCTION IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS CONTAINED IN THE REPORT "GEOTECHNICAL INVESTIGATION RTC SIERRA STREET BRIDGE PROJECT" PREPARED BY CONSTRUCTION MATERIALS ENGINEERS, INC. AND DATED MARCH 2026 (DRAFT PS&E).
12. STRUCTURAL STEEL: TRASH RACK PIPES SHALL BE ASTM A500 GRADE B (Fy = 46 ksi) AND PLATE STEEL SHALL BE ASTM A36 (Fy = 36 ksi). AFTER FABRICATION GALVANIZE PER ASTM A123.

HYDRAULIC INFORMATION	
STORM EVENT	WATER SURFACE ELEVATION
100-YEAR EVENT	4500.8 FT
CTWCD REGULATORY EVENT	4492.0 FT

APPROXIMATE QUANTITIES		
ITEM DESCRIPTION	QUANTITY	UNIT
BORROW EMBANKMENT	600	CUYD
STRUCTURE EXCAVATION	1,475	CUYD
GRANULAR BACKFILL	480	CUYD
AESTHETIC PATTERNING	70	SQYD
NATIVE BACKFILL	90	CUYD
TYPE 2 CLASS A AGGREGATE BASE	14	CUYD
CLASS AA CONCRETE, MODIFIED (MAJOR)	29	CUYD
CLASS DA CONCRETE, MODIFIED (MAJOR)	181	CUYD
REINFORCING STEEL	28,921	POUND
REINFORCING STEEL (DOWELED)	241	POUND
STRUCTURAL STEEL	745	POUND
VAULT ACCESS DOORS	1	EACH
GRAFFITI RESISTANT COATING	70	SQYD

NOTE: FOR CONDUIT, JUNCTION BOXES, LIGHTING, AND OTHER ELECTRICAL FEATURES PAYMENT, SEE ELECTRICAL PLANS



EXCAVATION LIMITS

1" = 10'

BACKFILL LIMITS

1" = 10'

EARTHWORK LEGEND: STRUCTURE EXCAVATION; BORROW EMBANKMENT; NATIVE BACKFILL; GRANULAR BACKFILL; AGGREGATE BASE; GROUTED RIPRAP (SEE BRIDGE PLANS)

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	REVISION	DR	CHK	APVD
DSGN	T. VESCO	P. WALKER	R. COOMES	R. COOMES	R. COOMES BY

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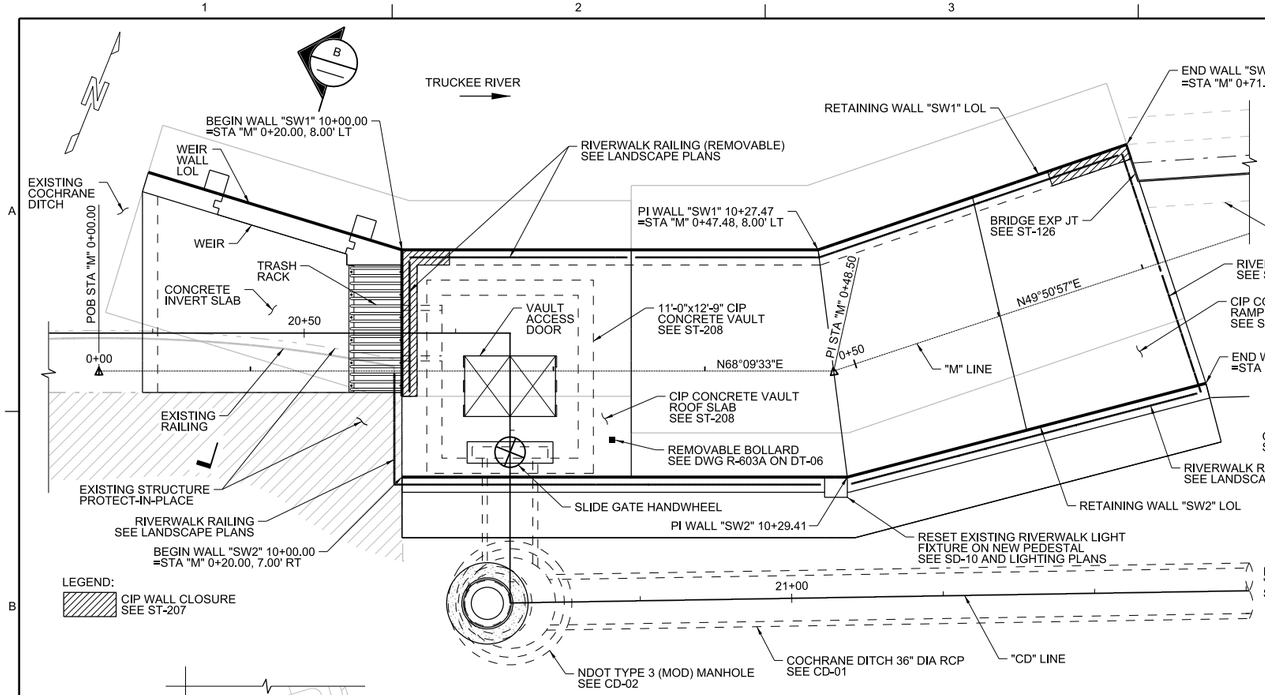
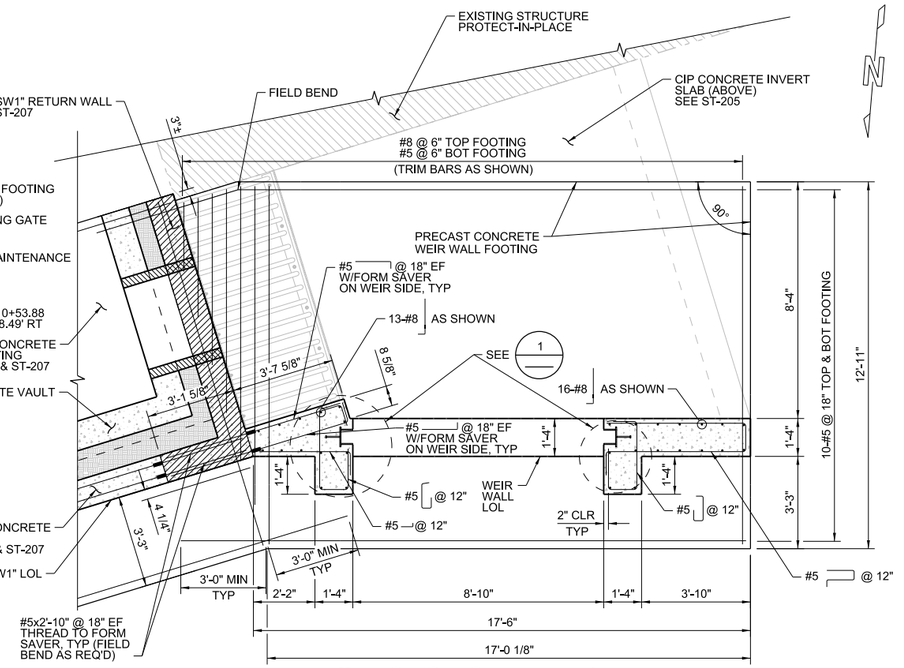
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508
SIERRA STREET BRIDGE REPLACEMENT PROJECT
COCHRANE DITCH MAINTENANCE ACCESS GENERAL NOTES, QUANTITIES & DEVELOPED WALL ELEVATIONS

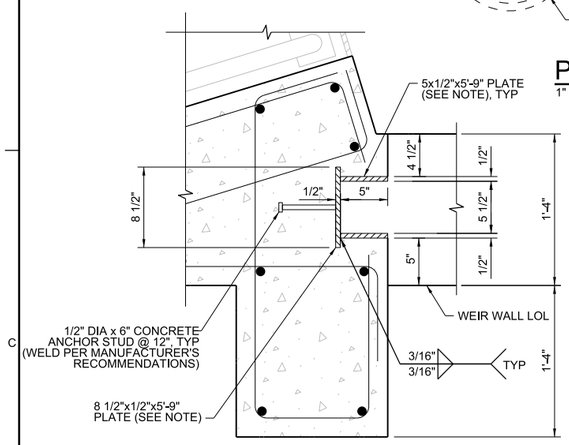
AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-202
SHEET	

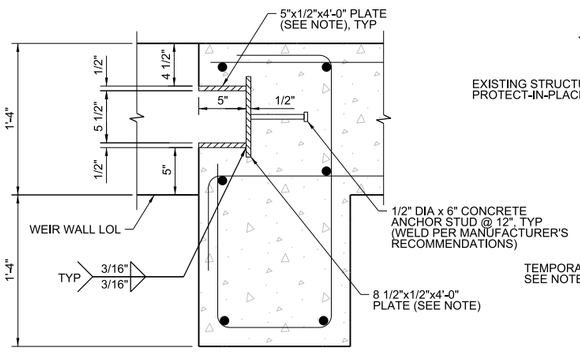


PLAN DETAILS
1" = 5'



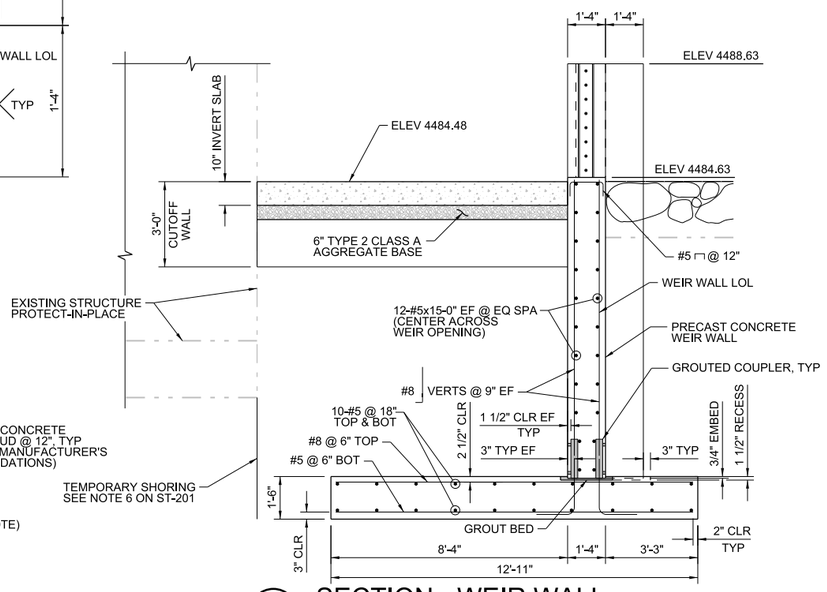
A SECTION - WEIR WALL
3/8"=1'-0"





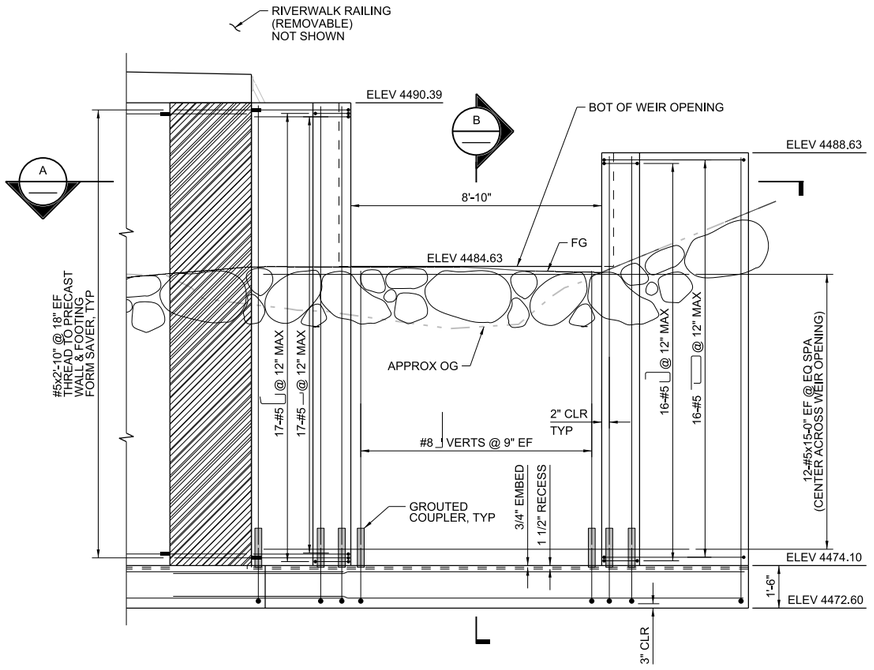
1 DETAIL - STOP LOG KEYS
1 1/2"=1'-0"

NOTE: GALVANIZE ENTIRE ASSEMBLY AFTER FABRICATION



B SECTION - WEIR WALL
3/8"=1'-0"

ST-203
ST-207



WEIR WALL ELEVATION
3/8"=1'-0"

(LOOKING SOUTH)

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NO.	DATE	DSGN	REVISION	BY	APVD
		T. VESCO	P. WALKER	R. COOMES	R. COOMES

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PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

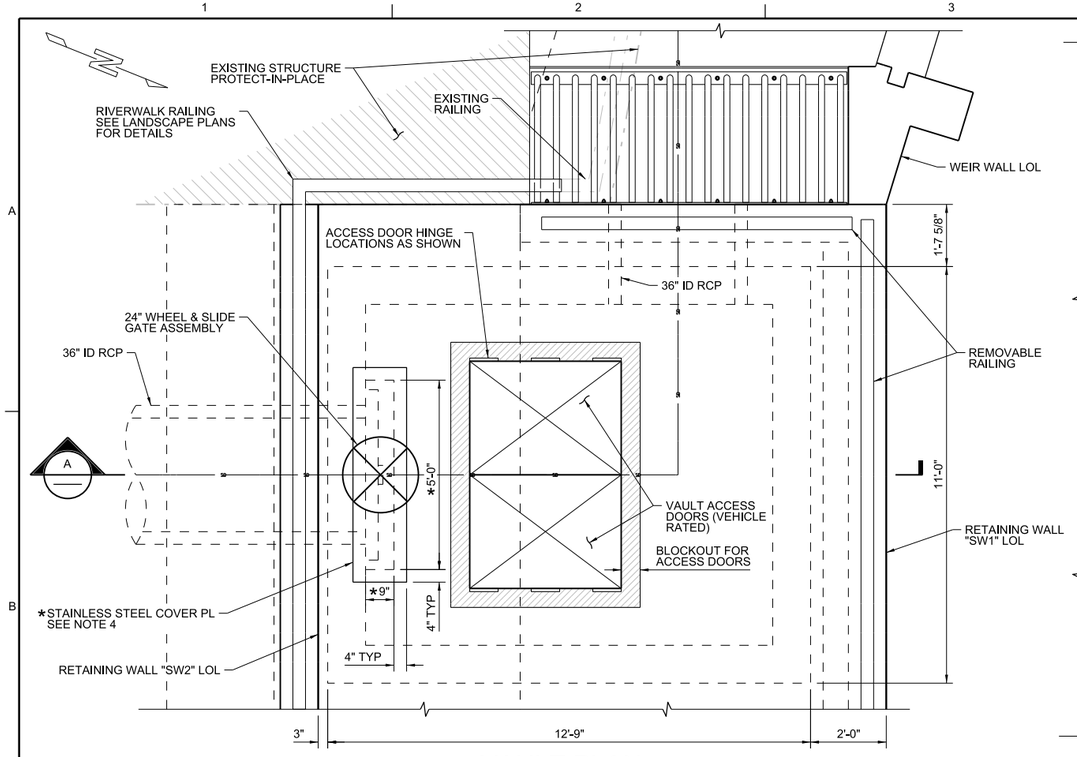
SIERRA STREET BRIDGE REPLACEMENT PROJECT

COCHRANE DITCH MAINTENANCE ACCESS DETAILS NO. 1

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

REUSE OF DOCUMENTS:

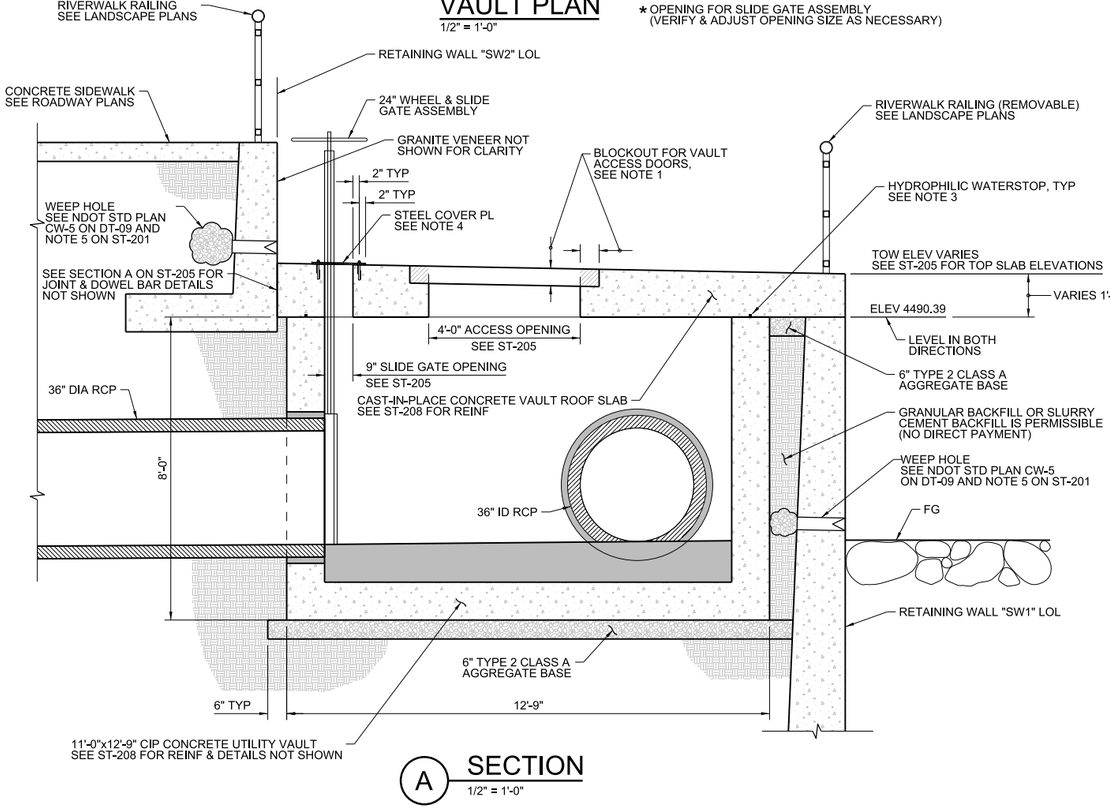
AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-203
SHEET	



VAULT PLAN

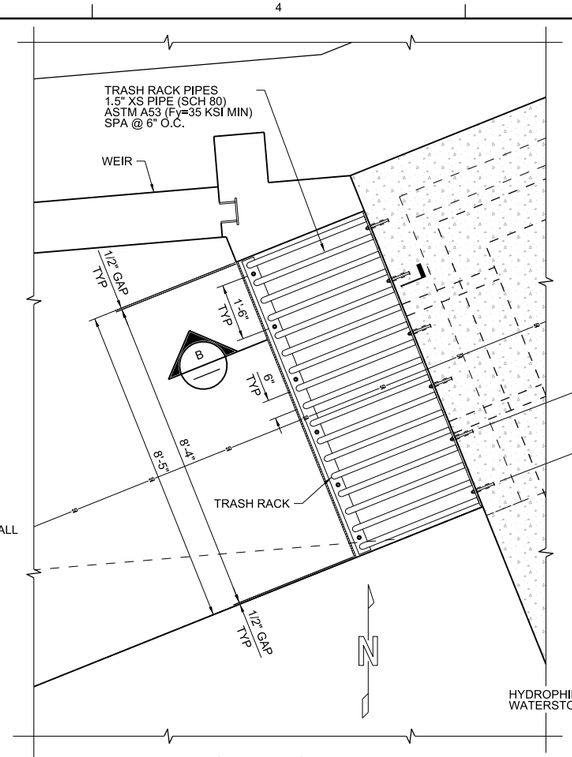
1/2" = 1'-0"

* OPENING FOR SLIDE GATE ASSEMBLY (VERIFY & ADJUST OPENING SIZE AS NECESSARY)



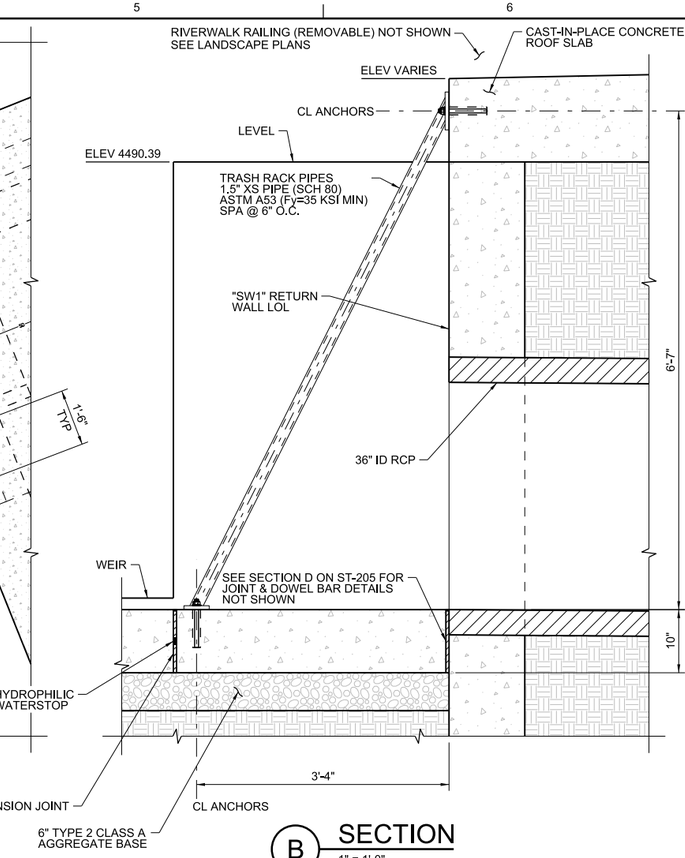
A SECTION

1/2" = 1'-0"



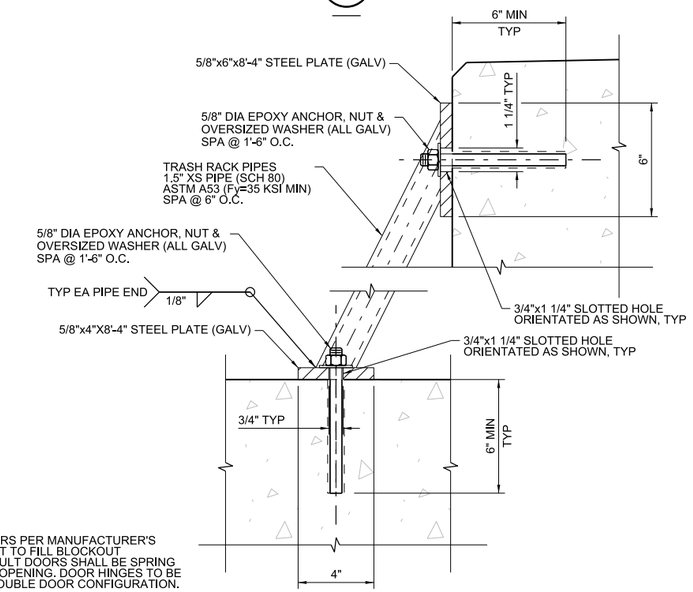
TRASH RACK PLAN

1/2" = 1'-0"



B SECTION

1" = 1'-0"



1 DETAIL

1/4" = 1"

NOTES:

1. BLOCKOUT DIMENSIONS FOR VAULT ACCESS DOORS PER MANUFACTURER'S RECOMMENDATIONS. USE HIGH-STRENGTH GROUT TO FILL BLOCKOUT AFTER INSTALLATION OF THE ACCESS DOORS. VAULT DOORS SHALL BE SPRING ASSISTED AND H-20 LOAD RATED FOR A 4'-0"x6'-0" OPENING. DOOR HINGES TO BE PLACED ON THE 4' SIDES OF THE OPENING FOR DOUBLE DOOR CONFIGURATION.
2. GALVANIZE TRASHRACK ASSEMBLY AFTER FABRICATION.
3. JOINT BETWEEN PRECAST CONCRETE VAULT AND ROOF SLAB SHALL HAVE A HYDROPHILIC WATERSTOP.
4. AFTER SLIDE GATE ASSEMBLY INSTALLATION, INSTALL A 1/4" STAINLESS STEEL COVER PLATE SO THERE IS NO OPENING (GAPS) LARGER THAN 4"x4". USE 1/2" DIA ANCHOR BOLTS (STAINLESS STEEL) SPACED NO MORE THAN 12" ON EACH SIDE OF OPENING. PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DSGN	DATE	DR	CHK	APVD	BY	APVD
REVISION			T. VESCO	P. WALKER	R. COOMES		R. COOMES

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SIERRA STREET BRIDGE REPLACEMENT PROJECT

COCHRANE DITCH MAINTENANCE ACCESS DETAILS NO. 2

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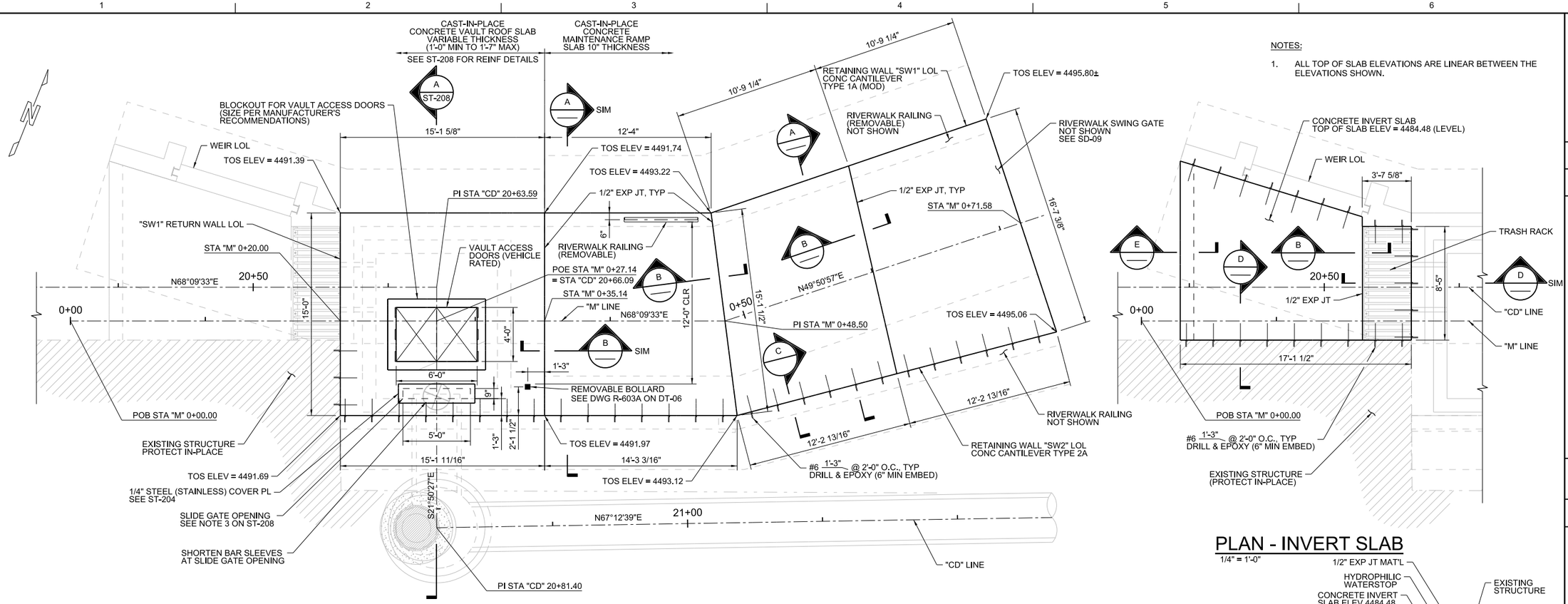
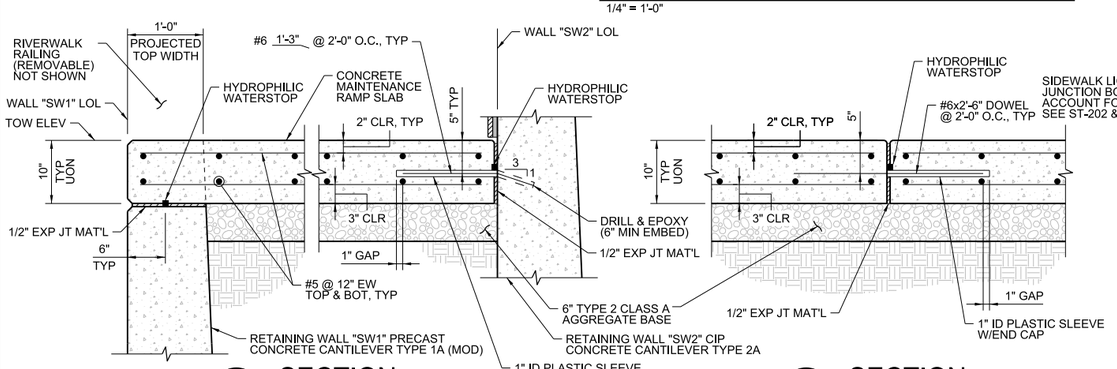
AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-204
SHEET	



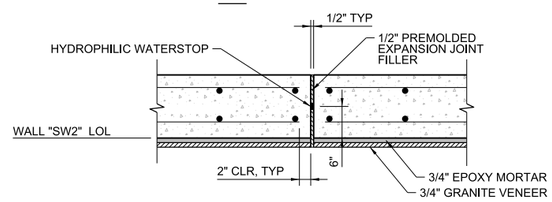
PLAN - MAINTENANCE ACCESS SLAB
1/4" = 1'-0"

PLAN - INVERT SLAB
1/4" = 1'-0"

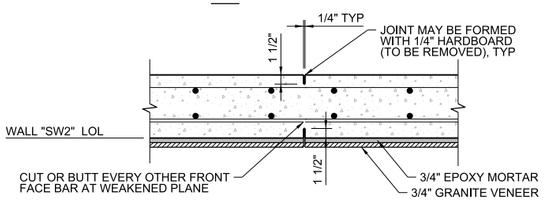


A SECTION
3/4"=1'-0"

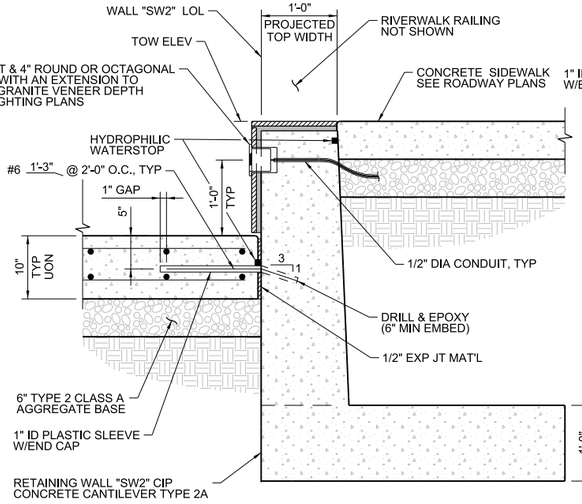
B SECTION
3/4"=1'-0"



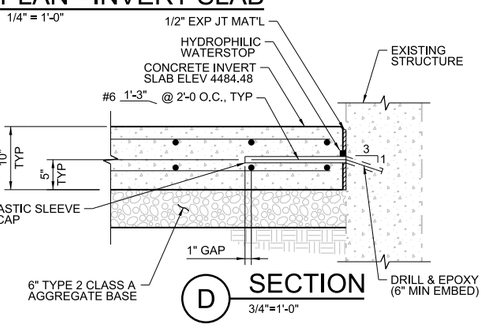
1 DETAIL - EXPANSION JOINT
NTS



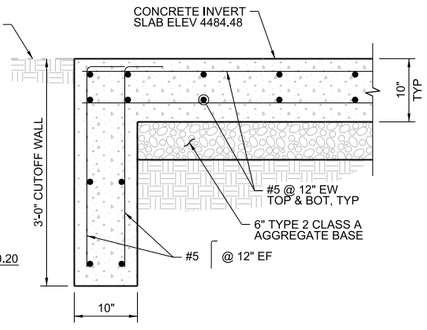
2 DETAIL - WEAKENED PLANE
NTS



C SECTION
3/4"=1'-0"



D SECTION
3/4"=1'-0"



E SECTION
3/4"=1'-0"

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DSGN	DATE	BY	APVD
	T. VESCO	DR	P. WALKER	CHK
		REVISION	R. COOMES	APVD
			R. COOMES	BY

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

COCHRANE DITCH MAINTENANCE ACCESS DETAILS NO. 3

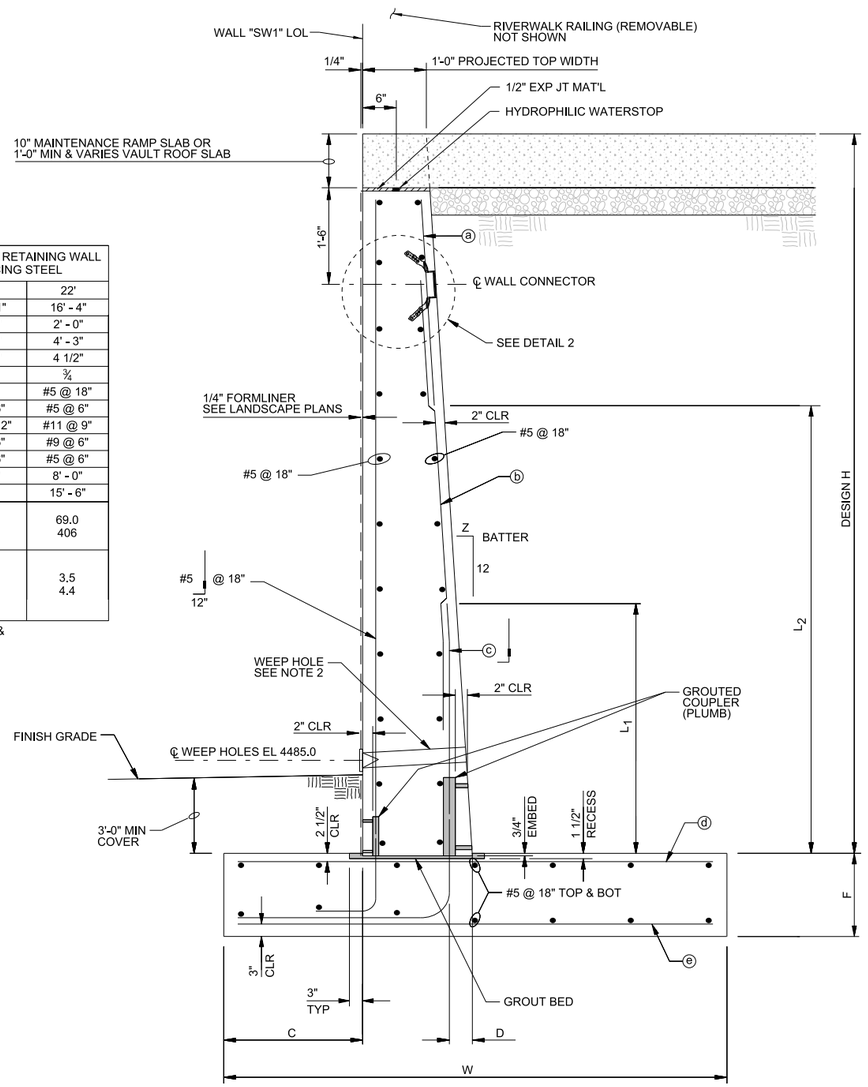
Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-205
SHEET	

LAYOUT AND REINFORCEMENT DATA	TYPE 1A (MOD) - PRECAST REINF. CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL		
	DESIGN H	18'	22'
	W	12' - 11"	16' - 4"
	F	1' - 6"	2' - 0"
	C	3' - 3"	4' - 3"
	D	4 1/4"	4 1/2"
	BATTER, Z	5/8	3/4
	ⓐ BARS	-	#5 @ 18"
	ⓑ BARS	#5 @ 6"	#5 @ 6"
	ⓒ BARS	#11 @ 12"	#11 @ 9"
	ⓓ BARS	#8 @ 6"	#9 @ 6"
	ⓔ BARS	#5 @ 6"	#5 @ 6"
	L_1	7' - 0"	8' - 0"
	L_2	-	15' - 6"
EST. QTY.	★CONCRETE FT.^{3}/FT. REINF. LBS./FT.	45.0 288	69.0 406
MAX TOE PRESSURE (KSF)	LEVEL SLOPE WITH SURCH. LEVEL SLOPE @ 0.51G	3.1 3.8	3.5 4.4

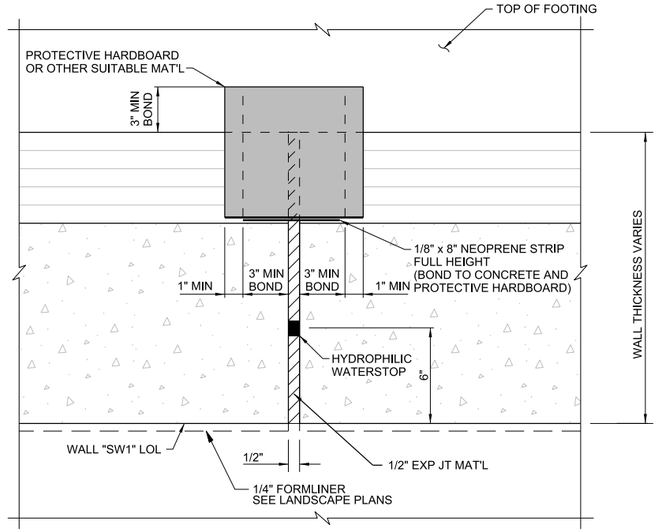
★ACCOUNTS FOR 10" CONCRETE MAINTENANCE SLAB & VARIABLE CONCRETE VAULT SLAB AT TOP OF WALL.



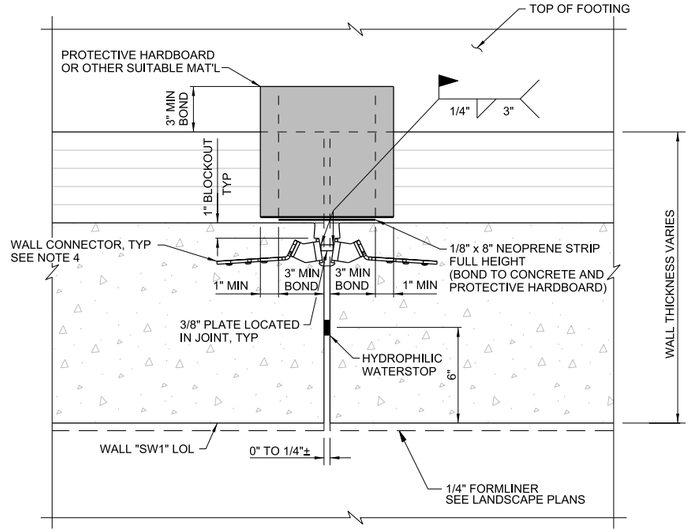
1A ST-202 ST-207 — PRECAST TYPICAL SECTION - TYPE 1A (MOD)
NTS

NOTES:

1. FOR ADDITIONAL NOTES SEE NDOT STANDARD PLAN CW-4 ON DT-08.
2. FOR WEEP HOLE DETAILS NOT SHOWN, SEE DETAILS ON NDOT STANDARD PLAN CW-5 ON DT-09. WEEP HOLE SHALL HAVE A ONE-WAY CHECK VALVE BY JET FILTER SYSTEM OR APPROVED EQUAL.
3. GEOTECHNICAL ENGINEER WILL VERIFY MAXIMUM ALLOWABLE BEARING PRESSURES FOR ACTUAL SITE SOIL CONDITIONS DURING CONSTRUCTION.
4. WALL CONNECTORS SHALL BE A GALVANIZED STEEL VECTOR CONNECTOR BY JVI INC. OR APPROVED EQUAL.
5. PRECAST WALL SEGMENT LENGTHS SHOWN ON ST-202 TO BE VERIFIED BY THE CONTRACTOR PRIOR TO TRANSPORTING AND ERECTING.



1 ST-202 — DETAIL - PRECAST WALL EXPANSION JOINT
NTS



2 ST-202 — DETAIL - PRECAST WALL JOINT
NTS

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	T. VESCO		P. WALKER	R. COOMES	R. COOMES		R. COOMES

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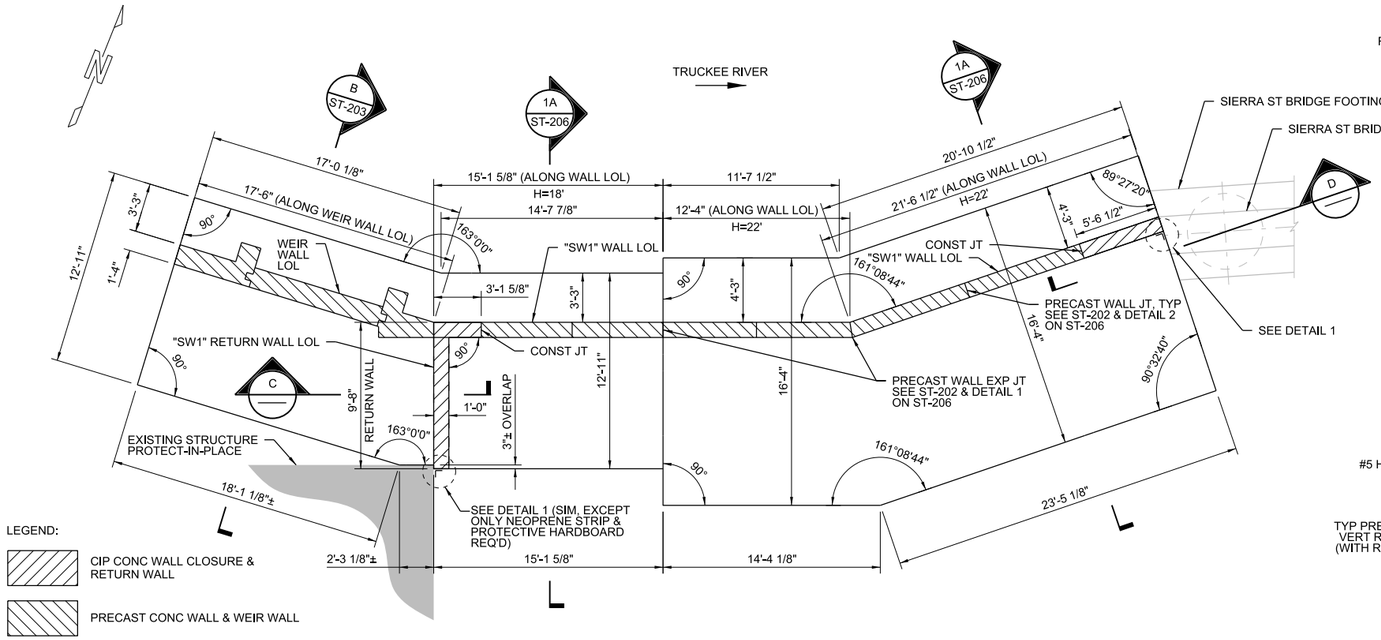
REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

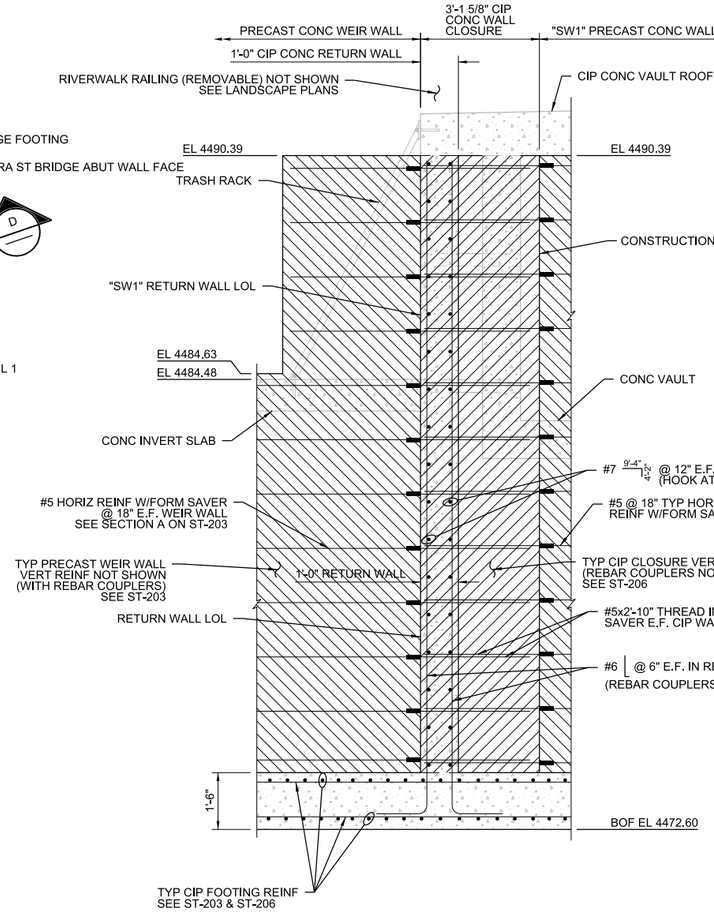
SIERRA STREET BRIDGE REPLACEMENT PROJECT
COCHRANE DITCH MAINTENANCE ACCESS PRECAST CONCRETE RETAINING WALL TYPE 1A (MOD)

AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-206
SHEET	



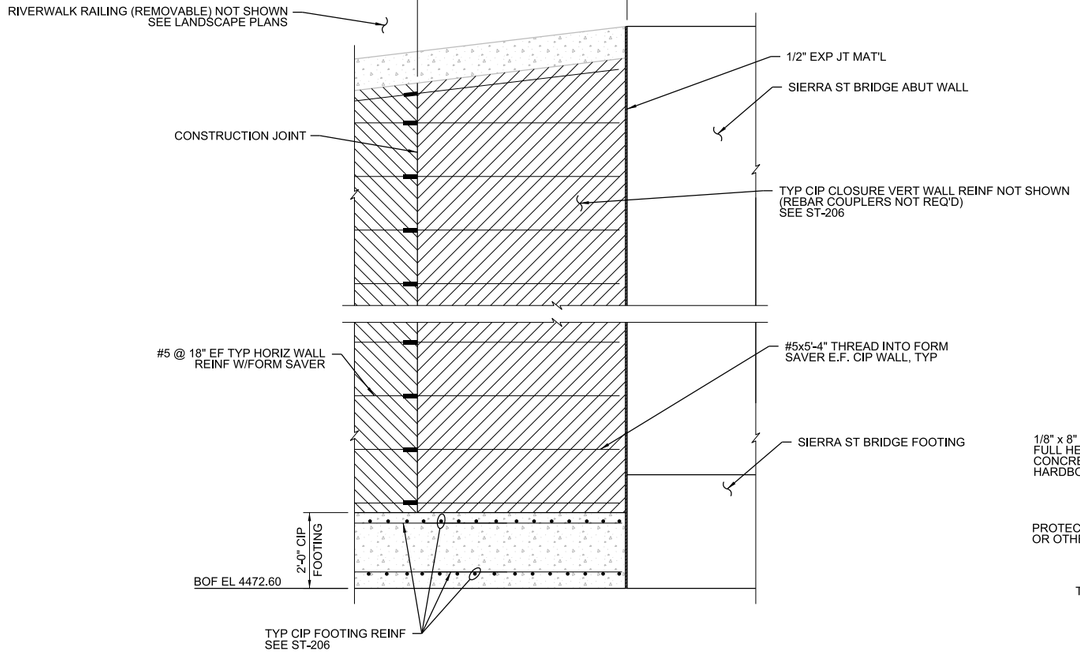
PLAN - PRECAST CONCRETE WALL "SW1" & WEIR LAYOUT

1"=5'



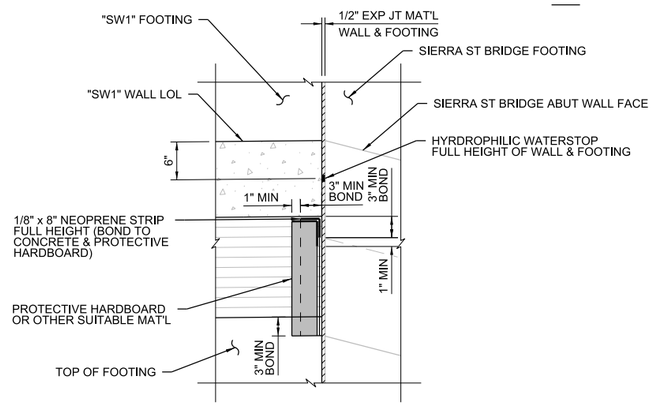
C SECTION

1/2"=1'-0"



D SECTION

1/2"=1'-0"



1 DETAIL

1/2"=1'-0"

NOTES:

1. PRECAST WALL SEGMENT LENGTHS SHOWN ON ST-202 TO BE VERIFIED BY THE CONTRACTOR PRIOR TO TRANSPORTING AND ERECTING.
2. FOR PRECAST WALL DETAILS NOT SHOWN, SEE ST-206.

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	REVISION	BY	APVD
		T. VESCO	DR	P. WALKER	R. COOMES
			CHK	R. COOMES	R. COOMES

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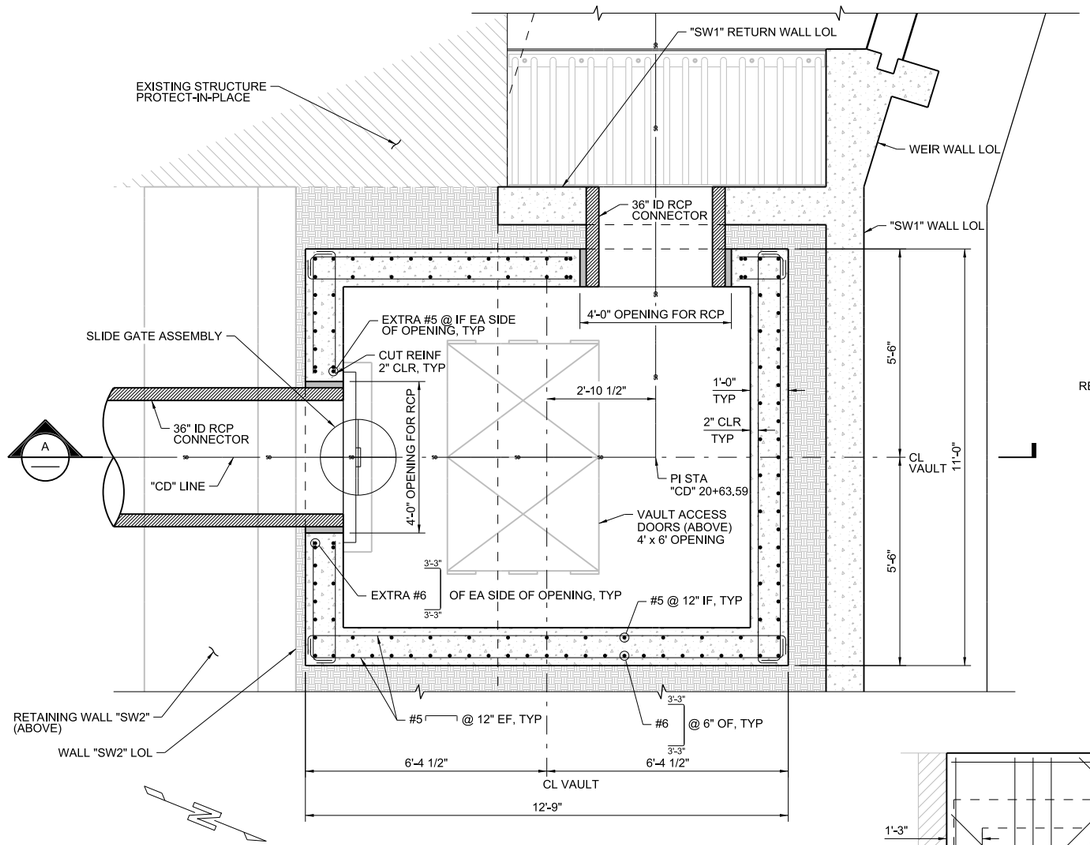
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

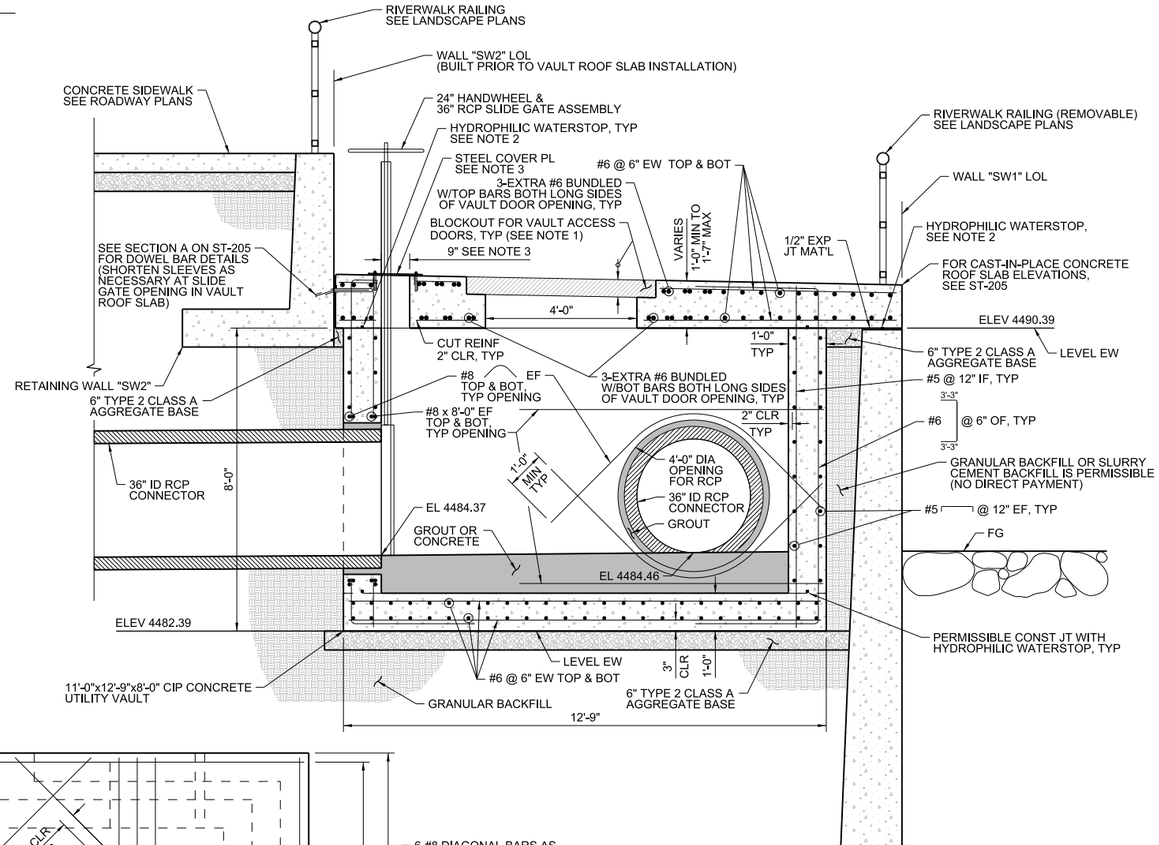
SIERRA STREET BRIDGE REPLACEMENT PROJECT
COCHRANE DITCH MAINTENANCE ACCESS PRECAST CONCRETE RETAINING WALL DETAILS

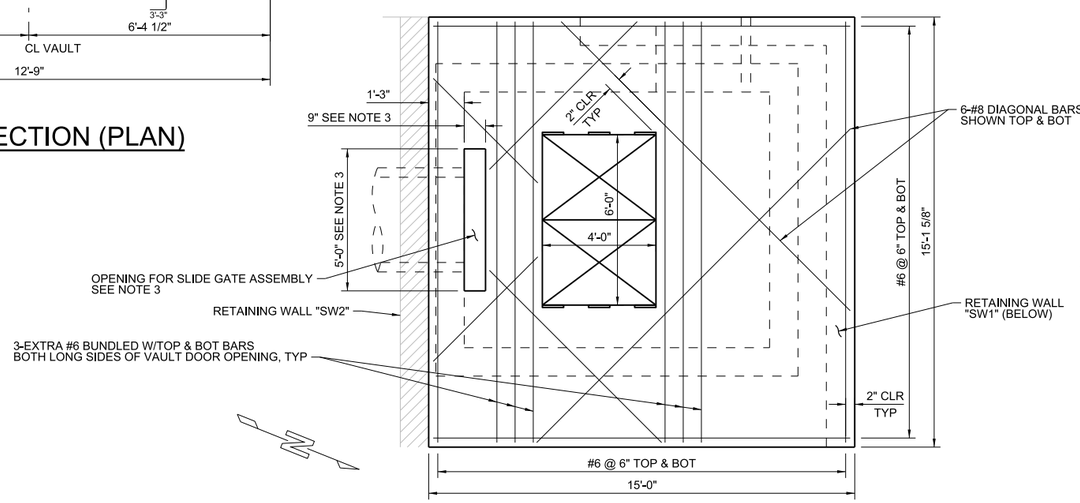
	AS NOTED
	VERIFY SCALE
	BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-207
SHEET	



VAULT SECTION (PLAN)

1/2" = 1'-0"





1 VAULT ROOF SLAB REINF DETAILS

NTS

A SECTION

1/2" = 1'-0"

ST-205
ST-208

CAST-IN-PLACE CONCRETE VAULT DESIGN NOTES:

1. DESIGN SPECIFICATIONS: "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS", 9TH EDITION, 2020. NDOT "STRUCTURES MANUAL", 2008 WITH REVISIONS THROUGH 2019.
2. CONSTRUCTION SPECIFICATIONS: STATE OF NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2014", EXCEPT AS NOTED BELOW AND IN THE CONTRACT REVISIONS TO NDOT SPECIFICATIONS.
3. DEAD LOADS:
   REINFORCED CONCRETE 150 PCF
4. LIVE LOADS:
   HL-93 DESIGN TRUCK
   HL-93 DESIGN TANDEM
   IMPACT FACTOR 33%
   LATERAL SURCHARGE 240 PSF
5. SEISMIC ACCELERATION: PGA = 0.51g, DESIGN FOR 1/2 OF PGA.
6. SOIL PROPERTIES:
   INTERNAL ANGLE OF FRICTION = 34 DEGREES
   UNIT WEIGHT = 120 PCF
   AT-REST LATERAL EARTH PRESSURE 60 PCF
7. CONCRETE: VAULT CONCRETE SHALL BE CLASS DA MODIFIED (MAJOR) WITH f'c = 4.5 KSI AT 28 DAYS.
8. REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE ASTM A706, Fy = 60 KSI.
9. FOUNDATIONS: PRECAST CONCRETE VAULT TO BE FOUNDED ON SPREAD FOOTING WITH A MAXIMUM BEARING PRESSURE OF 4 KSF.
10. CONSTRUCTION JOINTS: JOINT SURFACE SHALL BE ROUGHENED TO 1/4-INCH AMPLITUDE AND USE A HYDROPHILIC WATERSTOP.

NOTES:

1. BLOCKOUT DIMENSIONS FOR VAULT ACCESS DOORS PER MANUFACTURER'S RECOMMENDATIONS. USE HIGH-STRENGTH GROUT TO FILL BLOCKOUT AFTER INSTALLATION OF THE ACCESS DOORS. VAULT DOORS SHALL BE SPRING ASSISTED AND H-20 LOAD RATED FOR A 4'-0"x6'-0" OPENING. DOOR HINGES TO BE PLACED ON THE 4' SIDES OF THE OPENING FOR DOUBLE DOOR CONFIGURATION.
2. JOINT BETWEEN PRECAST CONCRETE VAULT AND ROOF SLAB SHALL HAVE A HYDROPHILIC WATERSTOP.
3. SEE ST-205 FOR ASSUMED SLIDE GATE OPENING SHOWN ON PLAN VIEW. ADJUST OPENING DIMENSIONS FOR PROPOSED SLIDE GATE ASSEMBLY. AFTER SLIDE GATE ASSEMBLY INSTALLATION, INSTALL A 1/4" STAINLESS STEEL COVER PLATE SO THERE IS NO OPENING (GAPS) LARGER THAN 4"x4". USE 1/2" DIA ANCHOR BOLTS (STAINLESS STEEL) SPACED NO MORE THAN 12" ON EACH SIDE OF OPENING. PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	APVD
		T VESCO	T VESCO	R COOMES	R COOMES	REVISION	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

COCHRANE DITCH MAINTENANCE ACCESS VAULT DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

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AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-208
SHEET	

NOTES:

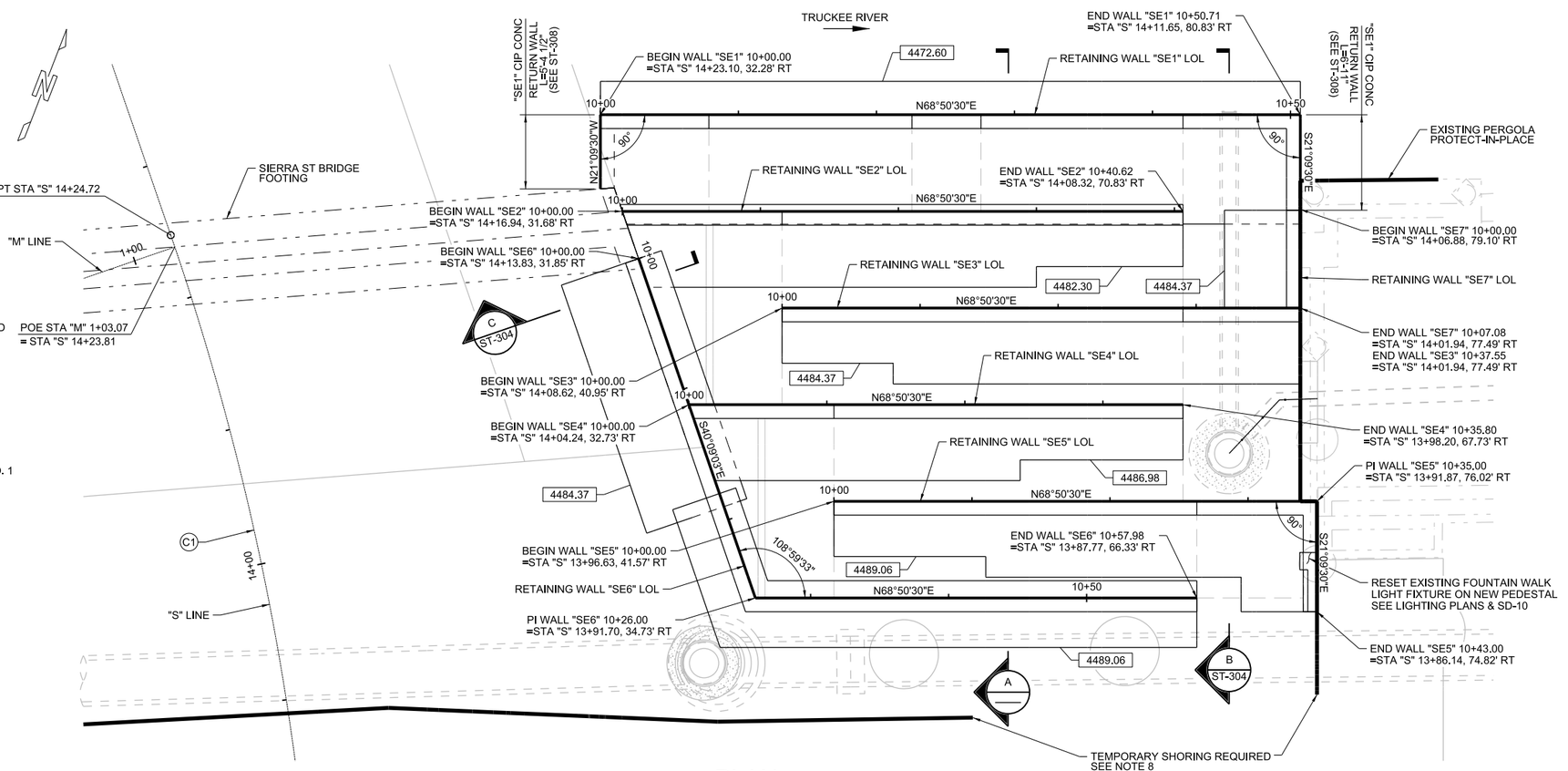
1. FOR COCHRANE DITCH DETAILS, SEE CD-01.
2. FOR TYPE 1A & 2A CONCRETE CANTILEVER RETAINING WALL DETAILS, SEE NDOT STD PLANS CW-1, CW-3 THRU CW-6 ON SHEETS DT-07 THRU DT-09.
3. FOR FOUNTAIN WALK RAILING DETAILS, SEE LANDSCAPE PLANS.
4. FOR DEVELOPED WALL ELEVATIONS, SEE ST-302 & ST-303.
5. FOR ADDITIONAL WALL PLAN DETAILS, SEE ST-304.
6. FOR GENERAL NOTES & QUANTITIES, SEE ST-302.
7. ALL WALLS SHALL HAVE A ONE-WAY CHECK VALVE WEEP HOLES TO PREVENT FLOW OF RIVER WATER BEHIND RETAINING WALL. WEEP HOLE VALVE SHALL BE JET MODEL JF4SSCVLV, OR APPROVED EQUAL
8. SEE ST-103 FOR TEMPORARY SHORING LAYOUT. NO DIRECT PAYMENT FOR TEMPORARY SHORING.
9. FOR SIDEWALK LIGHTING, SEE LIGHTING PLANS AND DETAIL 1 ON ST-303.
10. FOR IRRIGATION DETAILS, SEE IRRIGATION PLANS AND DEVELOPED WALL "SE4" ELEVATION ON ST-303.
11. FOR WALL VENEER AND FORMLINER DETAILS, SEE LANDSCAPE PLANS.

XXXX.XX DENOTES BOTTOM OF FOOTING ELEVATION

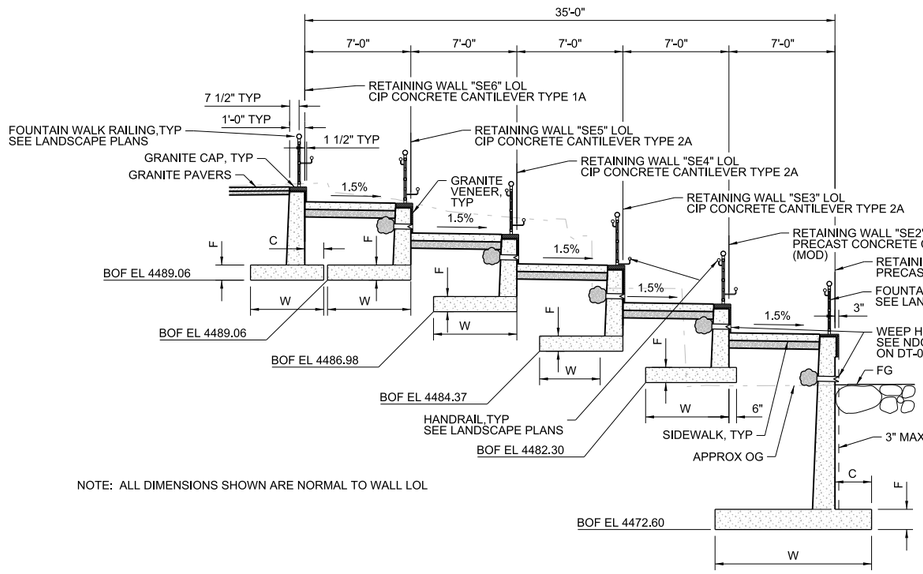
DRAWING LIST

ST-301 PLAN, ELEVATION & TYPICAL SECTION
ST-302 GENERAL NOTES, QUANITIES & DEVELOPED WALL ELEVATIONS NO. 1
ST-303 DEVELOPED WALL ELEVATIONS NO. 2
ST-304 DETAILS NO. 1
ST-305 DETAILS NO. 2
ST-306 PRECAST CONCRETE CANTILEVER WALL TYPE 1A (MOD)
ST-307 PRECAST CONCRETE CANTILEVER WALL TYPE 2A (MOD)
ST-308 WALL "SE1" CIP RETURN WALL DETAILS

C1 CURVE DATA
△ = 25°01'03"
R = 198.00'
L = 86.45'
T = 43.93'

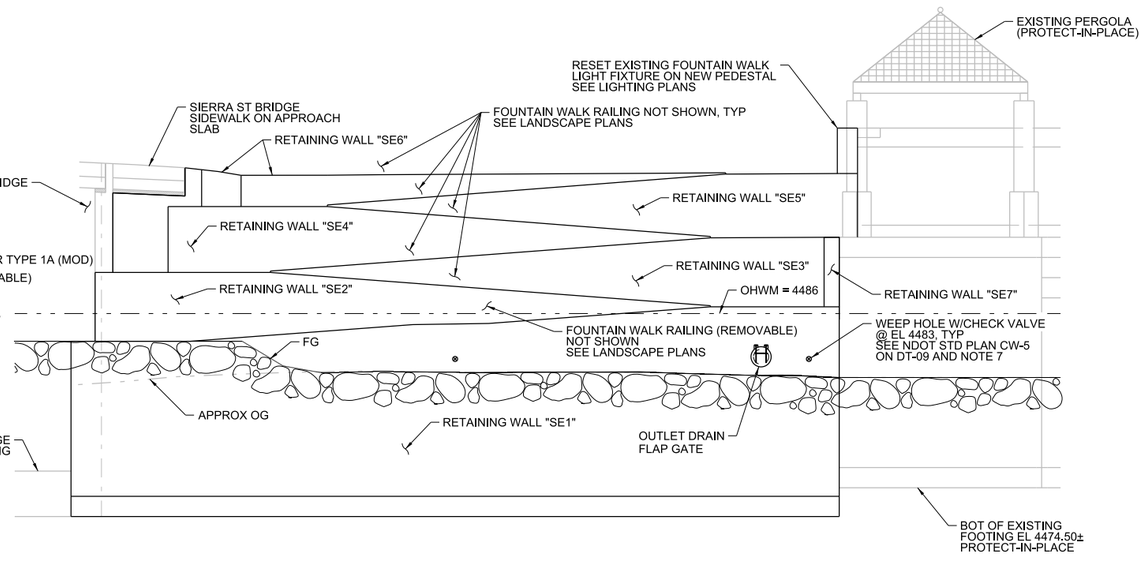


PLAN
1" = 5'



NOTE: ALL DIMENSIONS SHOWN ARE NORMAL TO WALL LOL

A TYPICAL SECTION
1" = 5'
ST-301
ST-304



ELEVATION (MIRRORED)
1" = 5'

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	REVISION	DR	CHK	APVD
DSGN	T. VESCO	P. WALKER	R. COOMES	R. COOMES	R. COOMES

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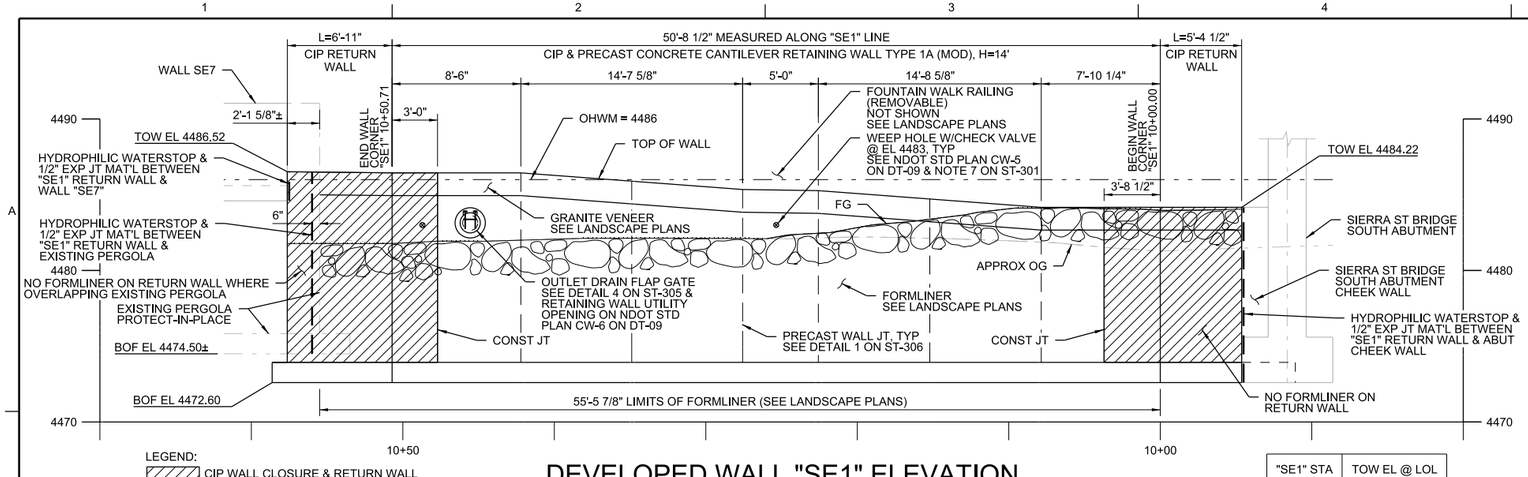
REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

WHITE WATER PARK EXIT
PLAN, ELEVATION & TYPICAL SECTION

1" = 5'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-301
SHEET	



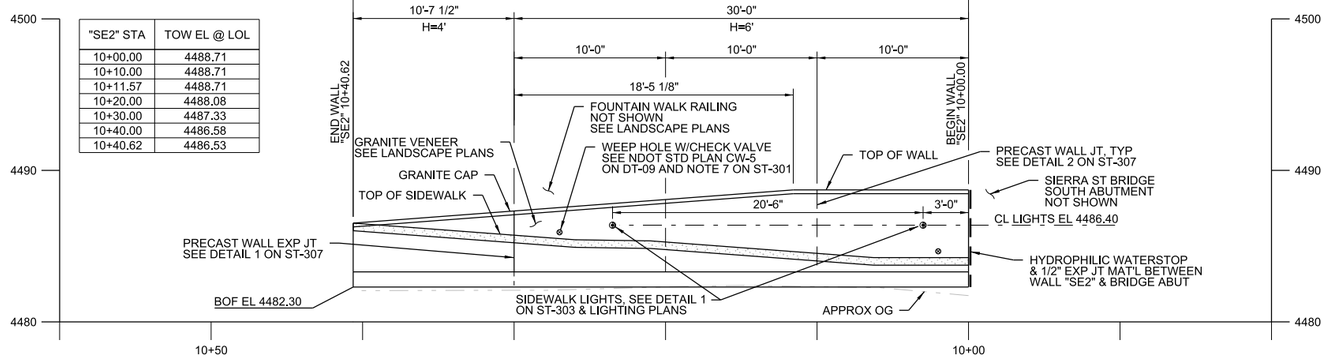
DEVELOPED WALL "SE1" ELEVATION

1" = 5'

(LOOKING SOUTH)

"SE1" STA	TOW EL @ LOL
10+00.00	4484.15
10+07.86	4484.15
10+10.00	4484.31
10+20.00	4485.06
10+22.57	4485.25
10+27.57	4485.33
10+30.00	4485.51
10+40.00	4486.26
10+42.21	4486.43
10+50.00	4486.43
10+50.71	4486.43

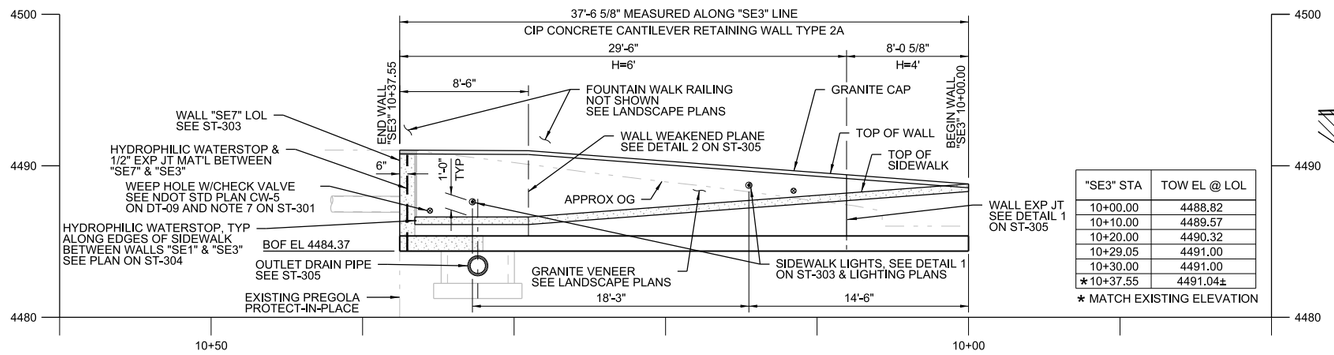
"SE2" STA	TOW EL @ LOL
10+00.00	4488.71
10+10.00	4488.71
10+11.57	4488.71
10+20.00	4488.08
10+30.00	4487.33
10+40.00	4486.58
10+40.62	4486.53



DEVELOPED WALL "SE2" ELEVATION

1" = 5'

(LOOKING SOUTH)



"SE3" STA	TOW EL @ LOL
10+00.00	4488.82
10+10.00	4489.57
10+20.00	4490.32
10+29.05	4491.00
10+30.00	4491.00
✱ 10+37.55	4491.04±

✱ MATCH EXISTING ELEVATION

DEVELOPED WALL "SE3" ELEVATION

1" = 5'

(LOOKING SOUTH)

GENERAL NOTES:

1. DESIGN SPECIFICATIONS: "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS", 9TH EDITION, 2020. NDOT "STRUCTURES MANUAL", 2008 WITH REVISIONS THROUGH 2019.
2. STANDARD PLANS: NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION", 2024.
3. CONSTRUCTION SPECIFICATIONS: NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2014", EXCEPT AS NOTED BELOW AND IN THE CONTRACT REVISIONS TO NDOT SPECIFICATIONS.
4. LIVE LOAD: SEE NOTE 2 ON NDOT STANDARD PLAN CW-4 ON DT-08.
5. SEISMIC ACCELERATION: PGA=0.51g, DESIGN FOR 1/2 OF PGA.
6. SOIL PROPERTIES: K_ae=0.369 AND EQUIVALENT PASSIVE FLUID PRESSURE (SEISMIC)=0.322 kcf. FOR ALL OTHER SOIL PROPERTIES, SEE NOTE 5 ON NDOT STANDARD PLAN CW-4 ON DT-08.
7. SURFACE FINISH: WALL "SE1" HAS A FORMLINER FINISH WITH A GRANITE VENEER CAP. WALLS "SE2" THROUGH "SE7" RECEIVE A GRANITE VENEER FINISH. SEE LANDSCAPE PLANS.
8. DETAILED CONCRETE STAIN AND GRAFFITI RESISTANT COATING: WALL "SE1" SHALL RECEIVE A DETAILED CONCRETE STAIN AND GRAFFITI RESISTANT COATING TO 2 FEET BELOW FINISHED GRADE.
9. CONCRETE: ALL RETAINING WALL CONCRETE SHALL BE CLASS DA MODIFIED (MAJOR) WITH f'c = 4 ksi AT 28 DAYS. SIDEWALK CONCRETE COVERED IN ROADWAY PLANS.
10. REINFORCING STEEL: SEE NOTE 4 ON NDOT STANDARD PLAN CW-4 ON DT-08.
    LAP SPLICE TABLE:

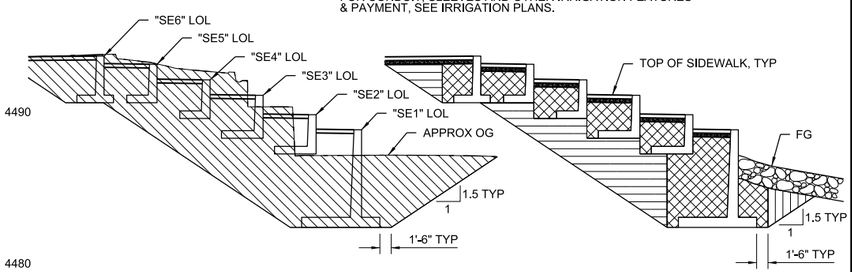
[A] MINIMUM LAP SPLICE (INCHES)				
	UNCOATED BARS		EPOXY COATED BARS	
BAR SIZE	TYP BARS	[B] TOP HORIZ BARS	TYP BARS	[B] TOP HORIZ BARS
#4	20	26	24	32
#5	24	32	30	39
#6	30	39	34	45
#7	38	50	45	59
#8	48	63	57	75
#9	60	78	72	94
#10	76	99	91	119
#11	94	123	112	146

    LAP SPLICE NOTES:
    A. LAP SPLICE LENGTHS BASED ON A MINIMUM f'c OF 4 ksi @ 28 DAYS, UNCOATED BARS SPACED 4 INCHES OR MORE WITH A CLEAR COVER OF 1.5 INCHES OR MORE, EPOXY COATED BARS SPACED AT 6 BAR DIAMETERS OR MORE WITH A CLEAR COVER OF 3 BAR DIAMETERS OR MORE, AND NORMAL WEIGHT CONCRETE.
    B. A TOP BAR IS ANY HORIZONTAL BAR WITH 12" OR MORE OF FRESH CONCRETE CAST DIRECTLY BENEATH IT.
11. FOUNDATIONS: RETAINING WALLS TO BE FOUNDED ON SPREAD FOOTINGS, DESIGN AND CONSTRUCTION IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS CONTAINED IN THE REPORT "GEOTECHNICAL INVESTIGATION RTC SIERRA STREET BRIDGE PROJECT" PREPARED BY CONSTRUCTION MATERIALS ENGINEERS, INC. AND DATED MARCH, 2026 (DRAFT PS&E).

HYDRAULIC INFORMATION	
STORM EVENT	WATER SURFACE ELEVATION
100-YEAR EVENT	4500.8 FT
CTWCD REGULATORY EVENT	4492.0 FT

APPROXIMATE QUANTITIES		
ITEM DESCRIPTION	QUANTITY	UNIT
BORROW EMBANKMENT	248	CUYD
STRUCTURE EXCAVATION	932	CUYD
GRANULAR BACKFILL	348	CUYD
AESTHETIC PATTERNING	22	SQYD
NATIVE BACKFILL	34	CUYD
CLASS DA CONCRETE, MODIFIED (MAJOR)	175	CUYD
REINFORCING STEEL	18,598	POUND
FLAP GATE	1	EACH
DETAILED CONCRETE STAIN	22	SQYD
GRAFFITI RESISTANT COATING	22	SQYD

NOTES: FOR CONDUIT, JUNCTION BOXES, LIGHTING, AND OTHER ELECTRICAL FEATURES & PAYMENT, SEE ELECTRICAL PLANS. FOR CONDUIT, SLEEVES AND OTHER IRRIGATION FEATURES & PAYMENT, SEE IRRIGATION PLANS.



EXCAVATION LIMITS

1" = 10'

BACKFILL LIMITS

1" = 10'

EARTHWORK LEGEND: STRUCTURE EXCAVATION; BORROW EMBANKMENT; NATIVE BACKFILL; GRANULAR BACKFILL; AGGREGATE BASE (SEE ROADWAY PLANS); GROUTED RIPRAP (SEE BRIDGE PLANS)

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	REVISION	CHK	DR
		T. VESCO	P. WALKER	R. COOMES	APVD
				BY	APVD
				R. COOMES	

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Jacobs
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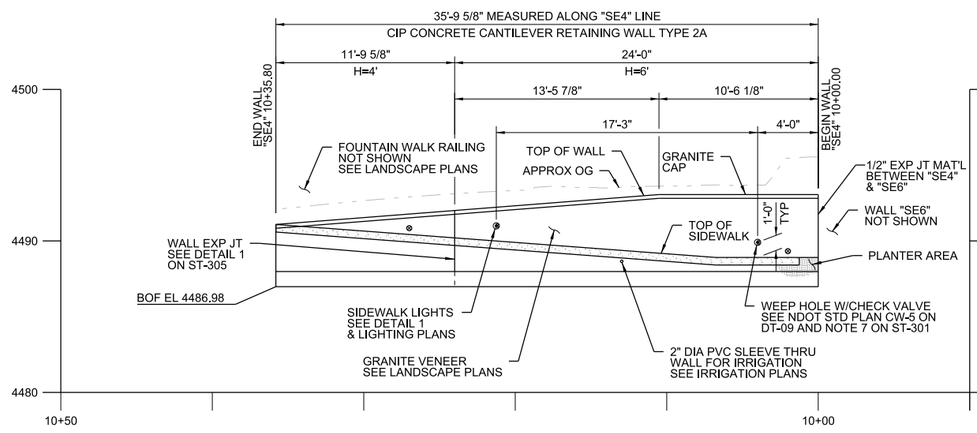
RENO, NV 89501
PH (775) 329-7300

SIERRA STREET BRIDGE REPLACEMENT PROJECT

WHITE WATER PARK EXIT
GENERAL NOTES, QUANTITIES & DEVELOPED WALL ELEVATIONS NO. 1

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

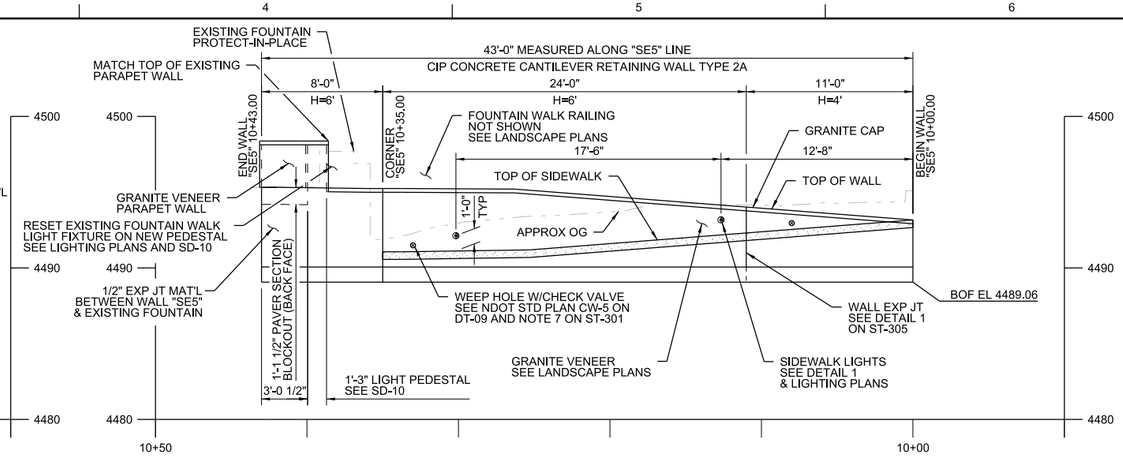
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-302
SHEET	



"SE4" STA	TOW EL @ LOL
10+00.00	4493.06
10+10.00	4493.06
10+10.51	4493.06
10+20.00	4492.33
10+30.00	4491.55
10+35.80	4491.10

DEVELOPED WALL "SE4" ELEVATION

1" = 5'

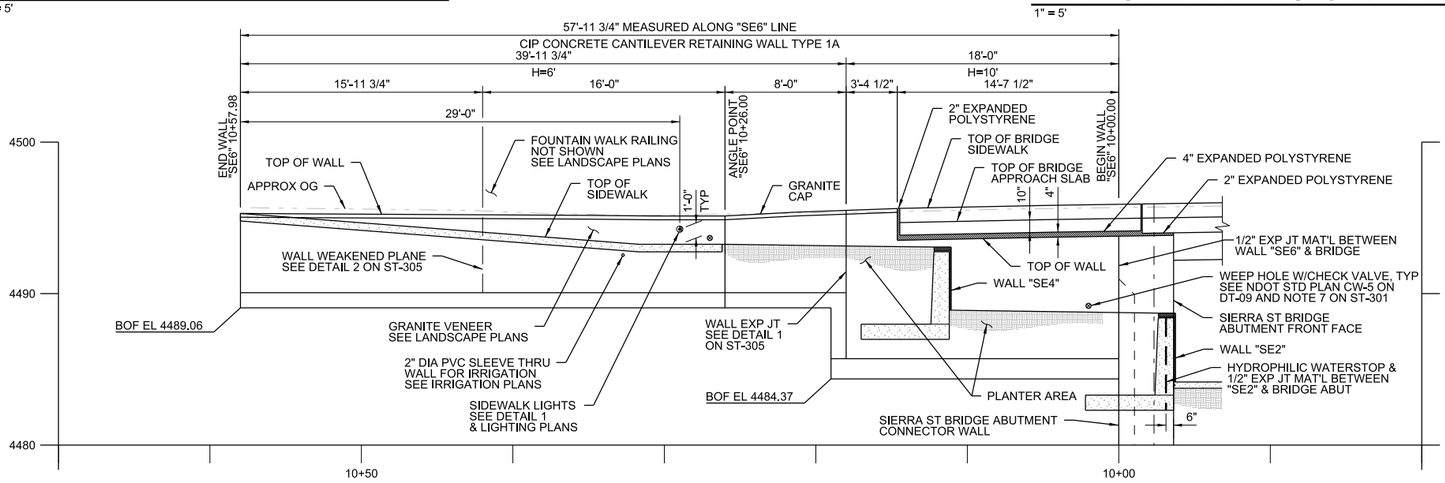


"SE5" STA	TOW EL @ LOL
10+00.00	4493.17
10+10.00	4493.94
10+20.00	4494.72
10+26.29	4495.20
10+30.00	4495.22
✱10+35.00	4495.24
✱10+40.00	4495.29±
✱10+43.00	4495.31±

✱ MATCH EXISTING ELEVATION

DEVELOPED WALL "SE5" ELEVATION

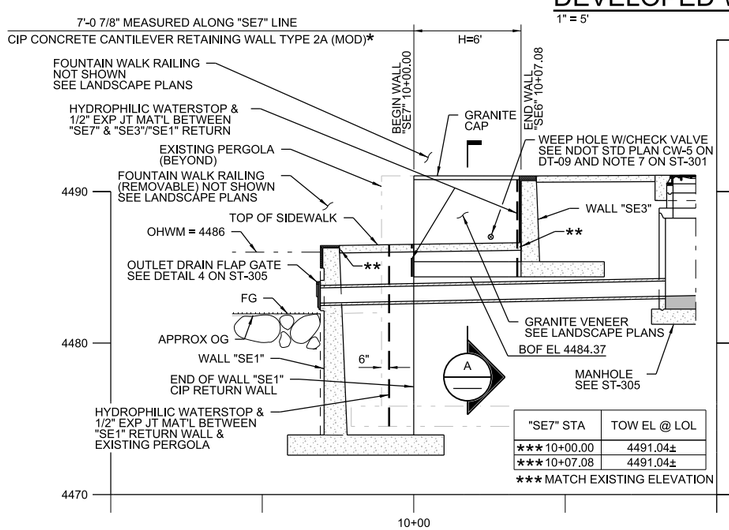
1" = 5'



"SE6" STA	TOW EL @ LOL
10+00.00	4493.81
10+10.00	4493.67
10+14.62	4493.51/4495.61
10+18.00	4495.48
10+20.00	4495.41
10+26.00	4495.12
10+30.00	4495.14
10+31.69	4495.14
10+40.00	4495.18
10+50.00	4495.23
10+57.98	4495.29

DEVELOPED WALL "SE6" ELEVATION

1" = 5'

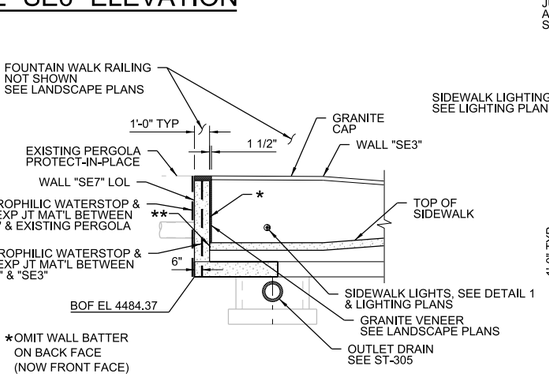


"SE7" STA	TOW EL @ LOL
✱✱✱10+00.00	4491.04±
✱✱✱10+07.08	4491.04±

✱✱✱ MATCH EXISTING ELEVATION

DEVELOPED WALL "SE7" ELEVATION

1" = 5'

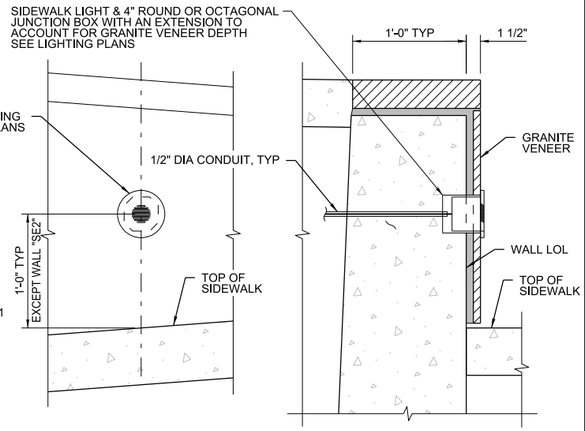


✱OMIT WALL BATTER ON BACK FACE (NOW FRONT FACE)

✱✱HYDROPHILIC WATERSTOP, TYP ALONG EDGES OF SIDEWALK BETWEEN WALLS "SE1" & "SE3" SEE PLAN VIEW ON ST-304

A SECTION

1" = 5'



1 DETAIL - SIDEWALK LIGHTING

1 1/2" = 5'

NOTE: SEE LIGHTING PLANS FOR CONDUIT LAYOUT AND DETAILS NOT SHOWN.

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD
DSGN	T. VESCO	DR	P. WALKER	CHK	R. COOMES	APVD	R. COOMES

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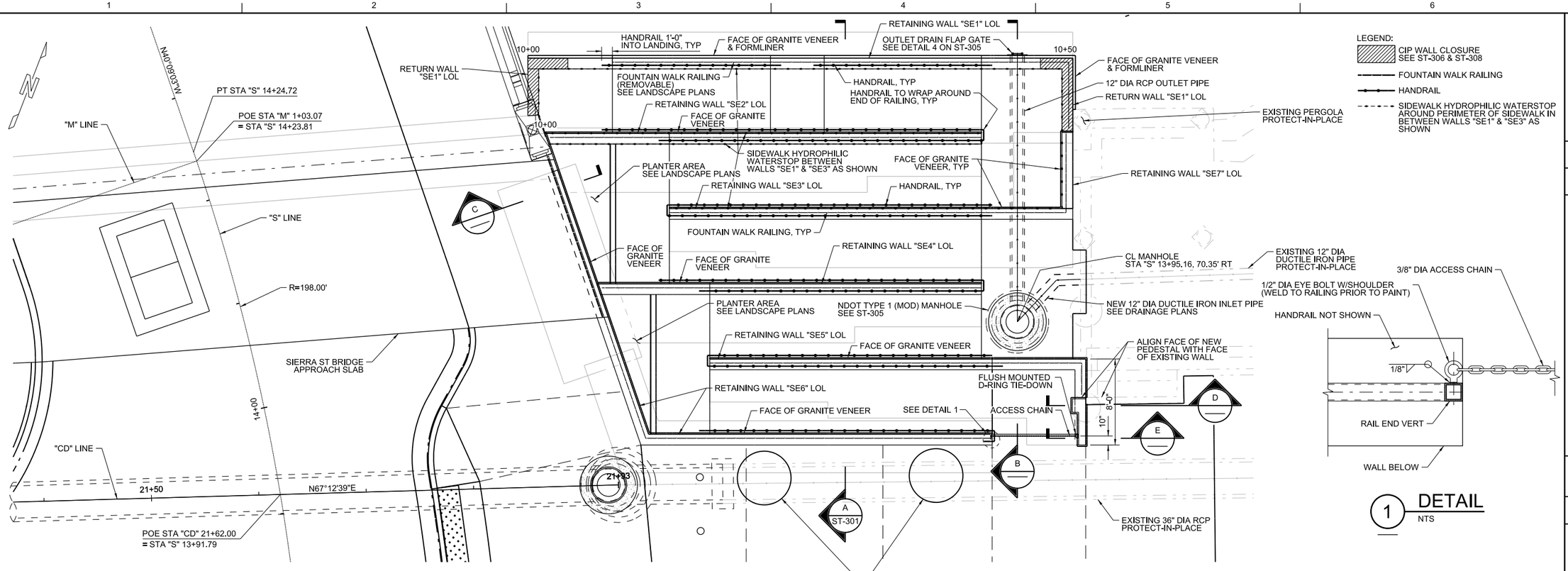
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

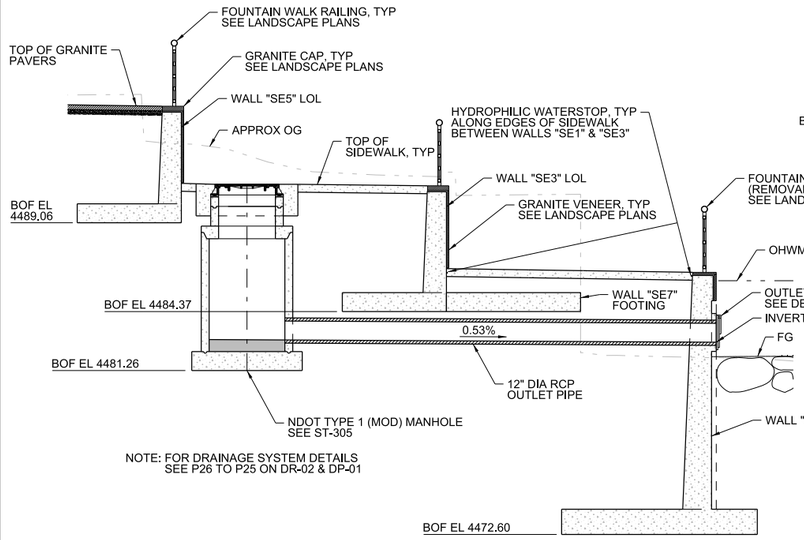
WHITE WATER PARK EXIT
DEVELOPED WALL ELEVATIONS NO. 2

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

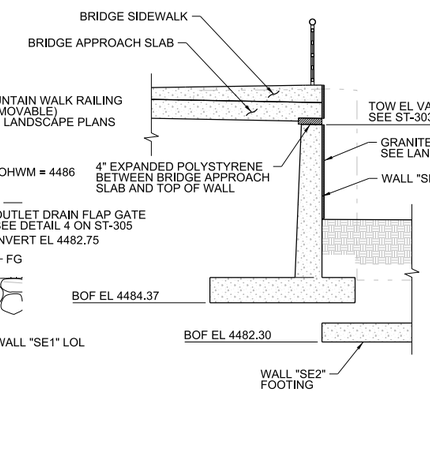
AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-303
SHEET	



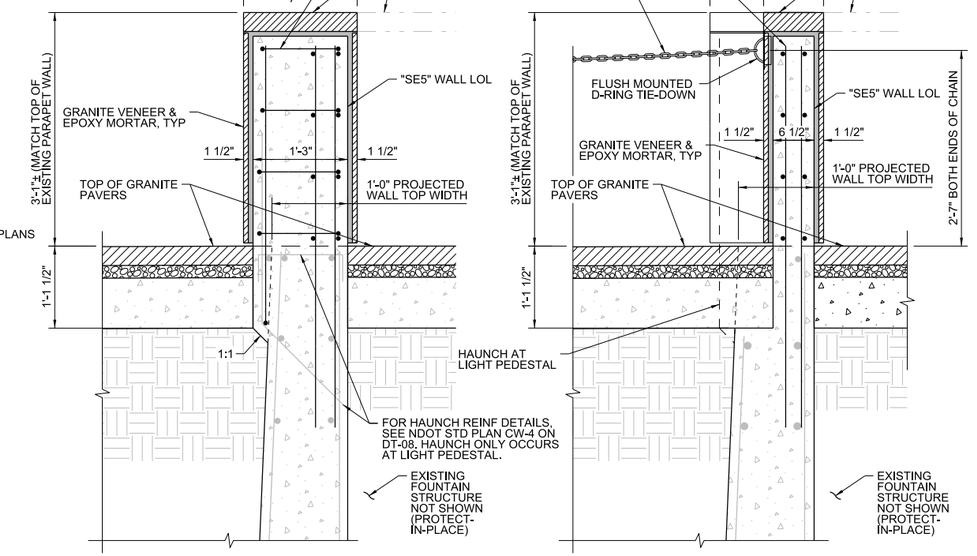
PLAN DETAILS
1" = 5'



B SECTION
1/4"=1'-0"
ST-301
ST-304



C SECTION
1/4"=1'-0"
ST-301
ST-304



NOTE: FOR LIGHT PEDESTAL DETAILS NOT SHOWN SEE SD-10 & LIGHTING PLANS

D SECTION
1"=1'-0"

E SECTION
1"=1'-0"

1 DETAIL
NTS

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	REVISION	DR	CHK	APVD
DSGN	T. VESCO	P. WALKER		R. COOMES	R. COOMES
				BY	APVD

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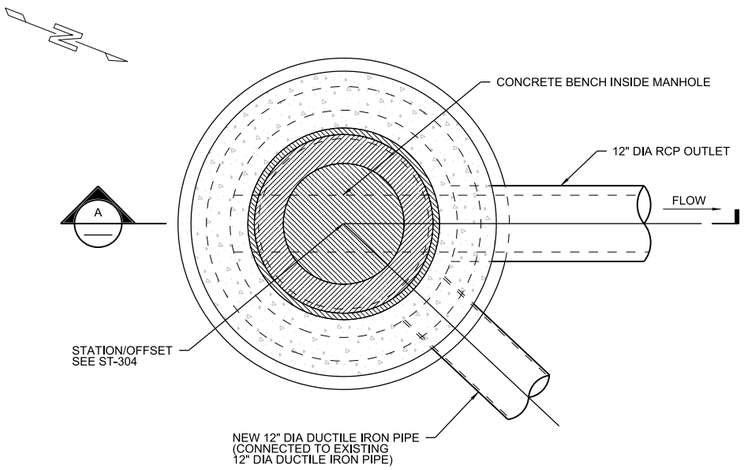
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

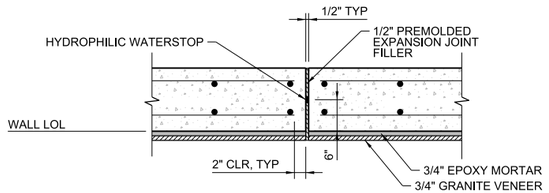
WHITE WATER PARK EXIT
DETAILS NO. 1

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-304
SHEET	

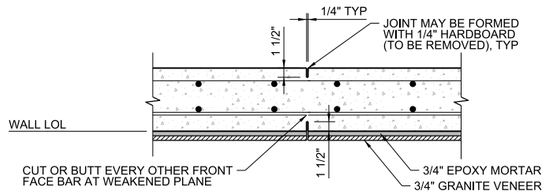


PLAN
3/4"=1'-0"



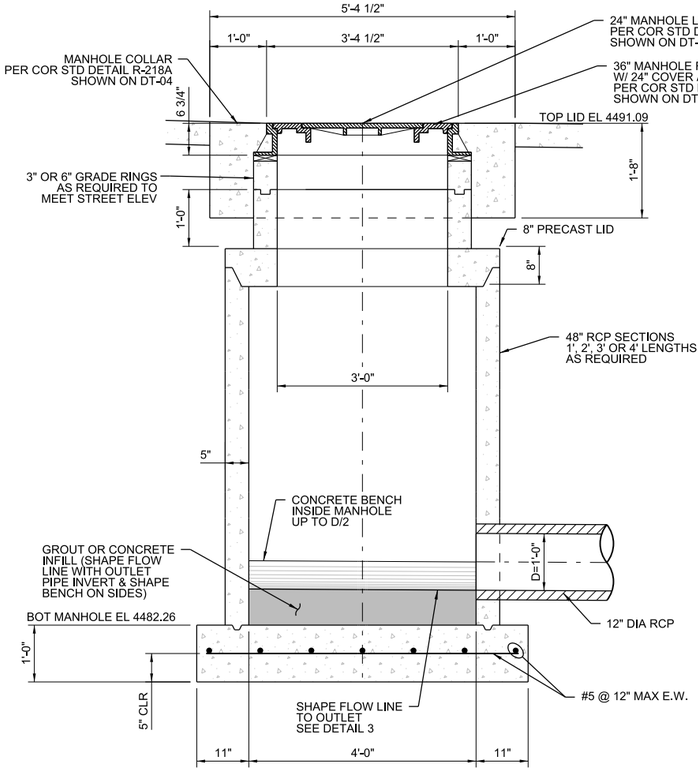
1 DETAIL - EXPANSION JOINT
NTS

ST-302
ST-303



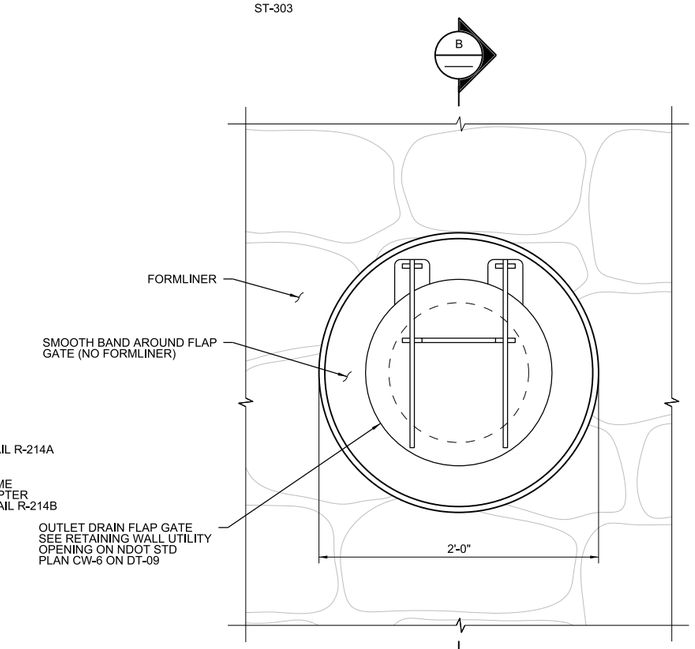
2 DETAIL - WEAKENED PLANE
NTS

ST-302
ST-303



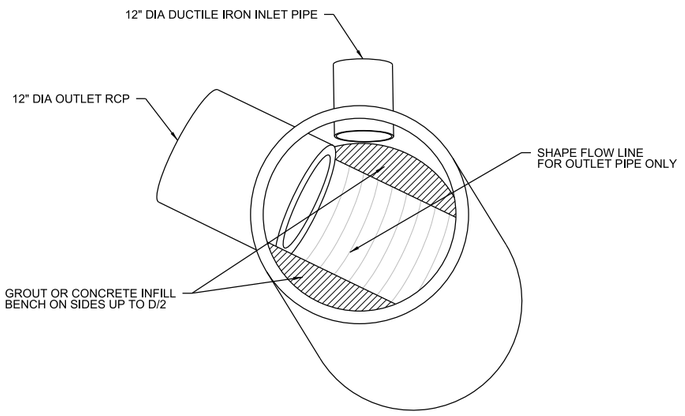
A SECTION - NDOT TYPE 1 (MOD) MANHOLE
3/4" = 1'

ST-304
DR-02

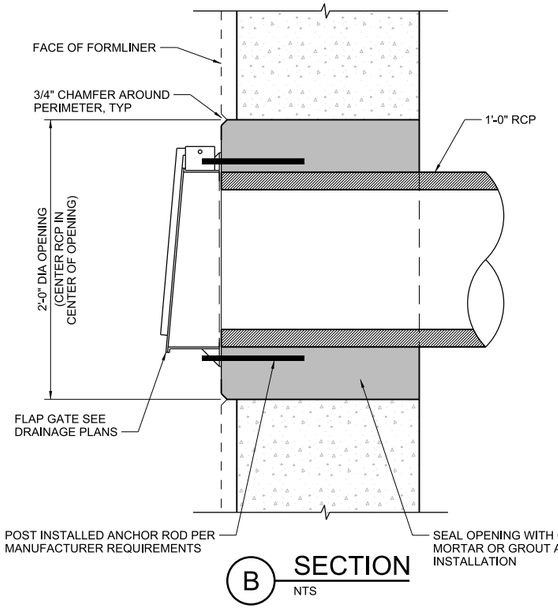


4 DETAIL - FLAP GATE
NTS

ST-302
WE-02



3 DETAIL - CONCRETE BENCH INSIDE MANHOLE
NTS



B SECTION
NTS

NOTES:

1. FOR CAST-IN-PLACE CONCRETE BASE, ALL REINFORCING STEEL TO BE #5 BARS AT 12-INCHES ON CENTER, TIGHTLY WOUND AT ALL INTERSECTIONS, AND EMBEDDED IN CONCRETE AT LEAST 2-INCHES. BAR ENDS MUST CLEAR CONCRETE SURFACES BY 1 1/2"-INCHES. PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
2. PRECAST CONCRETE PIPE SECTIONS, TAPERED SECTIONS, LIDS, GRADE RINGS, BASES, AND STEPS SHALL CONFORM TO AASHTO M 199, ASTM C-478.
3. SHAPE FLOW LINE IN MANHOLE TO OUTLET PIPE, AND PROVIDE A 10:1 MINIMUM SLOPE FROM ALL DIRECTIONS TOWRD FLOW LINE.
4. SEE DRAINAGE SHEETS FOR PAYMENT OF MANHOLE AND PIPES.

DRAFT PS&E
NOT FOR
CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
	T. VESCO		P. WALKER	R. COOMES	R. COOMES	R. COOMES	

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PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

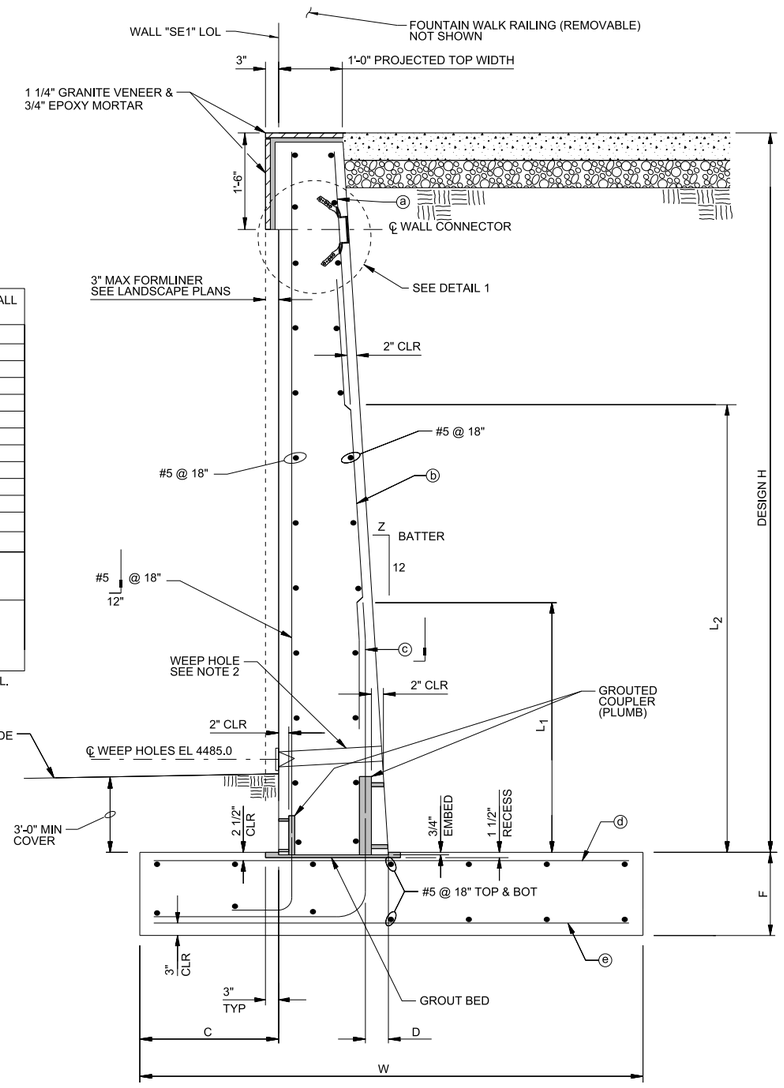
WHITE WATER PARK EXIT
DETAILS NO. 2

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-305
SHEET	

LAYOUT AND REINFORCEMENT DATA	TYPE 1A (MOD) - PRECAST REINF. CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL	
	DESIGN H	14'
	W	10' - 4"
	F	1' - 4"
	C	2' - 5"
	D	5 1/2"
	BATTER, Z	¾
	ⓐ BARS	-
	ⓑ BARS	#5 @ 12"
	ⓒ BARS	#10 @ 12"
	ⓓ BARS	#6 @ 6"
	ⓔ BARS	#6 @12"
	L_1	6' - 0"
	L_2	-
EST. QTY.	*CONCRETE FT.^{3}/FT. REINF. LBS./FT.	35.5 159
MAX TOE PRESSURE (KSF)	LEVEL SLOPE WITH SURCH. LEVEL SLOPE @ 0.51G	2.5 3.1

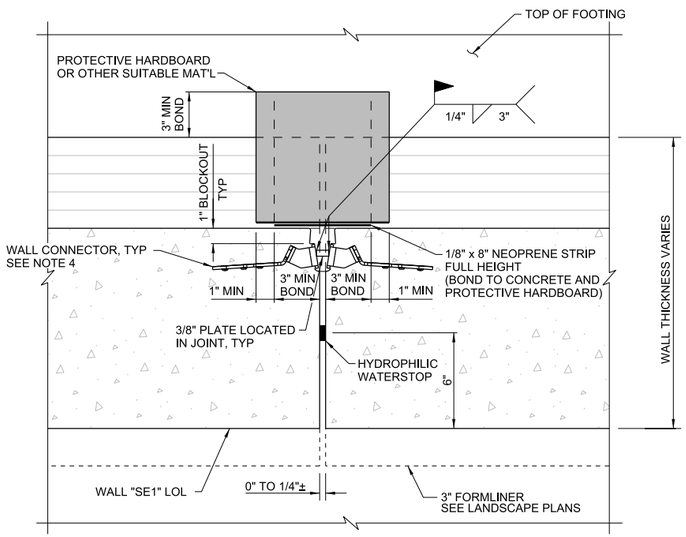
ACCOUNTS FOR FORMLINER AND GRANITE VENEER AT TOP OF WALL.



1A PRECAST TYPICAL SECTION - TYPE 1A (MOD)

NTS

ST-302
ST-308



1 DETAIL - PRECAST WALL JOINT

NTS

ST-302

NOTES:

1. FOR ADDITIONAL NOTES SEE NDOT STANDARD PLAN CW-4 ON DT-08.
2. FOR WEEP HOLE DETAILS NOT SHOWN, SEE DETAILS ON NDOT STANDARD PLAN CW-5 ON DT-09. WEEP HOLE SHALL HAVE A ONE-WAY CHECK VALVE BY JET FILTER SYSTEM OR APPROVED EQUAL.
3. GEOTECHNICAL ENGINEER WILL VERIFY MAXIMUM ALLOWABLE BEARING PRESSURES FOR ACTUAL SITE SOIL CONDITIONS DURING CONSTRUCTION.
4. WALL CONNECTORS SHALL BE A GALVANIZED STEEL VECTOR CONNECTOR BY JVI INC. OR APPROVED EQUAL.
5. PRECAST WALL SEGMENT LENGTHS SHOWN ON ST-302 TO BE VERIFIED BY THE CONTRACTOR PRIOR TO TRANSPORTING AND ERECTING.

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD
DSGN	T. VESCO	DR P. WALKER	CHK R. COOMES	APVD R. COOMES

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PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

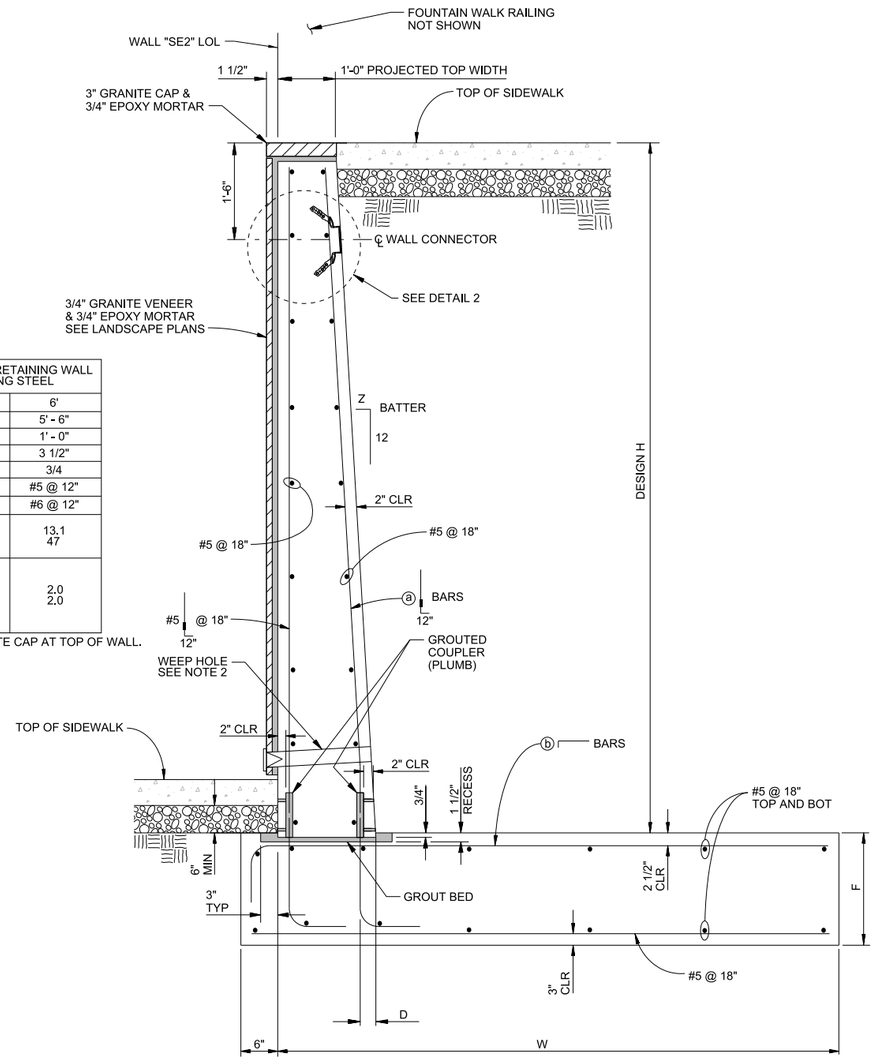
WHITE WATER PARK EXIT PRECAST CONCRETE CANTILEVER RETAINING WALL TYPE 1A (MOD)

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-306
SHEET	

LAYOUT AND REINFORCEMENT DATA	TYPE 2A (MOD) - PRECAST REINF. CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL		
	DESIGN H	4'	6'
	W	4' - 0"	5' - 6"
	F	1' - 0"	1' - 0"
	D	4"	3 1/2"
	BATTER, Z	1	3/4
	ⓐBARS	#5 @ 12"	#5 @ 12"
	ⓑBARS	#5 @ 12"	#6 @ 12"
EST. QTY.	*CONCRETE FT.^{3}/FT. *REINF LB./FT.	9.2 33	13.1 47
*MAX. TOE PRESSURE (KSF)	LEVEL SLOPE WITH SURCH. LEVEL SLOPE @ 0.51G	1.6 1.6	2.0 2.0

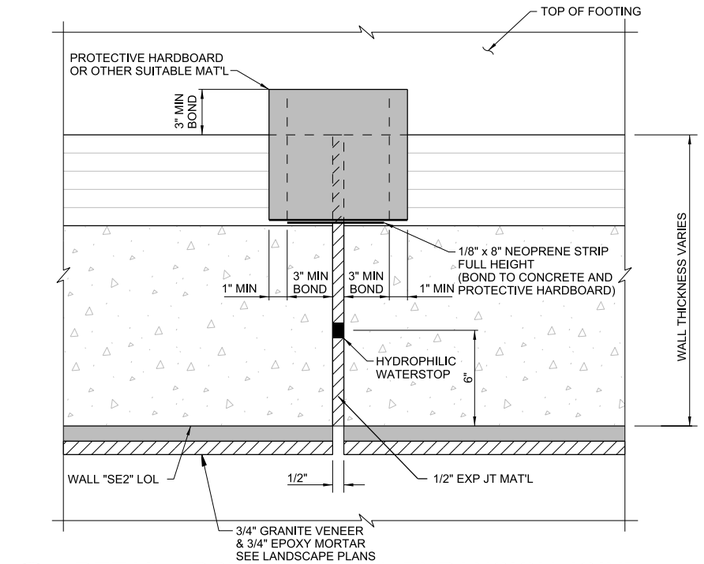
*ACCOUNTS FOR 6" FOOTING EXTENSION AND GRANITE CAP AT TOP OF WALL.



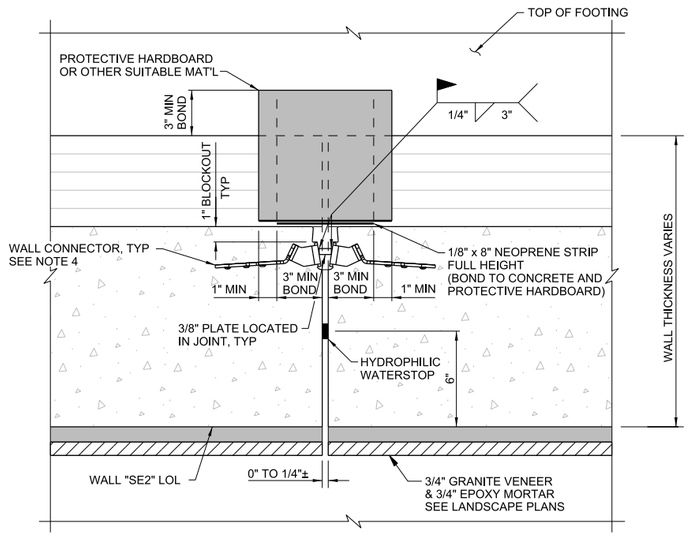
2A ST-302 **PRECAST TYPICAL SECTION - TYPE 2A (MOD)**
NTS

NOTES:

1. FOR ADDITIONAL NOTES SEE NDOT STANDARD PLAN CW-4 ON DT-08.
2. FOR WEEP HOLE DETAILS NOT SHOWN, SEE DETAILS ON NDOT STANDARD PLAN CW-5 ON DT-09. WEEP HOLE SHALL HAVE A ONE-WAY CHECK VALVE BY JET FILTER SYSTEM OR APPROVED EQUAL.
3. GEOTECHNICAL ENGINEER WILL VERIFY MAXIMUM ALLOWABLE BEARING PRESSURES FOR ACTUAL SITE SOIL CONDITIONS DURING CONSTRUCTION.
4. WALL CONNECTORS SHALL BE A GALVANIZED STEEL VECTOR CONNECTOR BY JVI INC. OR APPROVED EQUAL.
5. PRECAST WALL SEGMENT LENGTHS SHOWN ON ST-302 TO BE VERIFIED BY THE CONTRACTOR PRIOR TO TRANSPORTING AND ERECTING.



1 ST-302 **DETAIL - PRECAST WALL EXPANSION JOINT**
NTS



2 ST-302 **DETAIL - PRECAST WALL JOINT**
NTS

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T. VESCO	P. WALKER	R. COOMES	APVD	R. COOMES	

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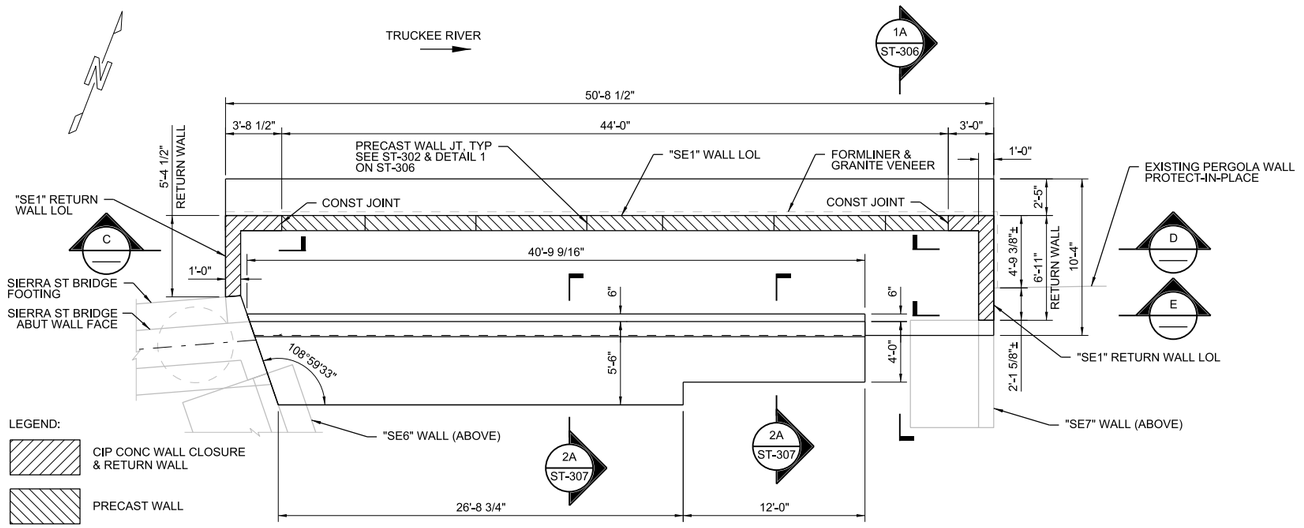
REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

WHITE WATER PARK EXIT
PRECAST CONCRETE CANTILEVER
RETAINING WALL TYPE 2A (MOD)

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-307
SHEET	

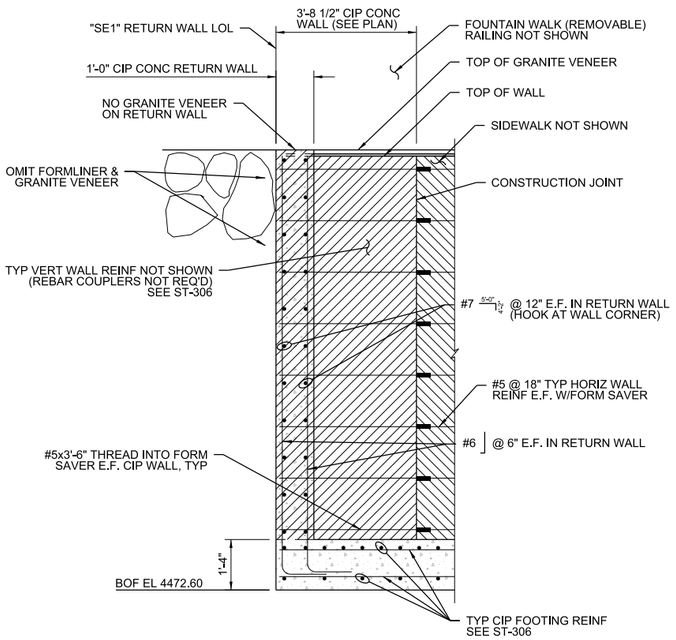


PLAN - WALL "SE1" & "SE2" PRECAST FOOTING & WALL LAYOUT

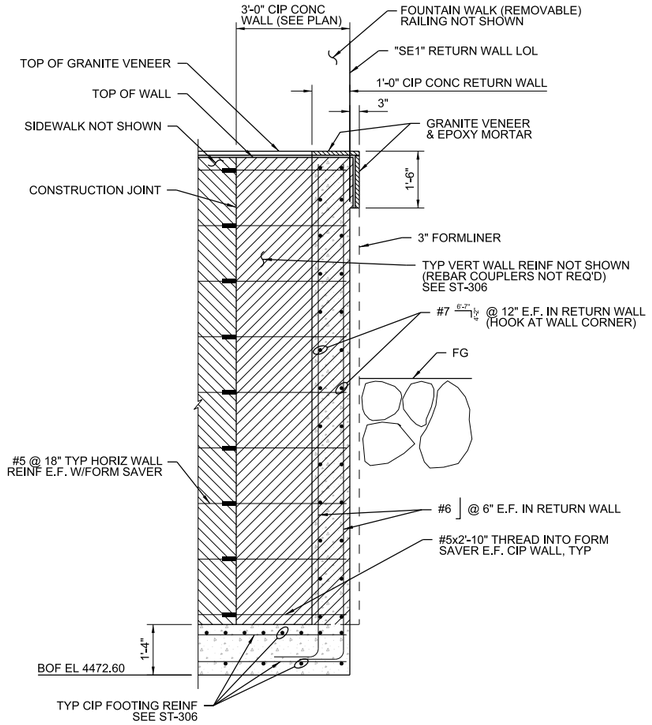
1"=5'

NOTES:

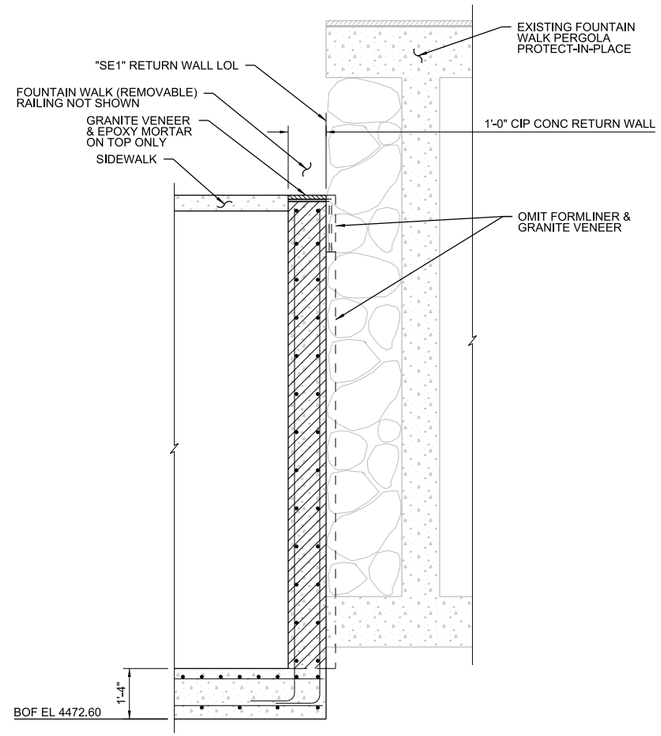
1. PRECAST WALL SEGMENT LENGTHS SHOWN ON ST-302 TO BE VERIFIED BY THE CONTRACTOR PRIOR TO TRANSPORTING AND ERECTING.
2. FOR PRECAST WALL DETAILS NOT SHOWN, SEE ST-306 & ST-307.



C SECTION
1/2"=1'-0"



D SECTION
1/2"=1'-0"



E SECTION
1/2"=1'-0"

DRAFT PS&E
NOT FOR
CONSTRUCTION

NO.	DATE	DSGN	REVISION	CHK	APVD	BY	APVD
	T. VESCO	DR	P. WALKER	R. COOMES	R. COOMES	R. COOMES	

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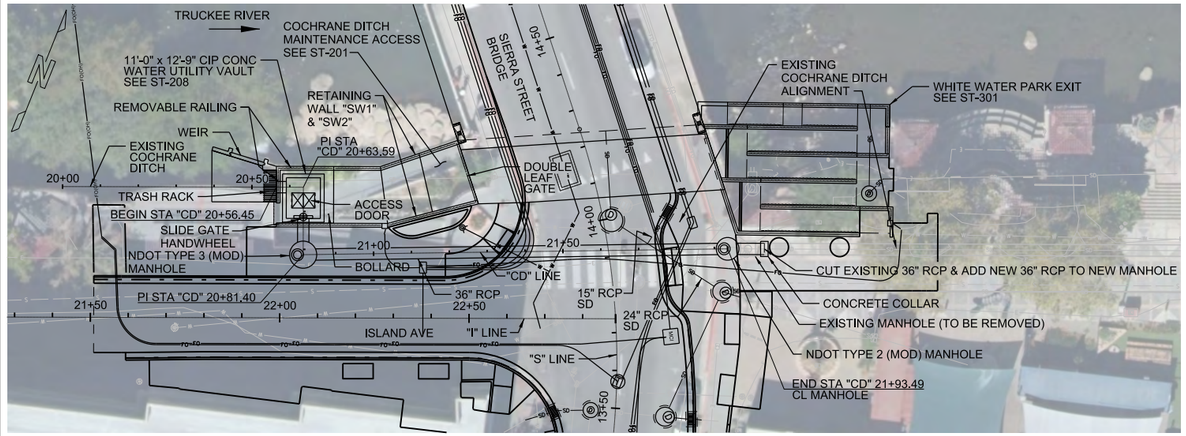
REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

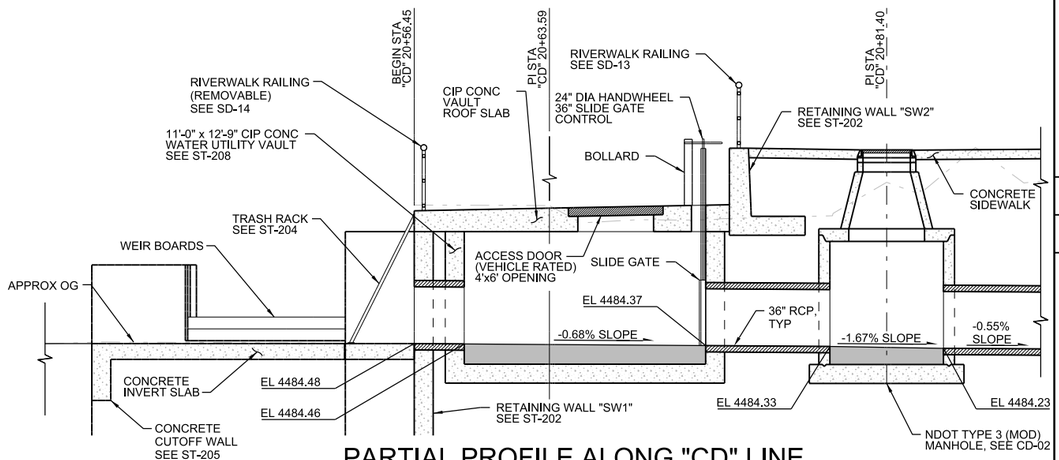
WHITE WATER PARK EXIT
WALL "SE1" CIP RETURN
WALL DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

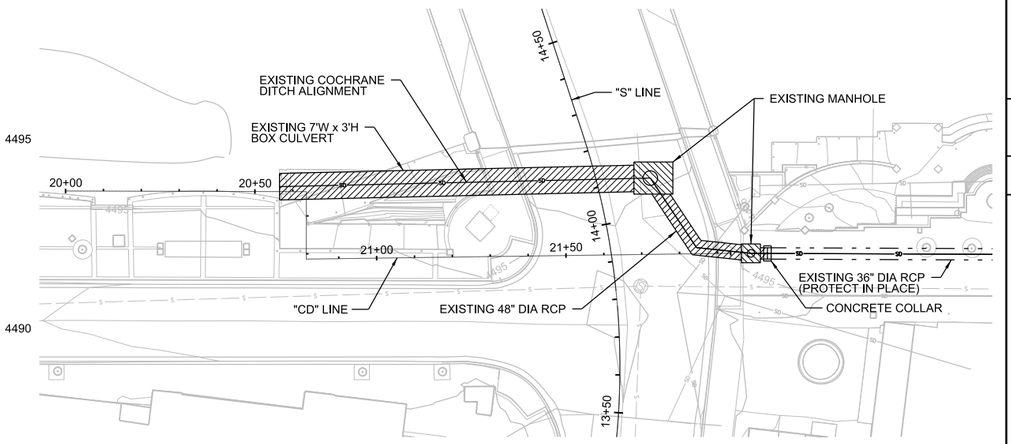
AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	APRIL 2026
PROJ	W7Y56600
DWG	ST-308
SHEET	



PLAN
1"=20'



PARTIAL PROFILE ALONG "CD" LINE
1"=4'



EXISTING COCHRANE DITCH DEMOLITION PLAN
1"=20'

LEGEND
- REMOVAL OF BOX CULVERT & RCP
- REMOVAL OF MANHOLE

APPROXIMATE QUANTITIES

ITEM DESCRIPTION	QUANTITY	UNIT
REMOVE COCHRANE DITCH MANHOLE	2	EACH
REMOVE COCHRANE DITCH BOX CULVERT	98	LINFT
REMOVE CONCRANE DITCH 36-INCH RCP	5	LINFT
REMOVE CONCRANE DITCH 48-INCH RCP	37	LINFT
NDOT TYPE 2 (MOD) MANHOLE	1	EACH
NDOT TYPE 3 (MOD) MANHOLE	1	EACH
36-INCH REINFORCED CONCRETE PIPE, CLASS III	136	LINFT
CONCRETE PIPE COLLAR	1	EACH
SLIDE GATE ASSEMBLY	1	EACH
INSTALL REMOVABLE BOLLARD	1	EACH
MAINTAIN 1.5-5 CFS FLOWS TO COCHRANE DITCH SYSTEM	1	LS

DRAWING LIST
CD-01 PLAN & PROFILE
CD-02 MANHOLE DETAILS

NOTES:
1. FOR CONCRETE CANTILEVER RETAINING WALLS AND WEIR WALL DETAILS, SEE ST-201.
2. FOR EXISTING AND NEW UTILITIES, SEE UTILITY PLANS.
3. FOR HANDWHEEL, SLIDE GATE, TRASH RACK DETAILS, SEE ST-201.

PROFILE ALONG "CD" LINE
H: 1"=20'
V: 1/2"=1'

NO.	DATE	REVISION	DR	CHK	APVD	BY
			T VESCO	R COOMES	APVD	R COOMES

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PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

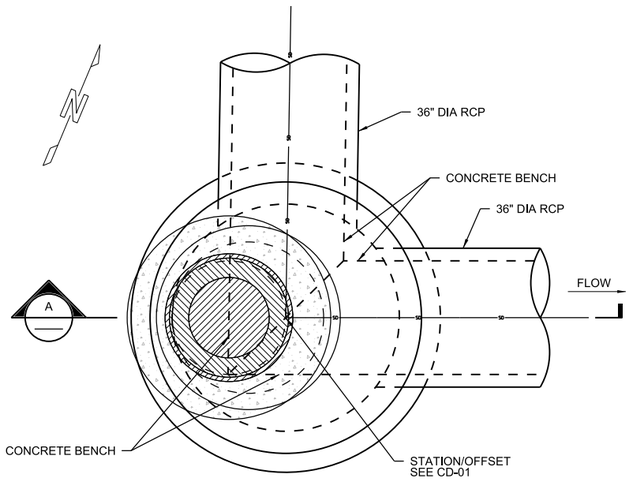
SIERRA STREET BRIDGE REPLACEMENT PROJECT

COCHRANE DITCH PLAN & PROFILE

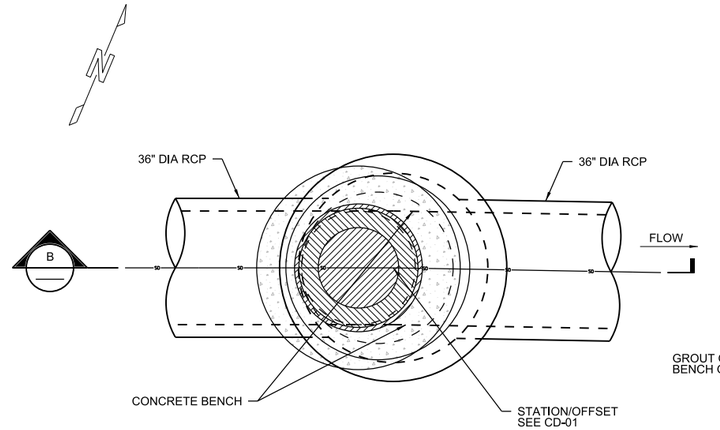
Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

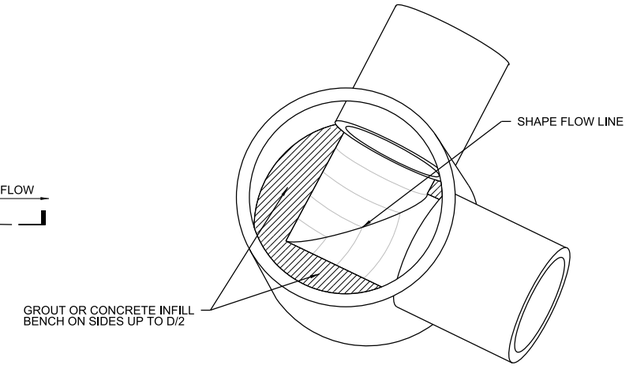
DATE	APRIL 2026
PROJ	W7Y56600
DWG	CD-01
SHEET	



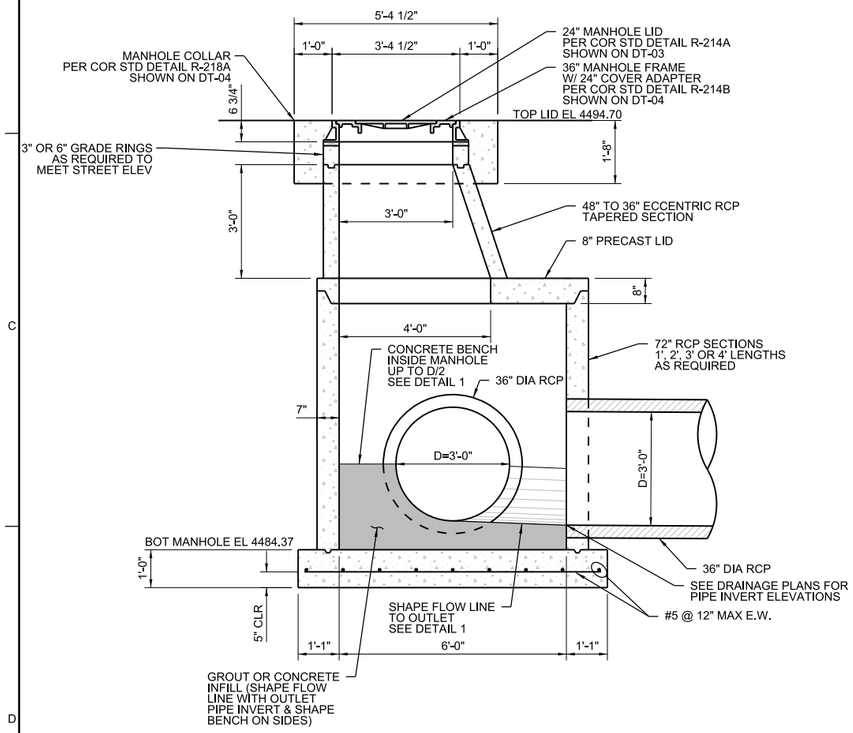
PLAN
1/2" = 1'-0"



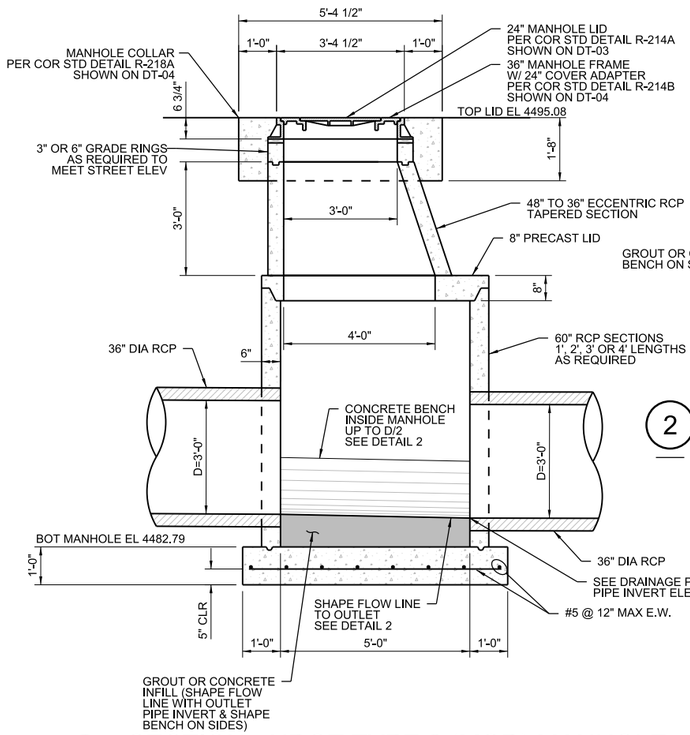
PLAN
1/2" = 1'-0"



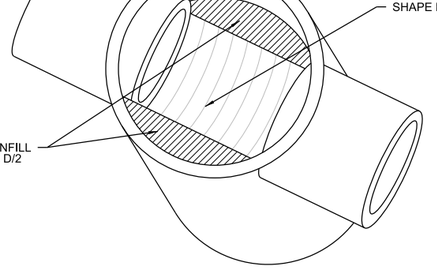
1 DETAIL - CONCRETE BENCH INSIDE MANHOLE
NTS



A SECTION - NDOT TYPE 3 (MOD) MANHOLE
1/2" = 1'



B SECTION - NDOT TYPE 2 (MOD) MANHOLE
1/2" = 1'



2 DETAIL - CONCRETE BENCH INSIDE MANHOLE
NTS

NOTES:

1. FOR CAST-IN-PLACE CONCRETE BASE, ALL REINFORCING STEEL TO BE #5 BARS AT 12-INCHES ON CENTER, TIGHTLY WOUND AT ALL INTERSECTIONS, AND EMBEDDED IN CONCRETE AT LEAST 2-INCHES. BAR ENDS MUST CLEAR CONCRETE SURFACES BY 1 1/2"-INCHES. PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
2. PRECAST CONCRETE PIPE SECTIONS, TAPERED SECTIONS, LIDS, GRADE RINGS, BASES, AND STEPS SHALL CONFORM TO AASHTO M 199, ASTM C-478.
3. SHAPE FLOW LINE IN MANHOLE TO OUTLET PIPE, AND PROVIDE A 10:1 MINIMUM SLOPE FROM ALL DIRECTIONS TOWRD FLOW LINE.

DRAFT PS&E
NOT FOR
CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
	T VESCO	T VESCO	T VESCO	R COOMES	R COOMES	R COOMES	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

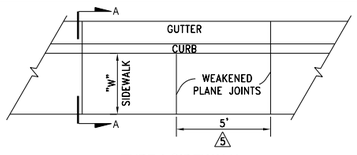
SIERRA STREET BRIDGE REPLACEMENT PROJECT

COCHRANE DITCH
MANHOLE DETAILS

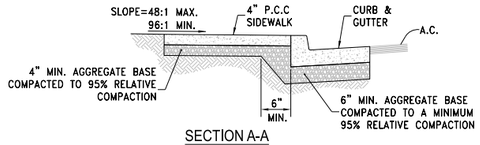
Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

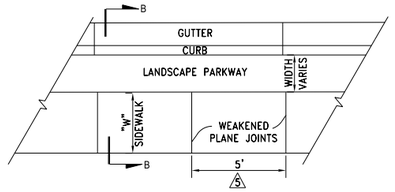
DATE	APRIL 2026
PROJ	W7Y56600
DWG	CD-02
SHEET	



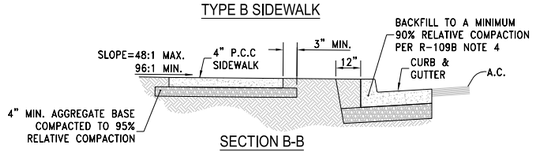
TYPE A SIDEWALK



SECTION A-A



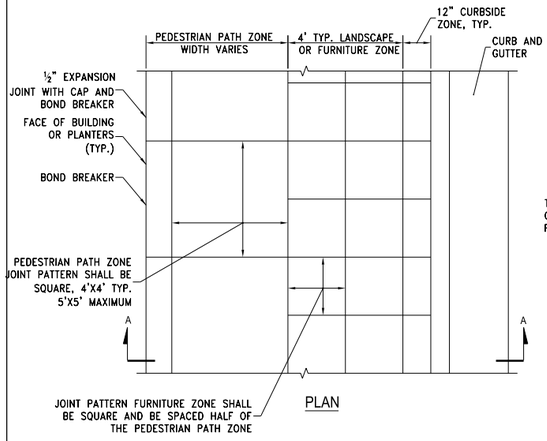
TYPE B SIDEWALK



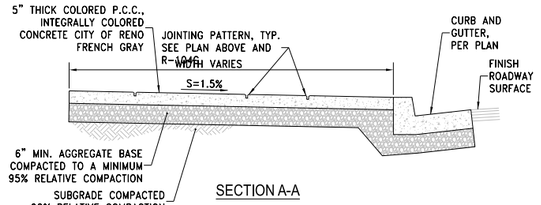
SECTION B-B

NOTES:

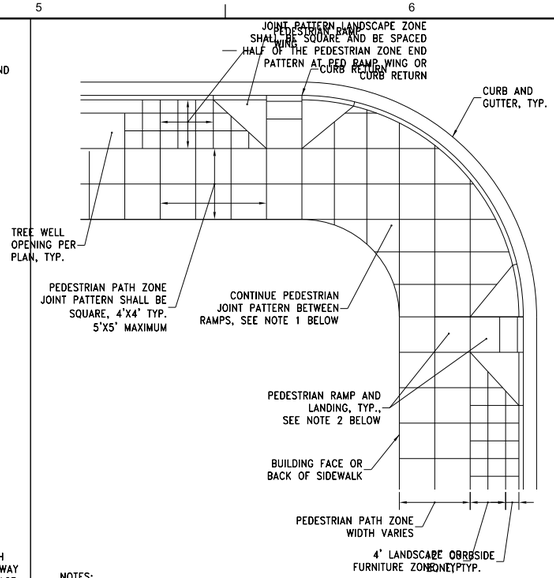
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. AGGREGATE BASE MATERIAL UNDER SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
3. SIDEWALK WIDTH "W" SHALL BE PER PLAN.
4. WEAKENED PLANE JOINTS TYPICALLY SHALL BE CONSTRUCTED AT 5 FT INTERVALS OR ACCORDANCE WITH SECTION 312 OF THE SSPWC.
5. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO NEW SIDEWALK AT NEAREST WEAKENED PLANE JOINT. NO OVERCUTS. DOWEL INTO EXISTING ADJACENT CONCRETE SIDEWALK WITH A MINIMUM OF TWO (2) No. 4 REINFORCEMENT BARS 10" IN LENGTH. DOWELS SHALL BE EQUALLY SPACED ACROSS WIDTH "W" AND DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONCRETE.
6. SIDEWALKS SHALL NOT BE POURED MONOLITHICALLY WITH CURBS.
7. COLORED CONCRETE AND PAVERS ARE NOT ALLOWED.
8. TUNNELING AND/OR BORING IS NOT ALLOWED.



PLAN



SECTION A-A



NOTES:

1. DETAIL IS INTEND FOR ILLUSTRATION OF JOINTING PATTERN FOR DECORATIVE SIDEWALK. THE JOINT PATTERNS ARE INTENDED TO BE SQUARE. SITE SPECIFIC JOINTS NECESSARY AT UTILITY BOXES AND VAULTS, POLES, DRIVEWAYS, PEDESTRIAN RAMPS, ETC., SHALL BE DETERMINED BY THE ENGINEER AND SHOWN ON THE IMPROVEMENT PLANS.
2. SEE CITY OF RENO STANDARD DETAILS FOR SIDEWALK AND PEDESTRIAN RAMP DETAILS AND SECTIONS. PEDESTRIAN RAMPS SHALL ALSO BE COLORED AND COMPLY WITH PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) STANDARDS, CURRENT VERSION.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
SIDEWALK DETAIL	R-104A
APPROVED BY: KK	DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
NOTES - SIDEWALK DETAIL	R-104B
APPROVED BY: KK	DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
DECORATIVE COLORED P.C.C. SIDEWALK	R-104C
APPROVED BY: KK	DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
DECORATIVE COLORED P.C.C. SIDEWALK JOINTING PATTERN	R-104D
APPROVED BY: KK	DATE: 2/2026

GENERAL NOTES - DECORATIVE COLORED CONCRETE

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. ALL PEDESTRIAN RAMPS SHALL BE COLORED AND CONFORM TO THE REQUIREMENTS IN CITY OF RENO STANDARD DETAILS R-106A THROUGH R-106G.
3. AGGREGATE BASE MATERIAL UNDER SIDEWALKS, PEDESTRIAN RAMPS AND DRIVEWAYS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SECTION 200 OF THE SSPWC.
4. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO NEW SIDEWALK. DOWEL INTO EXISTING ADJACENT CONCRETE SIDEWALK WITH A MINIMUM OF TWO (2) No. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W" OF SIDEWALK. DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONCRETE.
5. STORM DRAIN INLETS OR SIMILAR ACCESSES SHALL NOT BE LOCATED IN THE AREA AT THE BASE OF THE CURB RAMP OR LANDING AREA. IF OBSTRUCTIONS SUCH AS INLETS, UTILITY POLES, PULL BOXES, FIRE HYDRANTS, ETC. ARE ENCOUNTERED, THE LOCATION AND DIMENSIONS MAY BE ADJUSTED UPON APPROVAL OF THE ENGINEER.
6. GUTTER SHALL MAINTAIN POSITIVE DRAINAGE TO PREVENT PONDING.
7. ALL SLOPE RATES ARE RELATIVE TO LEVEL AND SHALL COMPLY WITH THE PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) STANDARDS, CURRENT VERSION.
8. THE CONCRETE SHALL BE PLACED AND CONSOLIDATED SO AS TO COMPLETELY FILL SPACES IN THE FORMS AND TO PROVIDE SUITABLE SURFACE FOR FINISHING. THE CONCRETE ADJACENT TO THE FORMS SHALL BE SPADED. ALL SURROUNDING SURFACES OR WALLS SHALL BE PROTECTED TO PREVENT DISCOLORATION. WATER MUST NOT BE SPRAYED ON THE SURFACE TO RETEMPER THE PLASTIC CONCRETE FOR ADDITIONAL TROWELLING. HARD STEEL TROWELLING SHALL BE MINIMIZED TO AVOID TROWEL BURNS.

TEST SECTION:

1. THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT A TEST SECTION AT THE PROJECT LOCATION FOR THE DECORATIVE COLORED CONCRETE SIDEWALK.
2. THE TEST SECTION WILL CONSIST OF A PORTION OF THE FINAL SIDEWALK WORK, FULL WIDTH AND A MINIMUM LENGTH OF 10 FEET. THE ENGINEER RESERVES THE RIGHT TO INCREASE THE LENGTH OF THE TEST SECTION TO 20 FEET IF THE SITUATION WARRANTS SUCH. THE CONTRACTOR MAY CONSTRUCT THE TEST SECTION BETWEEN EXPANSION JOINTS TO BECOME A PORTION TO THE FINAL SIDEWALK WORK. THE CONTRACTOR SHALL CONSTRUCT THE TEST SECTION TO DEMONSTRATE HIS ABILITY TO SUPPLY, PLACE, CONSOLIDATE, FINISH, CURE, TEXTURE, AND SEAL DECORATIVE CONCRETE. THE COLOR SHALL BE UNIFORM AND CONFORM TO THE CITY OF RENO'S COLOR SCHEME. THE JOINT LINES LINES SHALL NOT BE SKEWED AND SHALL HAVE LINES THAT ARE CONTINUOUS ACROSS CONTRACTION AND EXPANSION JOINTS.
3. FOR ACCURATE COLOR, THE QUANTITY OF CONCRETE MIXED TO PRODUCE THE SAMPLE SHALL NOT BE LESS THAN 3 YD^3 AND SHOULD BE IN FULL CUBIC YARD INCREMENTS. BATCH TICKETS SHALL INCLUDE A COMPLETE BREAK OUT OF ALL MATERIALS AND WEIGHTS FOR EACH.
4. ONCE ACCEPTED BY THE ENGINEER, THIS TEST SECTION SHALL REMAIN THROUGH THE COMPLETION OF THE WORK AND WILL BE A QUALITY STANDARD FOR JUDGING THE REMAINDER TO THE WORK. THE CONTRACTOR SHALL NOT COMMENCE WORK ON THE REMAINDER OF ANY OF THE DECORATIVE CONCRETE UNTIL THE TEST SECTION HAS BEEN COMPLETED AND ACCEPTED BY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO CONSTRUCT ADDITIONAL DECORATIVE CONCRETE TEST SECTIONS, IF THE INITIAL TEST SECTION IS NOT ACCEPTABLE. ALL DECORATIVE CONCRETE PLACED IN THE FINAL WORK SHALL BE ACCEPTED BASED ON THE CONTRACTOR'S ABILITY TO PRODUCE THE SAME QUALITY AS THAT SHOWN IN THE TEST SECTION AND IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THESE SPECIAL PROVISIONS.
5. AREAS NOT HAVING UNIFORM COLOR, STAMPING, OR OTHER SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

INTEGRALLY COLORED CONCRETE:

1. COLORS SHALL MATCH THE EXISTING COLORS ON VIRGINIA ST. (WEST SIDE) AND W. FIRST ST. FRENCH GRAY – ASHLAR COLOR
2. CONTRACTOR IS RESPONSIBLE FOR COLOR MATCH AND PROVIDING A TEST SECTION PER DETAIL R-104G. RECENTLY ACCEPTED COLORS (OR APPROVED EQUAL):
   INCRETE SYSTEMS POWDER COLOR DARK GRAY (4 LBS PER SACK) – MATCH FRENCH GRAY
3. INTEGRAL COLORS SHALL MEET REQUIREMENTS OF ASTM C979.
4. LIQUID RELEASE SHALL CONSIST OF 100% MINERAL SPIRITS. THE SURFACE SHALL BE BROOM FINISHED (LIGHT) AND HAVE A FLAT SURFACE FINISH.
5. CURING AND SEALING SYSTEM SHALL BE A SOLVENT BASED, NON-YELLOWING, VOC COMPLIANT COMPOUND WITH ACRYLIC POLYMERS. THE CURING AND SEALING SYSTEM SHALL MEET THE FOLLOWING REQUIREMENTS: ASTM C-309 (TYPE 1, CLASS A), ASTM C1315 (TYPE 1, CLASS A, MINIMUM 25% SOLIDS CONTENT).
   A. ALL COLORED CONCRETE TO BE SEALED SHALL BE SUFFICIENTLY CURED PRIOR TO APPLICATION OF SAID SEALANT. ALSO, ALL CAULKING AND EXPANSION JOINT WORK SHALL BE FULLY CURED PRIOR TO APPLICATION OF THE SEALANT. THE COVERAGE RATE SHALL BE 100 TO 125 SQUARE FEET PER GALLON, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
   B. ALL MATERIALS SHALL BE DELIVERED IN THE ORIGINAL MANUFACTURER'S SEALED CONTAINERS. MATERIALS SHALL BE STORED TO PREVENT DAMAGE TO THE CONTAINERS. THE SEALER SHALL BE THOROUGHLY STIRRED BEFORE AND DURING USE. SURFACE, AIR AND MATERIAL TEMPERATURES SHALL NOT BE LESS THAN 50 DEGREES FAHRENHEIT DURING APPLICATION OR WITHIN 4 HOURS AFTER SAID APPLICATION. AREAS NOT SUBJECT TO NATURAL VENTILATION SHALL HAVE POSITIVE VENTILATION PROVIDED THROUGHOUT THE APPLICATION. PERSONNEL SHALL BE WARNED AGAINST PROLONGED BREATHING OF VAPORS AND CONTACT OF MATERIALS WITH THE SKIN OF EYES. PROTECT OTHER SURFACES NOT BEING SEALED AS NECESSARY DURING THE APPLICATION PROCESS.
   C. THE CONTRACTOR SHALL NOT ALLOW FOOT OR VEHICULAR TRAFFIC ON SURFACES WHICH HAVE BEEN SEALED UNTIL SUCH TIME AS THEY ARE THOROUGHLY DRY, AS DETERMINED BY THE ENGINEER.

EXPANSION AND CONTROL JOINTS:

1. EXPANSION JOINTS AS SHOWN ON THE PLANS SHALL CONSIST OF A 1/2 INCH PREMOLDED EXPANSION JOINT WITH WHITE CAP OR BACKER ROD AND CAULK. THE PREMOLDED EXPANSION JOINT MATERIAL IS AN ASPHALT COATED FIBER EXPANSION JOINT, THE WHITE CAPE/BACKER IS A CLOSED BACKER ROD AND CAULK. WITHIN ROADWAY, THE CAULK SHALL BE A DOW CORNING 880 – SL SELF LEVELING SILICONE JOINT SEALANT OR APPROVED EQUAL. ALL OTHER LOCATIONS THE CAULK SHALL BE A SIKAFLEX 2C SL DEEP CHARCOAL OR APPROVED EQUAL. EXPANSION JOINTS (TRANSVERSE TO THE STREET CENTERLINE) SHALL BE CONSTRUCTED IN ALL CONCRETE SIDEWALKS, APPROACHES, DRIVEWAYS AT ALL CONSTRUCTION (COLD JOINTS) AND BETWEEN THE CONCRETE AND ANY EXISTING BUILDING. ALL JOINTS SHALL BE FILLED WITH THE PREMOLDED JOINT FILLER AS DESCRIBED ABOVE.
2. TRANSVERSE EXPANSION JOINTS 1/2 INCH WIDE SHALL BE CONSTRUCTED AT ALL SIDEWALK RETURNS OPPOSITE EXPANSION JOINTS IN ADJACENT CURB AND AT REGULAR INTERVALS NOT TO EXCEED 30 FEET. TRANSVERSE EXPANSION JOINTS SHALL ALSO BE CONSTRUCTED AT TRANSITION POINTS THAT WOULD NORMALLY CRACK DUE TO ANGLE POINTS OR SIMILAR OCCURRENCES. ISOLATION JOINTS SHALL BE INSTALLED AROUND ALL STRUCTURES.
3. SAWCUT JOINTS WILL BE REQUIRED BETWEEN EXPANSION JOINTS AS SPECIFIED:
   A. FROM ALL ANGLE POINTS INCLUDING, BUT NOT LIMITED TO PULL BOXES, VAULTS, MANHOLES, PILLARS, DROP INLETS, STEEL INSERTS, STAIR WELLS, ETC., OR ANY ANGLE POINT FROM AN ADJOINING STRUCTURE.
   B. SAW CUTS SHALL BE 1-1/4 INCH DEEP AND 1/8 INCH WIDE, PER DETAIL A BELOW. TRANSVERSE JOINTS AND LONGITUDINAL JOINTS SHALL HAVE 1/4" CHAMFERED EDGE. PRIOR TO CHAMFER EDGE CUT, CONCRETE SHALL BE ALLOWED TO CURE A MINIMUM OF 3 DAYS TO PREVENT "SPALDING" OF THE CHAMFER EDGE. DEVIATION OF CURE TIME SHALL BE APPROVED THE ENGINEER.
   C. AREA BETWEEN SAWCUT AND EXPANSION (CONSTRUCTION) JOINTS SHALL BE SQUARE AND NOT TO EXCEED 100 SQUARE FEET.
4. WEAKENED PLANE JOINTS (TOOL JOINTS) AS SPECIFIED HEREINAFTER:
   A. TOOL JOINTS SHALL MATCH THE DIMENSIONS OF SIDEWALK SCORE PATTERN, BE 1-1/4 INCH DEEP AND 1/4 INCH WIDE RADIUS AT THE TOP. ANY DEVIATIONS TO THESE REQUIREMENTS MUST BE APPROVED BY THE ENGINEER.
   B. TOOL JOINTS SHALL BE LOCATED AT REGULAR INTERVALS NOT EXCEEDING 1.2 TIMES THE WIDTH AND NO MORE FREQUENTLY THAN 0.8 TIMES THE WIDTH. IN NO CASE SHALL REGULAR INTERVALS OF TOOL JOINTS IN EITHER DIRECTION EXCEED 10 FEET.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
GENERAL NOTES DECORATIVE COLORED CONCRETE SIDEWALKS / DRIVEWAYS / PEDESTRIAN RAMPS	R-104E
APPROVED BY: KK	DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
TEST SECTION DECORATIVE COLORED CONCRETE SIDEWALKS / DRIVEWAYS / PEDESTRIAN RAMPS	R-104F
APPROVED BY: KK	DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	
INTEGRALLY DECORATIVE COLORED CONCRETE SIDEWALKS / DRIVEWAYS / PED RAMPS CURE AND SEAL	R-104G
APPROVED BY: KK	DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
EXPANSION AND CONTROL JOINTING DECORATIVE COLORED CONCRETE SIDEWALKS AND DRIVEWAYS	R-104H
APPROVED BY: KK	DATE: 2/2026

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DESIGNER	REVISION	CHK	APVD	BY	APVD
DSGN		DR	J CHELONIS	T HOWARD		R COOMES	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

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NTS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	DT-01
SHEET	

1. ALL SIDEWALK AND PEDESTRIAN RAMP CONCRETE SHALL WE FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) AND SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF THE STANDARD SPECIFICATION OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYP II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO THE SSPWC.

2. ALL CROSSWALK CONCRETE SHALL BE DESIGNED TO ACHIEVE A 28 DAY STRENGTH SUCH THAT NOT MORE THAN FIVE PERCENT OF THE CONCRETE PRODUCED WILL FALL BELOW FLEXURAL STRENGTH OF 650 PSI. THE MIX DESIGN SHALL MEET THE REQUIREMENT OF SECTION 337.11.01 OF THE SSPWC. ALL CONCRETE SHALL BE PROTECTED FROM TRAFFIC LOADS UNTIL 550 PSI MIN FLEXURAL STRENGTH IS ACHIEVED.

3. AGGREGATE BASE MATERIAL UNDER SIDEWALKS, PEDESTRIAN RAMPS AND CROSSWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SECTION 200 OF THE SSPWC.

4. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO NEW SIDEWALK. DOWEL INTO EXISTING ADJACENT CONCRETE SIDEWALK WITH A MINIMUM OF TWO (2) No. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W" OF SIDEWALK. DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONCRETE.

5. STORM DRAIN INLETS OR SIMILAR ACCESSES SHALL NOT BE LOCATED IN THE AREA AT THE BASE OF THE CURB RAMP OR LANDING AREA. IF OBSTRUCTIONS SUCH AS INLETS, UTILITY POLES, PULL BOXES, FIRE HYDRANTS, ETC. ARE ENCOUNTERED, THE LOCATION AND DIMENSIONS MAY BE ADJUSTED UPON APPROVAL OF THE ENGINEER.

6. DETECTABLE WARNING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE PLACED ON MIN. SIX (6") INCHES OF P.C.C.

7. DETECTABLE WARNING SHALL CONSIST OF PRECAST WETSET TILES WITH MIN. SIZE OF 2' X 2', COLOR DARK RED. APPROVED PRODUCTS INCLUDE: "CASTinTACT", "TEKWAY DOMES-TILES", "ARMOR CAST WET SET TILES", AND "ARCIS WET SET TILES". DETECTABLE WARING SHALL BE CONSTRUCTED PER MANUFACTURER'S INSTALLATION GUIDELINES AND CONFORM TO ADAAG.

8. GUTTER SHALL MAINTAIN POSITIVE DRAINAGE TO PREVENT PONDING.

9. ALL SLOPE RATES ARE RELATIVE TO LEVEL AND SHALL COMPLY WITH THE PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) STANDARDS, CURRENT VERSION.

10. THE CONCRETE SHALL BE PLACED AND CONSOLIDATED SO AS TO COMPLETELY FILL SPACES IN THE FORMS AND TO PROVIDE SUITABLE SURFACE FOR FINISHING. THE CONCRETE ADJACENT TO THE FORMS SHALL BE SPADED. ALL SURROUNDING SURFACES OR WALLS SHALL BE PROTECTED TO PREVENT DISCOLORATION. WATER MUST NOT BE SPRAYED ON THE SURFACE TO RETEMPER THE PLASTIC CONCRETE FOR ADDITIONAL TROWELLING. HARD STEEL TROWELLING SHALL BE MINIMIZED TO AVOID TROWEL BURNS. THERE WILL BE "NO RELIEF" IN THE SURFACE OF THE CONCRETE FOR THE ASHLAR STONE RANDOM PATTERN AREAS.

GENERAL NOTES - STAMPED CONCRETE

1. COLORS SHALL MATCH THE EXISTING COLORS ON VIRGINIA ST. (WEST SIDE) AND W. FIRST ST.
   CORAL RED – BRICK HEADER COURSE
   FRENCH GRAY – ASHLAR STAMPED

2. CONTRACTOR IS RESPONSIBLE FOR COLOR MATCH AND PROVIDING A TEST SECTION PER DETAIL R-104G. RECENTLY ACCEPTED COLORS (OR APPROVED EQUAL):
   INCRETE SYSTEMS POWDER COLOR DARK GRAY (4 LBS PER SACK) – MATCH FRENCH GRAY
   INCRETE SYSTEMS POWDER COLOR BRICK RED (4 LBS PER SACK) – MATCH CORAL RED

3. INTEGRAL COLORS SHALL MEET REQUIREMENTS OF ASTM C979.

4. LIQUID RELEASE SHALL CONSIST OF 100% MINERAL SPIRITS. THE SURFACE SHALL BE BROOM FINISHED (LIGHT) AND HAVE A FLAT SURFACE FINISH.

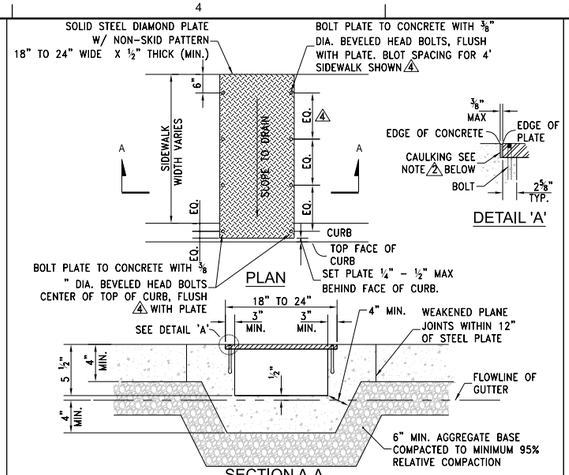
5. CURING AND SEALING SYSTEM SHALL BE A SOLVENT BASED, NON-YELLOWING, VOC COMPLIANT COMPOUND WITH ACRYLIC POLYMERS. THE CURING AND SEALING SYSTEM SHALL MEET THE FOLLOWING REQUIREMENTS: ASTM C-309 (TYPE 1, CLASS A), ASTM C1315 (TYPE 1, CLASS A, MINIMUM 25% SOLIDS CONTENT).

   A. ALL STAMPED CONCRETE TO BE SEALED SHALL BE SUFFICIENTLY CURED PRIOR TO APPLICATION OF SAID SEALANT. ALSO, ALL CAULKING AND EXPANSION JOINT WORK SHALL BE FULLY CURED PRIOR TO APPLICATION OF THE SEALANT. THE COVERAGE RATE SHALL BE 100 TO 125 SQUARE FEET PER GALLON, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.

   B. ALL MATERIALS SHALL BE DELIVERED IN THE ORIGINAL MANUFACTURER'S SEALED CONTAINERS. MATERIALS SHALL BE STORED TO PREVENT DAMAGE TO THE CONTAINERS. THE SEALER SHALL BE THOROUGHLY STIRRED BEFORE AND DURING USE. SURFACE, AIR AND MATERIAL TEMPERATURES SHALL NOT BE LESS THAN 50 DEGREES FAHRENHEIT DURING APPLICATION OR WITHIN 4 HOURS AFTER SAID APPLICATION. AREAS NOT SUBJECT TO NATURAL VENTILATION SHALL HAVE POSITIVE VENTILATION PROVIDED THROUGHOUT THE APPLICATION. PERSONNEL SHALL BE WARNED AGAINST PROLONGED BREATHING OF VAPORS AND CONTACT OF MATERIALS WITH THE SKIN OF EYES. PROTECT OTHER SURFACES NOT BEING SEALED AS NECESSARY DURING THE APPLICATION PROCESS.

   C. THE CONTRACTOR SHALL NOT ALLOW FOOT OR VEHICULAR TRAFFIC ON SURFACES WHICH HAVE BEEN SEALED UNTIL SUCH TIME AS THE YARE THOROUGHLY DRY, AS DETERMINED BY THE ENGINEER.

GENERAL NOTES - STAMPED CONCRETE



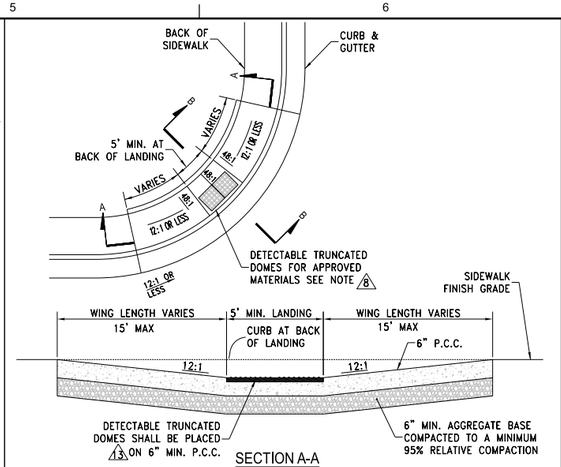
NOTES:
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.

2. SET PLATE FLUSH WITH ADJACENT CONCRETE AND PROVIDE ⅜" MAX GAP BETWEEN STEEL PLATE AND EDGE OF SIDEWALK. FILL GAP WITH CAULKING AFTER PLACEMENT OF PLATE. CAULKING MATERIAL SHALL BE GE SILICONE II* W/D SUPREME, OR APPROVED EQUAL. COLOR SHALL BE WHITE.

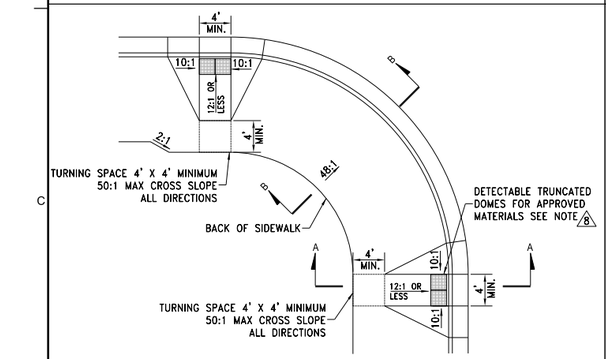
3. AGGREGATE BASE MATERIAL UNDER CONCRETE DRAIN SUPPORT STRUCTURE SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE, ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

4. BOLTS: ⅜" DIA x 2 ⅞" LONG DYNABOLT SLEEVE ANCHOR RAMSET REDHEAD FS-3826 OR APPROVED EQUIVALENT. SIDEWALK WIDER THAN 4FT, BOLTS SHALL BE PLACED AT 18" O.C. FOR WIDTH OF SIDEWALK

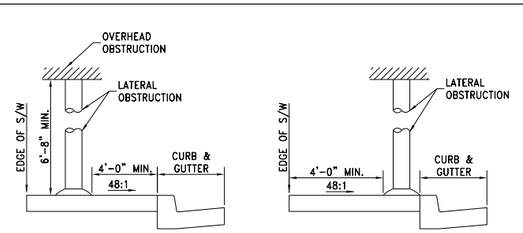
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
SIDEWALK CROSS-DRAIN	R-105
	APPROVED BY: KK DATE: 2/2026



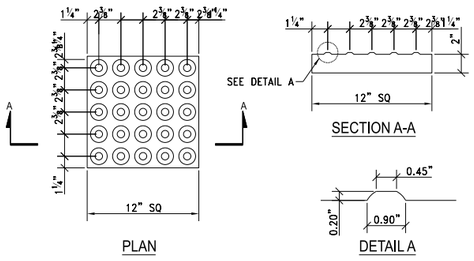
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
PEDESTRIAN RAMP - EXISTING SIDEWALKS	R-106A
	APPROVED BY: KK DATE: 2/2026



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
PEDESTRIAN RAMP - WIDE SIDEWALKS	R-106C
	APPROVED BY: KK DATE: 2/2026



TYPICAL SIDEWALK vs OBSTRUCTION CLEARANCE DETAIL



NOTE: FOR DETECTABLE TRUNCATED DOMES APPROVED MATERIALS SEE NOTE 8

TRUNCATED DOMES DETAIL

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
PEDESTRIAN RAMP - DETAILS	R-106F
	APPROVED BY: KK DATE: 2/2026

1. STORM DRAIN INLETS OR SIMILAR ACCESSES SHALL NOT BE LOCATED IN THE AREA AT THE BASE OF THE CURB RAMP OR LANDING AREA. IF OBSTRUCTIONS SUCH AS INLETS, UTILITY POLES, PULL BOXES, FIRE HYDRANTS, ETC. ARE ENCOUNTERED, THE LOCATION AND DIMENSIONS MAY BE ADJUSTED UPON APPROVAL OF THE ENGINEER.

2. NO LIP SHALL BE PERMITTED AT THE CURB RAMP SLOPE TO GUTTER PAN.

3. PLANTMIX BITUMINOUS SURFACE SHALL BE FLUSH WITH THE EDGE OF THE GUTTER PAN IN THE AREA OF THE CURB RAMP.

4. ROUGH BROOM TEXTURE ON CURB RAMPS AND WINGS.

5. DETECTABLE WARNING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE PLACED ON MIN. SIX (6") INCHES OF P.C.C.

6. ALL SLOPE RATES ARE RELATIVE TO LEVEL AND SHALL COMPLY WITH THE PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) STANDARDS, CURRENT VERSION.

7. GUTTER SHALL MAINTAIN POSITIVE DRAINAGE TO PREVENT PONDING.

8. DETECTABLE WARNING SHALL CONSIST OF PRECAST WETSET TILES WITH MIN. SIZE OF 2' X 2', COLOR DARK RED. APPROVED PRODUCTS INCLUDE: "ACCESS TILE", "TEKWAY DOME-TILES", "ADA SOLUTIONS", AND "TUFTILE". DETECTABLE WARNING SHALL BE CONSTRUCTED PER MANUFACTURER'S INSTALLATION GUIDELINES AND CONFORM TO PROWAG.

9. CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT NEAREST WEAKENED PLANE JOINT. NO OVERCUTS.

10. AGGREGATE BASE MATERIAL UNDER PEDESTRIAN RAMPS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

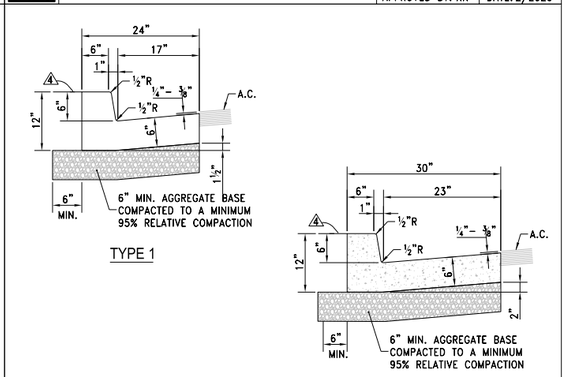
11. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.

12. CONTRACTORS SHALL CORRECT ANY GRADE CONFLICT WITH EXISTING BOXES. THE ENGINEER SHALL MAKE THE FINAL DETERMINATION REGARDING THE DEGREE OF MODIFICATIONS REQUIRED BY THE CONTRACTOR FOR GRADE CONFLICTS BETWEEN EXISTING BOXES AND NEW PEDESTRIAN RAMPS.

13. SIDEWALK AT BOTH SIDES OF RAMP MAY BE RECONSTRUCTED TO MINIMIZE THE GRADE AT A HORIZONTAL DISTANCE TO BE DETERMINED IN THE FIELD, UPON APPROVAL OF THE ENGINEER, SUBJECT TO PROWAG REQUIREMENTS. CURB AT THE BACK OF WALK MAY BE NEEDED. A TRANSITION SECTION OF SIDEWALK MAY BE NECESSARY TO MATCH CROSS SLOPE OF EXISTING SIDEWALK TO PEDESTRIAN RAMP IMPROVEMENTS. TRANSITION SECTIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

14. CONTRACTOR SHALL CONSTRUCT ROUNDED CURBS WHERE THEY INTERSECT. RADIUS SHALL BE 1 FT MINIMUM MEASURED FROM FACE OF CURB. CURBS THAT INTERSECT AT A POINT SHALL NOT BE ALLOWED.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
NOTES - PEDESTRIAN RAMP	R-106G
	APPROVED BY: KK DATE: 2/2026



NOTES:
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.

2. AGGREGATE BASE MATERIAL UNDER AND BEHIND CURB AND GUTTER SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

3. WEAKENED PLANE JOINTS SHALL BE EVERY 10 FEET AND LOCATED ON THE BACK, TOP AND FACE OF THE CURB AND THE TOP OF THE GUTTER PAN.

4. CURB & GUTTER SECTIONS SHALL BE PLACED SEPARATELY FROM SIDEWALK SECTIONS. WHEN SIDEWALK IS NOT REQUIRED DIRECTLY BEHIND THE CURB, BACKFILL TO TOP OF CURB FOR A HORIZONTAL DISTANCE OF 12" FROM BACK FACE OF CURB AND COMPACT TO 90% RELATIVE COMPACTION.

5. FOR REPLACEMENT OF EXISTING CURB AND GUTTER, MATCH EXISTING TYPE. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO NEW CURB AND GUTTER AT NEAREST WEAKENED PLANE JOINT.

6. TUNNELING AND/OR BORING IS NOT ALLOWED. REFER TO R-120 FOR ASPHALT PATCHING AGAINST CURB.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
P.C.C. TYPE 1 CURB & GUTTER	R-109A
	APPROVED BY: KK DATE: 2/2026

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DESIGNER	DR	J CHELONIS	CHK	T HOWARD	APVD	R COOMES	BY	APVD
DSGN		REVISION								

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
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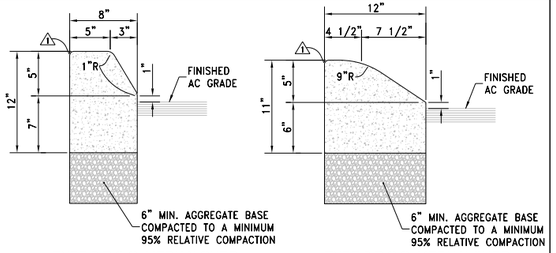
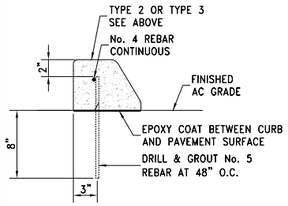
NTS
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	DT-02
SHEET	



TYPE 2 P.C.C. MEDIAN CURB

TYPE 3 P.C.C. MEDIAN CURB

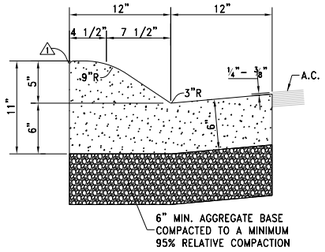


P.C.C. MEDIAN CURB (ALTERNATE)

NOTES:

1. RADIUS TO BE 1/2 INCH, OMIT ROUNDING IF CURBS ARE BACK TO BACK.
2. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
3. AGGREGATE BASE MATERIAL UNDER MEDIAN CURBS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
P.C.C. MEDIAN CURBS	R-110
	APPROVED BY: KK | DATE: 1/2023

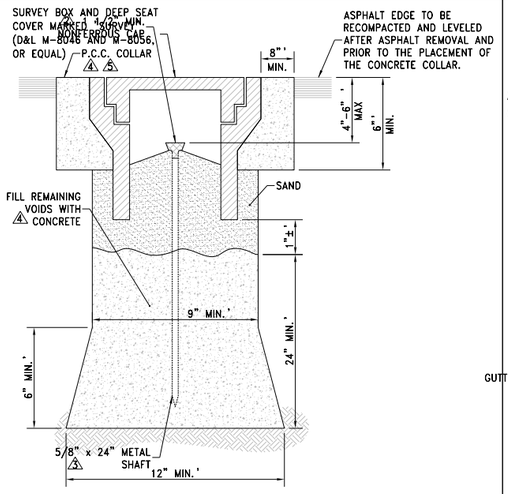


NOTES:

1. RADIUS TO BE 1/2 INCH, OMIT ROUNDING IF CURBS ARE BACK TO BACK.
2. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
3. AGGREGATE BASE MATERIAL UNDER MEDIAN CURBS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

MODIFIED CURB AND GUTTER

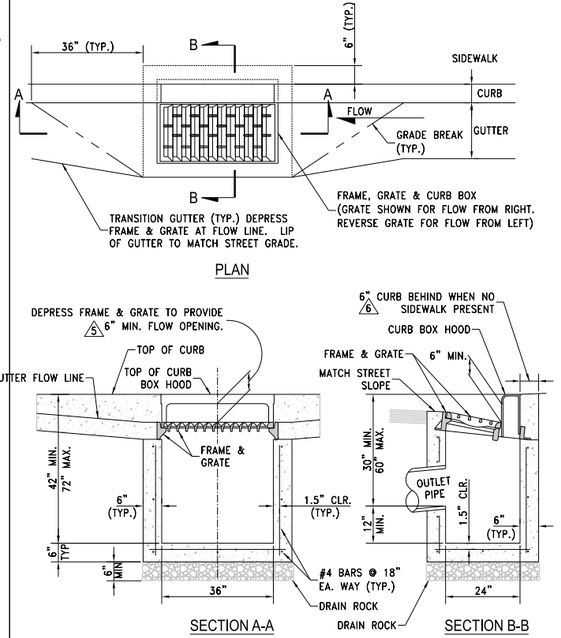
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
MODIFIED CURB AND GUTTER	R-110
	APPROVED BY: KK | DATE: 1/2023



NOTES:

1. FERROUS METAL OVER MONUMENT FOR RECOVERY BY DIP NEEDLE OR MAGNETIC INSERT IN CAP.
2. 1 1/2" MIN. NONFERROUS CAP WITH PROFESSIONAL LAND SURVEYOR NO. PERMANENTLY ATTACHED PRIOR TO PLACEMENT. PRE-PUNCHED CAPS SHALL NOT BE PERMITTED
3. 5/8" METALLIC SHAFT (SMOOTH SHAFTS TO BE DEFORMED).
4. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
5. P.C.C. COLLARS IN ALL ROADWAYS SHALL BE PROTECTED FROM TRAFFIC LOADS UNTIL MINIMUM 3000 PSI IS ATTAINED.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
MONUMENTS	R-124
	APPROVED BY: KK | DATE: 1/2023



PLAN

SECTION A-A

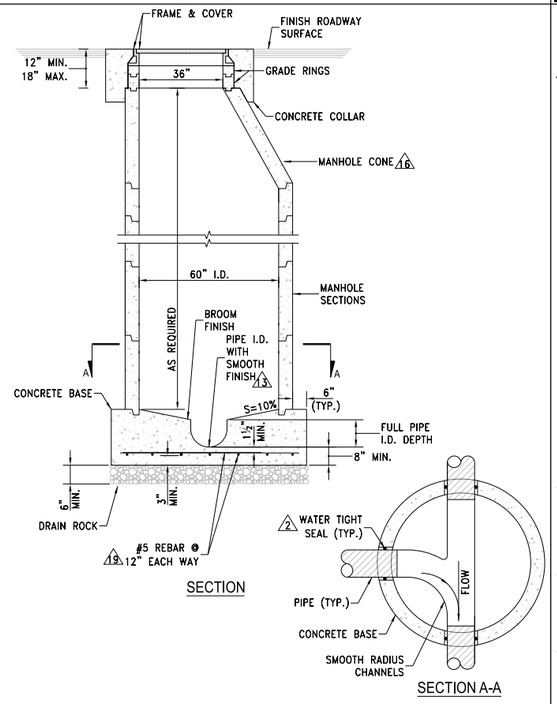
SECTION B-B

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
CATCH BASIN TYPE 4-R	R-206A
	APPROVED BY: KK | DATE: 1/2023

NOTES:

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5" MINIMUM CLEAR COVER.
3. CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT UPON APPROVAL OF THE CITY ENGINEER. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
4. FRAME, GRATE AND CURB BOX HOOD ASSEMBLY SHALL BE D&L I-3519 WITH TYPE L "VANE GRATE" OR APPROVED EQUAL. GRATE SHALL BE INSTALLED WITH PROPER FLOW DIRECTION. EACH CATCH BASIN SHALL BE CAST WITH A FISH IMAGE AND THE WORDS "NO DUMPING! DRAINS TO WATERWAYS" IN THE TOP OF EACH CURB HOOD.
5. TILT FRAME & GRATE AS REQUIRED TO ATTAIN 6" MIN. FLOW OPENING & INSTALL DURABLE SHIMS BETWEEN THE CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OF CURB AND FACE OF CURB (SEE SECTION B-B).
6. WHEN SIDEWALK IS PRESENT CONCRETE BEHIND CURB BOX SHALL BE THICKENED TO THE FULL DEPTH OF THE CURB BOX. IF NO SIDEWALK IS PRESENT, POUR 6" CONCRETE CURB STRUCTURE BEHIND GRATE AND TIE BEAM INTO BOX.
7. ALL CATCH BASINS, PUBLIC OR PRIVATE, SHALL BE PROVIDED WITH A "SUR-TRAP" OIL/WATER SEPARATOR OR APPROVED EQUAL.
8. FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT WITH MINIMAL GAPS.
9. CATCH BASIN SHALL NOT BE PLACED WITHIN THE RADIUS OF THE CURB.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
NOTES CATCH BASIN TYPE 4-R	R-206B
	APPROVED BY: KK | DATE: 1/2023



SECTION

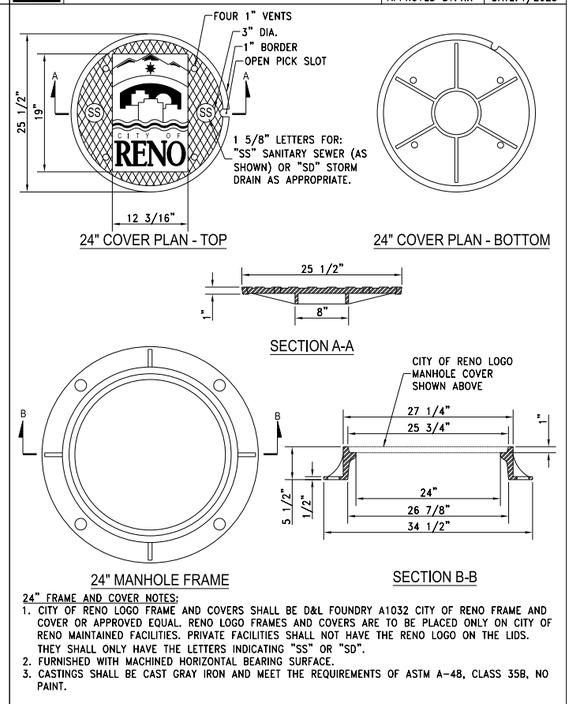
SECTION A-A

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
MANHOLE TYPE V	R-208B
	APPROVED BY: KK | DATE: 1/2023

GENERAL MANHOLE NOTES

1. ALL PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478.
2. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE MANHOLE SECTION AS MEASURED AT THE OUTSIDE EDGES OF THE PIPE, VERTICALLY ALIGNED WITH THE SPRINGLINE. PIPE CONNECTION TO MANHOLE SHALL BE WATERTIGHT PER STANDARD DETAILS R-223A, R-223B AND R-223C.
3. MANHOLE BASE SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) AND SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
4. TYPE I MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 12" OR SMALLER AND DEPTHS NOT EXCEEDING 18 FEET.
5. TYPE V MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 15" THROUGH 27" OR DEPTHS EXCEEDING 18 FEET.
6. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
7. PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
8. EXCAVATION AND BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION AND BACKFILL" IN SECTION 305 OF THE STANDARD SPECIFICATIONS.
9. EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE IF SOIL CONDITIONS REQUIRE) IN EXISTING STREET SECTIONS, ALLEY SECTIONS, AND CONFINED AREAS, SUCH AS LIMITED EASEMENTS OR ADJACENT STRUCTURES.
10. MANHOLE PRECAST SECTION LENGTH SHALL BE ARRANGED TO FIT THE REQUIRED DEPTH.
11. NO LATERALS OR PIPES LESS THAN 8" IN DIAMETER SHALL BE CONNECTED TO THE MANHOLE.
12. PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
13. MATCH PIPE INVERTS TO MANHOLE INVERTS WHERE PIPES CONNECT TO MANHOLE BASE.
14. ALL MANHOLES SHALL BE WATERTIGHT.
15. SEE DETAIL FOR OUTSIDE DROP MANHOLE FOR SANITARY SEWERS WITH MORE THAN 2 FEET VERTICAL DROP AT THE MANHOLE. THE USE OF "INSIDE DROP" MANHOLES IS NOT PERMITTED.
16. THE USE OF FLAT TOP MANHOLE CONES REQUIRES PRIOR APPROVAL FROM THE CITY ENGINEER.
17. PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER ASTM C-1244.
18. NO STEPS, LADDERS, OR OTHER CLIMBING DEVICES SHALL BE INSTALLED IN THE MANHOLE.
19. REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST 1½" CLEAR, UNLESS OTHERWISE NOTED.
20. WHEN PIPE CONNECTIONS TO EXISTING MANHOLES ARE ALLOWED, THEY SHALL BE MADE BY CORE DRILLING THE MANHOLE AND CONNECTING THE PIPE PENETRATION PER DETAIL R-223A & R-223B.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
NOTES - MANHOLE TYPE I & TYPE V	R-208C
	APPROVED BY: KK | DATE: 1/2023



24" COVER PLAN - TOP

24" COVER PLAN - BOTTOM

SECTION A-A

24" MANHOLE FRAME

SECTION B-B

24" FRAME AND COVER NOTES:

1. CITY OF RENO LOGO FRAME AND COVERS SHALL BE D&L FOUNDRY A1032 CITY OF RENO FRAME AND COVER OR APPROVED EQUAL. RENO LOGO FRAMES AND COVERS ARE TO BE PLACED ONLY ON CITY OF RENO MAINTAINED FACILITIES. PRIVATE FACILITIES SHALL NOT HAVE THE RENO LOGO ON THE LIDS. THEY SHALL ONLY HAVE THE LETTERS INDICATING "SS" OR "SD".
2. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
3. CASTINGS SHALL BE CAST GRAY IRON AND MEET THE REQUIREMENTS OF ASTM A-48, CLASS 35B, NO PAINT.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
24" MANHOLE FRAME & COVER	R-214A
	APPROVED BY: JF | DATE: 4/2015

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DESIGNER	DR	J CHELONIS	CHK	T HOWARD	APVD	R COOMES
		REVISION					BY	APVD

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

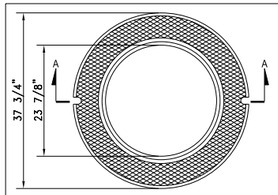
SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

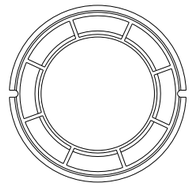
Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NTS
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

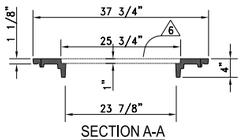
DATE	APRIL 2026
PROJ	W7Y56600
DWG	DT-03
SHEET	



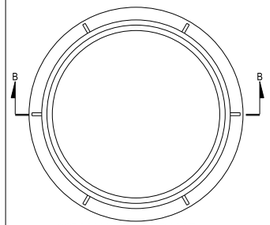
24" COVER ADAPTOR PLAN - TOP



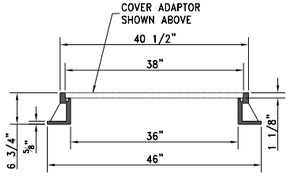
24" COVER ADAPTOR PLAN - BOTTOM



SECTION A-A



36" MANHOLE FRAME

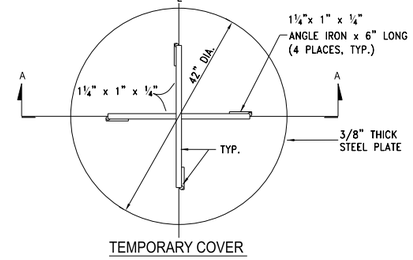


SECTION B-B

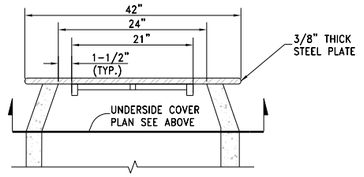
36" FRAME AND COVER ADAPTOR NOTES:

1. 24" COVER ADAPTOR SHALL BE D&L FOUNDRY A1462-R5, TO ACCEPT D&L FOUNDRY A1032 CITY OF RENO MANHOLE COVERS AND TO SET IN D&L FOUNDRY A1462 CITY OF RENO FRAME OR APPROVED EQUAL.
2. 36" MANHOLE FRAME SHALL BE D&L FOUNDRY A1462 CITY OF RENO FRAME OR APPROVED EQUAL.
3. CASTINGS SHALL BE CAST GRAY IRON, AND MEET THE REQUIREMENTS OF ASTM A-48, CLASS 35B, NO PAINT.
4. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
5. MANHOLE COVER ADAPTOR SHALL BE FREE OF HOOKS OR PROTRUSIONS THAT MAY HINDER REMOVAL.
6. FOR A1032 CITY OF RENO LOGO COVER, SEE 24" MANHOLE FRAME AND COVER DETAIL (COVER ONLY).

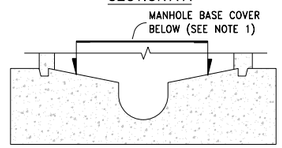
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
36" MANHOLE FRAME WITH 24" COVER ADAPTOR	R-214B
	APPROVED BY: JF DATE: 3/2014



TEMPORARY COVER



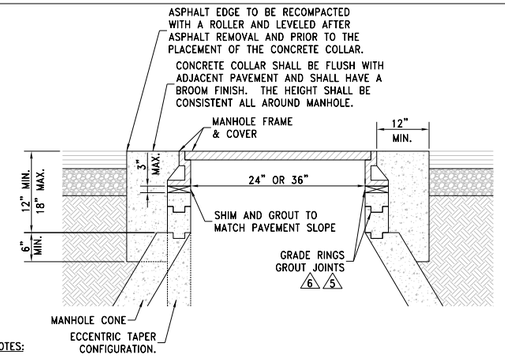
SECTION A-A



NOTES:

1. INSTALL TEMPORARY COVER WITH CONE INSTALLATION WHEN INSTALLING NEW MANHOLE OR PRIOR TO REMOVING EXISTING FRAME & COVER AND GRADE RINGS TO ADJUST TO FINISH GRADE. INSTALL COVER OVER MANHOLE BASE TO PREVENT DEBRIS FROM ENTERING SEWER SYSTEM. THE MANHOLE BASE COVER SHALL BE IN PLACE PRIOR TO PERFORMING ANY ADJUSTMENTS OR GROUTING AND SHALL REMAIN IN PLACE WHILE ADJUSTMENTS OR GROUTING ARE BEING PERFORMED. REMOVE BASE COVER UPON ADJUSTMENT APPROVAL BY CITY OF RENO.

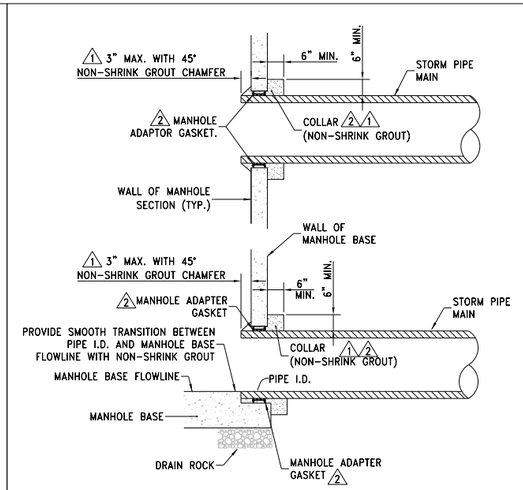
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
TEMPORARY MANHOLE COVER	R-214C
	APPROVED BY: JF DATE: 1/2013



NOTES:

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. CIRCUMSTANCES MAY REQUIRE THE NEED FOR SPECIAL TYPES OF TOP OF MANHOLE CONFIGURATIONS SUCH AS FLAT TOP, ABOVE GROUND, ETC. AS DIRECTED BY THE CITY OF RENO. DETAILED PLANS OF ANY SPECIAL TOP OF MANHOLE CONFIGURATIONS AND ASSOCIATED COLLARS MUST BE APPROVED BY THE ENGINEER.
3. IN UNPAVED AREAS, IT SHALL BE NECESSARY TO SET THE MANHOLE RIM APPROXIMATELY 6 INCHES ABOVE THE SURROUNDING AREA. INSTALL A 6 INCH THICK RING OF CONCRETE, TAPERED AT A 3:1 SLOPE, FROM THE TOP, OUTSIDE EDGE OF THE COLLAR TO THE EXISTING GROUND SURFACE.
4. EXISTING SANITARY SEWER MANHOLE LIDS LOCATED IN GUTTER PANS, SHALL HAVE NEW WATER TIGHT FRAMES AND COVERS.
5. ALL GRADE RING JOINTS ARE TO BE GROUTED WITH NON-SHRINK GROUT HAVING THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD AND SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO SSPWC.
6. ALL GRADE RINGS SHALL BE PORTLAND CEMENT CONCRETE. PVC GRADE RINGS ARE NOT ALLOWED.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
MANHOLE COLLAR	R-218A
	APPROVED BY: KK DATE: 1/2023



NOTE:

1. NON-SHRINK GROUT SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD AND SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO SSPWC SECTION 202.
2. STORM DRAIN PIPE CONNECTIONS TO MANHOLE BASES AND SECTIONS REQUIRE AN AGENCY-APPROVED FORM OF SEAL OR WATER STOP AND IS REQUIRED ON ALL STORM DRAIN INSTALLATIONS TO PROVIDE A WATERTIGHT CONNECTION. UTILIZE A ROMAC STYLE "LCT" MANHOLE ADAPTER GASKET OR APPROVED EQUAL IN CONJUNCTION WITH THE NON-SHRINK GROUT.
3. A RESILIENT FLEXIBLE CONNECTOR INSTALLED IN ACCORDANCE WITH STANDARD DETAIL R-223C MAY BE USED TO SATISFY THE REQUIREMENTS OF NOTE 2 ABOVE.
4. ALL PIPE OPENINGS TO NEW MANHOLES MUST BE EITHER CAST-IN-PLACE OR PRE-FORMED AND PIPE OPENINGS TO EXISTING MANHOLES MUST BE CORE DRILLED.

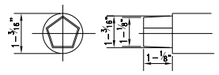
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
STORM DRAIN PIPE TO MANHOLE CONNECTION	R-223B
	APPROVED BY: JF DATE: 4/2014

FIRE HYDRANT COLOR SCHEDULE

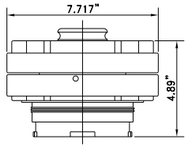
RENO
ALL HYDRANTS TO BE FACTORY ENAMELED SAFETY RED.

SPARKS
PUBLIC HYDRANTS TO BE FACTORY ENAMELED SAFETY YELLOW.
PRIVATE HYDRANTS TO BE FACTORY ENAMELED SAFETY RED.

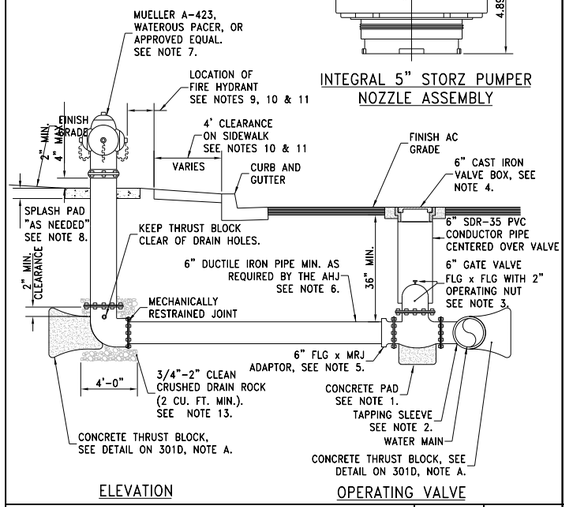
WASHOE COUNTY
PUBLIC HYDRANTS TO BE FACTORY ENAMELED SAFETY RED.
PRIVATE HYDRANTS TO BE FACTORY ENAMELED SAFETY RED WITH HIGH REFLECTIVE WHITE TOP.



OPERATING NUT - PENTAGON



INTEGRAL 5" STORZ PUMPER NOZZLE ASSEMBLY



ELEVATION

OPERATING VALVE

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	AHJ	DRAWING No.
FIRE HYDRANT	RENO	R-301A
	SPARKS	S-301A
	W/C	W-23A
	DATE: 1/2020	

NOTES:

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY AUTHORITY HAVING JURISDICTION (AHJ). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY AHJ.
2. TAPPING SLEEVE
HOT-TAP TAPPING SLEEVES SHALL BE FULL-CIRCLE ASTM A 240, TYPE 304 STAINLESS STEEL WITH FULL CIRCUMFERENCE GASKETS THROUGHOUT SLEEVE LENGTH WITH AWWA C207 CLASS D ANSI 150 LB. DRILLING ASTM A 240, TYPE 304 STAINLESS STEEL FLANGE. TYPE 304 STAINLESS STEEL STUD BOLTS, HEAVY HEX NUTS, AND WASHERS SHALL BE INCLUDED. HEAVY HEX NUTS AND STUD BOLTS SHALL BE COATED TO PREVENT GALLING. TYPE 304 STAINLESS STEEL TEST PLUG SHALL BE INCLUDED WITH THREADS COATED TO PREVENT GALLING. TAPPING SLEEVE SHALL BE RATED FOR A TEST PRESSURE OF 300 PSI AND WORKING PRESSURE OF 200 PSI. TAPPING SLEEVE SHALL BE ROMAC STYLE "SST" STAINLESS STEEL TAPPING SLEEVE AS MANUFACTURED BY ROMAC INDUSTRIES, INC.; SMITH-BLAIR 663 STAINLESS STEEL FLANGE TAPPING SLEEVE AS MANUFACTURED BY SMITH-BLAIR, INC.; OR EQUAL.

ALL WATER MAIN SHUT DOWNS AND/OR INSTALLATION OF TAPPING SLEEVES SHALL BE COORDINATED WITH THE WATER PURVEYOR IN THE AREA AND CONFORM TO THEIR REQUIREMENTS. TAPPING SLEEVES ARE TO BE USED ONLY FOR EXISTING INSTALLATIONS.

3. GATE VALVE
GATE VALVE SHALL BE 6-INCH, FLG X FLG AND SHALL MEET AWWA C515, DUCTILE IRON BODY, NON-RISING STEM, RESILIENT-SEATED VALVE. GATE VALVE SHALL BE EQUIPPED WITH A 2-INCH OPERATING NUT FOR BURIED SERVICE. GATE VALVE SHALL BE FUSION EPOXY LINED AND COATED. ALL VALVES FOR BURIED SERVICE SHALL BE POLYETHYLENE ENCASED PER AWWA C105. GATE VALVE SHALL BE A MUELLER A-2361 RESILIENT WEDGE GATE VALVE; AMERICAN AVK COMPANY SERIES 65 AWWA C515 DUCTILE IRON GATE VALVE; OR APPROVED EQUAL.
4. 6" VALVE BOX SHALL BE D&L #8044 & #8056 OR APPROVED EQUAL. CASTINGS SHALL BE CAST IRON GRAY AND MEET THE REQUIREMENTS OF ASTM A48-74, CLASS 30B, NO PAINT.
5. 6-INCH FLG X MRJ ADAPTOR
6-INCH FLG X MRJ ADAPTOR SHALL BE DUCTILE IRON AND MEET THE REQUIREMENTS OF AWWA STANDARDS C110/C153 AND C104. ALL FITTINGS SHALL BE POLYETHYLENE ENCASED PER AWWA C105. ADAPTOR SHALL BE ASPHALTIC COATED WITH CEMENT-MORTAR LINING PER AWWA C110/C153 AND C104.
6. 6-INCH MINIMUM DUCTILE IRON LATERAL PIPE
ALL DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF AWWA STANDARDS C151, C104, AND C111 WITH PRESSURE CLASS 350, STANDARD CEMENT LINING, BITUMINOUS COATING, AND SHALL BE NSF-61 CERTIFIED. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE ENCASED WITH THICKNESS OF 4 MIL AND BE BLACK IN COLOR. MATERIAL SHALL BE HIGH-DENSITY, CROSS-LAMINATED FILM CONFORMING TO SECTION 4.1.3 OF AWWA STANDARD C105. TUBE SIZE SHALL BE AS LISTED IN TABLE 1 OF SAME STANDARD. DUCTILE IRON PIPE SHALL BE EQUIPPED WITH TYTON TYPE BELL AND SPIGOT JOINTS. DUCTILE IRON PIPE SHALL BE TYTON DUCTILE IRON PIPE AS MANUFACTURED BY U.S. PIPE, GRIFFIN TYTON JOINT DUCTILE IRON PIPE AS MANUFACTURED BY GRIFFIN PIPE PRODUCTS CO., INC., OR APPROVED EQUAL. EXCEPTIONS FOR PRIVATE INSTALLATION UPON APPROVAL FROM AHJ.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	AHJ	DRAWING No.
NOTES - FIRE HYDRANT	RENO	R-301B
	SPARKS	S-301B
	W/C	W-23B
	DATE: 1/2020	

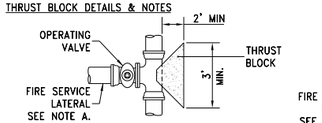
NOTES CONT:

7. MUELLER A-423 OR AMERICAN WATEROUS PACER WB67-250 WITH 5-1/4" VALVE OPENING OR FIRE DEPARTMENT APPROVED EQUAL. RISER SHALL BE 4 FT OR 5 FT AND RISER TYPE SHALL BE SAME AS THE FIRE HYDRANT MANUFACTURER. HYDRANTS MUST BE FACTORY PAINTED TO BE ACCEPTED. ALL HYDRANTS SHALL HAVE TWO 2-½" HOSE NOZZLES AND ONE FACTORY INSTALLED INTEGRAL 5" STORZ PUMPER NOZZLE ASSEMBLY.
8. IF PROPOSED HYDRANT LOCATION IS WITHIN PARKWAY OR LANDSCAPE WHERE NO CONCRETE EXISTS, PLACE 36" DIAMETER ROUND OR 36" x 36" SQUARE, 4" THICK REINFORCED CONCRETE SPLASH PAD AS REQUIRED BY THE AHJ. NO FENCES, LANDSCAPE FEATURES, OR OTHER OBSTRUCTIONS SHALL BE ALLOWED WITHIN 3-FEET OF ANY PORTION OF A FIRE HYDRANT. CLEARANCE IS MEASURED FROM ALL OBSTRUCTIONS TO THE NEAREST POINT ON THE FIRE HYDRANT. ANTICIPATED PLANT GROWTH TO BE CONSIDERED IN DESIGN AND INSTALLATION.
9. FIRE HYDRANTS SHALL BE INSPECTED BY AHJ INSPECTOR. INSPECTIONS SHALL BE SCHEDULED A MINIMUM OF TWO BUSINESS DAYS PRIOR AND INSPECTIONS SHALL BE PERFORMED DURING REGULAR BUSINESS HOURS. CONTACT AHJ FIRE PREVENTION BUREAU TO SCHEDULE INSPECTIONS.
10. FIRE HYDRANTS SHALL BE PLACED WITHIN THE RIGHT-OF-WAY OR EASEMENT GRANTED OUTSIDE THE RIGHT-OF-WAY. FIRE HYDRANT PLACED WITHIN PEDESTRIAN WALKWAY AND/OR SIDEWALKS SHALL PROVIDE FOR A MINIMUM OF 4 FT CLEARANCE IN ACCORDANCE WITH PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG).
11. AHJ APPROVAL IS REQUIRED FOR HYDRANT LOCATION WHERE NO SIDEWALK EXISTS BEHIND CURB OR WHERE A LANDSCAPE STRIP IS BETWEEN THE CURB AND THE SIDEWALK.
12. FIRE HYDRANTS SHALL BE TESTED BY THE AHJ PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.
13. FOR TRENCH EXCAVATION/BACKFILL SPECIFICATIONS SEE DETAIL BELOW. ALL DRAIN ROCK SHALL BE PLACED PRIOR TO INSPECTION AND BACKFILL.

TRENCH EXCAVATION/BACKFILL	
AHJ	DETAIL #
RENO	R-122
SPARKS	S-117
WASHOE COUNTY	W-22

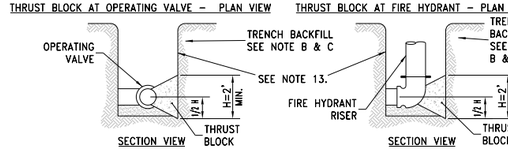
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	AHJ	DRAWING No.
NOTES - FIRE HYDRANT	RENO	R-301C
	SPARKS	S-301C
	W/C	W-23C
	DATE: 1/2020	

THRUST BLOCK DETAILS & NOTES



THRUST BLOCK AT OPERATING VALVE - PLAN VIEW

THRUST BLOCK AT FIRE HYDRANT - PLAN VIEW



THRUST BLOCK NOTES

A. THRUST BLOCK SIZE ASSUMES MAXIMUM 6" DIAMETER FIRE HYDRANT SERVICE. THRUST BLOCKS FOR LARGER SERVICES REQUIRE APPROVAL OF AHJ.

B. THE THRUST BLOCK DESIGN SHALL BE BASED ON THE FORCE RESISTING CAPACITY OF THE NATIVE SOILS AS STATED IN THE SOILS EVALUATION REPORT SPECIFIC TO THE PROJECT SITE. THE CALCULATIONS SHOWN WITH THE TRUST BLOCK DESIGN AND SIZING TABLE SHALL BE BASED ON THE REQUIREMENTS OF THE MOST CURRENT NFPA 24, ARTICLE 10.8.2 REQUIREMENTS. THE SOIL EVALUATION REPORT OR A SINGLE PAGE, STAMPED SUMMARY SHALL BE SUBMITTED WITH THE PROJECT PLANS.

C. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL. IN CASES WHERE THIS IS NOT PRACTICAL, BACKFILL AREA BEHIND WHERE THRUST BLOCK WILL BE PLACED WITH AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, CUT-BACK COMPACTED AGGREGATE BASE TO EXPOSE A FIRM SURFACE, THEN PLACE THRUST BLOCK.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	AHJ	DRAWING No.
NOTES - FIRE HYDRANT	RENO	R-301D
	SPARKS	S-301D
	W/C	W-23D
	DATE: 1/2020	

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DESIGNER	DR	REVISION	CHK	APVD	BY	APVD
DSGN		J CHELONIS			T HOWARD		R COOMES	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

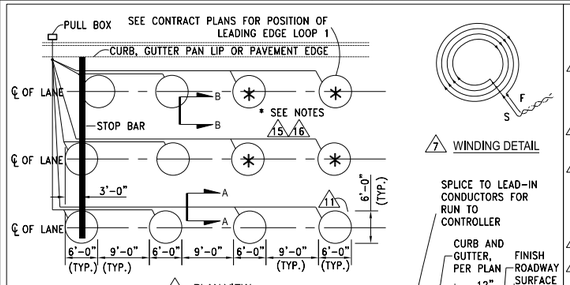
SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

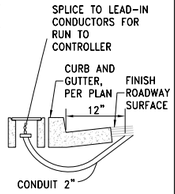
NTS
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	DT-04
SHEET	

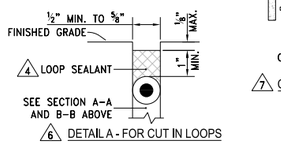


7 PLAN VIEW

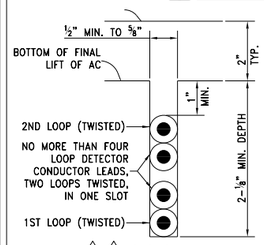
7 WINDING DETAIL



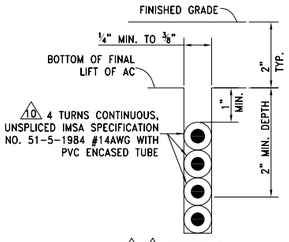
7 CONDUIT INSTALLATION



6 DETAIL A - FOR CUT IN LOOPS



2 3 SECTION A-A



2 3 SECTION B-B

NOTES:

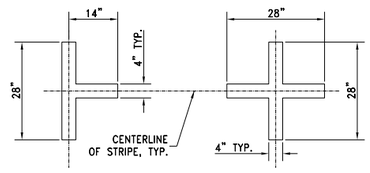
1. CIRCULAR LOOPS ARE REQUIRED FOR ALL DETECTOR LOOPS UNLESS NOTED IN THE CONTRACT.
2. WHERE NEW PAVEMENT SURFACES ARE PLACED, ALL TRAFFIC SIGNAL LOOP DETECTORS SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF THE FINAL "TOP" LIFT OF THE PLANTMIX BITUMINOUS PAVEMENT MATERIAL. PLACEMENT OF SLURRY SEAL DOES NOT NEGATE THIS REQUIREMENT. SEE DETAIL R-406A, SECTIONS A-A AND B-B.
3. WHERE LOOPS ARE TO BE OVERLAID WITH ASPHALT, THE LOOP SEALANT SHALL BE SAKRETE, OR APPROVED EQUAL, AND COMPACTED.
4. LOOPS CUT INTO THE STREET SURFACE SHALL BE SEALED WITH "CRAFCO" LOOP SEALANT, OR AN APPROVED EQUAL.
5. WASH, BLOW OUT, AND DRY SLOTS THOROUGHLY WITH COMPRESSED AIR BEFORE INSTALLING LOOP CONDUCTORS.
6. SAW SLOTS IN PAVEMENT FOR LOOP CONDUCTORS AS SHOWN IN R-406A DETAIL A.
7. LOOPS SHALL BE CENTERED IN LANES AS SHOWN IN "PLAN VIEW" ON R-406A.
8. INSTALL TERMINATION PULL BOX PER "CONDUIT INSTALLATION" ON R-406A.
9. INSTALL NO. 14 AWG PVC ENCASED TUBE LOOP CONDUCTOR IN SLOTS USING ⅛" TO ¼" THICK WOOD PADDLE. SEE R-406A SECTIONS B-B. ALLOW ADDITIONAL LENGTH FOR THE LEAD-IN RUN TO TERMINATION PULL BOX PLUS SO THAT THERE IF 5' OF SLACK IN PULL BOX. THIS ADDITIONAL LENGTH OF CONDUCTOR FOR EACH LOOP CIRCUIT SHALL BE TWISTED TOGETHER IN A PAIR, AT LEAST 5 TURNS PER FOOT, BEFORE BEING RUN TO PULL BOX.
10. ALL WIRES SHALL BE IDENTIFIED IN PULL BOXES, WITH LOOP WIRES AS FOLLOWS: BLUE TAPE INDICATES LEFT TURN LANE LOOPS WITH ONE BAND IDENTIFYING LOOP ONE, TWO BANDS LOOP TWO, ETC. WHITE TAPE INDICATES THROUGH LANE LOOPS AND RED TAPE INDICATES RIGHT TURN LANES. IF THERE ARE TWO LEFT TURN LANES, YELLOW TAPE INDICATES THE LANE CLOSEST TO THE CENTER LANE OF THE STREET. IN THE LOOP PAIRS ALSO IDENTIFY WHICH IS THE START(S) AND FINISH(F) OF THE CONDUCTOR AS SHOWN IN "WINDING DETAIL" ON SHEET R-406A.
11. LEFT TURN LOOP FARTHEST FROM FROM STOP BAR SHALL BE ON DEDICATED CHANNEL.
12. SPLICE LOOP CONDUCTORS TO LEAD-IN CABLE. ALL SPLICES SHALL BE SOLDERED USING #8 RESIN CORE SOLDER. ALL SPLICES SHALL BE PROVIDED A SOUND ENVIRONMENTAL SEAL. LEAD-IN CABLE SHALL NOT BE SPLICED BETWEEN THE TERMINATION PULL BOX AND THE CONTROLLER CABINET.
13. DISTANCE BETWEEN SIDE OF LOOP AND A LEAD-IN SAW CUT FROM ADJACENT DETECTORS SHALL BE TWO FEET MINIMUM. DISTANCE BETWEEN LEAD-IN SAW CUTS SHALL BE SIX INCHES MINIMUM. DISTANCE BETWEEN LEAD-IN SAW CUTS SHALL BE TWELVE INCHES FROM ANY CURB, GUTTER PAN LIP OR PAVEMENT EDGE.
14. ALL INDUCTIVE LOOPS ON A GIVEN CHANNEL SHALL BE CONNECTED IN SERIES. NO MORE THAN ONE LEAD IN CABLE SHALL BE CONNECTED TO A CABINET CHANNEL TERMINATION. NO MORE THAN 4 LOOPS ARE TO BE CONNECTED TO ONE CHANNEL.

NOTES CONT:

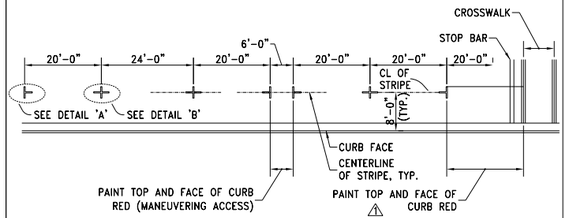
15. FOR SPEEDS LESS THAN 35MPH AND LEFT TURN POCKETS, FOUR LOOPS SHALL BE PLACED ACCORDING TO R-406A, "PLAN VIEW".
16. LISTED BELOW ARE THE MINIMUM DISTANCES FOR ADVANCE LOOP DETECTOR PLACEMENT AS A FUNCTION OF POSTED SPEED LIMITS, MEASURED FROM THE STOP BAR TO THE REAR OF THE LOOP. THIS APPLIES FOR THROUGH TRAVEL LANES ONLY. SEE TABLE BELOW.

16

SPEED LIMIT (MPH)	DISTANCE (FEET)
35	255
40	285
45	330
50	355
55	390



DETAIL A DETAIL B



PLAN LAYOUT

NOTES:

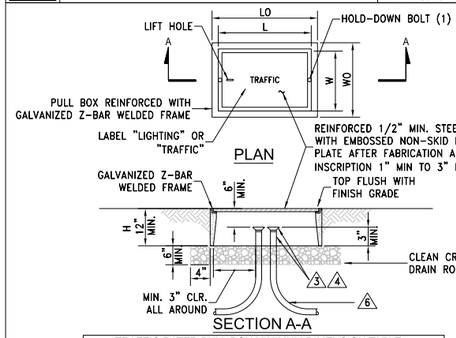
1. NO PARKING WITHIN 20 FEET OF A CROSSWALK OR 15 FEET ON EITHER SIDE OF A FIRE HYDRANT.
2. PARKING SPACE MARKINGS SHALL BE WHITE, TRAFFIC PAINT. MATERIAL AND APPLICATION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
3. PARKING SPACE MARKINGS SHALL BE SYMMETRICAL ABOUT AXIS.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
LOOP DETECTOR LAYOUT	R-406A
	APPROVED BY: KK DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
NOTES - LOOP DETECTOR LAYOUT	R-406B
	APPROVED BY: KK DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
NOTES - LOOP DETECTOR LAYOUT	R-406C
	APPROVED BY: KK DATE: 2/2026

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
PARKING SPACE MARKINGS	R-407
	APPROVED BY: KK DATE:2/2026



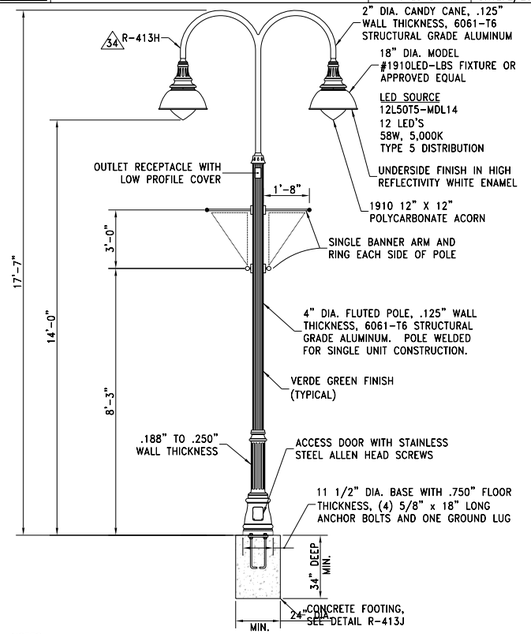
SECTION A-A

TRAFFIC RATED PULL BOX MINIMUM DIMENSION TABLE					
PULL BOX	CONCRETE BOX		COVER (STEEL COVER)		HEIGHT
	LO	WO	L	W	H
No. 3-1/2	19"	12"	14-1/2"	8-3/4"	12"
No. 5	25"	15"	20-1/2"	10-1/2"	12"
No. 7	35"	22"	30"	17"	12"
No. 9	52"	35"	47-3/4"	30"	14"

NOTES:

1. A MINIMUM OF No. 5 TRAFFIC RATED PULL BOXES SHALL BE USED AT LOCATION WHERE CONDUIT RUNS CONTAIN TRAFFIC SIGNAL CABLE. A MINIMUM OF No. 7 TRAFFIC RATED PULL BOXES SHALL BE USED WHERE FIBER IS PRESENT.
2. TRAFFIC RATED BOX SHALL BE USED IN VEHICULAR AREAS ONLY, INCLUDING, BUT NOT LIMITED TO TRAVEL WAY, DRIVEWAY APPROACHES AND WITHIN PEDESTRIAN RAMPS AT INTERSECTION CURB RETURNS OR AS APPROVED BY CITY OF RENO TRAFFIC ENGINEER. PULL BOXES THAT CONTAIN TRAFFIC CABLE, POWER, OR COMMUNICATIONS SHALL BE TRAFFIC RATED.
3. ALL CONDUIT TERMINATIONS SHALL HAVE A "BELL END" INSTALLATION AND BE SEALED WITH CONDUIT SEALER AFTER WIRE INSTALLATION.
4. ALL EXPOSED CONDUIT SHALL BE RIGID PVC SCHEDULE 80, AND SHALL EXTEND TO A MINIMUM DEPTH OF 18 INCHES.
5. BOX EXTENSIONS SHALL NOT BE USED UNLESS APPROVED BY CITY OF RENO TRAFFIC ENGINEER.
6. CONDUIT ENDS SHALL NOT TERMINATE WITHIN A SWEEP SECTION.
7. ALL METAL COVERS, METAL Z-BAR FRAME, METAL RINGS OR ANY METALLIC COMPONENT OF A PULL BOX SHALL BE BONDED TO A #8 AWG OR LARGER COPPER EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS SHALL BE BRAIDED COPPER EQUIVALENT TO #8 AWG COPPER AND MINIMUM 36" IN LENGTH AND SHALL BE ATTACHED WITH EXOTHERMIC WELDING. PROCESS IS A MOLECULAR BONDING WITH HIGH COPPER CONTENT ALLOYS (IN EXCESS OF 90%), HIGH CORROSION RESISTANCE AND HIGH CONDUCTIVITY, AND APPROVED GROUNDING LUG.
8. PULL BOX SHALL NOT BE INSTALLED WITHIN THE BOUNDARIES OF NEW OR EXISTING CURB RAMPS OR IN ROADWAY SECTION.

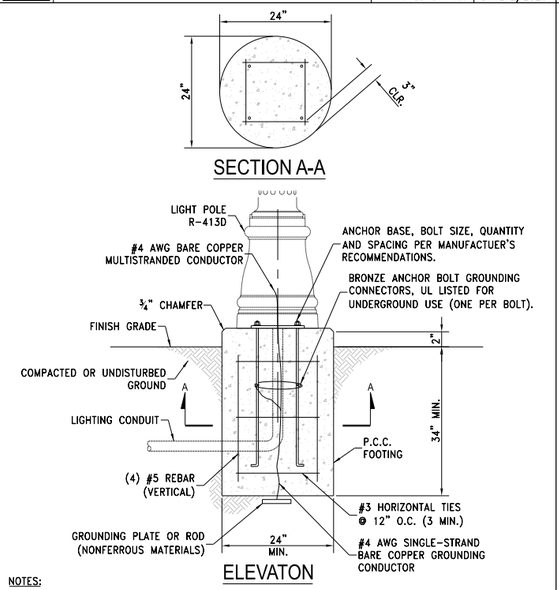
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
TRAFFIC RATED PULL BOX	R-412B
	APPROVED BY: KK DATE: 2/2026



NOTES:

CITY OF RENO DECORATIVE STREET LIGHT POLE IS MANUFACTURED BY "STERNBERG LIGHTING." THE MATERIAL STYLE AND COLOR OF THE POLE AND LIGHTING FIXTURES SHALL MATCH PREVIOUS PHASES OF DOWNTOWN IMPROVEMENTS TO THE SATISFACTION OF THE CITY OF RENO. NO EQUAL ALTERNATIVES WILL BE ALLOWED.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
DECORATIVE STREET LIGHT POLE	R-413D
	APPROVED BY: KK DATE: 2/2026

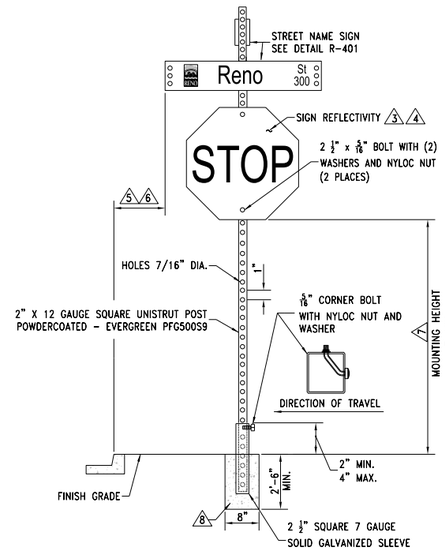


ELEVATON

NOTES:

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
LIGHT POLE FOOTING	R-413J
	APPROVED BY:KK DATE: 2/2026



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
TRAFFIC SIGN INSTALLATION	R-415A
	APPROVED BY: KK DATE: 2/2026

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DESIGNER	DR	J CHELONIS	CHK	T HOWARD	APVD	R COOMES	BY	APVD
				REVISION						

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Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

NTS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	APRIL 2026
PROJ	W7Y56600
DWG	DT-05
SHEET	

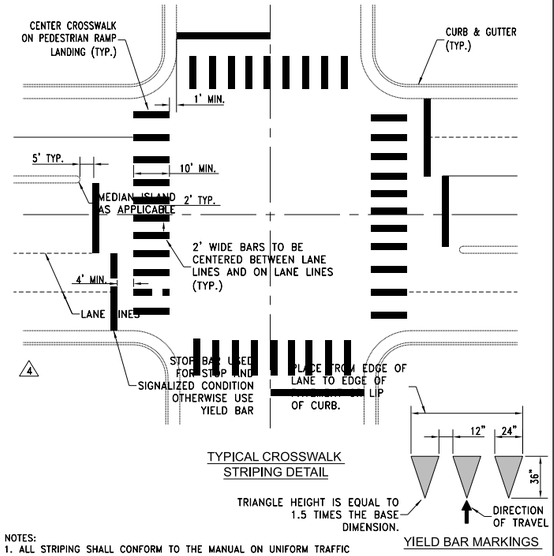
NOTES:

1. SIGN MATERIALS, CONSTRUCTION AND PLACEMENT SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. CONCRETE BASE SHALL BE LOCATED AT BACK OF SIDEWALK, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
3. ALL SIGNS SHALL BE 3M DIAMOND GRADE (DG3), SERIES 4000, SHEETING WITH A CLEAR, TRANSPARENT OVERLAY 3M #1160I (LATEST EDITION) OR APPROVED EQUAL. SHALL BE A MATCHED COMPONENT SYSTEM.
4. OVERLAY ACRYLIC EC FILMS, INKS AND DIGITAL IMAGING USED FOR ASSEMBLY SHALL BE APPROVED FOR USE BY THE MANUFACTURER OF THE SHEETING MATERIAL. THE SERVICE LIFE OF INKS AND FILMS SHALL BE COMPARABLE TO THE SHEETING USED. ALL LETTERS, NUMERALS, SYMBOLS, BORDERS, AND ACCESSORIES AS NECESSARY FOR THE SIGN LEGEND SHALL BE DIRECTLY APPLIED, DIGITALLY PRINTED, OR MOLDED TO FORM AN INTEGRAL SIGN LEGEND AND BACKGROUND ON ALL SIGNS.
5. 2 FEET MINIMUM FROM EDGE OF SIGN TO FACE OF CURB.
6. 6 FEET MINIMUM FROM EDGE OF SIGN TO EDGE OF PAVEMENT WHERE CURB DOES NOT EXIST.
7. SIGN MOUNTING HEIGHT SHALL BE 7 FEET FROM FINISHED GRADE OR ADJACENT ROADWAY PAVEMENT IF NOT BEHIND CURB.
8. FOUNDATION SHALL BE 4000 PSI CONCRETE.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION | DRAWING No. R-415B

NOTES - TRAFFIC SIGN INSTALLATION

APPROVED BY: KK | DATE: 2/2026



TYPICAL CROSSWALK STRIPING DETAIL

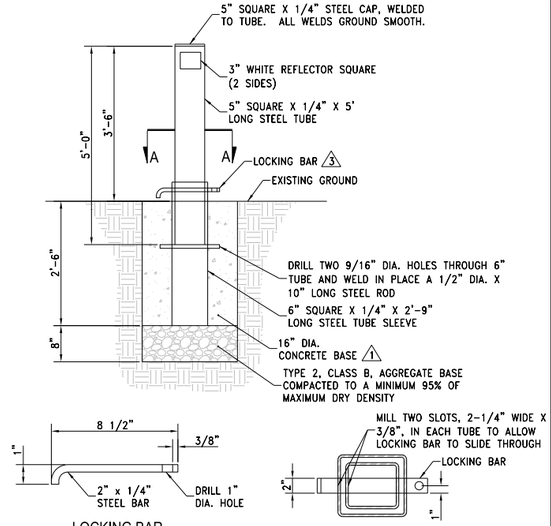
YIELD BAR MARKINGS

NOTES:
1. ALL STRIPING SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. PREFORMED THERMOPLASTIC PAVEMENT MARKINGS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH SECTION 634 OF THE LATEST EDITION OF "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" PUBLISHED BY THE NEVADA DEPARTMENT OF TRANSPORTATION (NDOT), EXCEPT ALL THERMOPLASTIC MARKINGS WILL BE BETWEEN 0.090 AND 0.125 INCHES THICK. HOT-APPLIED EXTRUDED THERMOPLASTIC SHALL NOT BE USED.
3. CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL TRAFFIC SIGNAL LOCATIONS AND AT OTHER LOCATIONS AS DIRECTED BY ENGINEER.
4. PLACE 24" WIDE STOP BAR FOR SIGNALIZED CONTROL INTERSECTIONS. USE 12" WIDE STOP BAR FOR STOP CONTROL INTERSECTIONS. FOR YIELD CONDITION SEE YIELD MARKINGS ABOVE.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION | DRAWING No. R-420

CROSSWALK LEGEND

APPROVED BY: KK | DATE: 2/2026



LOCKING BAR

SECTION A-A

NOTES:

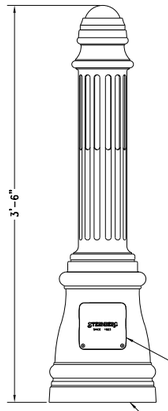
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. ALL WELDS AND BENDS SHALL BE SMOOTH, EVEN AND PAINTED YELLOW, MATCHING ENNIS-FLINT YELLOW 1952F COLOR.
3. CONTACT THE CITY OF RENO PUBLIC WORKS DEPARTMENT FOR PADLOCK DETAILS. THE CITY OF RENO SHALL MAINTAIN ALL KEYS.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION | DRAWING No. R-603A

REMOVABLE BOLLARD

APPROVED BY: KK | DATE: 2/2026

STERNBERG - RICHMOND QUICK RELEASE BOLLARD #390/B/OR/VG COLOR: VERDE GREEN



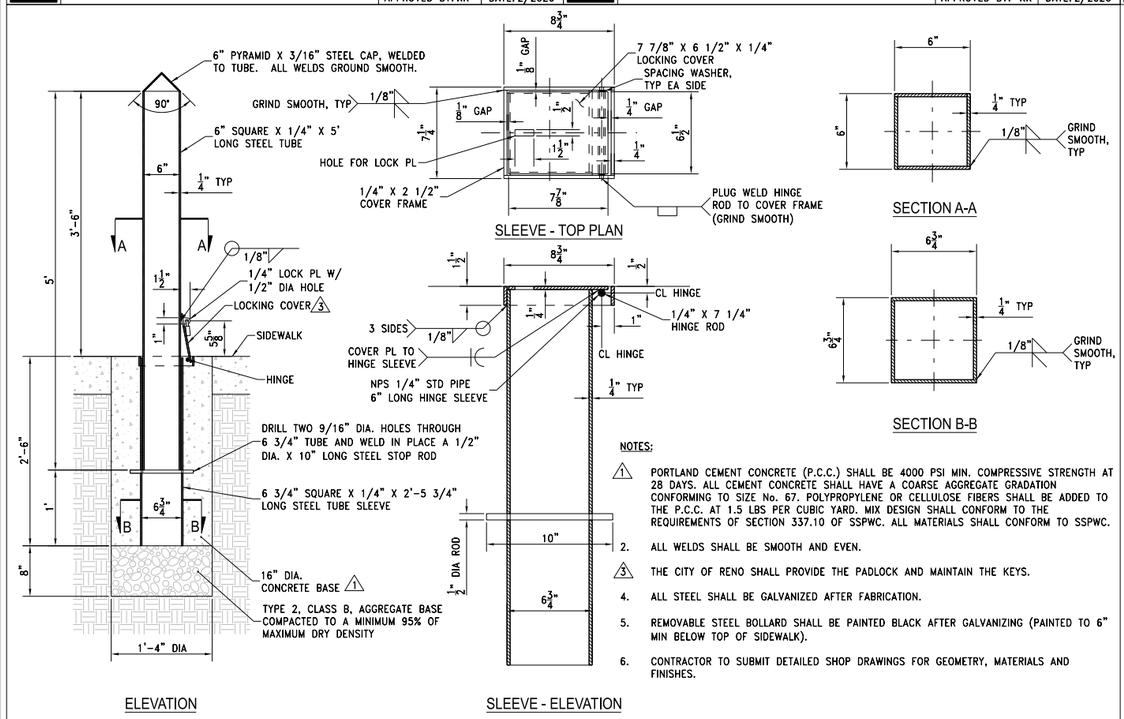
NOTES:

1. GENERAL
   THE BOLLARD SHALL BE CAST ALUMINUM, ONE-PIECE CONSTRUCTION. THE 11½" DIAMETER CAST ALUMINUM FLUTED BASE SHALL BE CONSTRUCTED WITH A 5¼" DIAMETER STRAIGHT FLUTED CAST ALUMINUM SHAFT. THE MODEL SHALL BE STERNBERG LIGHTING #390B-QR QUICK RELEASE UNIT BOLLARD, RICHMOND.
2. CONSTRUCTION
   THE BASE SHALL BE DESIGNED WITH A SCULPTURE BELL SHAPED BOTTOM, FOURTEEN FLUTE TOP SECTION AND BE MADE OF HEAVY 356 ALLOY CAST ALUMINUM. IT SHALL HAVE A ¾" THICK FLOOR CAST AS AN INTEGRAL PART OF THE BASE. THE BOLLARD CAP SHALL BE WELDED IN PLACE. THE OVERALL HEIGHT OF THE BOLLARD SHALL BE 42".
3. QUICK RELEASE MOUNT
   THE MODEL 390B-QR SHALL HAVE A QUICK RELEASE OPTION WHICH ALLOWS QUICK REMOVAL OF THE BOLLARD FOR CONVENIENCE OR EMERGENCY ACCESS. THE BURIAL PORTION SHALL BE MADE OF ASTM 6061 ALUMINUM EXTRUSION AND SHALL HAVE A KEYWAY AND FLEXIBLE CONNECTION SYSTEM FOR SECURING TO BOLLARD. THE BOLLARD SHALL HAVE A MATED EXTENSION AND ANTI-ROTATION KEY AND PADLOCK SLOT. THE QUICK RELEASE SYSTEM SHALL ALLOW FOR A FLUSH PAVEMENT INSTALLATION AFTER TEMPORARY BOLLARD REMOVAL.
4. FINISH
   OUR OPTIONAL ANTIQUE VERDE GREEN FINISH ARE HAND BRUSHED USING A 3-STEP PROCESS. THE TOTAL ASSEMBLY SHALL BE WRAPPED IN SHOCKPROOF WRAPPING OR FULLY ENCLOSED IN CORRUGATED CARTONS.
5. INSTALLATION
   FOUR, HOT DIPPED GALVANIZED "L" TYPE ANCHOR BOLTS SHALL BE PROVIDED WITH THE POST FOR NON-QUICK RELEASE BOLLARD ANCHORAGE. QUICK RELEASE ANCHORAGE REQUIRES NO ANCHOR BOLTS. A DOOR SHALL BE PROVIDED FOR ANCHOR BOLT ACCESS. IT SHALL BE SECURED WITH TAMPER PROOF, STAINLESS STEEL HARDWARE.
6. PLACE ACCESS DOOR AWAY FROM STREET.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION | DRAWING No. R-603B

DECORATIVE BOLLARD

APPROVED BY: KK | DATE: 1/2023



ELEVATION

SLEEVE - TOP PLAN

SECTION A-A

SECTION B-B

SLEEVE - ELEVATION

NOTES:

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL BE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS PER CUBIC YARD. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337.10 OF SSPWC. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. ALL WELDS SHALL BE SMOOTH AND EVEN.
3. THE CITY OF RENO SHALL PROVIDE THE PADLOCK AND MAINTAIN THE KEYS.
4. ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION.
5. REMOVABLE STEEL BOLLARD SHALL BE PAINTED BLACK AFTER GALVANIZING (PAINTED TO 6" MIN BELOW TOP OF SIDEWALK).
6. CONTRACTOR TO SUBMIT DETAILED SHOP DRAWINGS FOR GEOMETRY, MATERIALS AND FINISHES.

FOUNTAINWALK BOLLARD

REMOVABLE BOLLARD WITH CLOSABLE LID

DRAFT PS&E NOT FOR CONSTRUCTION

NO.	DATE	DSGN	DR	CHK	REVISION	APVD	BY	APVD
		NDOT	J CHELONIS	T VESCO			R COOMES	

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REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

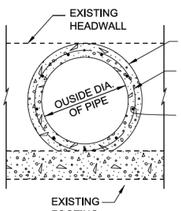
STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

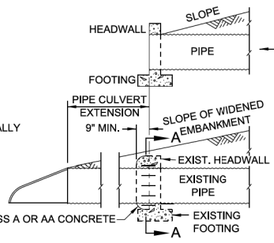
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

NTS
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

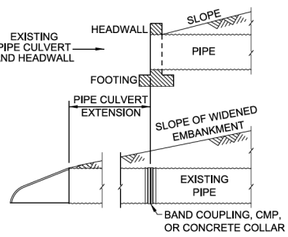
DATE	APRIL 2026
PROJ	W7Y56600
DWG	DT-06
SHEET	



SECTION A-A



TYPE 2 MODIFIED

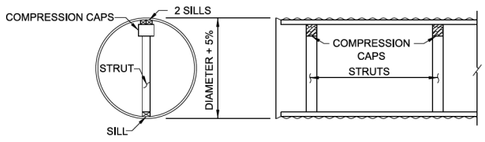


TYPE 1 MODIFIED

FOR ADDITIONAL INFORMATION SEE DETAIL EB-2

PIPE CULVERT EXTENSION

▨ - LIMITS OF REMOVAL



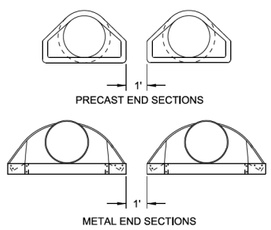
END VIEW

FOR STRUT, CAP, SILL SIZE, AND SPACING USE MANUFACTURERS RECOMMENDATIONS. STRUTS, CAPS AND SILLS TO BE THE SAME DIMENSION. FOR MAXIMUM FILL HEIGHTS, SEE DETAIL DS-2 UNDER COLUMNS DESIGNATED "E". STRUTS SHALL BE LEFT IN PLACE UNTIL FILL HAS BEEN COMPLETED AND COMPACTED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

FIELD STRUTTING CMP

SEPARATION FOR MULTIPLE INSTALLATIONS WITH END SECTIONS

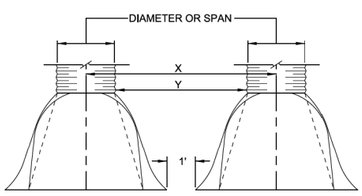
CMP/HDPE			CMAP			RCP		
DIA.	X	Y	SPAN	X	Y	DIA.	X	Y
-	-	-	21" x 15"	5' - 2"	3' - 5"	18"	4' - 4"	2' - 6"
-	-	-	24" x 18"	5' - 10"	3' - 10"	24"	5' - 5"	3'
-	-	-	28" x 20"	6' - 6"	4' - 2"	30"	6' - 6"	3' - 6"
24"	6' - 8"	4' - 8"	35" x 24"	7' - 8"	4' - 9"	36"	7' - 7"	4'
30"	8'	5' - 6"	42" x 29"	9' - 3"	5' - 9"	42"	8' - 2"	4'
36"	9' - 4"	6' - 4"	49" x 33"	10' - 3"	6' - 2"	48"	8' - 9"	4'
42"	10' - 8"	7' - 2"	57" x 38"	11' - 6"	6' - 9"	54"	8' - 7"	3' - 4"
48"	11' - 6"	7' - 6"	64" x 43"	12' - 6"	7' - 2"	-	-	-
54"	12' - 6"	8'	71" x 47"	13' - 6"	7' - 7"	-	-	-
60"	13' - 6"	8' - 6"	77" x 52"	14' - 6"	8' - 1"	-	-	-
66"	14'	8' - 6"	83" x 57"	15' - 6"	8' - 7"	-	-	-
72"	14' - 6"	8' - 6"	-	-	-	-	-	-
78"	15'	8' - 6"	-	-	-	-	-	-
84"	15' - 6"	8' - 6"	-	-	-	-	-	-



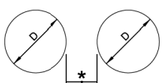
MULTIPLE INSTALLATIONS WITH END SECTIONS

NOTES:

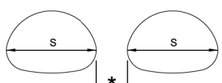
1. Concrete collar to be used for making repair connections, connect dissimilar pipe materials, extend or connect similar pipe materials where bell and spigot connections are not possible, and where specified.
2. Maintain proper alignment, line, and grade across the joint. Secure pipe sections adequately on each side of joint prior to casting concrete to prevent any inadvertent displacement or misalignment.
3. In lieu of a geotextile wrap, rubber boot adapters, coupling bands, or other special adapters specific to the application and as recommended by the manufacturer may be used to facilitate construction and maintain joint integrity. Use appropriate connection devices if required by the Engineer or special provisions to provide a competent or water tight connection. Maintain a minimum of 6-inches of concrete cover on the outside of any special connection devices.
4. For HDPE pipe, use an embedded waterstop gasket on each side of the joint where water tight connections are required and where required by the Engineer.
5. ~~No direct payment for concrete collars or associated connection devices. Payment to be included in the payment for pipe.~~
6. Where angle bends are specified, miter pipe ends to provide a tight joint connection with a maximum 1-inch gap tolerance.
7. Provide a minimum of 1-inch concrete cover from collar ends and 2-inches minimum clearance from inner to outer surface of concrete collar.



WHEN Y DISTANCE EXCEEDS 5', STRUCTURE EXCAVATION AND BACKFILL QUANTITIES SHALL BE CALCULATED FOR EACH CULVERT



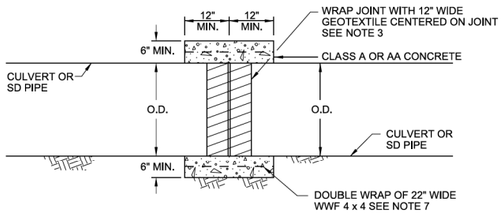
DIAMETER	MINIMUM SPACE BETWEEN PIPES
12" TO 24"	1'
30" TO 66"	ONE HALF DIAMETER OF PIPE
72" TO 84"	3'



SPAN	MIN. SPACE BETWEEN PIPE ARCHES
17" TO 35"	1'
42" TO 83"	ONE THIRD SPAN OF PIPE ARCH

★ WHEN HEADWALLS ARE USED OR ANTICIPATED FOR FUTURE USE SPACE AS PER HEADWALLS STANDARD

MULTIPLE INSTALLATIONS WITHOUT HEADWALLS



CONCRETE COLLAR

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF HYDRAULICS ENGR. SIGNED ORIGINAL ON FILE

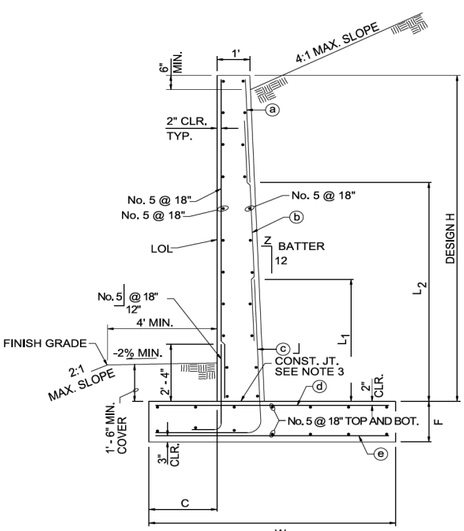
ADOPTED 8/1969

REVISED 5/2009

CULVERT INSTALLATION

SPEC. # 601,606

DETAIL NUMBER DS-4



TYPICAL SECTION: TYPE 1A

NOTES:

1. For additional notes see detail CW-4.
2. For details not shown and drainage requirements see details CW-4 thru CW-6.
3. Roughen construction joint surface to ¼-inch amplitude.
4. Geotechnical Engineer will verify maximum allowable bearing pressures for actual site soil conditions.

REINFORCED CONCRETE RETAINING WALL TYPES 1A, 1B AND 1C					
BACKFILL CONDITION	WALL TYPE REQUIRED FOR SEISMIC ACCELERATION				
	0.15G	0.25G	0.35G	0.40G	0.50G
LEVEL BACKFILL WITH SURCHARGE	1A	1A	1A	1A	1A
SLOPING BACKFILL WITHOUT SURCHARGE					
SLOPE ≤ 4:1	1A	1B	1B	1B	1B
4:1 SLOPE ≤ 3:1	1B	1B	1B	1B	★
3:1 SLOPE ≤ 2:1	1C	★	★	★	★

★ SPECIAL DESIGN REQUIRED

LAYOUT AND REINFORCEMENT DATA	TYPE 1A - REINFORCED CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL													
DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'
W	3' - 5"	4' - 10"	6' - 2"	7' - 8"	9'	10' - 4"	11' - 7"	12' - 11"	14' - 8"	16' - 4"	18' - 1"	19' - 9"	21' - 4"	22' - 11"
F	1'	1'	1'	1' - 4"	1' - 4"	1' - 4"	1' - 4"	1' - 6"	1' - 8"	2'	2' - 4"	2' - 9"	3' - 3"	3' - 9"
C	1'	1' - 3"	1' - 6"	1' - 9"	2' - 1"	2' - 5"	2' - 10"	3' - 3"	3' - 9"	4' - 3"	4' - 10"	5' - 5"	6'	6' - 7"
BATTER, Z	½	½	½	½	½	½	½	½	½	⅝	⅝	¾	¾	⅞
ⓐ BARS	-	-	-	-	-	-	-	-	No. 5 @ 18"	No. 5 @ 18"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"
ⓑ BARS	-	-	-	-	No. 5 @ 12"	No. 5 @ 12"	No. 6 @ 12"	No. 5 @ 6"	No. 5 @ 6"	No. 5 @ 6"	No. 6 @ 6"	No. 6 @ 6"	No. 7 @ 6"	No. 7 @ 6"
ⓒ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 6"	No. 6 @ 6"	No. 7 @ 6"	No. 7 @ 6"	No. 8 @ 6"	No. 9 @ 6"	No. 9 @ 6"	No. 10 @ 6"	No. 10 @ 6"	No. 11 @ 6"	No. 11 @ 6"
ⓓ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 6"	No. 5 @ 6"	No. 6 @ 6"	No. 7 @ 6"	No. 8 @ 6"	No. 9 @ 6"	No. 9 @ 6"	No. 9 @ 6"	No. 9 @ 6"	No. 9 @ 6"	No. 9 @ 6"
ⓔ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 6 @12"	No. 5 @ 6"	No. 5 @ 6"	No. 5 @ 6"	No. 5 @ 6"	No. 5 @ 6"	No. 6 @ 6"	No. 6 @ 6"	No. 6 @ 6"
L_1	-	-	-	-	5'	6'	6' - 6"	7'	No. 7' - 6"	8'	8' - 6"	9'	9' - 6"	10'
L_2	-	-	-	-	-	-	-	-	14'	15' - 6"	17'	18' - 6"	20'	22'
CONCRETE FT.^{3}/FT.	7.8	11.6	15.5	22.4	27.0	31.9	36.8	44.2	52.8	67.3	81.2	101.5	121.9	148.8
REINF. LBS./FT.	31	42	53	88	108	151	193	259	329	364	455	514	629	679
MAX. TY. SOIL PRESSURE (KSF)														
LEVEL SLOPE WITH SURCH.	1.0	1.3	1.6	1.9	2.2	2.4	2.6	2.9	3.0	3.2	3.4	3.7	3.9	4.2
LEVEL SLOPE @ 0.15G	0.9	1.2	1.5	1.9	2.1	2.4	2.6	2.9	3.1	3.3	3.5	3.8	4.1	4.5
LEVEL SLOPE @ 0.25G	0.9	1.2	1.6	2.0	2.3	2.5	2.8	3.1	3.3	3.6	3.8	4.1	4.5	4.8
LEVEL SLOPE @ 0.35G	1.0	1.3	1.6	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.1	4.5	4.9	5.3
LEVEL SLOPE @ 0.40G	1.0	1.3	1.7	2.2	2.5	2.8	3.1	3.5	3.7	4.0	4.3	4.6	5.1	5.5
LEVEL SLOPE @ 0.50G	1.1	1.4	1.8	2.3	2.7	3.0	3.4	3.8	4.0	4.4	4.7	5.1	5.5	6.0
SLOPE ≤ 4:1	0.7	1.1	1.4	1.8	2.1	2.4	2.7	3.0	3.2	3.6	3.8	4.1	4.5	4.9
SLOPE ≤ 4:1 @ 0.15G	0.8	1.2	1.6	2.1	2.5	2.8	3.2	3.6	3.9	4.2	4.6	4.9	5.4	5.8

STANDARD BAR LAPS		
BAR No.	UNCOATED	EPOXIED
4	20"	24"
5	26"	30"
6	31"	36"
7	39"	45"
8	51"	60"
9	64"	78"
10	82"	98"
11	100"	120"

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE

ADOPTED 12/2002

REVISED 10/2015

CANTILEVER CONCRETE RETAINING WALL TYPE 1A

SPEC. # 502

DETAIL NUMBER CW-1

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY

PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NO.	DATE	REVISION	BY	APVD

DSGN	DR	CHK	APVD
NDOT	J CHELONIS	T VESCO	R COOMES

DRAFT PS&E NOT FOR CONSTRUCTION

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ADJUST SCALE ACCORDINGLY

NTS

DATE APRIL 2026

PROJ W7Y56800

DWG DT-07

SHEET

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$PWURL

FILENAME: W7Y56800-DET-07.dgn

PLOT DATE: 1-APR-2026

PLOT TIME: 17:59

$PWURL

LAYOUT AND REINFORCEMENT DATA	TYPE 2A - REINFORCED CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL					
	DESIGN H	4'	6'	8'	10'	12'
	W	4'	5' - 6"	7'	8' - 9"	10' - 3"
	F	1'	1'	1'	1' - 4"	1' - 4"
	K★	0	1'	0	0	0
	BATTER, Z	½	½	½	½	½
	ⓐ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 6"	No. 5 @ 6"
	ⓑ BARS	No. 5 @ 12"	No. 6 @ 12"	No. 6 @ 12"	No. 6 @ 6"	No. 6 @ 6"
	KEY BARS	-	No. 5 @ 18"	-	-	-
EST. QTY.	CONCRETE FT.^{3}/FT.	8.4	12.3	16.4	23.8	28.7
	REINF LB./FT.	29	42	54	93	109
MAX. TOE PRESSURE (KSF)	LEVEL SLOPE W/SRCHG	1.2	1.6	2.0	2.4	2.8
	LEVEL SLOPE @ 0.15G	1.1	1.5	1.9	2.4	2.8
	LEVEL SLOPE @ 0.25G	1.1	1.5	2.0	2.5	2.9
	LEVEL SLOPE @ 0.35G	1.1	1.6	2.0	2.6	3.0
	LEVEL SLOPE @ 0.40G	1.2	1.6	2.1	2.6	3.1
	LEVEL SLOPE @ 0.50G	1.2	1.7	2.2	2.7	3.2
	SLOPE ≤ 4:1	1.0	1.5	2.0	2.5	3.0
	SLOPE ≤ 4:1 @ 0.15G	1.1	1.6	2.2	2.8	3.3
	SLOPE ≤ 4:1 @ 0.25G	1.2	1.8	-	-	-
	SLOPE ≤ 3:1	1.1	1.6	2.1	2.7	3.3
	SLOPE ≤ 3:1 @ 0.15G	1.2	1.8	-	-	-
	SLOPE ≤ 2:1	1.3	2.0	-	-	-

★ KEY ONLY REQUIRED FOR STATIC SLOPE ≤ 2:1
ADD 2 CUFT/FT CONCRETE AND 8 LBS/FT REINF.

LAYOUT AND REINFORCEMENT DATA	TYPE 2B - REINFORCED CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL					
	DESIGN H	4'	6'	8'	10'	12'
	W	4' - 1"	6'	7' - 10"	10'	11' - 1"
	F	1'	1'	1'	1' - 4"	1' - 4"
	K★	-	-	1'	1'	1' - 6"
	BATTER, Z	½	½	½	½	½
	ⓐ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 6 @ 12"	No. 5 @ 6"
	ⓑ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 6"	No. 6 @ 6"	No. 7 @ 6"
	KEY BARS	-	-	No. 5 @ 18"	No. 5 @ 18"	No. 5 @ 18"
EST. QTY.	CONCRETE FT.^{3}/FT.	8.5	12.8	17.2	25.5	30.8
	REINF LB./FT.	29	41	61	92	129
MAX. TOE PRESSURE (KSF)	SLOPE ≤ 4:1 @ 0.25G	-	-	2.2	2.7	3.2
	SLOPE ≤ 4:1 @ 0.35G	1.3	1.8	2.3	3.0	3.5
	SLOPE ≤ 3:1 @ 0.15G	-	-	2.2	2.8	3.4
	SLOPE ≤ 2:1	-	-	2.5	3.2	3.8

★ Key only required for static slope ≤ 2:1
For 1' key, add 2 ft.^{3}/ft. concrete and 8 lb./ft. reinf.
For 1' - 6" key, add 4.5 ft.^{3}/ft. concrete and 10.1 lb./ft. reinf.

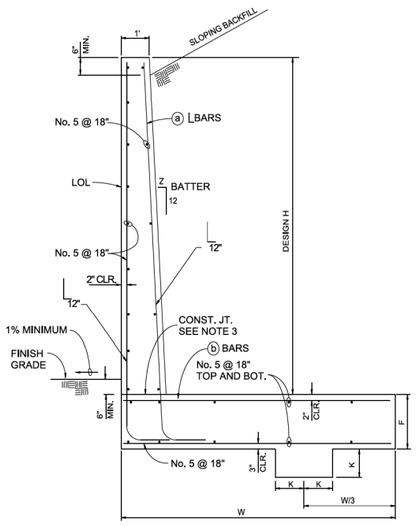
LAYOUT AND REINFORCEMENT DATA	TYPE 2C - REINFORCED CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL					
	DESIGN H	4'	6'	8'	10'	12'
	W	4' - 4"	6' - 4"	8' - 3"	10' - 6"	12' - 6"
	F	1'	1'	1'	1' - 4"	1' - 4"
	BATTER, Z	½	½	½	½	½
	ⓐ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 6 @ 12"	No. 5 @ 6"
	ⓑ BARS	No. 5 @ 12"	No. 6 @ 12"	No. 5 @ 6"	No. 6 @ 6"	No. 8 @ 6"
EST. QTY.	CONCRETE FT.^{3}/FT.	8.7	13.1	17.6	26.1	31.7
	REINF LB./FT.	30	45	63	94	149
MAX. TOE PRESSURE (KSF)	SLOPE ≤ 4:1 @ 0.40G	1.3	1.8	2.3	3.0	3.5
	SLOPE ≤ 3:1 @ 0.25G	1.3	1.8	2.4	3.0	3.6

LAYOUT AND REINFORCEMENT DATA	TYPE 2D - REINFORCED CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL					
	DESIGN H	4'	6'	8'	10'	12'
	W	4' - 11"	7' - 1"	9' - 5"	11' - 11"	14' - 2"
	F	1'	1'	1'	1' - 4"	1' - 4"
	BATTER, Z	½	½	½	½	½
	ⓐ BARS	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 12"	No. 5 @ 6"	No. 6 @ 6"
	ⓑ BARS	No. 5 @ 12"	No.5 @ 6"	No. 6 @ 6"	No. 7 @ 6"	No. 9 @ 6"
EST. QTY.	CONCRETE FT.^{3}/FT.	9.3	13.9	18.8	28.0	33.9
	REINF LB./FT.	31	52	77	122	195
MAX. TOE PRESSURE (KSF)	SLOPE ≤ 4:1 @ 0.50G	1.3	1.8	2.4	3.0	3.6
	SLOPE ≤ 3:1 @ 0.35G	1.3	1.9	2.4	3.1	3.7

LAYOUT AND REINFORCEMENT DATA	TYPE 2E - REINFORCED CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL					
	DESIGN H	4'	6'	8'	10'	12'
	W	5' - 7"	8' - 4"	11'	14' - 2"	17' - 3"
	F	1'	1'	1'	1' - 4"	1' - 8"
	BATTER, Z	½	½	½	½	½
	ⓐ BARS	No. 5 @ 12"	No.5 @ 12"	No. 5 @ 12"	No. 5 @ 6"	No. 6 @ 6"
	ⓑ BARS	No. 5 @ 12"	No. 5 @ 6"	No. 7 @ 6"	No. 9 @ 6"	No. 11 @ 6"
EST. QTY.	CONCRETE FT.^{3}/FT.	10.0	15.1	20.4	31.0	43.8
	REINF LB./FT.	34	57	96	174	290
MAX. TOE PRESSURE (KSF)	SLOPE ≤ 3:1 @ 0.40G	1.3	1.8	2.4	3.0	3.7
	SLOPE ≤ 2:1 @ 0.15G	1.4	2.0	2.7	3.4	4.2

NOTES:

1. For additional notes see detail CW-4.
2. For details not shown and drainage requirements see details CW-4 thru CW-6.
3. Roughen construction joint surface to ¼-inch amplitude.
4. Geotechnical Engineer will verify maximum allowable bearing pressures for actual site soil conditions.



TYPICAL SECTION: TYPE 2

REINFORCED CONCRETE RETAINING WALL TYPES 2A AND 23						
BACKFILL CONDITION	WALL TYPE REQUIRED FOR SEISMIC ACCELERATION					
	0.00G	0.15G	0.25G	0.35G	0.40G	0.50G
LEVEL BACKFILL WITH SURCHARGE	2A	2A	2A	2A	2A	2A
SLOPING BACKFILL W/O SURCHARGE						
SLOPE ≤ 4:1	2A	2A	2A, 2B	2B	2C	2D
4:1 SLOPE ≤ 3:1	2A	2A, 2B	2C	2D	2E	★
3:1 SLOPE ≤ 2.1	2A, 2B	2E	★	★	★	★

★ REQUIRES SPECIAL DESIGN

STANDARD BAR LAPS		
BAR No.	UNCOATED	EPOXIED
4	20"	24"
5	26"	30"
6	31"	36"
7	39"	45"
8	51"	60"
9	64"	78"
10	82"	98"
11	100"	120"

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE

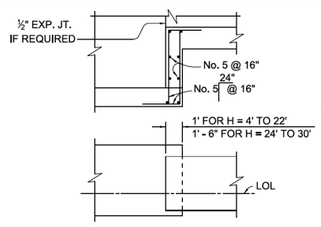
ADOPTED 10/2002

REVISED 10/2015

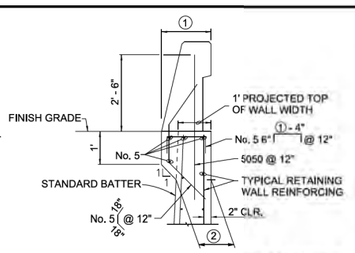
CANTILEVER CONCRETE RETAINING WALL TYPE 2A THRU 2E

SPEC. # 502

DETAIL NUMBER CW-3

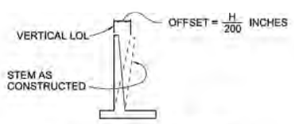


FOOTING STEP



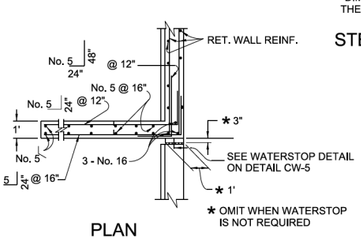
DIMENSION ①, BARRIER RAIL WIDTH, TO BE AS SHOWN IN THE PROJECT PLANS. STEM WIDTH ② AT BASE OF HAUNCH TO BE DETERMINED AS SHOWN.

STEM HAUNCH FOR BARRIER RAIL



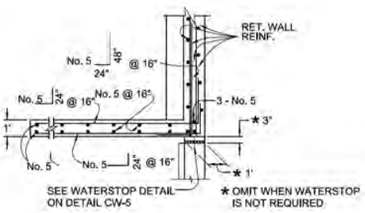
VALUES FOR OFFSETTING FORMS TO BE DETERMINED BY THE ENGINEER

APPROXIMATE WALL OFFSET VALUES



★ OMIT WHEN WATERSTOP IS NOT REQUIRED

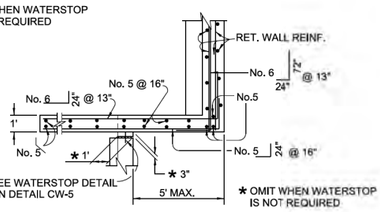
PLAN
RETURN WALL TYPE A



SEE WATERSTOP DETAIL ON DETAIL CW-5

★ OMIT WHEN WATERSTOP IS NOT REQUIRED

PLAN
RETURN WALL TYPE C

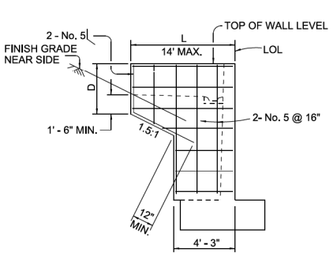


★ OMIT WHEN WATERSTOP IS NOT REQUIRED

PLAN
RETURN WALL TYPE B

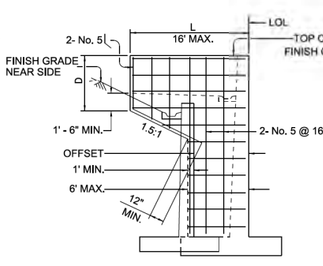
NOTES:

1. Design Specifications: AASHTO LRFD Bridge Design Specifications.
2. Loading: Live load surcharge pressure equal to 2-feet of earth.
   Seismic Acceleration = 0.15g, 0.25g, 0.35g, 0.40g and 0.50g, where ½ the peak ground acceleration is used in the design.
3. Concrete: All concrete, major, shall have F'c = 4 ksi at 28 days.
4. Reinforcing Steel: All reinforcing steel shall be ASTM A615 grade 60 or A706.
5. Design Data: Cantilevered Walls are designed based on the following parameters.
   Soil Properties:
   Internal Angle of Friction = 32°
   Unit Weight = 0.120 kcf
   Cohesion = 0.200 ksf
   Equivalent Active Fluid Pressure = 0.036 kcf
   Level Backfill
   Equivalent Active Fluid Pressure = 0.060 kcf
   2H: 1V Backfill
   Equivalent Active Fluid Pressure = Rankine Method, Sloping Backfill
   Equivalent Passive Fluid Pressure = 0.360 kcf
   Top of Footing Down
   Coefficient of Friction between Concrete Footing and Foundation Soil = 0.450
   Static + Seismic Earth Pressure Coefficient: K_ae: Mononobe-Okabe Method, If can be determined. Otherwise, special design required.
6. Footing Steps: Footing steps not required unless shown in plans. For dimension, D, see project plans.
7. Return Walls: Return wall not required unless shown in plans. For dimension, D, see project plans.
8. Drainage: Drainage system, gutter, drain, pipe, not required unless specified in the plans.
9. Stability Factors. For check only:
   Static Overturning = 2.0
   Static Sliding = 1.5
   Seismic Overturning = 1.5
   Seismic Sliding = 1.1
10. Detail provided for barrier rail to retaining wall connection detailing only. As standard plan retaining walls have not been explicitly designed for impact forces, wall designer is responsible for evaluating individual wall designs for impact loading and modifying retaining wall designs as necessary to resist impact loading.



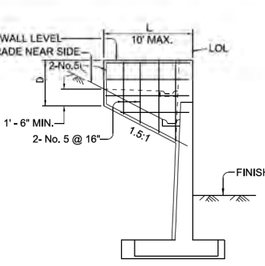
USE WHERE H = 8' OR LESS

ELEVATION
RETURN WALL TYPE A



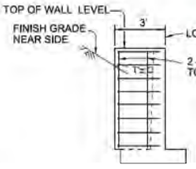
USE WHERE H = 10' OR MORE ON OFFSET WALLS

ELEVATION
RETURN WALL TYPE B



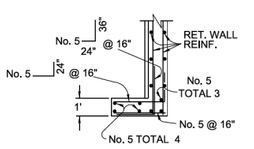
USE WHERE H = 10' OR MORE ON STRAIGHT WALLS

ELEVATION
RETURN WALL TYPE C



USE WHERE H = 6' OR LESS

ELEVATION
RETURN WALL TYPE D



PLAN
RETURN WALL TYPE D

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE

ADOPTED 10/2002

REVISED 7/2024

CANTILEVER CONCRETE RETAINING WALL DETAILS NO.1

SPEC. # 502

DETAIL NUMBER CW-4

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NO.	DATE	REVISION	BY	APVD

DSGN	DR	CHK	APVD
NDOT	J CHELONIS	T VESCO	R COOMES

DRAFT PS&E NOT FOR CONSTRUCTION

VERIFY SCALE NTS
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALE ACCORDINGLY
0 1"
DATE APRIL 2026
PROJ W7756800
DWG DT-08
SHEET

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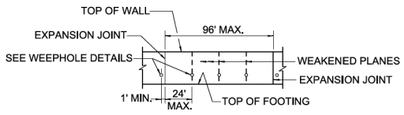
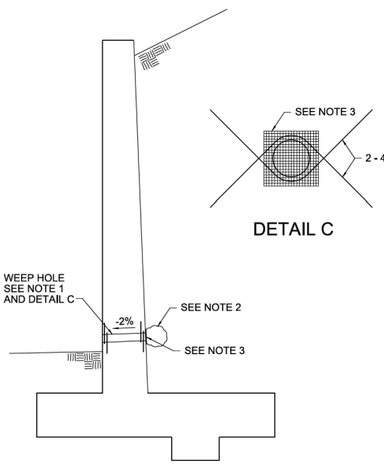
FILENAME: W7Y56800-DET-08.dgn
PLOT DATE: 1-APR-2026
PLOT TIME: 17:59



WALL EXPANSION JOINTS
AND WEAKENED PLANES

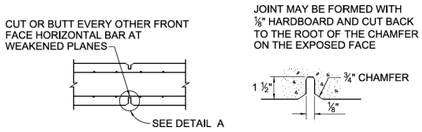


DETAIL C

WEEP HOLE

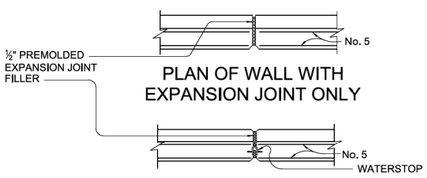
WEEP HOLE NOTES:

1. 4-inch dia. drains at 25-feet maximum center to center. Exposed drains shall be located 3-inches ± above finish grade.
2. 2-cubic feet of type 2 drain backfill encapsulated in a geotextile fabric securely tied. Geotexile shall meet the following:
   - A. Meet at least class 2 strength requirement per AASHTO M288 test method.
   - B. Have an AOS not greater than U.S. sieve No. 40.
   - C. Have a permittivity of at least 0.5 Sec^{-1}
3. 6-inch square aluminum or galvanized steel wire mesh hardware cloth, 4 openings per inch and minimum wire diameter 0.03-inches.



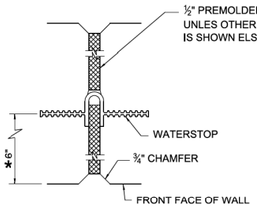
SECTION DETAIL A

WEAKENED PLANES

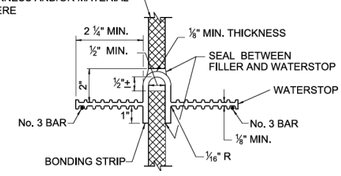


PLAN OF WALL WITH
EXPANSION JOINT ONLY

PLAN OF WALL WITH
EXPANSION JOINT AND WATERSTOP



WALL EXPANSION JOINT
WITH WATERSTOP
★FOR WALL THICKNESS LESS THAN 12", USE ½ THE WALL THICKNESS



WATERSTOP

WATERSTOP NOTES:

1. Holes will be permitted in the outer ½-inch of the web for wire, rings, etc. tie web to No. 3 reinforcing bars @ 16-inch maximum intervals to support the waterstop in proper position during concrete placement. Alternative detail may be submitted for approval of the engineer.
2. Waterstop to have 5 or more pairs of raised ribs to provide 0.1-square inches minimum rib cross-section area on each half of the waterstop.

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE

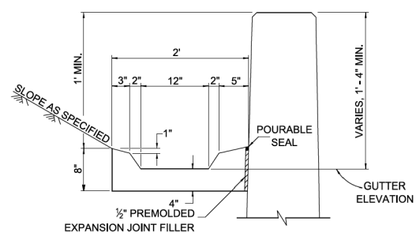
ADOPTED 10/2002

REVISED 6/2004

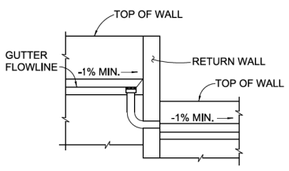
CANTILEVER CONCRETE RETAINING WALL DETAILS NO. 2

SPEC. # 502

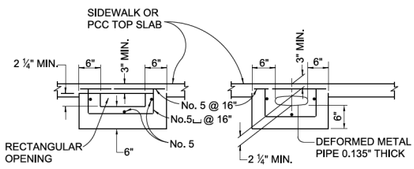
DETAIL NUMBER CW-5



TYPICAL GUTTER DETAIL



SECTION A-A

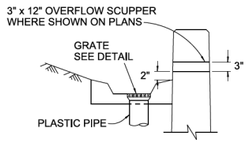


AREA OF OPENING TO BE NOT LESS THAN THAT OF PIPE FROM WALL GUTTER. MAKE OPENING TRANSITION IN WALL. EDGE OPENING IN CURB FACE TO ¾" MINIMUM RADIUS.

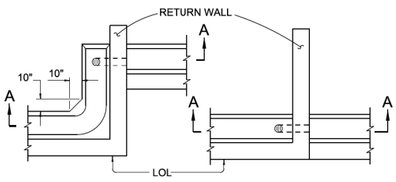
OUTLET DETAIL - SECTION B-B

SIZES TO FIT STANDARD HUBS

GRATE DETAIL

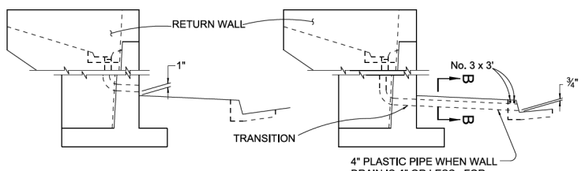


WALL DRAIN DETAIL



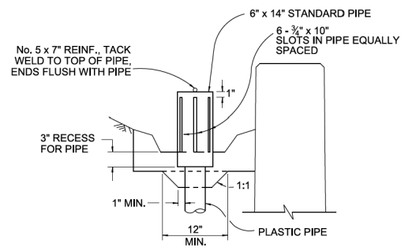
PLAN-OFFSET WALL
DRAIN THROUGH RETURN WALL

PLAN-CONTINUOUS WALL

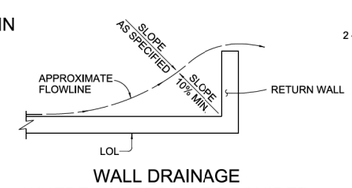


RETAINING WALL
FACE OF WALL OUTLET

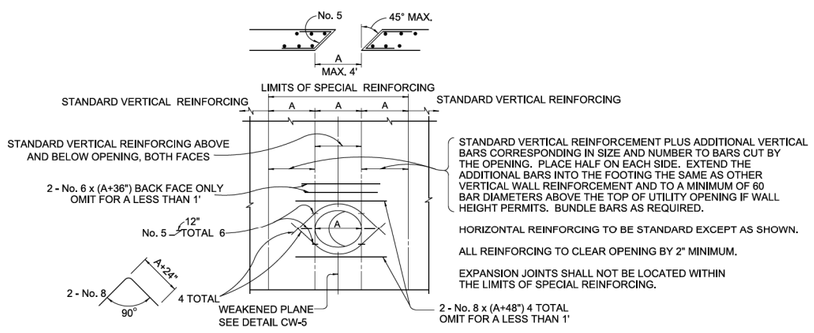
RETAINING WALL
GUTTER OUTLET



ALTERNATIVE WALL DRAIN
WITH PIPE DOME



WALL DRAINAGE
WHERE GUTTER NOT REQUIRED



MAXIMUM SIZE OF OPENING (A) = 4'

RETAINING WALL UTILITY OPENING

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE

ADOPTED 12/2002

REVISED

CANTILEVER CONCRETE RETAINING WALL DETAILS NO. 3

SPEC. # 502

DETAIL NUMBER CW-6

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY

PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NO.	DATE	REVISION	BY	APVD

DSGN	DR	CHK	APVD
NDOT	J CHELONIS	T VESCO	R COOMES

DRAFT PS&E NOT FOR CONSTRUCTION

VERIFY SCALE NTS

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ADJUST SCALE ACCORDINGLY. 0 1"

DATE APRIL 2026

PROJ W7Y56800

DWG DT-09

SHEET

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$PWURL

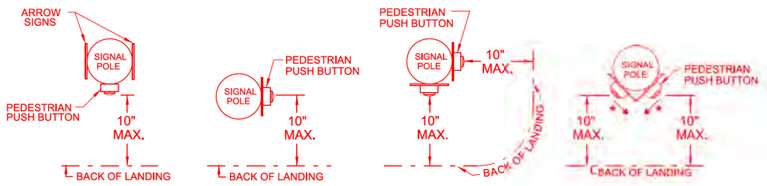
FILENAME: W7Y56800-DET-09.dgn

PLOT DATE: 1-APR-2026

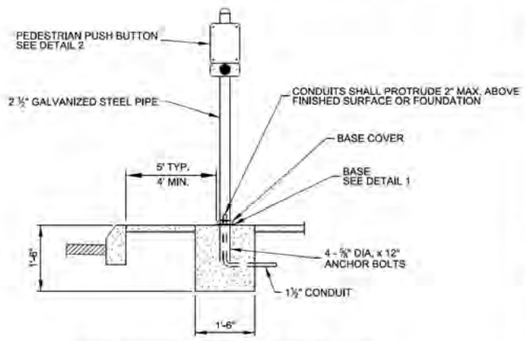
PLOT TIME: 17:59

NOTES:

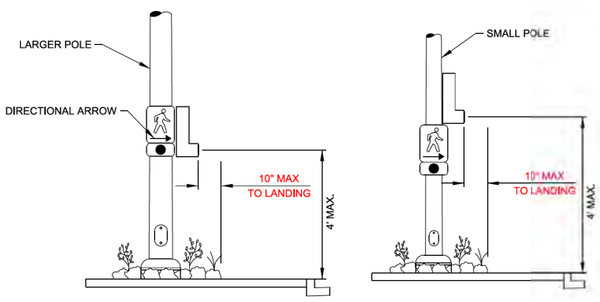
1. Arrow to be left or right or both as required.
2. Per plans or maintaining agency, 5" x 7" or 9" x 12" sign, black symbols on white background.



PUSH BUTTON REACH DETAIL



PEDESTRIAN PUSH BUTTON POST



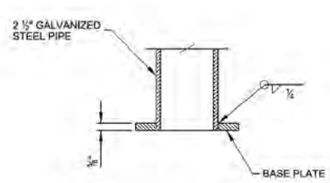
TYPE 1 TYPE 2

TYPE 1 - POSITION PEDESTRIAN PUSH BUTTONS ON SIGNAL POLE WHEN THE WIDTH OF THE POLE ALLOWS (2) PEDESTRIAN BUTTONS TO BE MOUNTED AT THE SAME HEIGHT.

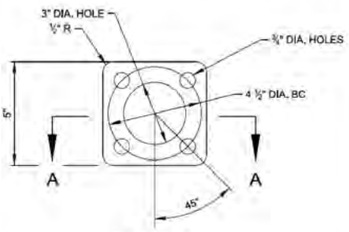
TYPE 2 - POSITION PEDESTRIAN PUSH BUTTONS ON SIGNAL POLE WHEN THE WIDTH OF THE POLE DOES NOT ALLOW (2) PEDESTRIAN BUTTONS TO BE MOUNTED AT THE SAME HEIGHT. MOUNT LOWER PUSH BUTTON AS HIGH AS POSSIBLE.

PUSH BUTTON POSITIONING DETAIL

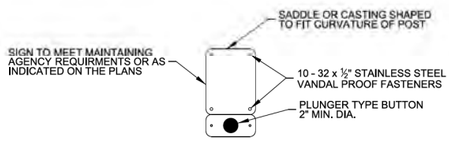
CONTRACTOR TO VERIFY POLE SIZE WITH ENGINEER FOR CORRECT PEDESTRIAN PUSH BUTTON INSTALLATION.



SECTION A-A WITH PIPE



DETAIL 1



DETAIL 2

NEVADA DEPARTMENT OF TRANSPORTATION
CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE
ADOPTED 8/1998
REVISED 7/2024

PEDESTRIAN PUSH BUTTON DETAILS

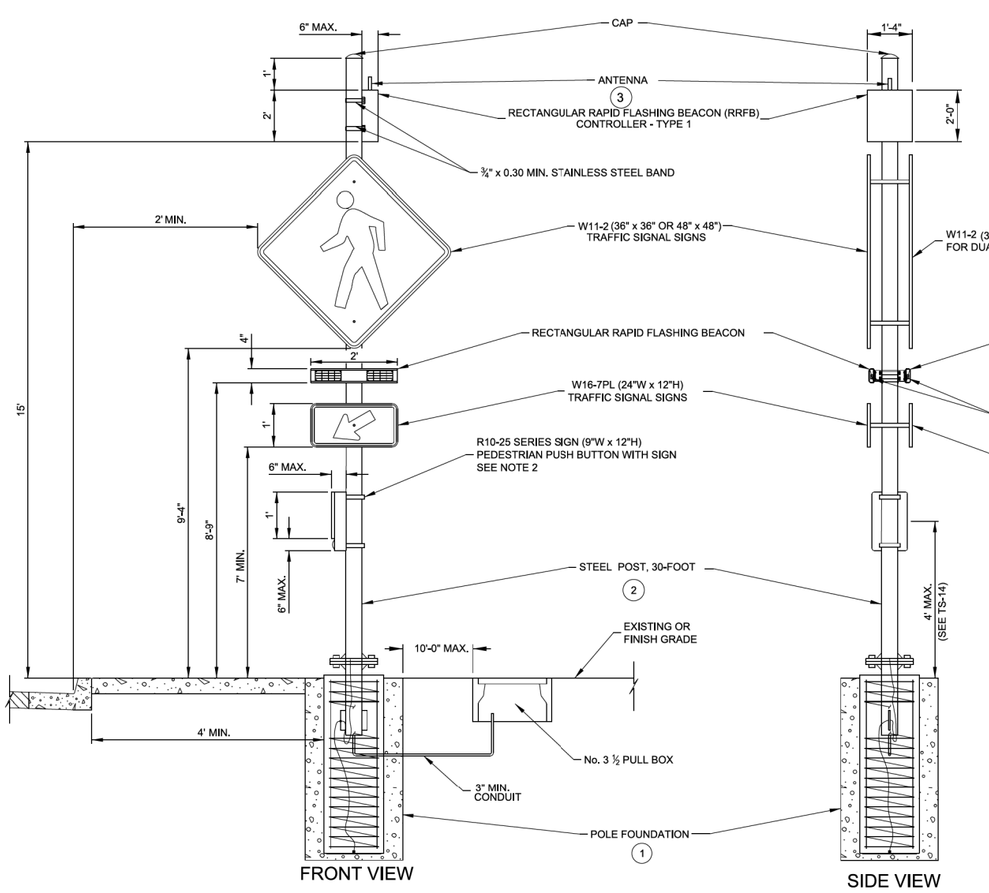
SPEC. # 623
DETAIL NUMBER TS-14

NOTES:

1. Rectangular Rapid Flashing Beacon (RRFB) must include pedestrian indication side flasher that faces crosswalk.
2. Install push button on side of pole facing pedestrian ramp.
3. Cut and cap post 1' above highest attachment.
4. Sign color to be standard yellow. Florescent yellow green shall not be allowed without Chief Traffic Operations Engineer approval.

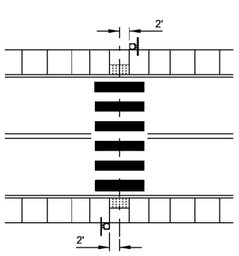
LEGEND:

1. SEE SHEET ITS-9 FOR FOUNDATION
2. SEE SHEET ITS-12A AND ITS-12B FOR STEEL POST, 30-FOOT
3. FOR USE WITH RADIO COMMUNICATION

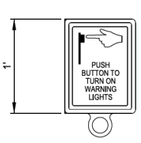


AC POWER

DESCRIPTION	WEIGHT LBS.
RRFB COTROLLER - TYPE 1	20
W11-2 SIGN (36" x 36" OR 48" x 48")	—
RRFB	10
W16-7PL SIGN (24"W x 12"H)	—
R10-25 SIGN (9"W x 12"H)	—
PEDESTRIAN PUSH BUTTON	10



SEE SHEET TS-27 FOR MIDBLOCK CROSSWALK LIGHTING DETAIL. ALIGN POLE BASE COVER SUCH THAT IT IS PARALLEL TO BACK OF SIDEWALK AND ALIGNS WITH NEAR EDGE OF THE DETECTABLE WARNING JOINT.



FRONT FACE OF PEDESTRIAN PUSH BUTTON

NEVADA DEPARTMENT OF TRANSPORTATION
CHIEF TRAFFIC OPS ENGR. SIGNED ORIGINAL ON FILE
ADOPTED 10/2015
REVISED 7/2024

TYPE 1 (RRFB) RECTANGULAR RAPID FLASHING BEACON

SPEC. # 623
DETAIL NUMBER TS-23

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY
PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NO.	DATE	REVISION	BY	APVD

DSGN	DR	CHK	APVD
NDOT	J CHELONIS	T VESCO	R COOMES

DRAFT PS&E NOT FOR CONSTRUCTION

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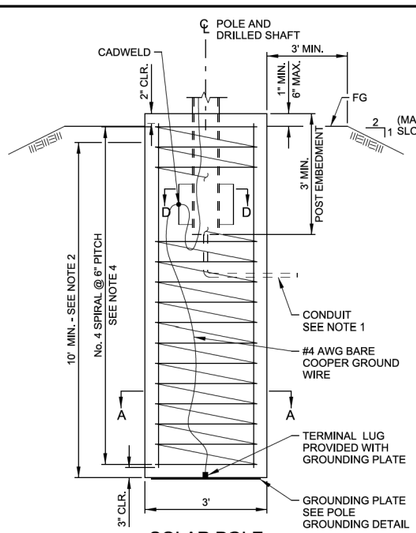
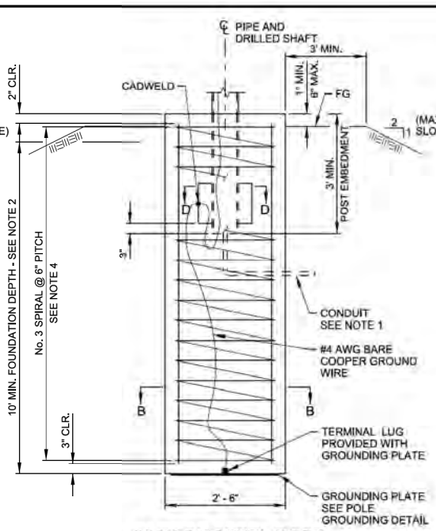
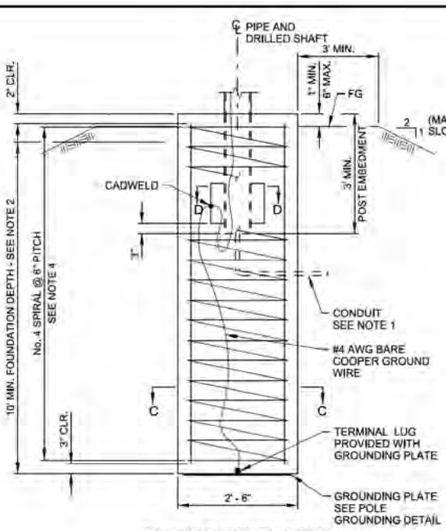
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALE ACCORDINGLY
NTS
1"
DATE APRIL 2026
PROJ W7Y56800
DWG DT-10
SHEET



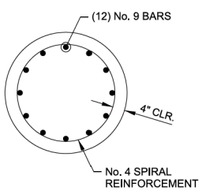
SOLAR POLE FOUNDATION



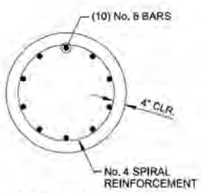
20 FOOT STEEL POST FOUNDATION



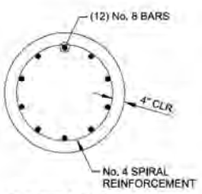
30 FOOT STEEL POST FOUNDATION



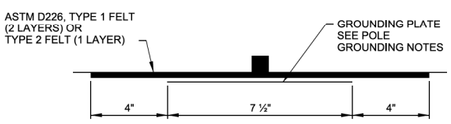
SECTION A-A



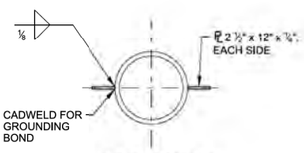
SECTION B-B



SECTION C-C



POLE GROUNDING DETAIL



SECTION D-D

POLE GROUNDING NOTES:

1. Connect bonding wire to the reinforcing steel cage near the midpoint of the foundation and at midpoint of the anchor bolts.
2. Ground plate shall be made of nonferrous material, brass or copper. Grounding plate grounding resistance shall not exceed National Electrical Code. Add additional grounding as required by the contract specifications. Ground plate shall be NSI or approved equivalent. Supply final grounding test results to Engineer.

NOTES:

1. For number and size of conduit in foundation, see electrical plan sheets, a minimum of one 3" conduit shall be provided.
2. Depth of foundation, drilled shaft, will be measured from the lowest point on finished grade and length of pile will change accordingly.
3. Pole grounding required for ITS structures.
4. Terminate spiral reinforcement with 135° hook around main vertical reinforcement, with 1 ½ turns at top and bottom.

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE

ADOPTED 10/2015

REVISED 9/2022

SOLAR POLE, STEEL POST FOUNDATION

SPEC. # 623

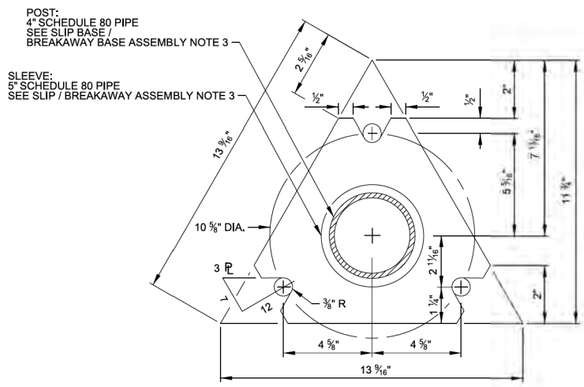
DETAIL NUMBER ITS-9

NOTES:

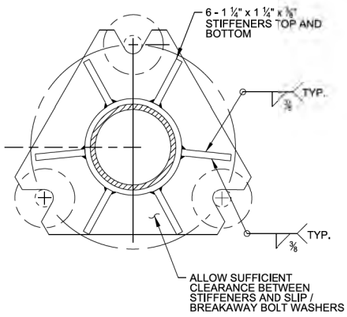
1. Pile shall be formed 6-inch min below ground surface. Remainder to be placed against undisturbed material.
2. Depth of foundation, drilled shaft, will be measured from the lowest point on finished grade and length of pile will change accordingly.
3. Structural bolts and other steel hardware shall be hot dipped galvanized in accordance with AASHTO M232 (ASTM A153).
4. For foundation details see ITS-9.

BREAKAWAY BASE ASSEMBLY NOTES:

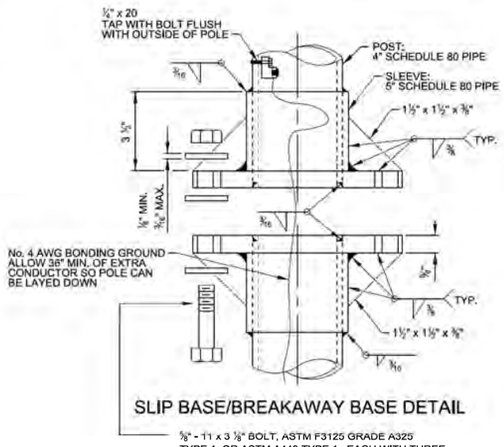
1. All parts and hardware shall be galvanized as per section 715
2. Slip base / breakaway bases are not required behind concrete barrier rail or behind guardrail where the sign post is greater than 2-feet and 6-inches from the back side of the guardrail post
3. Use extra strong weight pipe for posts, see ASTM A53
4. Stiffener shall be 2 ½" x 2 ½" x ⅜" on both sides of slip / breakaway bolts, top and bottom



PLAN VIEW
TOP/BOTTOM PLATE
PLATE THICKNESS = ⅝"



TOP/BOTTOM PLATE
STIFFENER DETAIL



SLIP BASE/BREAKAWAY BASE DETAIL

⅝" - 11 x 3 ½" BOLT, ASTM F3125 GRADE A325 TYPE 1, OR ASTM A449 TYPE 1; EACH WITH THREE USS THROUGH HARDENED WASHERS ASTM F436 TYPE 1; AND ONE NYLON INSERT STOP NUT ASTM A563 DH. ALL ITEMS SHALL BE GALVANIZED AS PER MANUFACTURER'S SPECIFICATIONS. TORQUE WITHIN THE RANGE OF 24 - 29 FT./LB. SEE BOLT DETAIL

n = A TYPICAL MANUFACTURER'S IDENTIFICATION

TYPE 1 ASTM A449 ⅝" x 3 ½" BOLT

TYPE 1 ASTM F3125 GRADE A325 ⅝" x 3 ½" BOLT

BOLT DETAIL

NEVADA DEPARTMENT OF TRANSPORTATION

CHIEF BRIDGE ENGR. SIGNED ORIGINAL ON FILE

ADOPTED 10/2015

REVISED 7/2024

STEEL POST 30 FOOT

SPEC. # 623

DETAIL NUMBER ITS-12B

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY

PWP-WA-2026-257 FHWA PIN: BR-0191-(343) NDOT EA:74508

SIERRA STREET BRIDGE REPLACEMENT PROJECT

STANDARD DETAILS

Jacobs
50 WEST LIBERTY STREET, SUITE 205
RENO, NV 89501
PH (775) 329-7300

NO.	DATE	REVISION	BY	APVD

DSGN	DR	CHK	APVD
NDOT	J CHELONIS	T VESCO	R COOMES

DRAFT PS&E NOT FOR CONSTRUCTION

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NTS

DATE APRIL 2026

PROJ W7Y56800

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