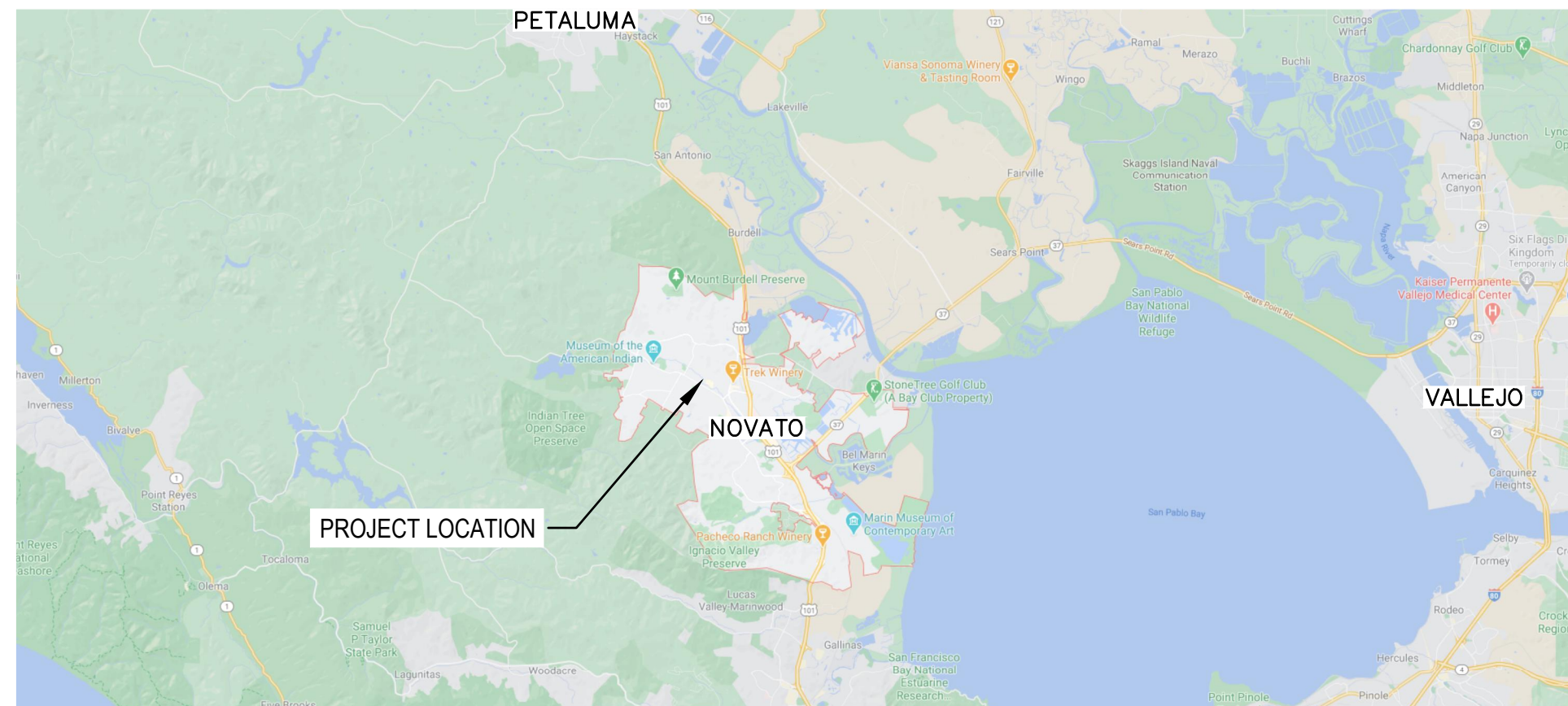


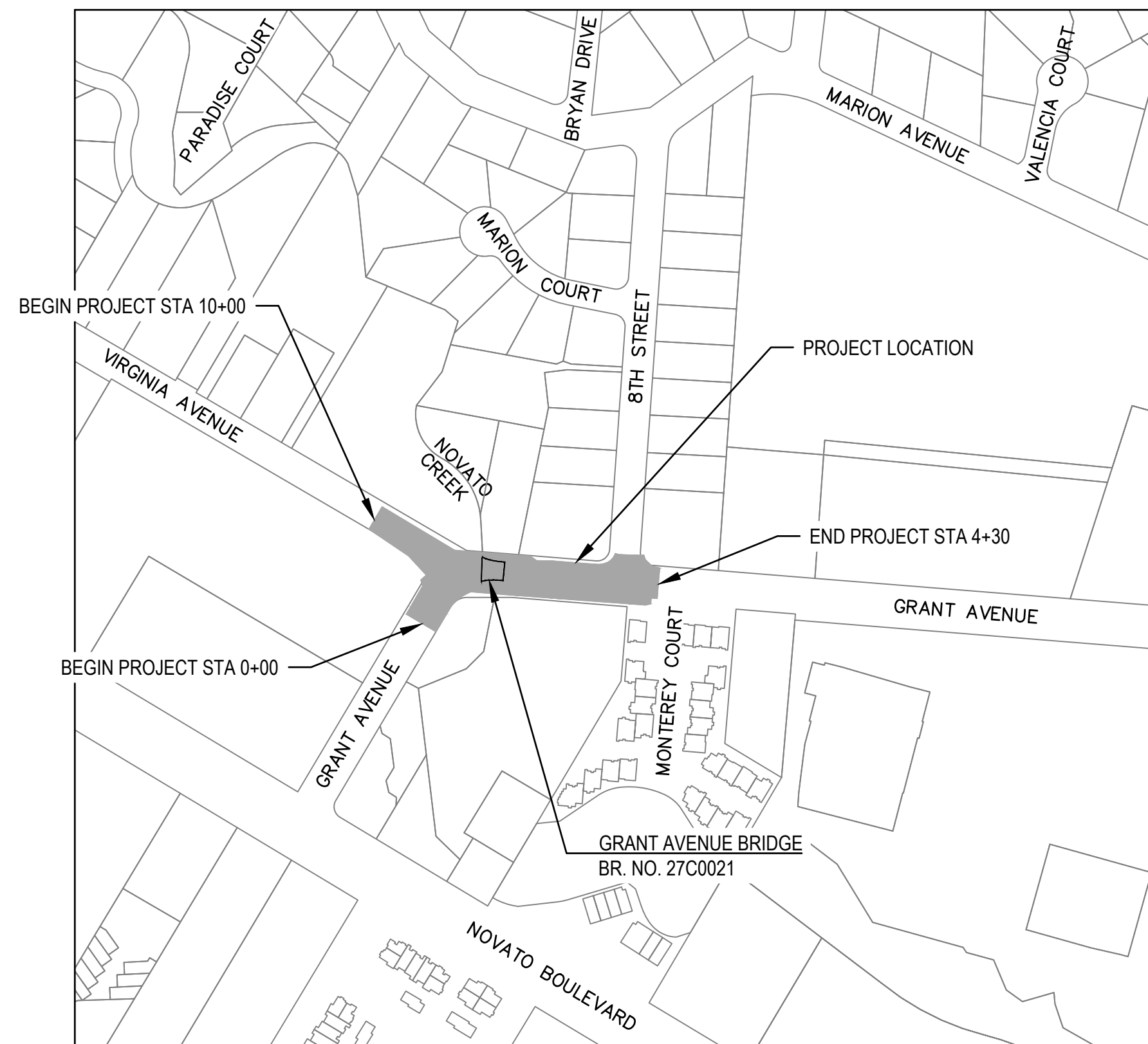
GRANT AVENUE BRIDGE REHABILITATION CALTRANS BRIDGE NO. 27C0021 CIP PROJECT 09-003 FEDERAL AID PROJECT NO. BHLS 5361 (023) CITY OF NOVATO MARIN COUNTY CALIFORNIA

SHEET INDEX

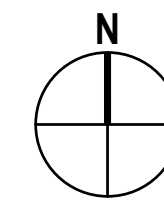
SHEET NUMBER	DWG NUMBER	SHEET DESCRIPTION
1	T1	TITLE SHEET
2	T2	GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS
3	PC1	PROJECT CONTROL
4	D1	DEMOLITION PLAN
5	X1	TYPICAL CROSS SECTIONS 1
6	X2	TYPICAL CROSS SECTIONS 2
7	C1	IMPROVEMENT PLAN AND PROFILE
8	C2	GRADING PLAN
9	C3	CONSTRUCTION DETAILS 1
10	C4	CONSTRUCTION DETAILS 2
11	C5	CONSTRUCTION DETAILS 3
12	U1	UTILITY PLAN
13	TH1	CONSTRUCTION AREA SIGNS
14	SC1	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN – STAGE 1
15	SC2	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN – STAGE 2
16	SC3	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN – STAGE 3
17	SC4	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN – STAGE 4
18	SC5	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN – STAGE 5
19	DE1	DETOUR PLAN 1 – STAGE 2 AND STAGE 4
20	DE2	DETOUR PLAN 2 – STAGE 3
21	PD1	PAVEMENT DELINEATION AND SIGN PLAN
22	E1	STREET LIGHTING PLAN
23	E2	ELECTRICAL DETAILS
24	EC1	CHANNEL RESTORATION PLAN
25	EC2	CHANNEL RESTORATION SECTIONS
26	EC3	EROSION AND SEDIMENT CONTROL PLAN
27	EC4	TEMPORARY CREEK DIVERSION PLAN
28	L1	LANDSCAPE REVEGETATION PLAN
29	L2	LANDSCAPE PLANTING DETAILS
STRUCTURE PLANS		
30	S1	GENERAL PLAN
31	S2	INDEX TO PLANS
32	S3	FOUNDATION PLAN
33	S4	ABUTMENT LAYOUT
34	S5	ABUTMENT DETAILS No. 1
35	S6	ABUTMENT DETAILS No. 2
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38	S9	TYPICAL SECTION No. 1
39	S10	TYPICAL SECTION No. 2
40	S11	PRECAST PRESTRESSED CONCRETE SLAB DETAILS No. 1
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42	S13	PARTIAL REMOVAL PLAN
43	S14	JOINT ARMOR FOR PEDESTRIAN WALKWAYS
44	S15	MISCELLANEOUS BARRIER DETAILS
45	S16	STRUCTURE APPROACH SLAB TYPE EQ (10)
46	S17	RETAINING WALL LAYOUT PLAN AND SECTION
47	S18	LOG OF TEST BORINGS



VICINITY MAP
NTS

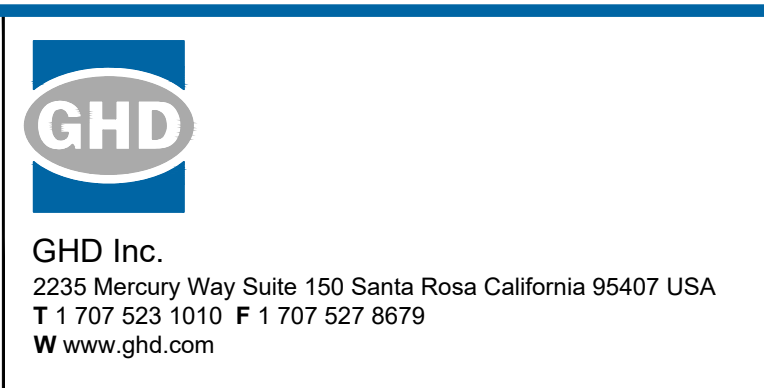
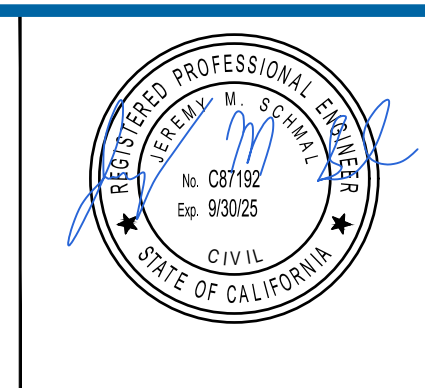
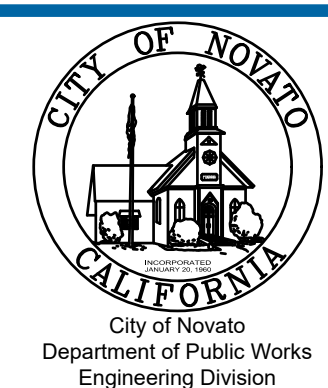


LOCATION MAP
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1		RFA FOR CONSTRUCTION				9/28/2021

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Submitted By -	<i>J. M. Bl</i>
Project Engineer	12/21/2023 Date
Approved By -	<i>Chris DiFabio</i>
City Engineer	1/11/2024 Date



Drawn	Designer
Drafting Check	Design Check
Approved (City Engineer)	Submitted (Project Engineer)
Date	Date
Scale	NTS

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	TITLE SHEET
Contract No.	11110085
Original Size	
Drawing No.	T1
Sheet	1 of 47
Rev.	

GENERAL NOTES

1. THE CONTRACTOR SHALL INSPECT THE PROJECT SITE PRIOR TO SUBMITTING A BID IN ORDER TO OBSERVE AND DETERMINE THE EXISTING JOBSITE CONDITIONS.
2. THE CONTRACTOR SHALL HOLD HARMLESS THE CITY, THEIR AUTHORIZED REPRESENTATIVES FROM ALL LIABILITIES AND DAMAGES RESULTING FROM HIS CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR SHALL BE REQUIRED TO ASSUME COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. THESE PLANS DO NOT INCLUDE COMPONENTS NECESSARY FOR CONSTRUCTION SAFETY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF THE PROJECT.
4. THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE CAL/OSHA CONSTRUCTION SAFETY ORDERS. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES INCLUDING ALL OVERHEAD AND BURIED UTILITIES WITHIN THE WORK AREA PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL PROCEED WITH CAUTION DURING UNDERGROUND OPERATIONS AND SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL UTILITIES DAMAGED DURING CONSTRUCTION AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT NORTH (U.S.A) AT 811 OR ONLINE AT WWW.USANORTH811.ORG A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION.
6. EVERY EFFORT HAS BEEN MADE TO SHOW THE LOCATION OF EXISTING UTILITIES AND OBSTRUCTIONS WHICH MAY INTERFERE WITH THE WORK. CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCIES PRIOR TO STARTING ANY WORK WHICH MAY AFFECT THEIR FACILITIES & IS FULLY RESPONSIBLE FOR ANY POTHOLES REQUIREMENTS. POTHOLES SHALL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF WORK FOR WHICH THE POTHOLES IS PERFORMED.
7. TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ALL TRAFFIC CONTROL AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
8. THE CONTRACTOR SHALL PROVIDE FOR CONTINUOUS INGRESS AND EGRESS TO ALL PRIVATE PROPERTY ADJACENT TO THE WORK THROUGHOUT THE PERIOD OF CONSTRUCTION UNLESS OTHERWISE SHOWN.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE SITE OR THE SURROUNDING AREA AS A RESULT OF THE CONTRACTOR'S WORK OR OPERATIONS. EXISTING FACILITIES THAT ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
10. ALL EXISTING FACILITIES, STRUCTURES, TREES, FENCES, LANDSCAPING, ETC. ARE TO REMAIN. ONLY THOSE SPECIFICALLY DESIGNATED FOR REMOVAL AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER, SHALL BE REMOVED.
11. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR ENCOUNTERS ANY SURFACE OR SUBSURFACE MATERIALS THAT HE/SHE BELIEVES ARE HAZARDOUS (AS DEFINED IN SECTION 25117 OF THE HEALTH AND SAFETY CODE), THE CONTRACTOR MUST INFORM THE ENGINEER IN WRITING IMMEDIATELY. MATERIAL IS TO REMAIN UNDISTURBED UNTIL AN INVESTIGATION BY THE CITY. REMOVAL AND/OR DISPOSAL OF HAZARDOUS MATERIAL IS NOT PART OF THE SCOPE OF WORK.
12. THE CONTRACTOR SHALL CONTACT THE NORTH MARIN WATER DISTRICT AND NOVATO SANITARY DISTRICT 48 HOURS PRIOR TO GRINDING, PAVING AND GRADING. WHERE APPLICABLE, SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
13. ALL DIMENSIONS ARE FEET UNLESS OTHERWISE NOTED.

ABBREVIATIONS

Ø	DIAMETER	PUE	PUBLIC UTILITY EASEMENT
AC	ASPHALT CONCRETE	PVI	POINT OF VERTICAL INTERSECTION
AB	AGGREGATE BASE, ASPHALT BASE	PVMT	PAVEMENT
AP	ANGLE POINT	R	RADIUS
APN	ASSESSOR'S PARCEL NUMBER	RCP	REINFORCED CONCRETE PIPE
B2B	BACK TO BACK	RSP	ROCK SLOPE PROTECTION
BC	BEGIN CURVE	RW	RETAINING WALL
BEG	BEGINNING	R/W	RIGHT OF WAY
BR	BRIDGE	SD	STORM DRAIN
BSW	BACK OF SIDEWALK	SS	SANITARY SEWER
BVCS	BEGINNING VERTICAL CURVE STATION	SSMH	SANITARY SEWER MANHOLE
C	CONDUIT	STA	STATION
(CA)	CALIFORNIA	STD	STANDARD
CL	CENTERLINE	SW	SIDEWALK
CL2	CLASS 2	TC	TOP OF CURB
CLR	CLEAR	TEMP	TEMPORARY
DI	DROP INLET	TI	TRAFFIC INDEX
DWA	DRIVEWAY APPROACH	TYP	TYPICAL
DWY	DRIVEWAY	UCS	UNIFORM CONSTRUCTION STANDARDS
EC	END CURVE	UON	UNLESS OTHERWISE NOTED
EG	EXISTING GROUND	VAR	VARIABLE
EL,ELEV	ELEVATION	VERT	VERTICAL
EP	EDGE OF PAVEMENT	W	WATER
EVCS	END VERTICAL CURVE STATION	WM	WATER METER
(E)	EXISTING	WV	WATER VALVE
FC	FACE OF CURB	WW	WINGWALL
FL	FLOW LINE	WWLQ	WINGWALL LAYOUT LINE
FG	FINISHED GROUND		
FH	FIRE HYDRANT		
G	GAS		
GB	GRADE BREAK		
HORIZ	HORIZONTAL		
HMA	HOT MIX ASPHALT		
INV	INVERT		
JP	JOINT POLE		
LIP	LIP OF GUTTER		
LF	LINEAR FEET		
LP	LOW POINT		
MAX	MAXIMUM		
MCUCS	MARIN COUNTY UNIFORM CONSTRUCTION STANDARDS		
MIN	MINIMUM		
MH	MANHOLE		
MON	SURVEY MONUMENT		
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES		
(N)	NEW/PROPOSED		
NMWD	NORTH MARIN WATER DISTRICT		
NTS	NOT TO SCALE		
OC	ON CENTER		
OHT	OVERHEAD TELEPHONE LINE		
OHU	OVERHEAD UTILITY LINE		
PCC	PORTLAND CEMENT CONCRETE		
PI	POINT OF INTERSECTION		
PP	POWER POLE		
PRC	POINT OF REVERSE CURVE		

CONSTRUCTION NOTES

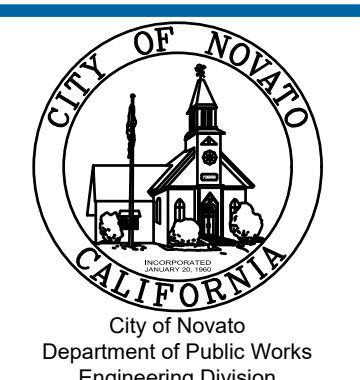
1. ALL MINOR CONCRETE SHALL BE CLASS A (SIX SACK MIX).
2. NO CONCRETE SHALL BE PLACED PRIOR TO FORM INSPECTION AND STEEL APPROVAL BY THE CITY ENGINEER.
3. ALL CONCRETE SIDEWALKS, CURB AND GUTTERS, AND DRIVEWAYS SHALL BE BROOM FINISHED.
4. TOP CONCRETE SHALL BE CAST IN PLACE.
5. ALL CONCRETE SIDEWALK CROSS SLOPES SHALL BE 1.5% UNLESS OTHERWISE NOTED.
6. TRENCH EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH UCS DRAWING NO. 330, 340, 350
7. ALL ASPHALT CONFORMS SHALL BE SAWCUT UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL CONTACT CITY OF NOVATO TRAFFIC ENGINEERING TO COORDINATE THE CAT TRACKING AND LAYOUT WORK INCLUDING EXACT LOCATIONS AND PLACEMENT. ALL CAT TRACKING AND LAYOUT ARE TO BE IN PLACE AT LEAST 48 HOURS IN ADVANCE OF PLACING ANY PAVEMENT STRIPING, DELINEATION OR PAVEMENT MESSAGES TO ALLOW TIME FOR CITY TO REVIEW.
9. ALL STRIPING AND PAVEMENT MARKINGS IN THIS CONTRACT SHALL BE THERMOPLASTIC. NO THERMOPLASTIC MAY BE PLACED WITHIN FIVE DAYS OF PAVING.
10. THE CONTRACTOR IS RESPONSIBLE FOR MONUMENTING EXISTING STRIPING AND MARKINGS TO FACILITATE REPLACEMENT, WHERE NEW LAYOUT IS NOT SHOWN.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RE-ESTABLISH AND MAINTAIN TEMPORARY REFLECTIVE INDICATIONS FOR ALL TRAFFIC STRIPING REMOVED OR DEGRADED BY THE PROJECT AT THE END OF EACH WORKING DAY AND AS NEEDED BETWEEN WORKING DAYS.
12. QUANTITIES SHOWN FOR REMOVAL ARE BASED ON IN-SITU VALUES. QUANTITIES SHOWN FOR NEW IMPROVEMENTS ARE BASED ON NEATLINE VOLUMES, AREAS OR LENGTHS. CONTRACTOR SHALL ACCOUNT FOR SHRINKAGE OR BULKING FACTORS TO DETERMINE ACTUAL DISPOSAL OR MATERIAL QUANTITIES REQUIRED.
13. SIDEWALK, CURB AND GUTTER SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF UNIFORM CONSTRUCTION STANDARDS (UCS) FOR ALL CITIES AND COUNTY OF MARIN DRAWING NO. 105 AND SHALL COMPLY WITH CITY OF NOVATO DESIGN AND CONSTRUCTION STANDARDS (INTERIM), AS OUTLINED IN MEMORANDUM ISSUED SEPTEMBER 9, 2014 (UCS MODIFICATION-NOVATO PARAGRAPH NO. 2).
14. CONSTRUCT NEW PEDESTRIAN CURB RAMPS PER 2023 CALTRANS STANDARD PLAN A88A. PROVIDE DETECTABLE WARNING SURFACE PER CALTRANS STANDARD A88A. MAXIMUM RAMP SLOPE = 7.5% ; MAXIMUM CROSS SLOPE = 1.5% ; MAXIMUM SLOPE @ CURB (CASE A, TYP) = 9%.

SYMBOLS

EXISTING	
	CONTROL POINT
	SANITARY SEWER CLEANOUT
	SANITARY SEWER MANHOLE
	STORM DRAIN DROP INLET
	WATER METER
	WATER VALVE
	UTILITY POLE
	GUY WIRE
	SIGN
	TREE
	CENTER LINE
	FENCE
	OVERHEAD UTILITY LINE
	WATER
	GAS
	SANITARY SEWER
	RIGHT OF WAY (R/W) LINE
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)
	PAVEMENT MARKING, PER STD. PLAN A24D (WHITE, UON)
	PAVEMENT MARKING, PER STD. PLAN A24D (WHITE, UON)
	PAVEMENT MARKING, PER STD. PLAN A24D (WHITE, UON)
	TYPE IV (R) ARROW, PER STD. PLAN A24A
	TYPE IV (L) ARROW, PER STD. PLAN A24A
	DETAIL NUMBER SHEET ON WHICH DETAIL IS SHOWN
PROPOSED	
	FENCE
	BOLLARDS
	PEDESTRIAN CURB RAMP
	SIDEWALK
	CURB AND GUTTER

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

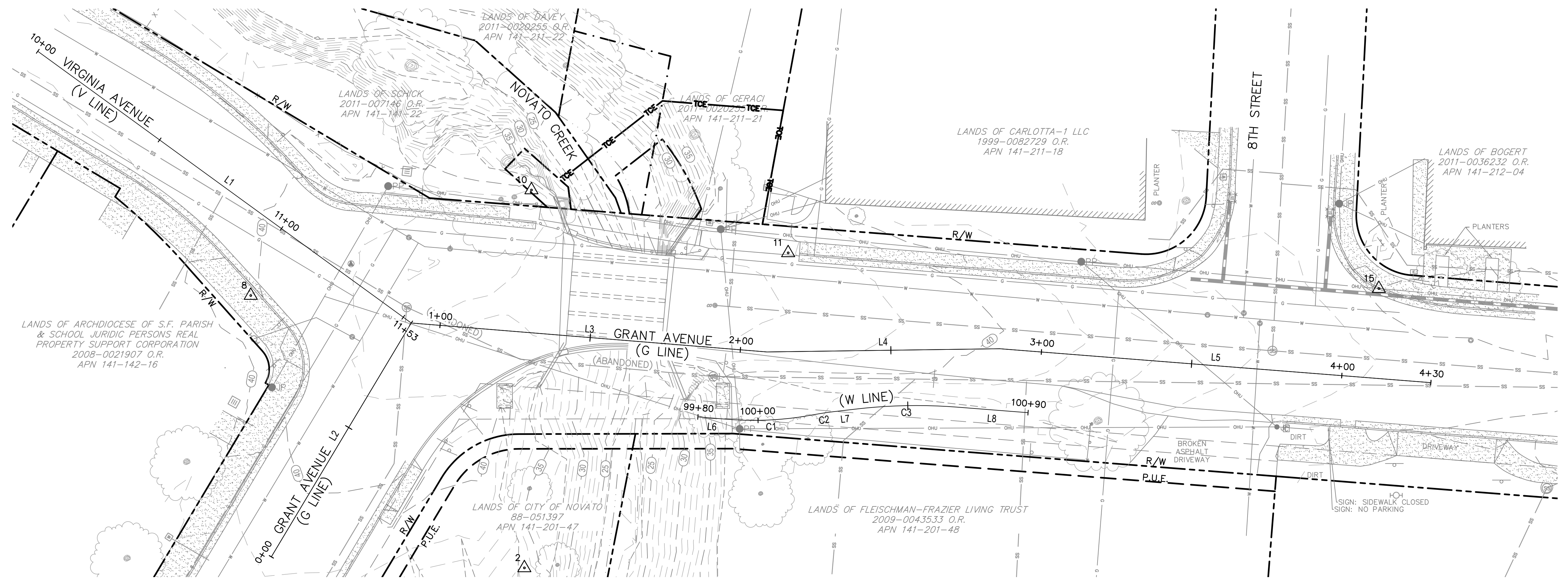
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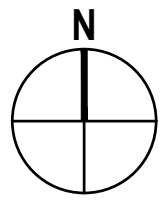
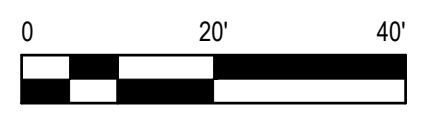
Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	N/A	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client **CITY OF NOVATO**
 Project **GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)**
 Title **GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS**
 Contract No. 11110085
 Original Size
 Drawing No: **T2**
 Sheet 2 of 47
 Rev:



LEGEND	
	RIGHT OF WAY (R/W)
	ACCESS EASEMENT
	PUBLIC UTILITY EASEMENT (PUE)
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

PROJECT CONTROL
1" = 20'



LINE TABLE							
LINE	ALIGNMENT	LENGTH	BEARING	BEGIN STATION	END STATION	BEGIN STATION NORTHING	BEGIN STATION EASTING
L1	V LINE	153.25	S53°58'33"E	10+00.00	11+53.25	2233167.0652	5962386.1862
L2	G LINE	90.41	N30°53'50"E	0+00.00	0+90.41	2232999.3560	5962463.7087
L3	G LINE	118.44	S85°20'57"E	0+90.41	2+08.85	2233076.9330	5962510.1327
L4	G LINE	77.30	N89°12'45"E	2+08.85	2+86.15	2233067.3294	5962628.1817
L5	G LINE	99.50	S85°30'23"E	2+86.15	3+85.65	2233068.3918	5962705.4770

LINE TABLE: "W" LINE				
LINE	LENGTH	BEARING	BEGIN NORTHING	BEGIN EASTING
L6	9.96	S85°20'57"E	2233045.7829	5962605.2702
L7	7.18	N83°15'04"E	2233047.5058	5962650.2889
L8	23.52	S85°30'23"E	2233049.0187	5962691.4034

BENCHMARK
CONTROL POINT #8 - A CUT 'X' IN CONCRETE, AT THE SOUTHWEST CORNER OF GRANT AVENUE AND VIRGINIA AVENUE ELEVATION: 40.45 FEET. (NAVD88)

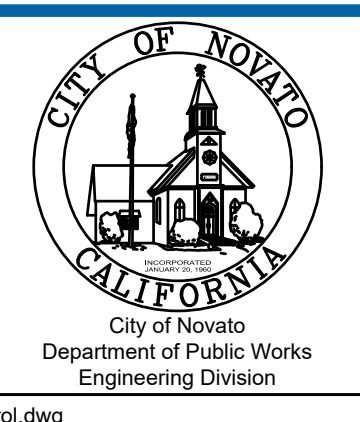
BASIS OF BEARINGS
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE II, NAD 83.

SURVEY CONTROL DATA				
NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
2	2232995.6710	5962547.6810	36.814	SPIKE
8	2233086.041	5962456.871	40.45	CUT 'X'
10	2233121.051	5962550.034	41.11	SPIKE
11	2233100.193	5962635.229	41.80	MAG NAIL
15	2233088.337	5962831.279	35.10	CUT 'X'

CURVE TABLE: "W" LINE					
CURVE	RADIUS	LENGTH	DELTA	BEGIN NORTHING	BEGIN EASTING
C1	106.00	28.26	15°16'32"	2233044.9753	5962615.1975
C2	104.00	7.04	3°52'33"	2233046.4435	5962643.3359
C3	173.50	34.04	11°14'32"	2233048.3498	5962657.4213

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

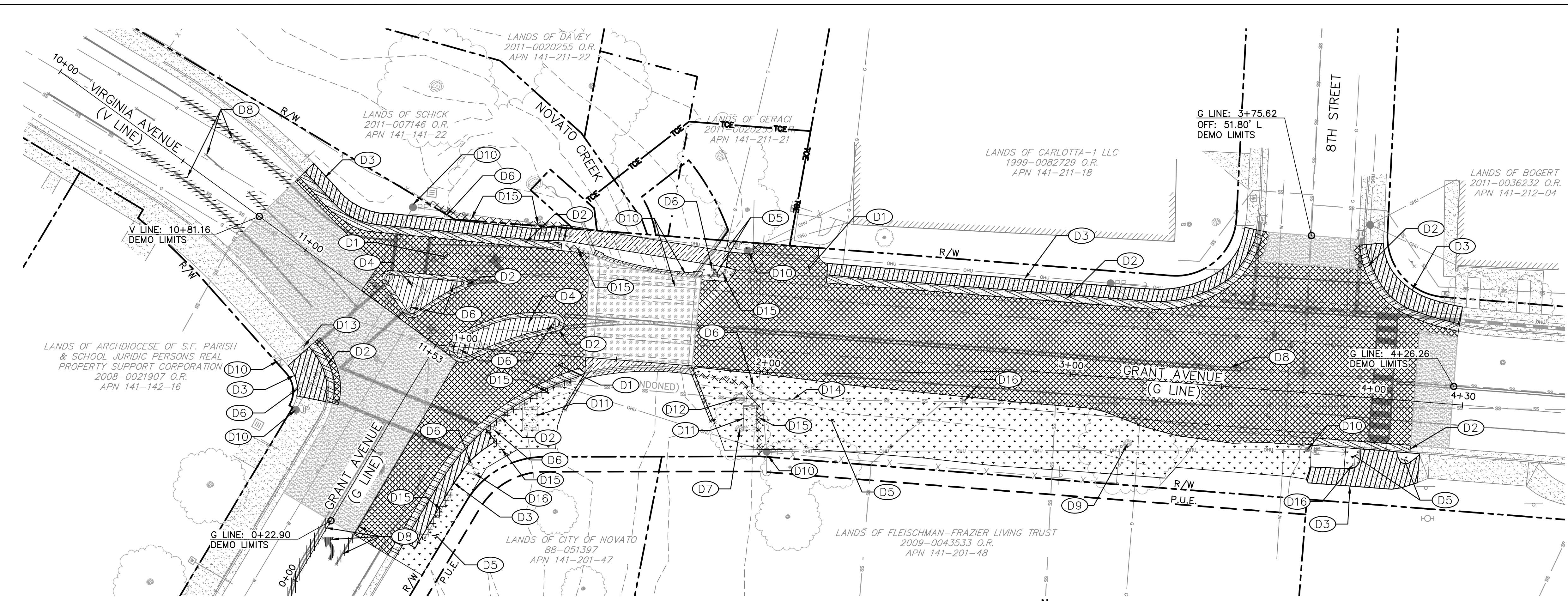
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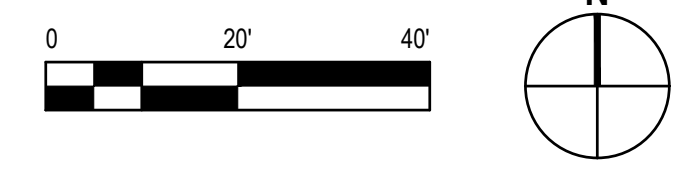
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Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	PROJECT CONTROL
Contract No.	11110085
Drawing No.	PC1
Original Size	Sheet 3 of 47
Rev:	



DEMOLITION PLAN
1" = 20'

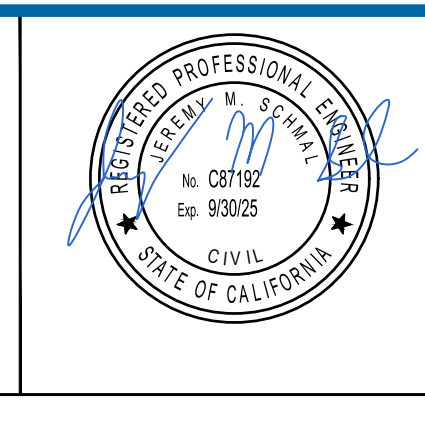


KEYNOTE	
(D1)	REMOVE HMA PAVEMENT SECTION
(D2)	REMOVE CONCRETE CURB OR CURB AND GUTTER
(D3)	REMOVE CONCRETE SIDEWALK
(D4)	REMOVE CONCRETE MEDIAN
(D5)	CLEAR AND GRUB
(D6)	REMOVE SIGN POST AND FOUNDATION
(D7)	REMOVE (E) TREE
(D8)	REMOVE STRIPING AND MARKERS
(D9)	PROTECT (E) TREE
(D10)	PROTECT (E) UTILITIES UNLESS OTHERWISE NOTED
(D11)	REMOVE CONCRETE SLAB
(D12)	REMOVE SSMH
(D13)	PROTECT (E) SIGN
(D14)	REMOVE SS PIPE FROM MH TO NEW CLEANOUT. SEE UTILITY PLANS FOR DETAILS
(D15)	REMOVE FENCE OR GUARDRAIL
(D16)	RELOCATE (E) SIGN

LEGEND	
	SEE STRUCTURE PLANS FOR STRUCTURE DEMOLITION
	REMOVE HMA PAVEMENT SECTION
	COLD PLANE ASPHALT PAVEMENT VARIABLE DEPTH GRIND
	GRIND OFF ALL (E) ASPHALT ON BRIDGE AND GRIND (E) CONCRETE CROWN
	REMOVE CONCRETE (FLATWORK)
	REMOVE CONCRETE (CURB AND GUTTER)
	CLEAR AND GRUB
	REMOVE PAVEMENT MARKINGS
	REMOVE FENCE
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

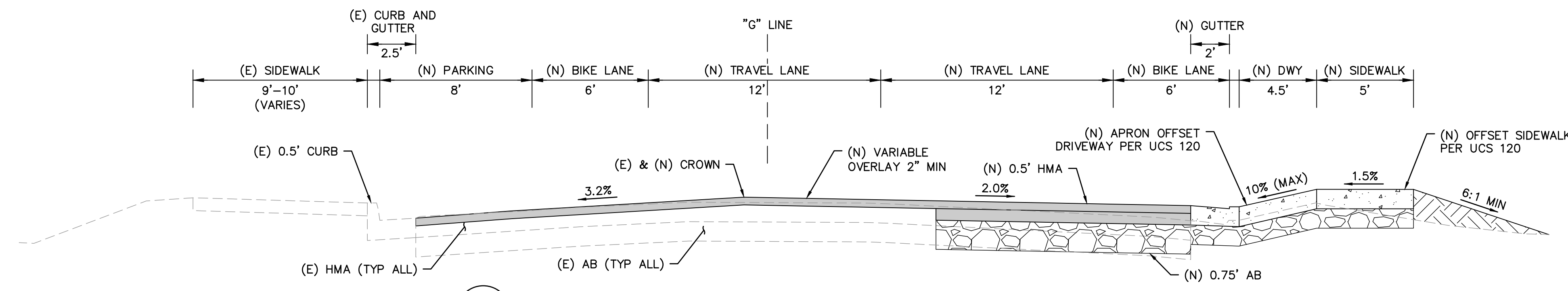
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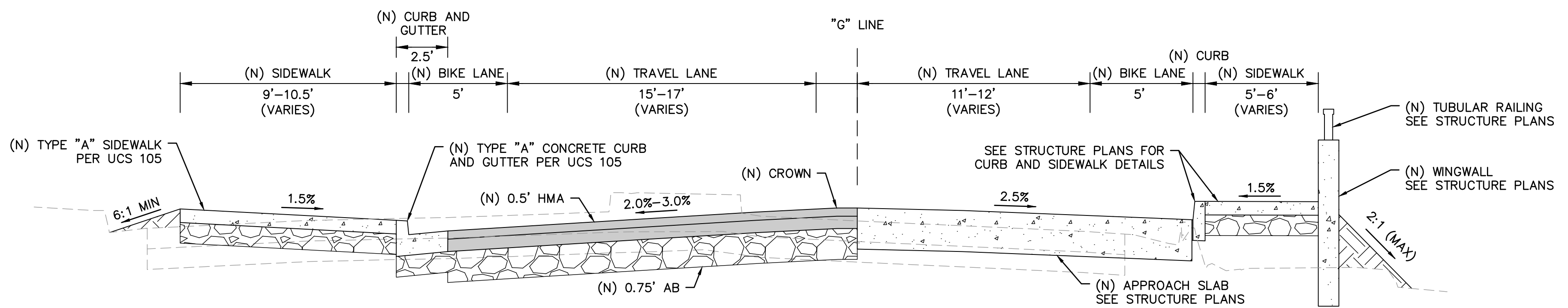
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Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

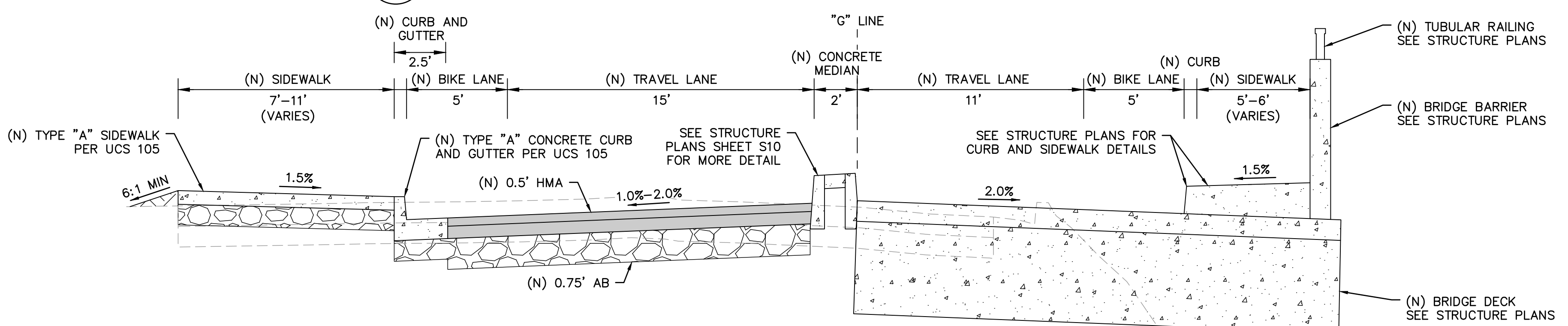
Client Project	CITY OF NOVATO GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	DEMOLITION PLAN
Contract No.	11110085
Original Size	
Drawing No.	D1
Sheet	4 of 47
Rev:	



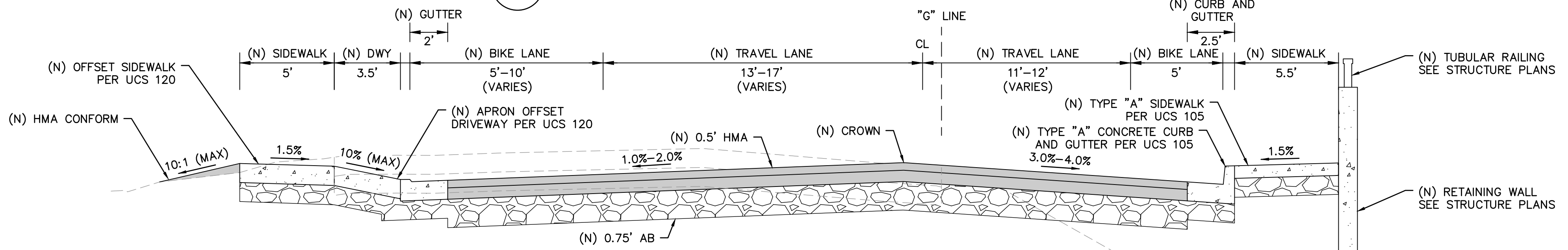
1 GRANT AVENUE SECTION - STA 00+22.87 TO STA 1+15.93
NTS



2 GRANT AVENUE SECTION - STA 1+15.93 TO STA 1+24.93 & STA 1+97.04 TO STA 2+06.04
NTS



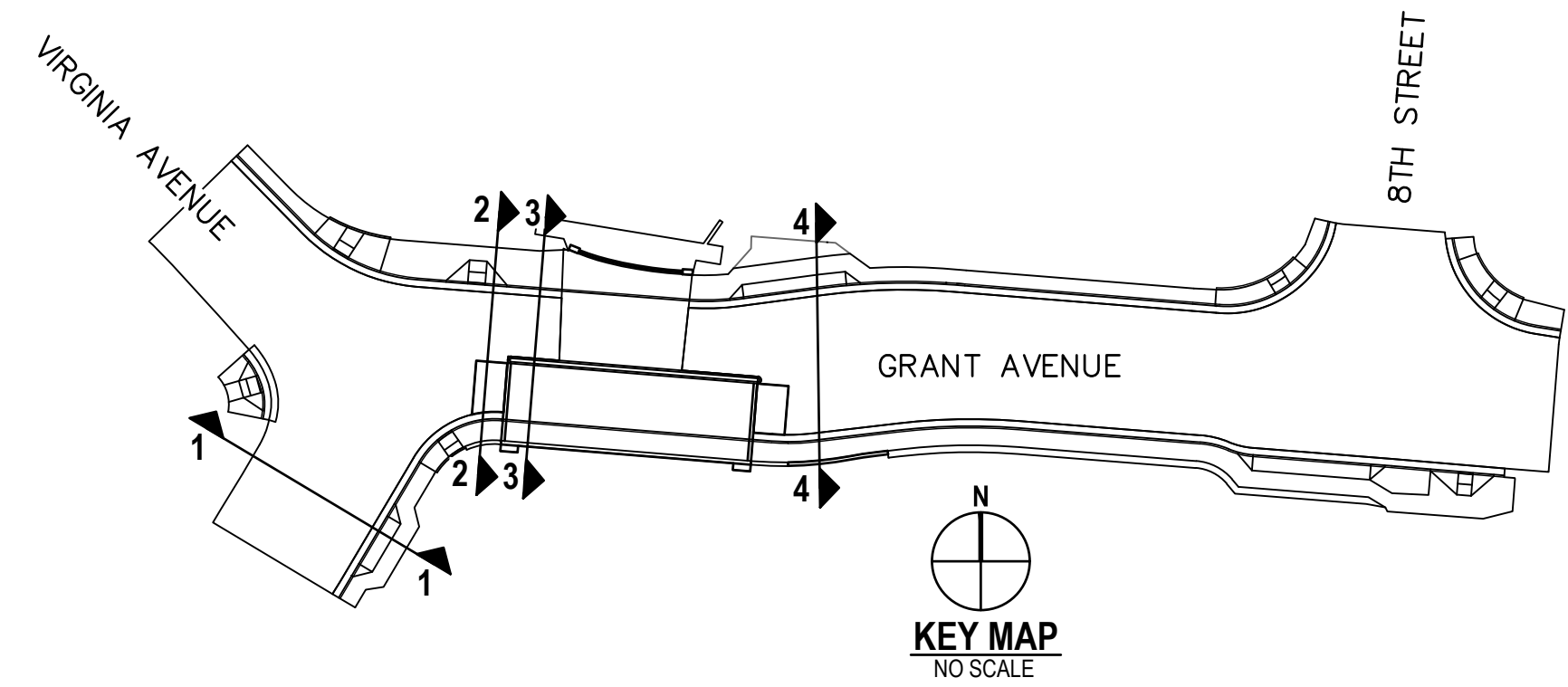
3 GRANT AVENUE SECTION - STA 1+24.93 TO STA 1+39.74 & STA 1+75.08 TO STA 1+97.04
NTS



4 GRANT AVENUE SECTION - STA 2+07.66 TO STA 2+34.30
NTS

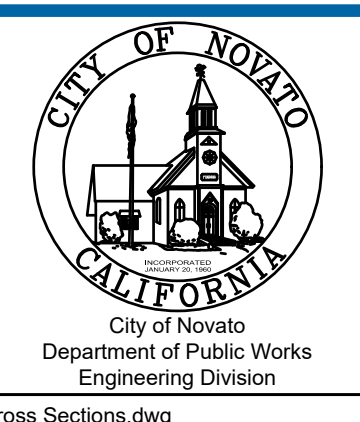
STRUCTURAL SECTION	
Tl = 7	R-VALUE = 15
HMA	= 0.5'
AB CL2	= 0.75'

- NOTES:
- TYPE "A" SIDEWALK, CURB & GUTTER SHALL BE PLACED MONOLITHICALLY WITH NO EXPANSION JOINT BETWEEN THE CURB AND THE SIDEWALK.
 - SEE STRUCTURAL SHEET S9 "TYPICAL SECTION No. 1" FOR TYPICAL SECTION ACROSS BRIDGE.



No	Revision	Note	Drawn	Job Manager	Project Director	Date

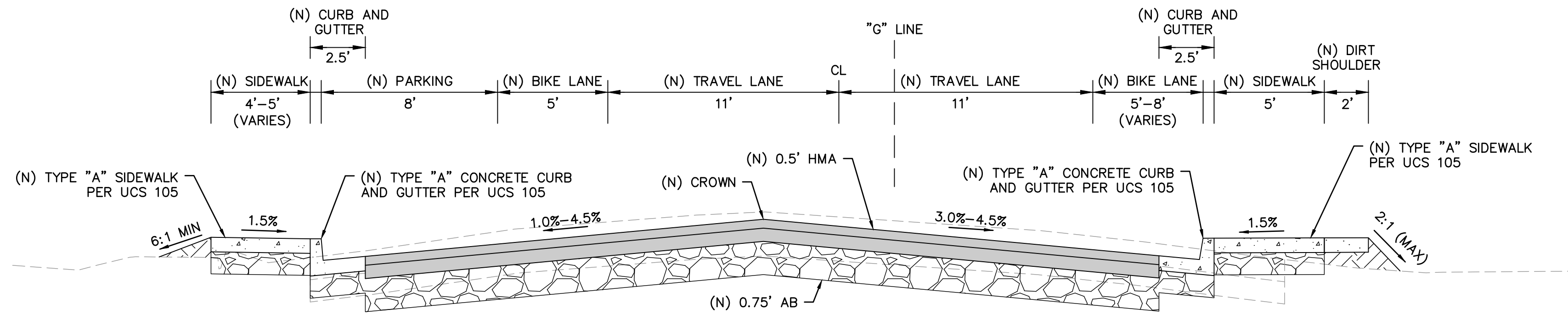
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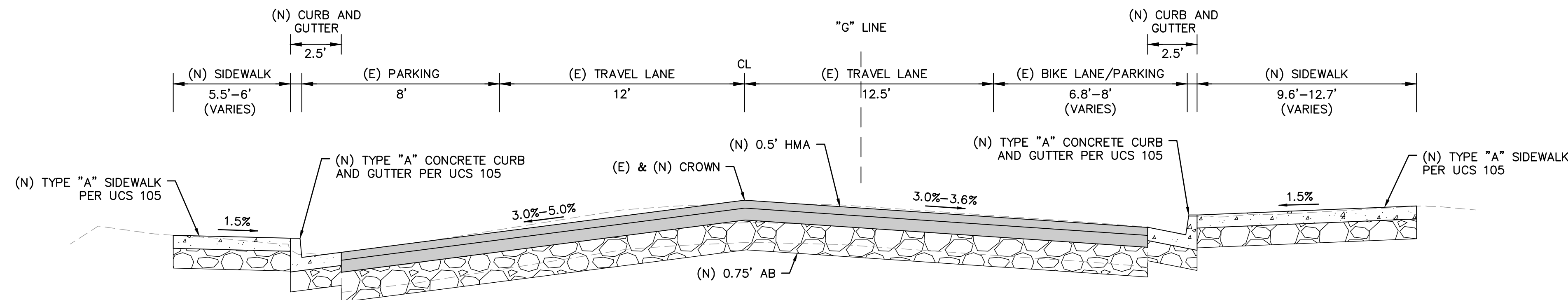
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Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23

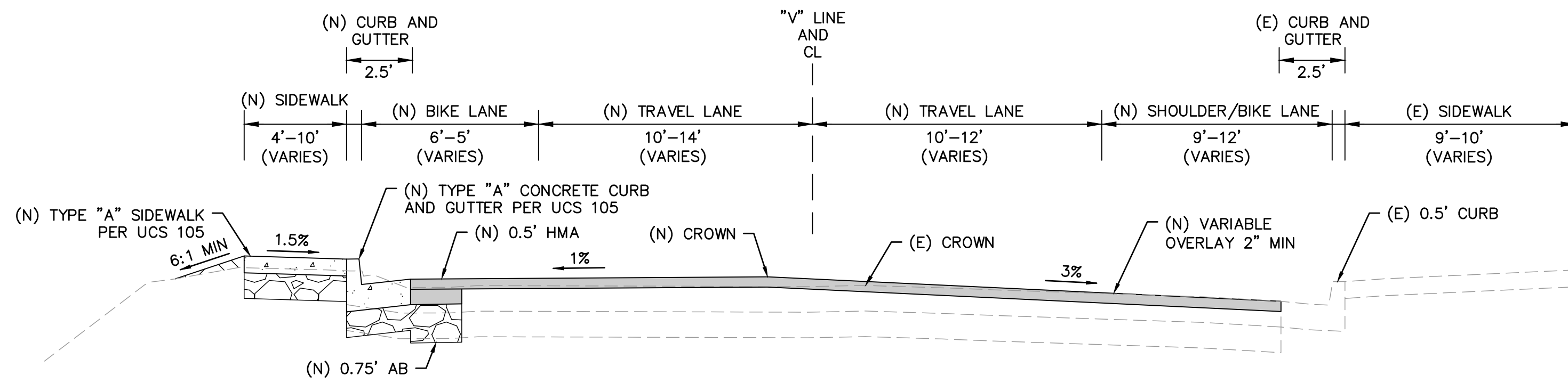
Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	TYPICAL CROSS SECTIONS 1
Contract No.	11110085
Original Size	
Drawing No.	X1
Sheet	5 of 47
Rev:	



5 GRANT AVENUE SECTION - STA 2+34.30 TO STA 3+80.24
NTS



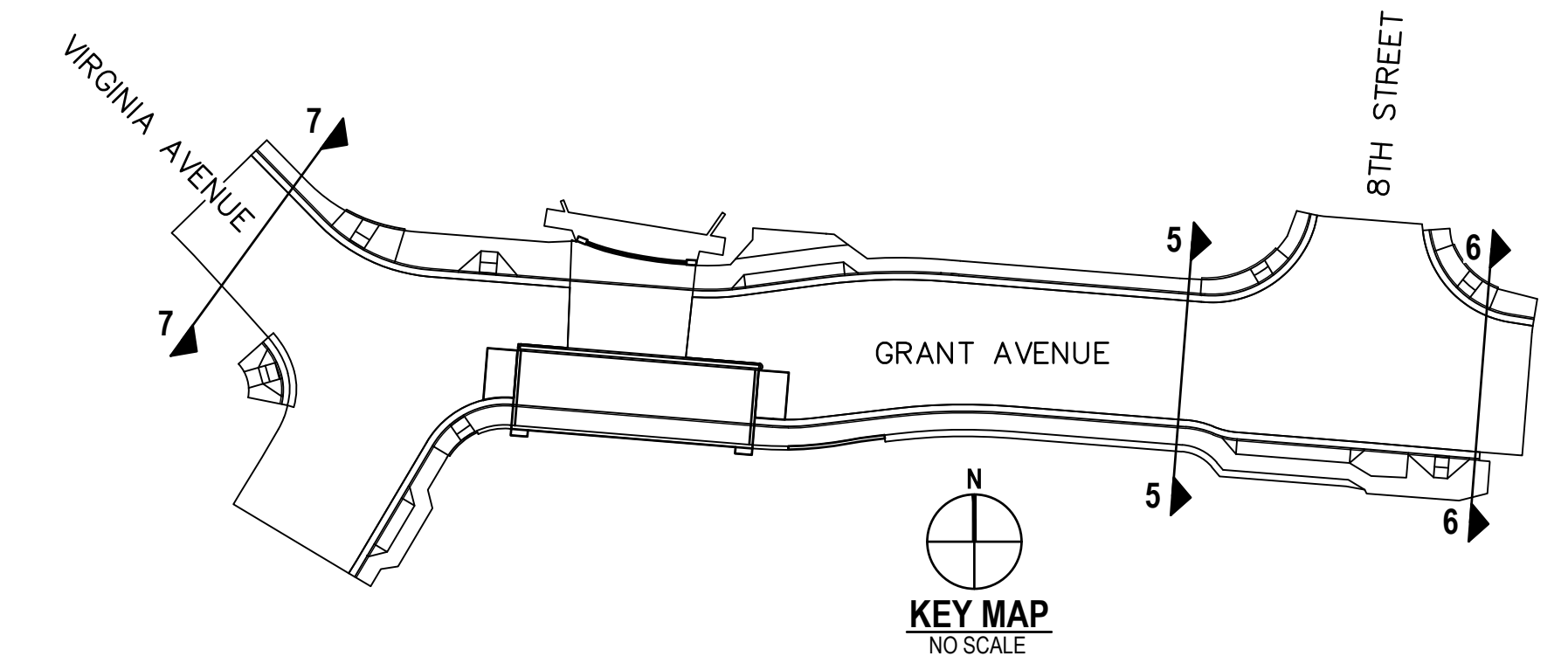
6 GRANT AVENUE SECTION - STA 3+80.24 TO STA 4+16.79
NTS



7 VIRGINIA AVENUE SECTION - STA 10+81.16 TO STA 11+53.00
NTS

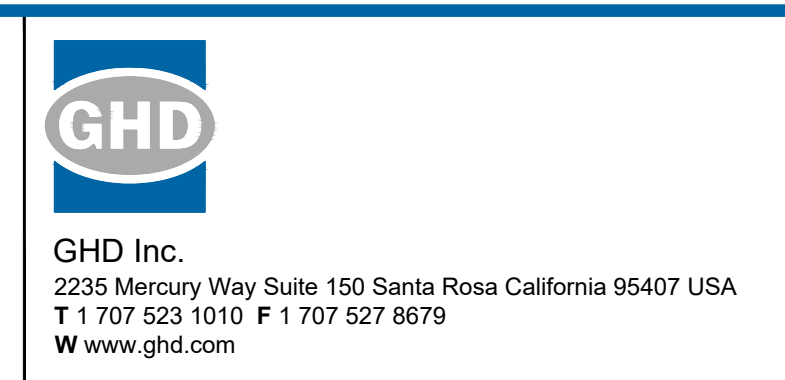
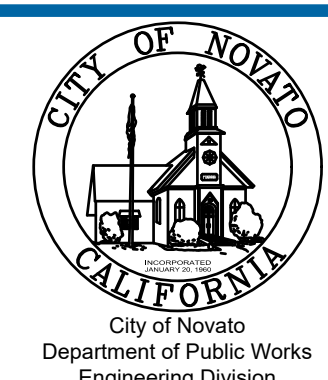
STRUCTURAL SECTION	
Tl = 7	R-VALUE = 15
HMA = 0.5'	
AB CL2 = 0.75'	

- NOTES:
1. TYPE "A" SIDEWALK, CURB & GUTTER SHALL BE PLACED MONOLITHICALLY WITH NO EXPANSION JOINT BETWEEN THE CURB AND THE SIDEWALK.
 2. SEE STRUCTURAL SHEET S9 "TYPICAL SECTION No. 1" FOR TYPICAL SECTION ACROSS BRIDGE.



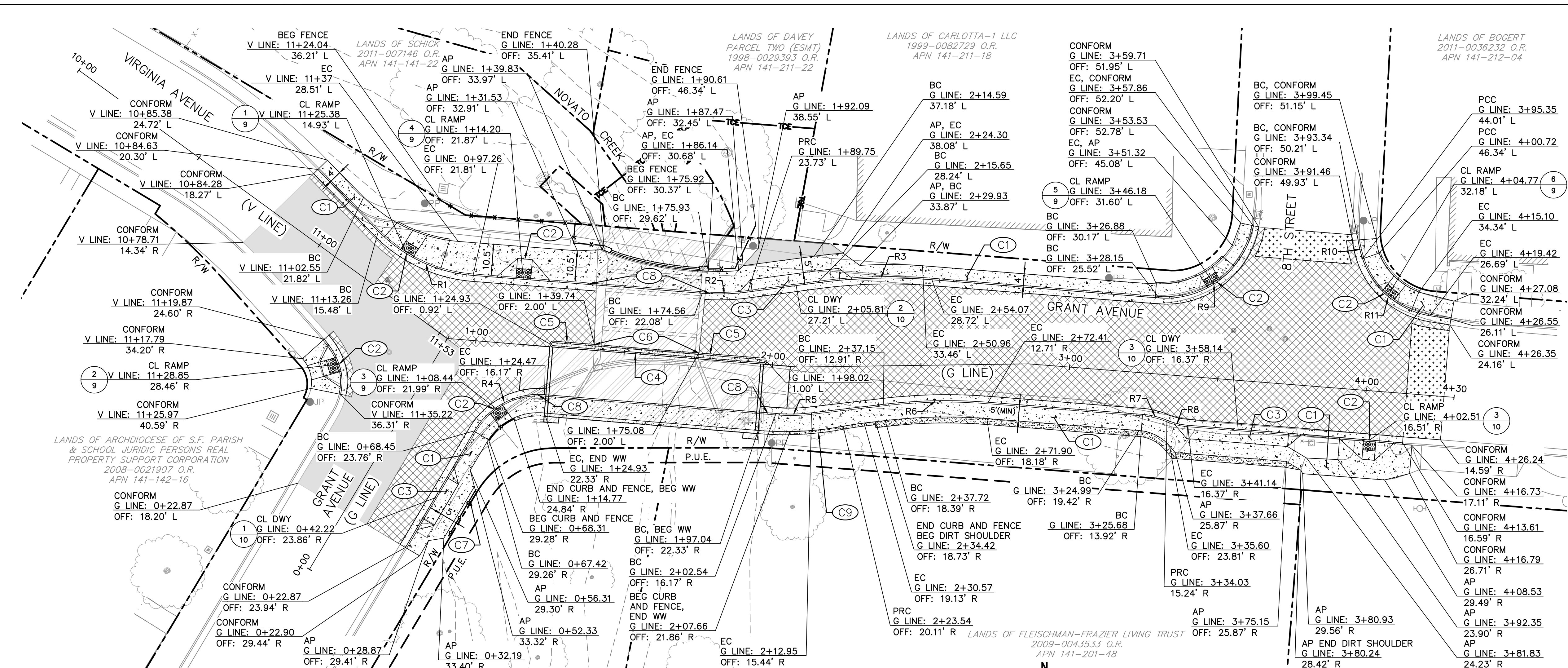
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

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Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	NTS	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

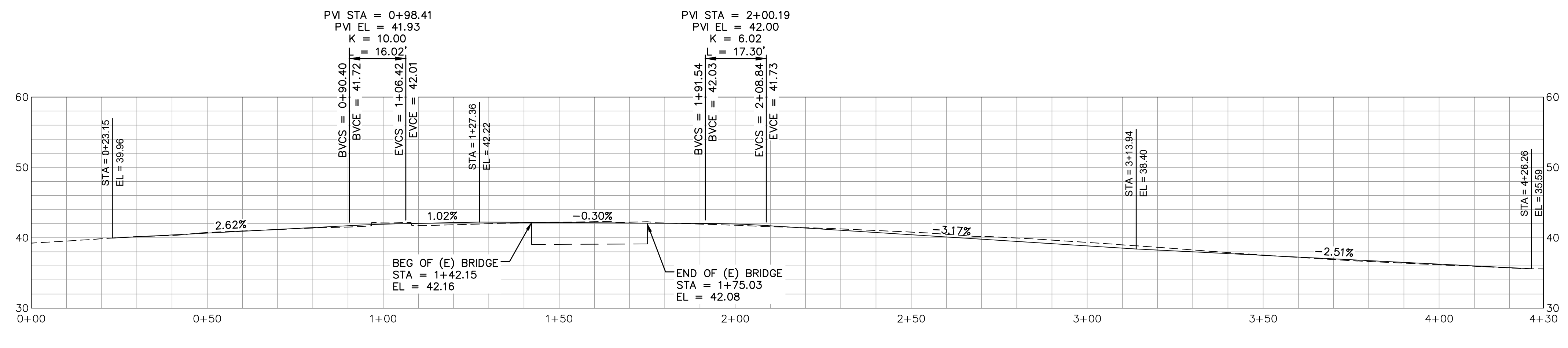
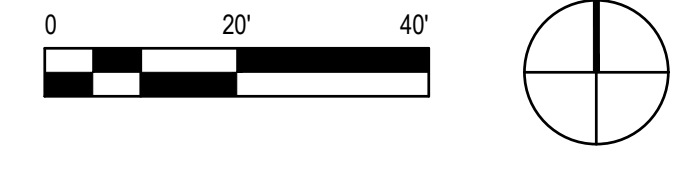
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Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)	
Title	TYPICAL CROSS SECTIONS 2	Original Size
Drawing No: X2		Sheet 6 of 47
Rev:		



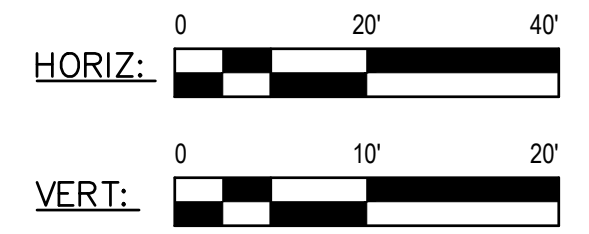
- KEYNOTE**
- (C1) CONSTRUCT SIDEWALKS PER UCS 105
 - (C2) CONSTRUCT PEDESTRIAN CURB RAMP
 - (C3) CONSTRUCT DRIVEWAY WITH OFFSET SIDEWALK PER UCS 120
 - (C4) CONSTRUCT BRIDGE MEDIAN CURB FROM STA 1+39.74 TO STA 1+75.08. PER (3) (11)
 - (C5) CONSTRUCT MEDIAN CURB FROM STA 1+24.93 TO STA 1+39.74 AND FROM STA 1+75.08 TO STA 1+98.02. PER (4) (11)
 - (C6) PLACE EXPANDED POLYSTYRENE BETWEEN BRIDGE MEDIAN CURB AND MEDIAN CURB
 - (C7) RELOCATE EXISTING BOLLARDS
 - (C8) TRANSITION CURB FROM 8-INCH TO 6-INCH
 - (C9) SEE STRUCTURE PLANS FOR BARRIER & RAILING

- LEGEND**
- SEE STRUCTURE PLANS
 - CONFORM GRIND, PER (5) (11)
 - VARIABLE OVERLAY 2" MIN
 - 0.5' OF HMA OVER 0.75' OF CLASS II AGGREGATE BASE
 - PORTLAND CEMENT CONCRETE
 - DIRT SHOULDER
 - RIGHT OF WAY (R/W)
 - PUBLIC UTILITY EASEMENT (PUE)
 - ACCESS EASEMENT
 - TEMPORARY CONSTRUCTION EASEMENT (TCE)
 - FENCE - 5' TYPE CL (BLACK VINYL PER CALTRANS DETAIL RSP A85)

LAYOUT PLAN
1" = 20'



LAYOUT PROFILE
HORIZ: 1" = 20'
VERT: 1" = 10'

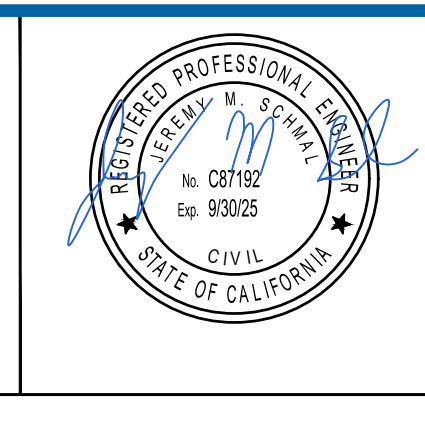
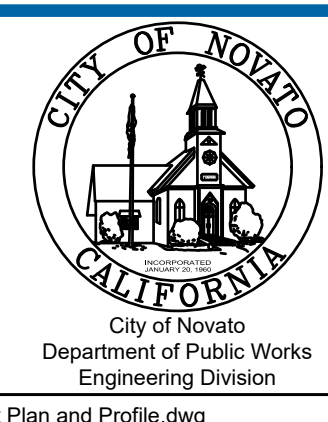


FLOW LINE CURVE TABLE

NO.	RADIUS (FT)
R1	50
R2	73
R3	182
R4	25
R5	60
R6	180
R7	27
R8	23
R9	30
R10	34
R11	29

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

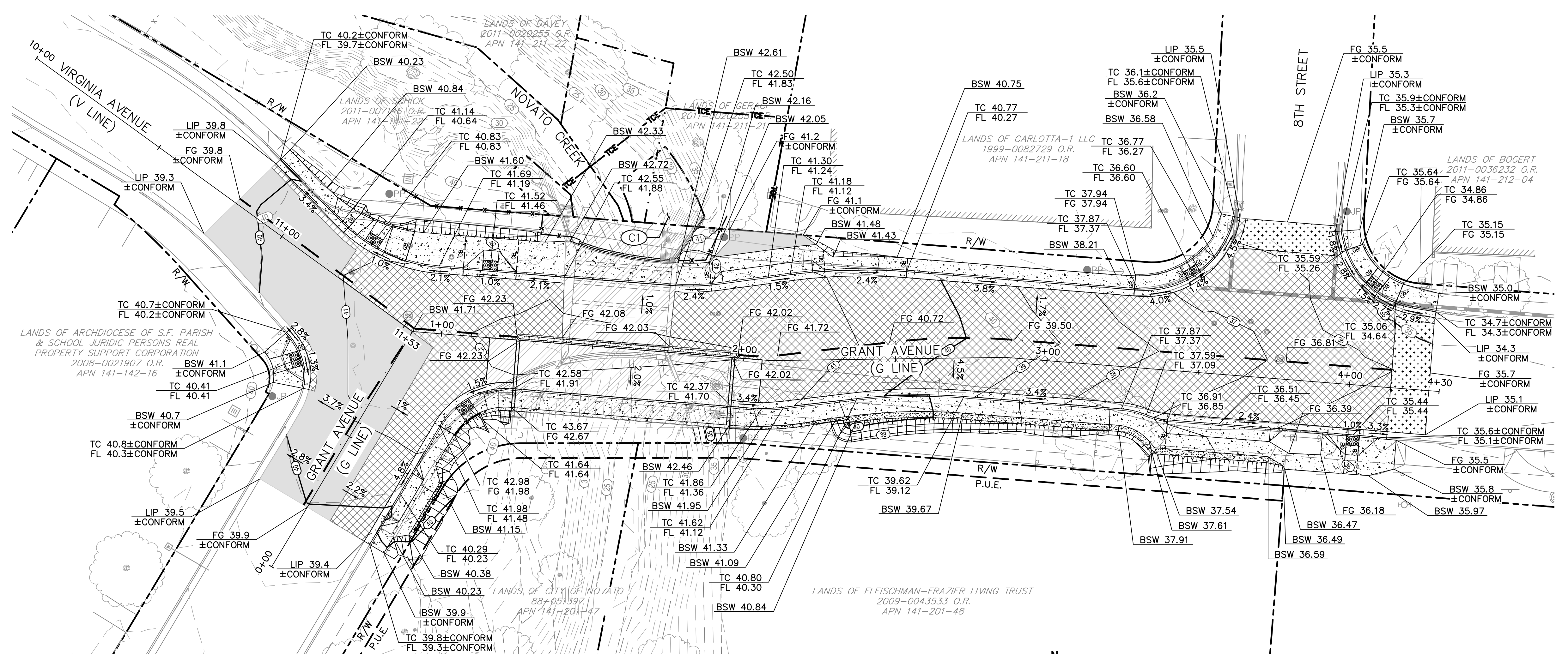
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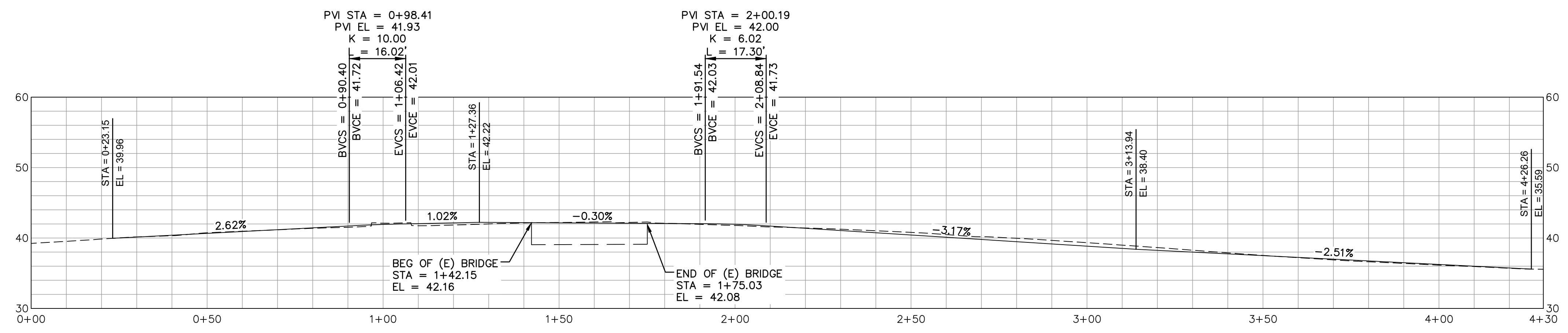
Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	AS SHOWN		

Client **CITY OF NOVATO**
Project **GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)**
Title **IMPROVEMENT PLAN AND PROFILE**
Contract No. 11110085
Original Size
Drawing No: **C1**
This Drawing shall not be used for Construction unless Signed and Sealed For Construction
Sheet 7 of 47
Rev:

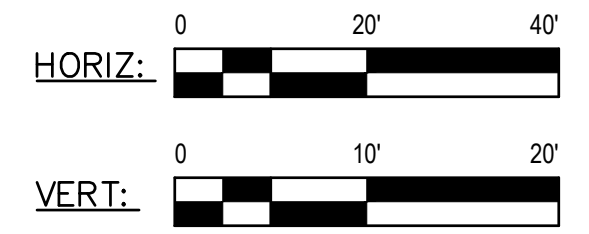


KEYNOTE	
(C1)	SEE SHEET EC1 CHANNEL RESTORATION PLAN FOR RIPRAP DETAILS
LEGEND	
	SEE STRUCTURE PLANS
	CONFORM GRIND, PER 5/11
	VARIABLE OVERLAY 2" MIN
	0.5' OF HMA OVER 0.75' OF CLASS II AGGREGATE BASE
	PORTLAND CEMENT CONCRETE
	DIRT SHOULDER
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)
	GRADE BREAK HIGH POINTS

GRADING PLAN
1" = 20'

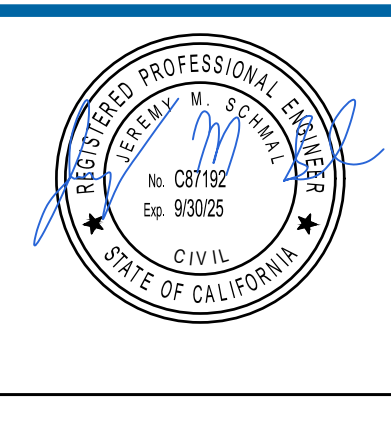
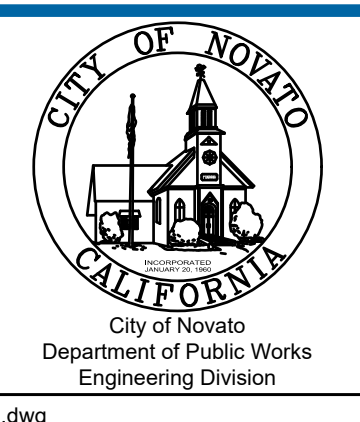


PROFILE
HORIZ: 1" = 20'
VERT: 1" = 10'



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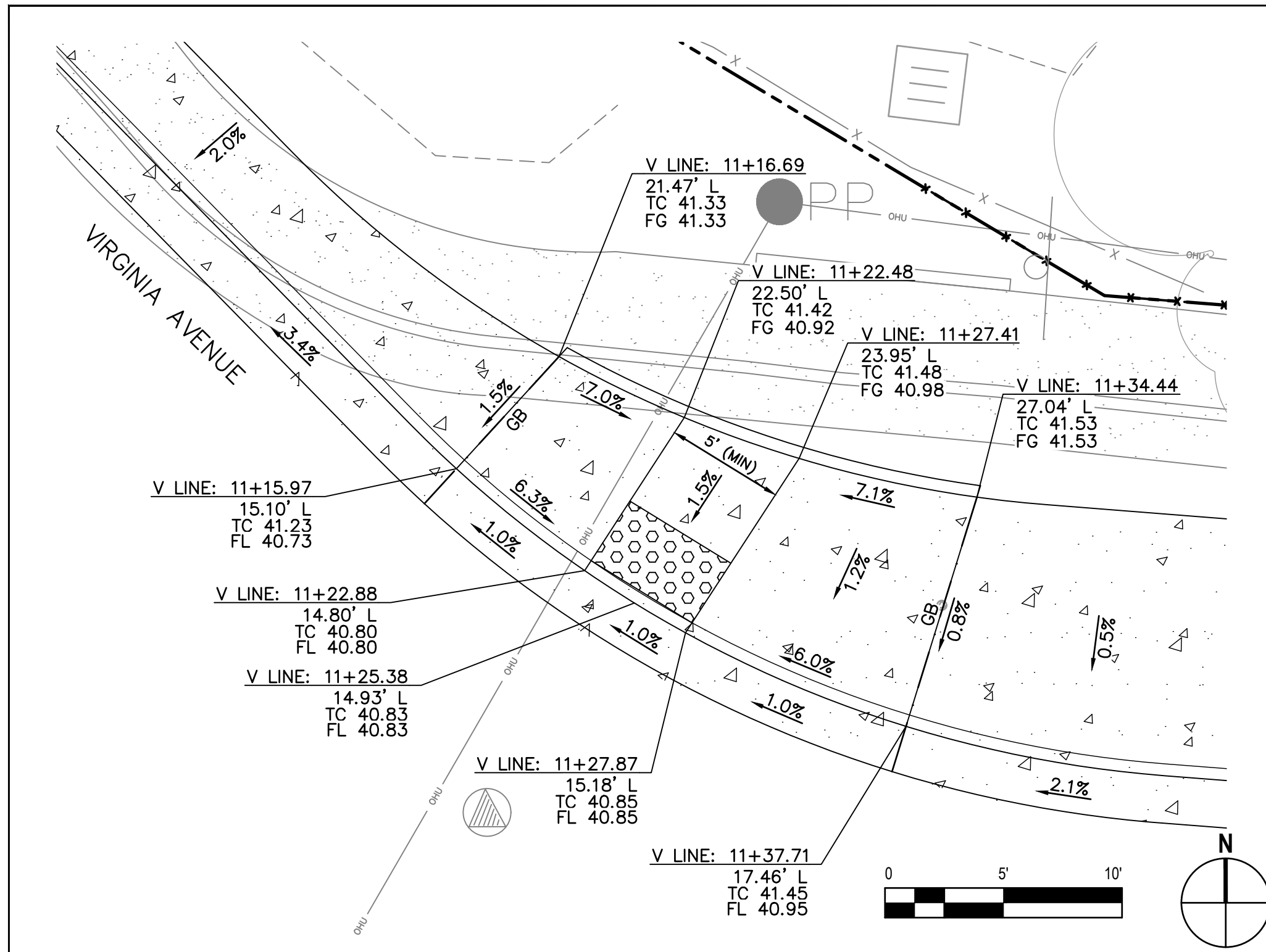
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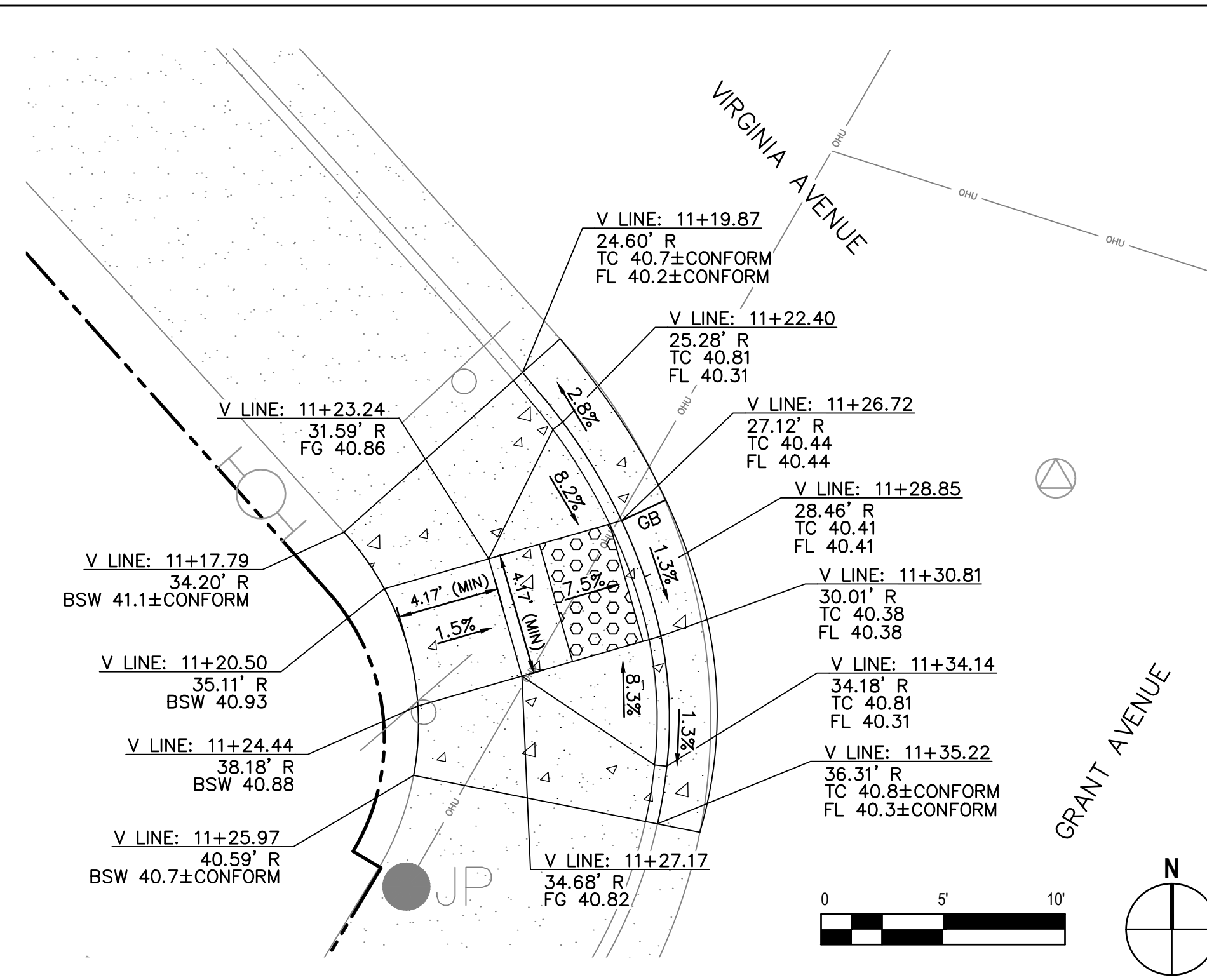
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Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

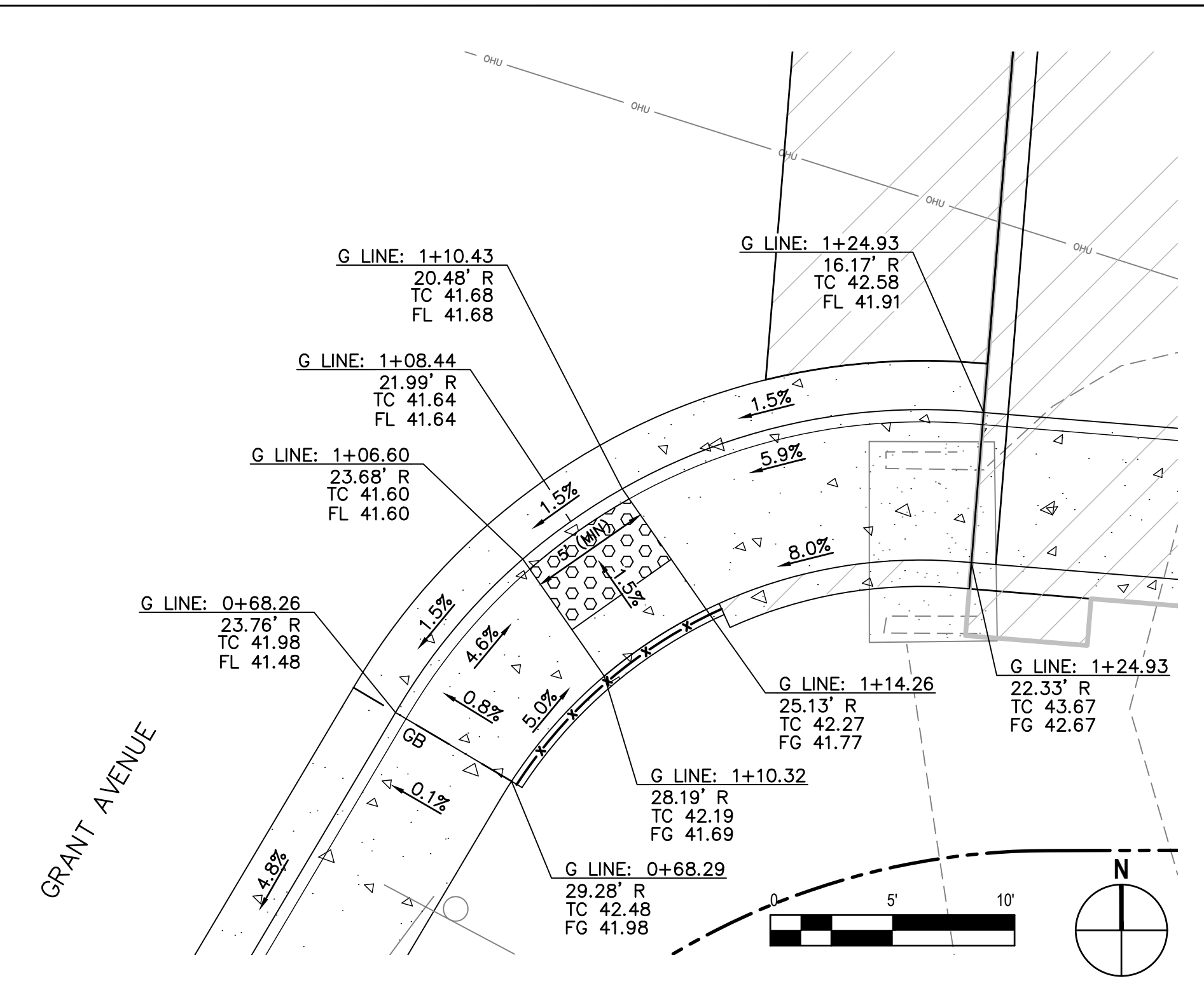
Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	GRADING PLAN
Contract No.	11110085
Drawing No.	C2
Original Size	Sheet 8 of 47
Rev:	



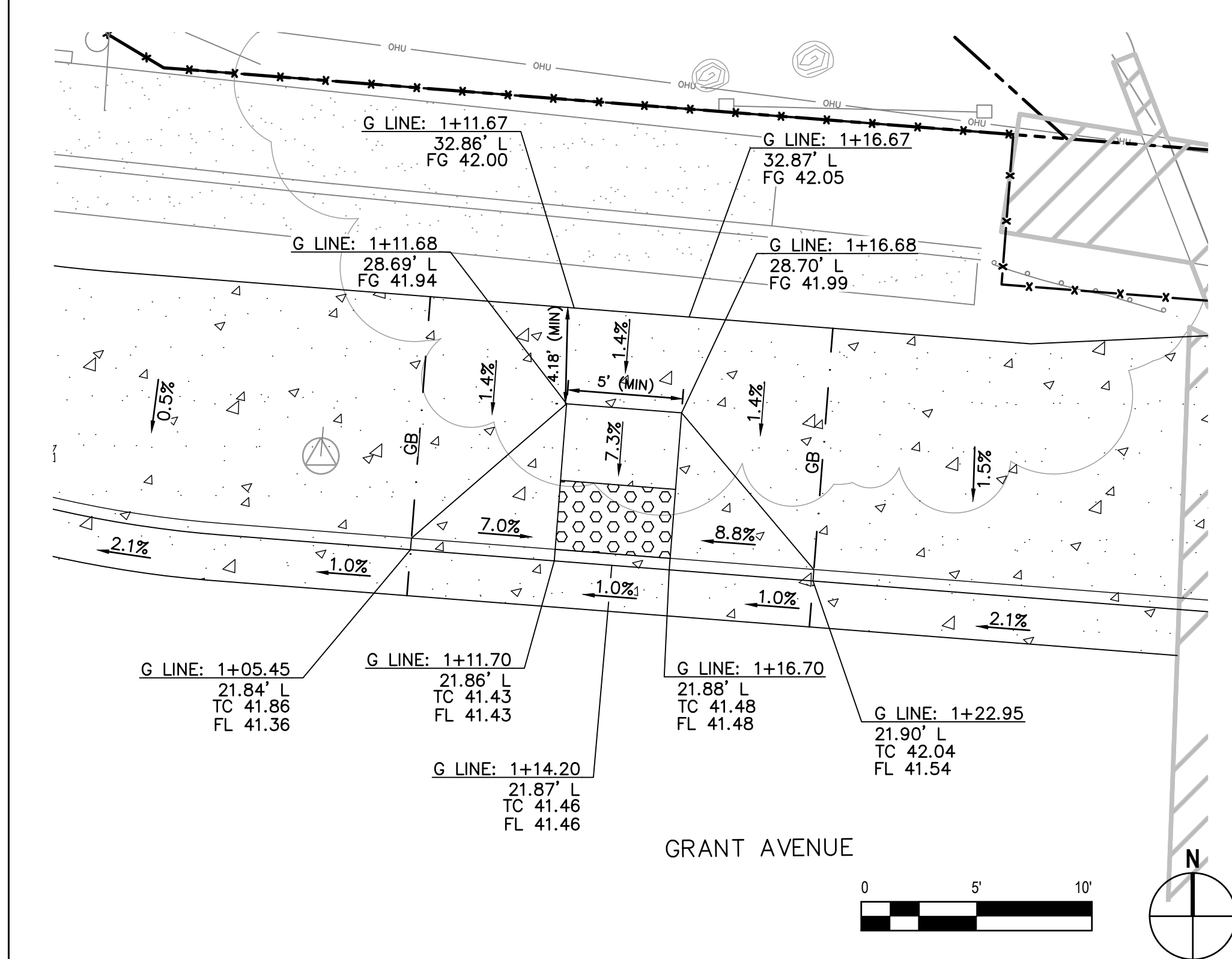
1 CURB RAMP CASE C - "V" LINE 11+25.38
- NE CORNER GRANT AVENUE AND VIRGINIA AVENUE



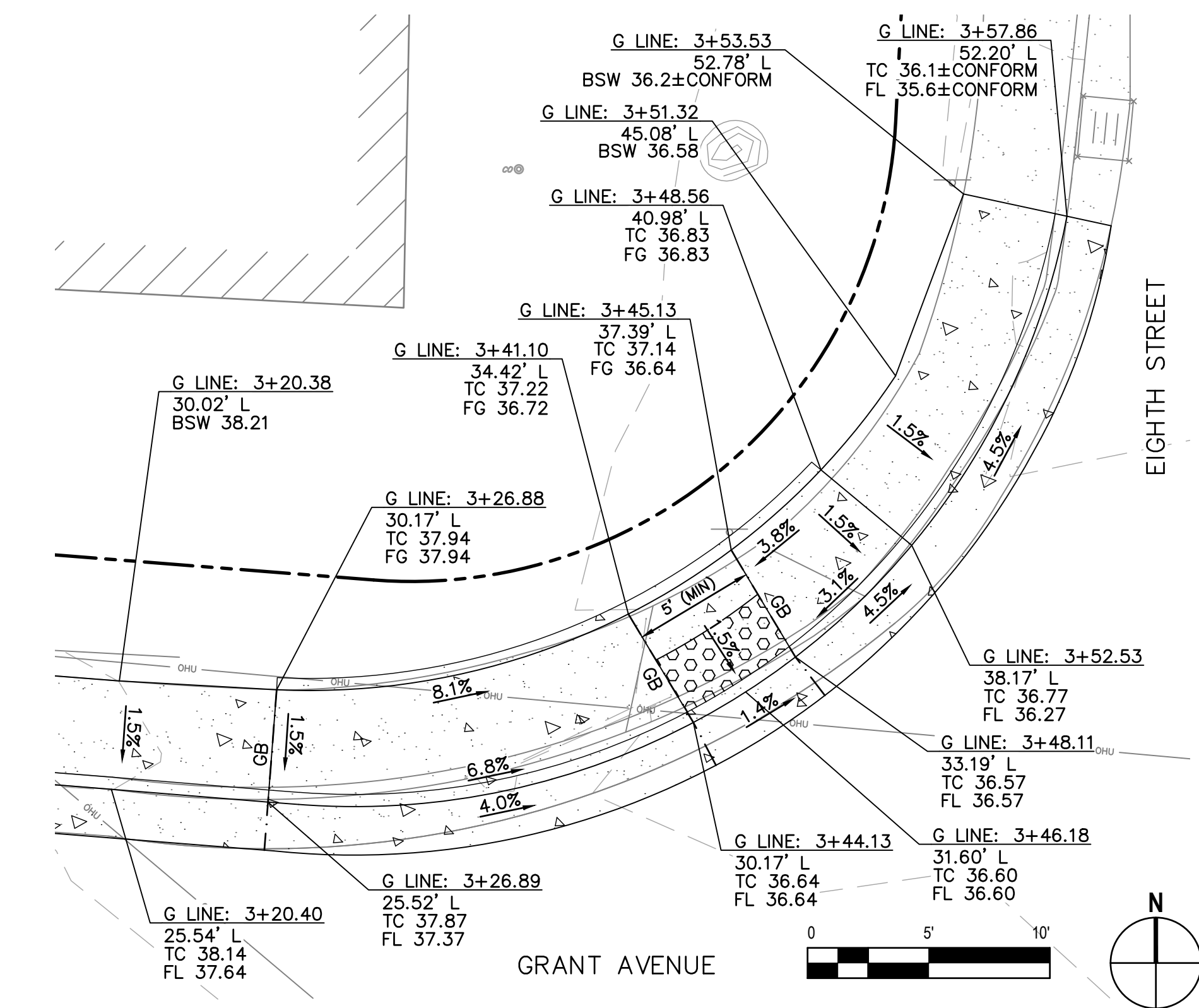
2 CURB RAMP CASE A - "V" LINE 11+28.85
- SW CORNER GRANT AVENUE AND VIRGINIA AVENUE



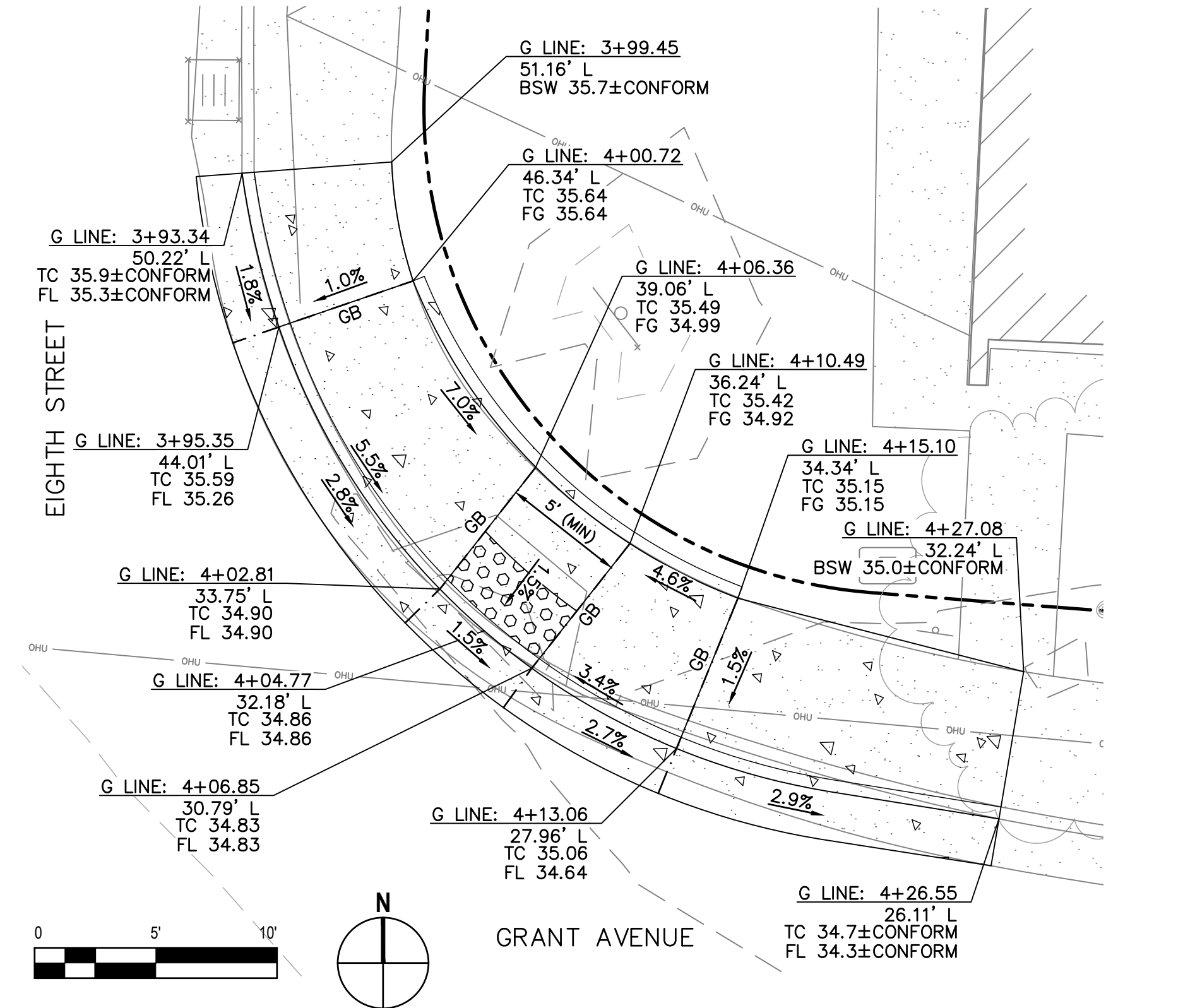
3 CURB RAMP CASE C - "G" LINE 1+08.44
- SE CORNER GRANT AVENUE



4 CURB RAMP CASE B - "G" LINE 1+14.20
- N SIDE OF GRANT AVENUE



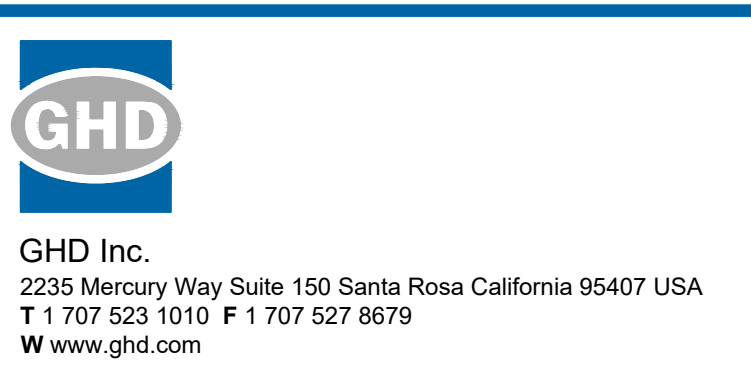
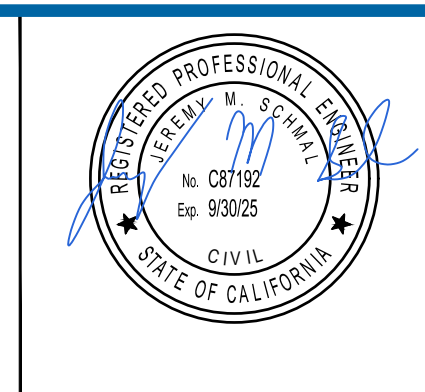
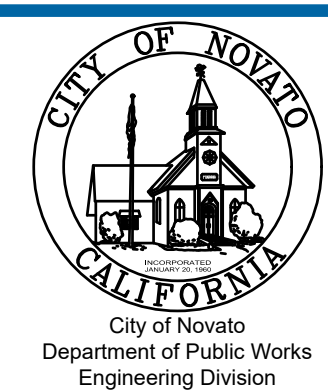
5 CURB RAMP CASE C - "G" LINE 3+46.18
- NW CORNER GRANT AVENUE AND EIGHTH STREET



6 CURB RAMP CASE C - "G" LINE 4+04.77
- NE CORNER GRANT AVENUE AND EIGHTH STREET

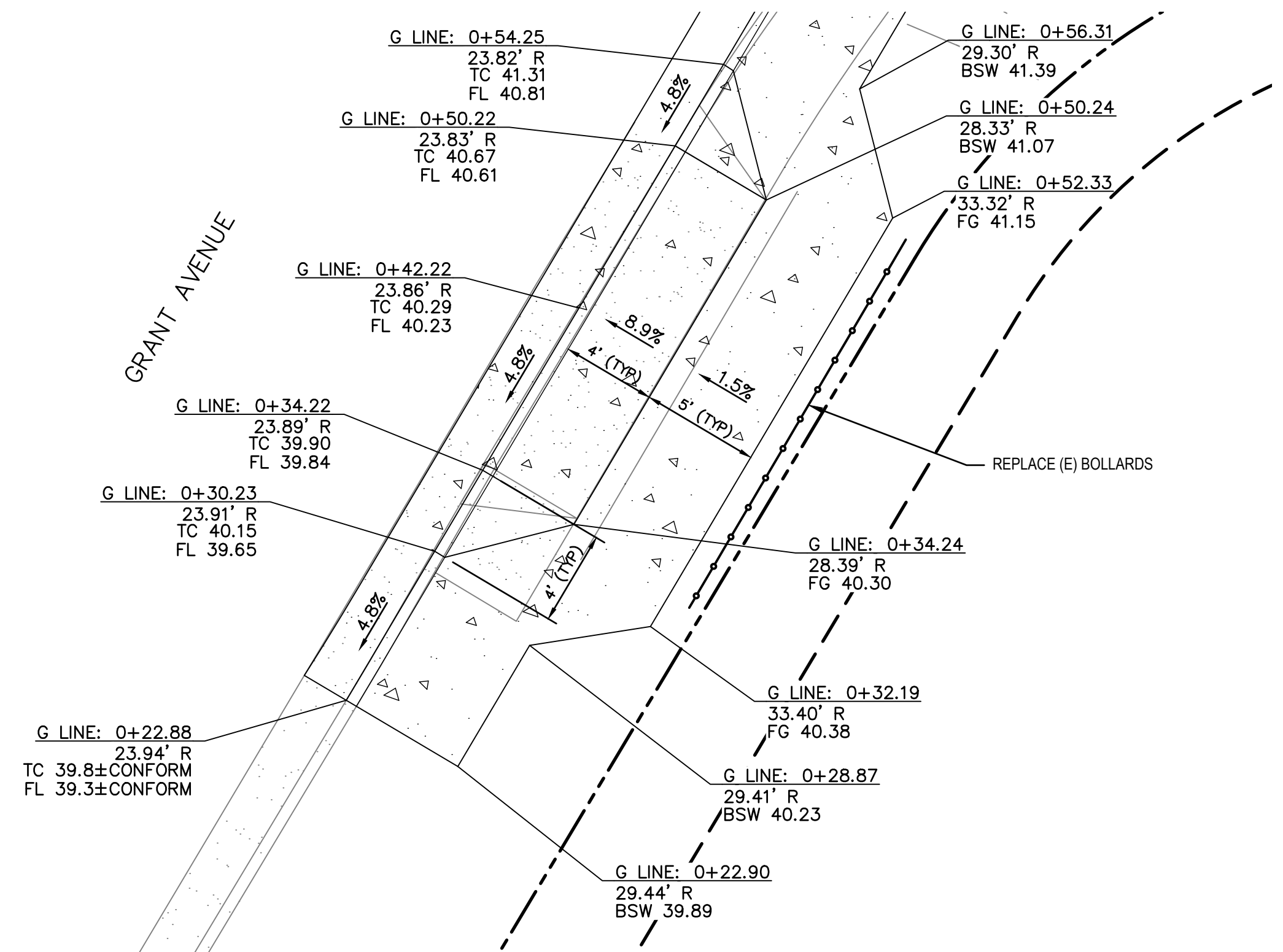
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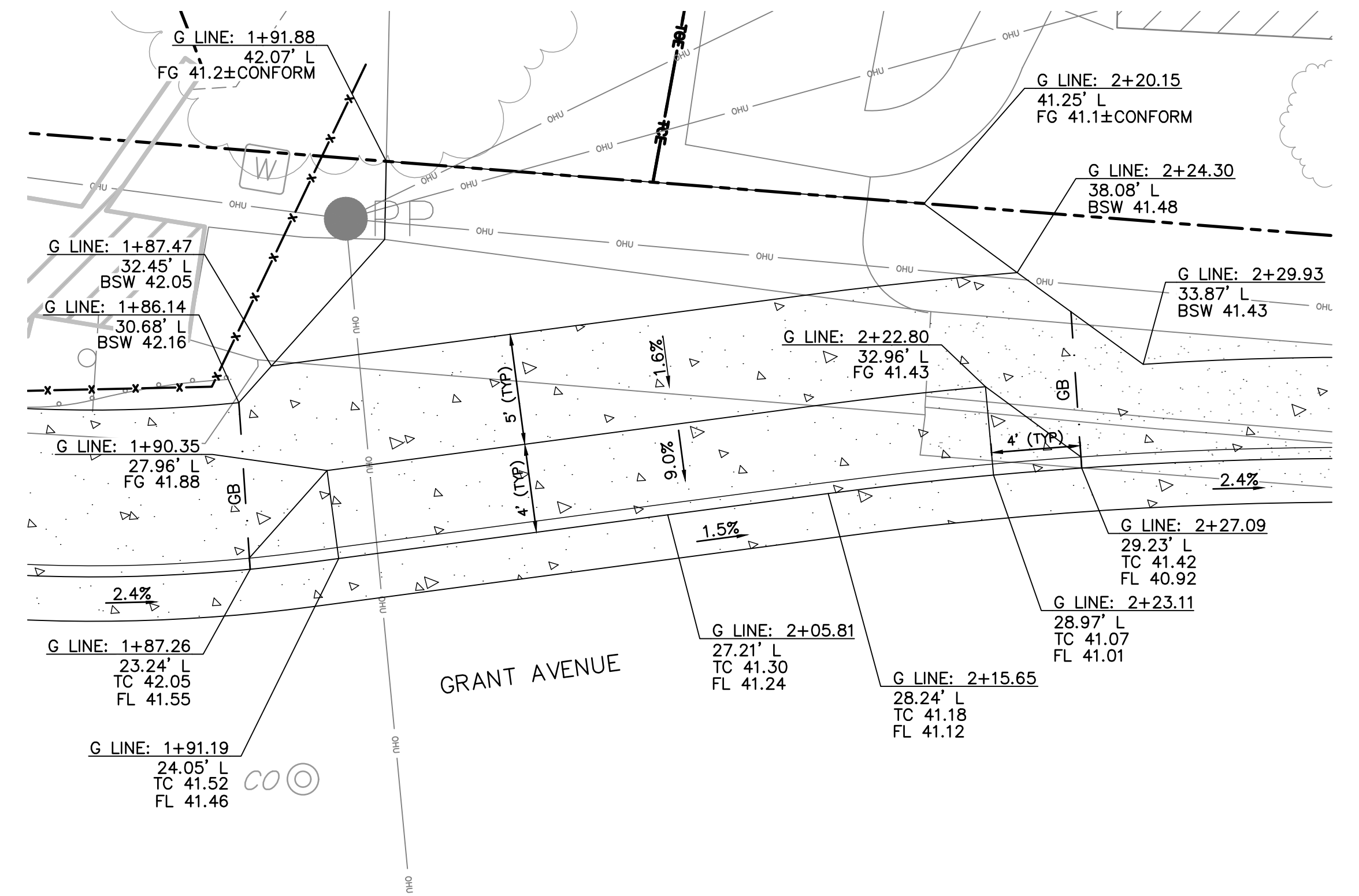
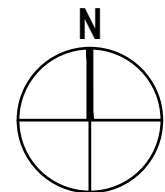


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Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23

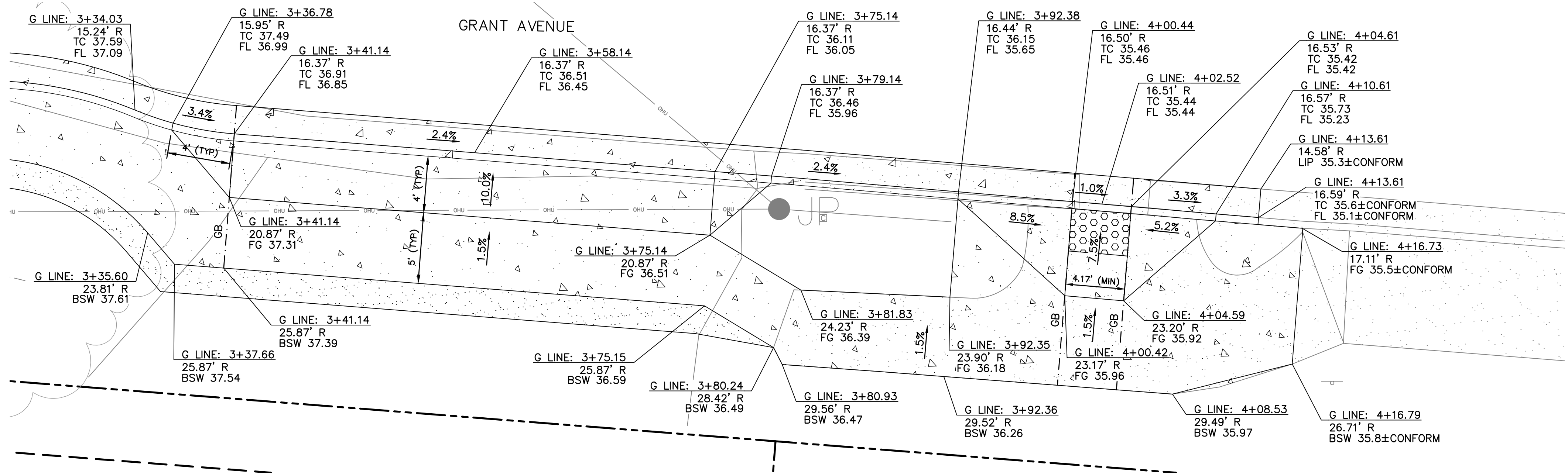
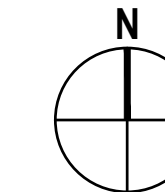
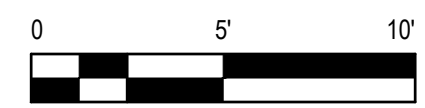
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Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	CONSTRUCTION DETAILS 1
Contract No.	11110085
Drawing No.	C3
Original Size	
This Drawing shall not be used for Construction unless Signed and Sealed For Construction	
Scale	1" = 5'
Sheet	9 of 47
Rev:	



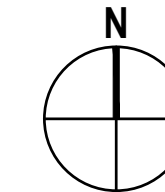
1 DRIVEWAY - "G" LINE 0+42.22
- E SIDE OF GRANT AVENUE



2 DRIVEWAY - "G" LINE 2+05.81
- N SIDE OF GRANT AVENUE



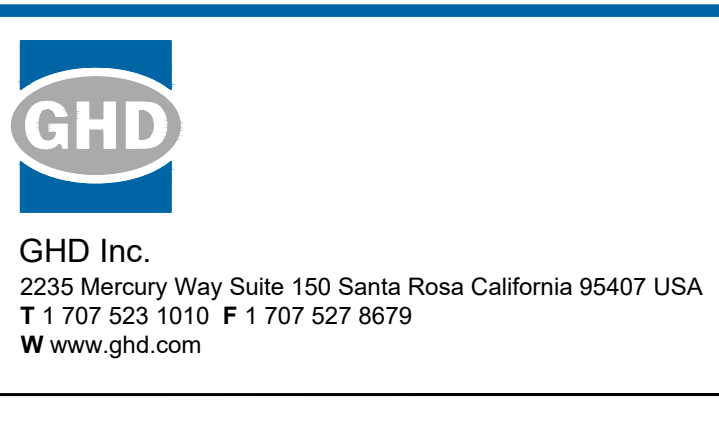
3 DRIVEWAY - "G" LINE 3+58.14 AND CURB RAMP CASE A - "G" LINE 4+02.52
- S SIDE OF GRANT AVENUE



LEGEND	
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

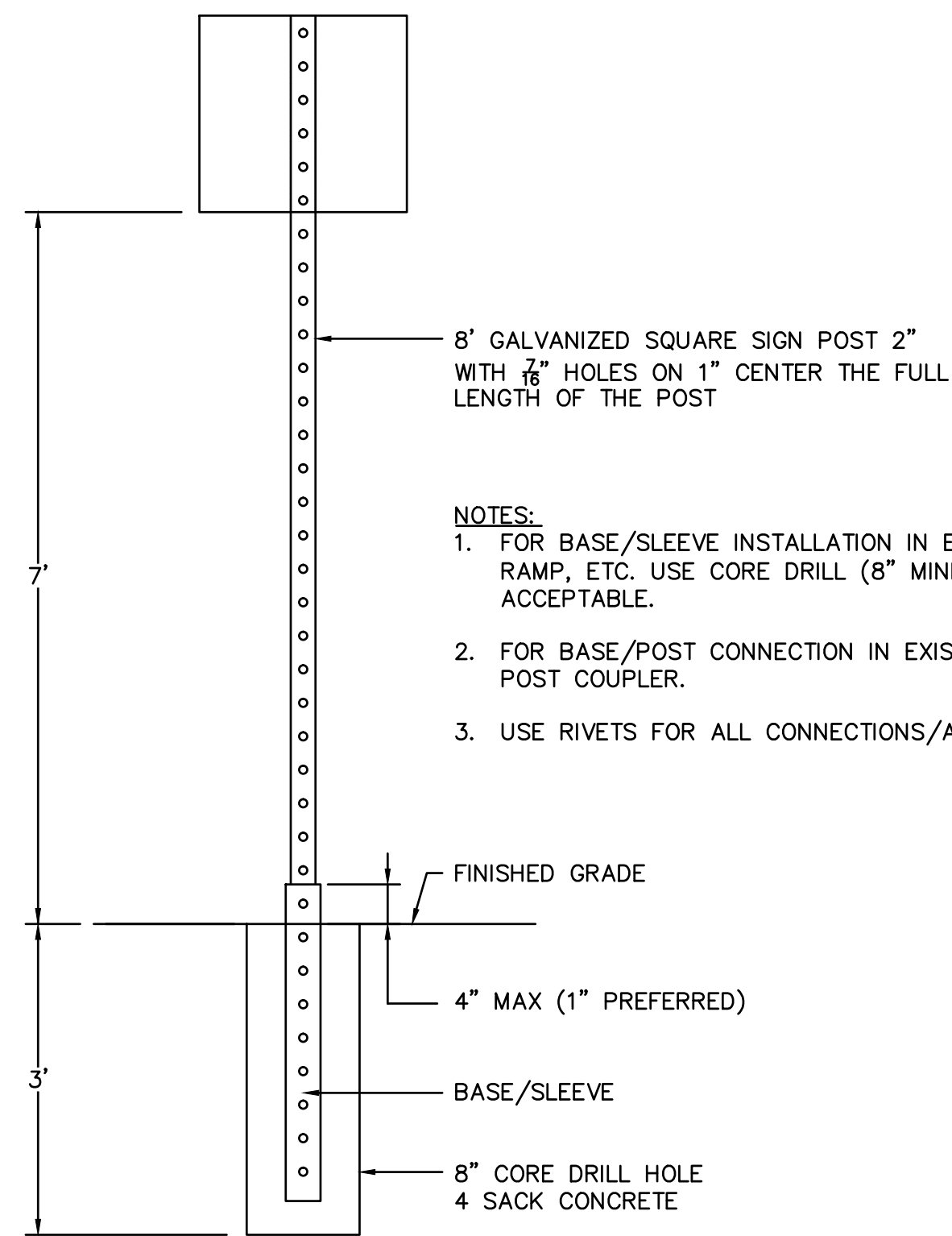
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

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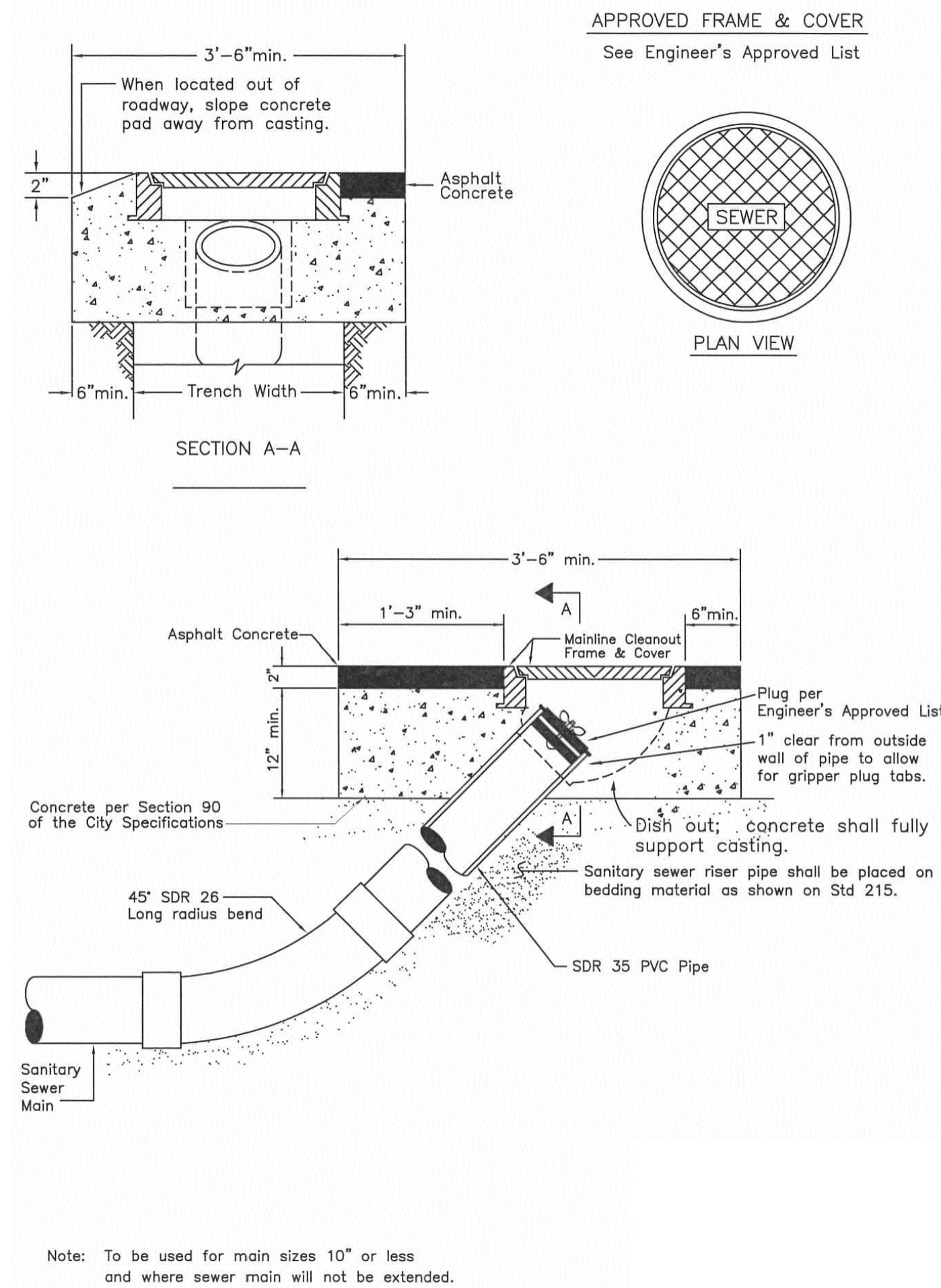


Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 5'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

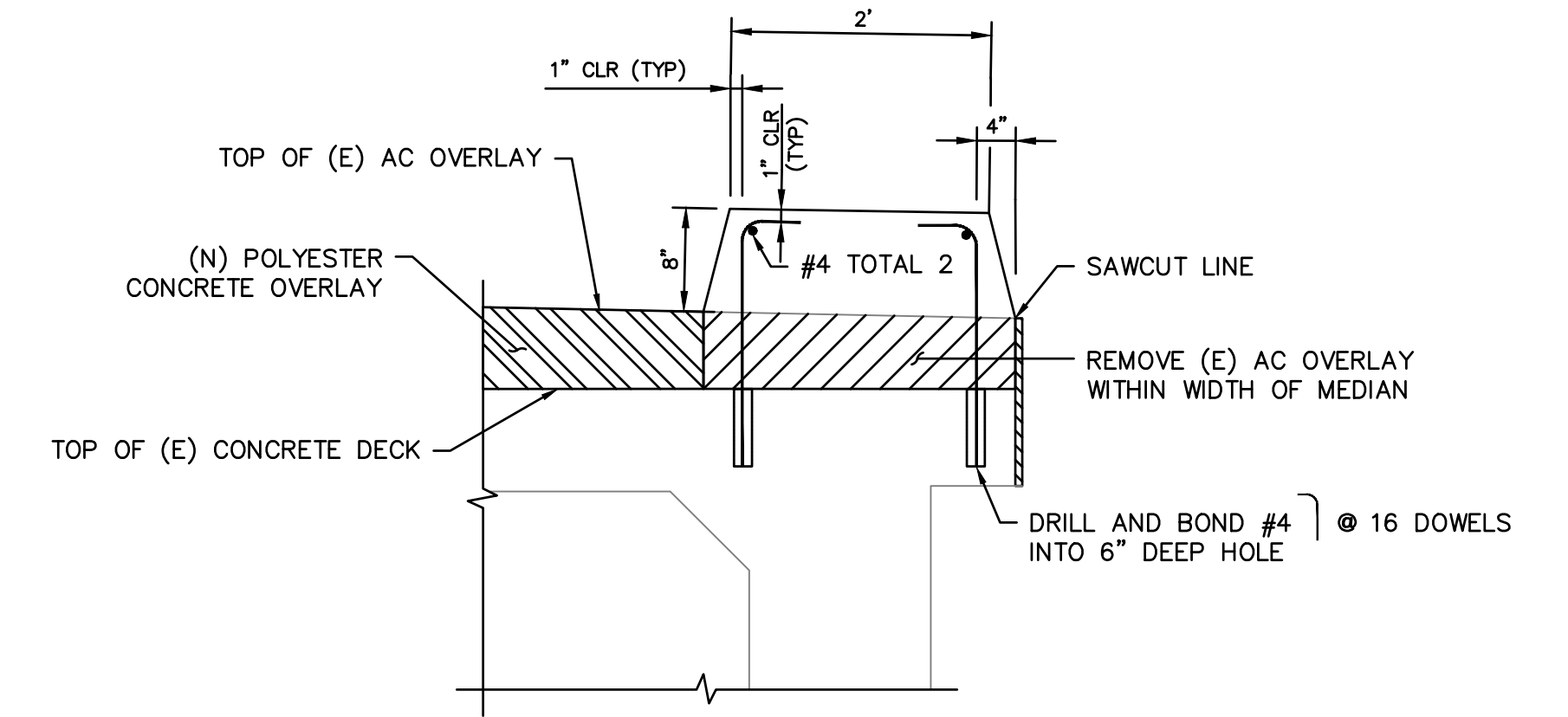
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Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	CONSTRUCTION DETAILS 2
Contract No.	11110085
Original Size	
Drawing No.	C4
Sheet	10 of 47
Rev:	



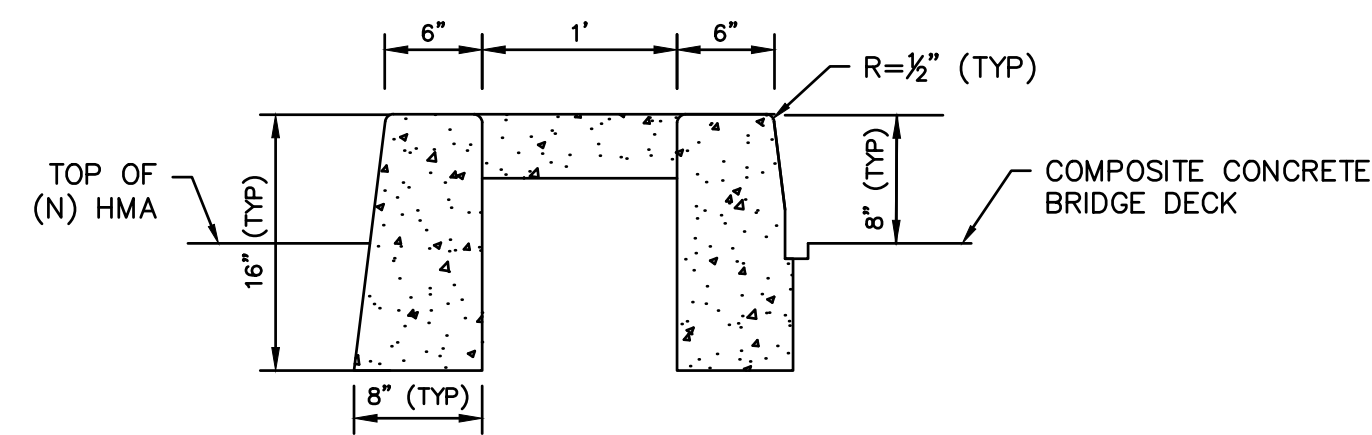
1 STREET SIGN POST
- NTS



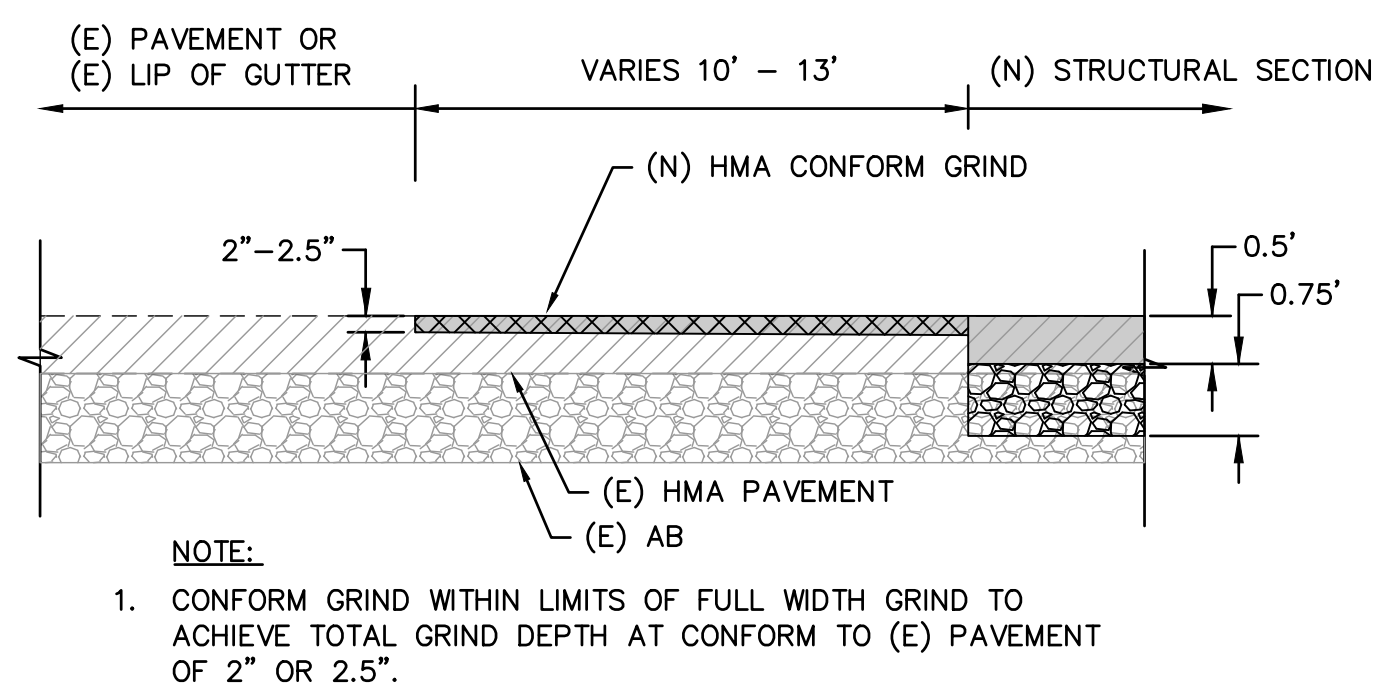
2 SANITARY SEWER CLEANOUT
- NTS



3 BRIDGE MEDIAN CURB - FROM STA 1+39.74 TO STA 1+75.08
- NTS



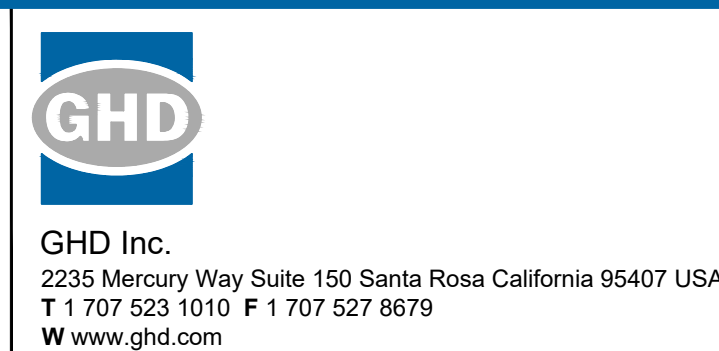
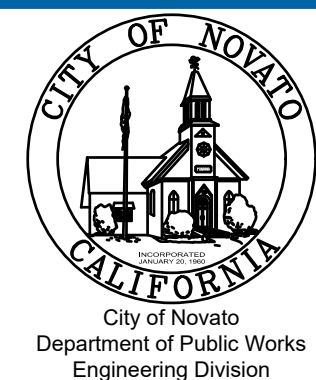
4 MEDIAN CURB - FROM STA 1+24.93 TO STA 1+39.74 AND FROM STA 1+75.08 TO STA 1+98.02
- NTS



5 TYPICAL CONFORM GRIND
- NTS

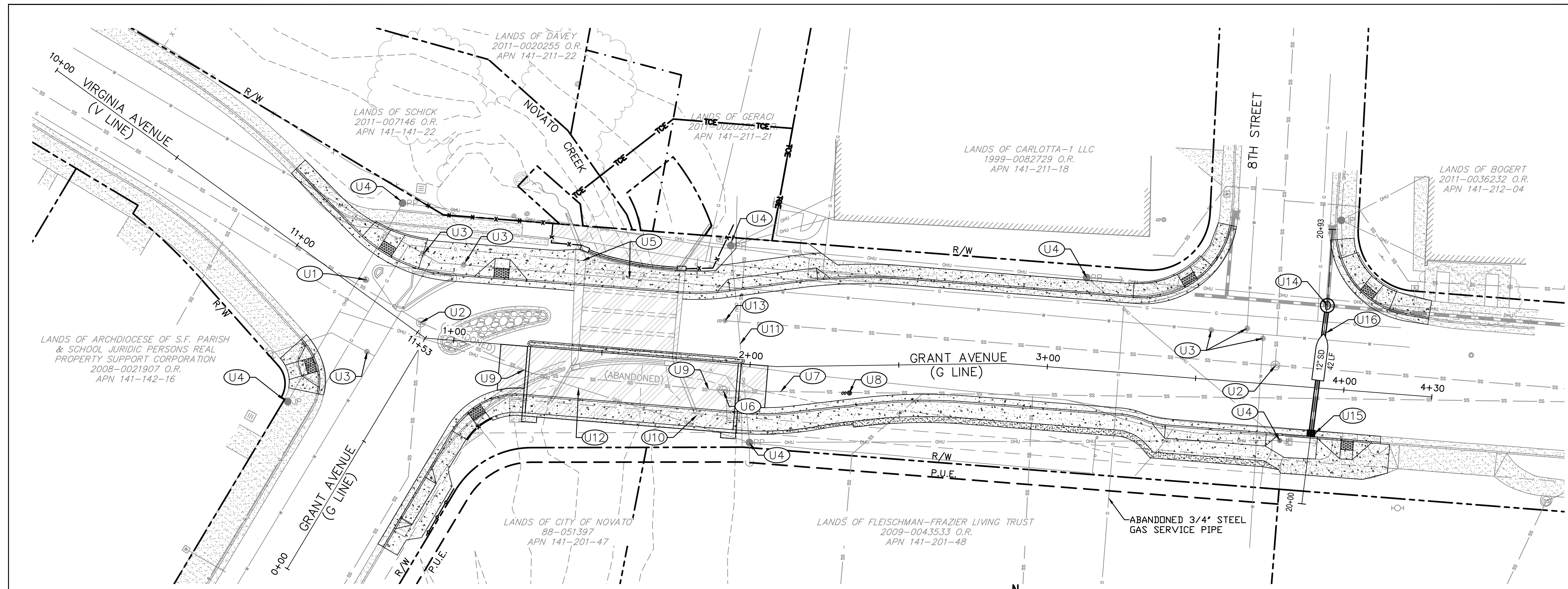
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Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 5'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	CONSTRUCTION DETAILS 3
Contract No.	11110085
Drawing No.	C5
Original Size	Sheet 11 of 47
Rev:	

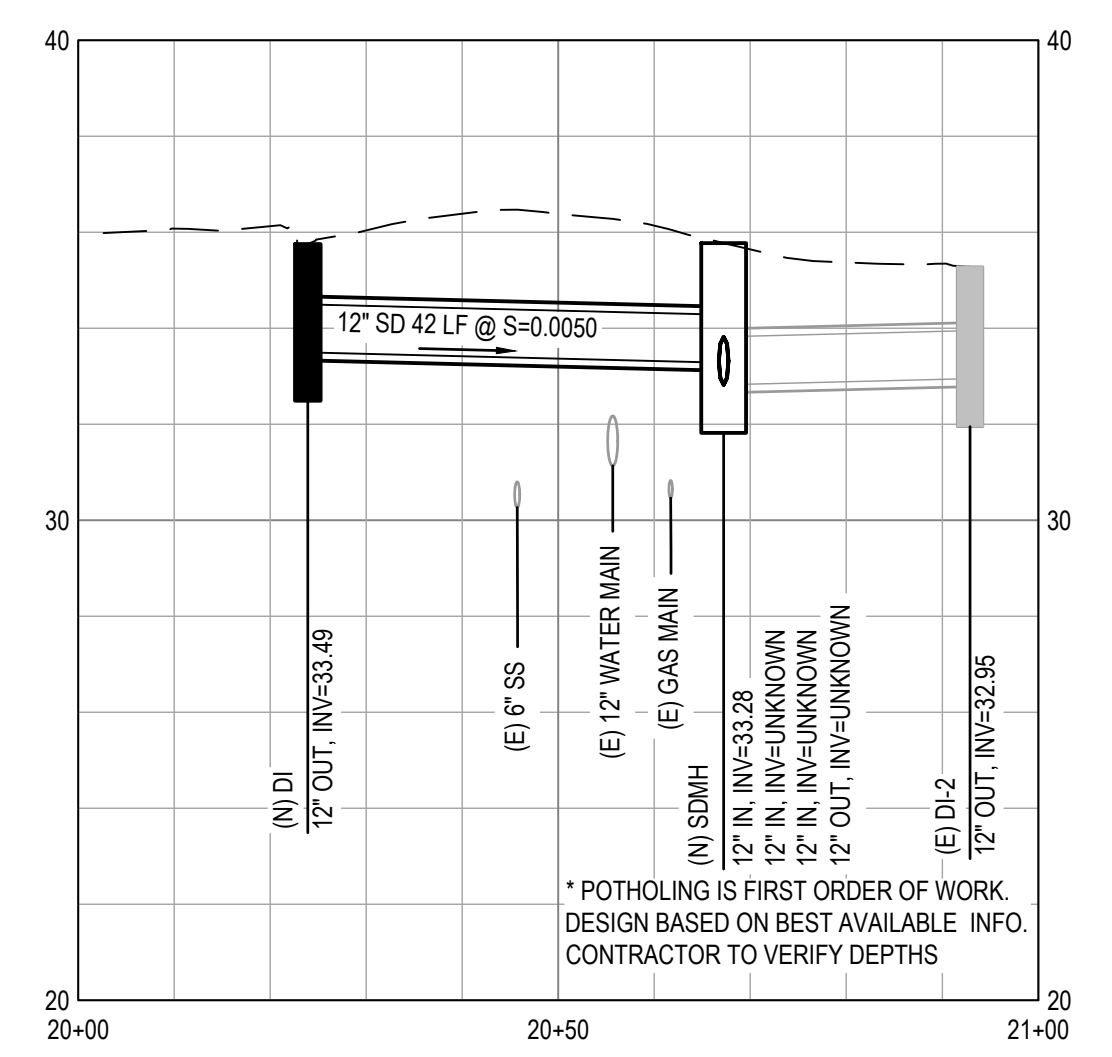


KEYNOTE	
U1	ADJUST GAS VALVE COVER TO GRADE
U2	ADJUST SSMH TO GRADE
U3	ADJUST WATER VALVE COVER TO GRADE
U4	PROTECT UTILITY POLE
U5	PROTECT (E) GAS AND (E) WATER ACROSS BRIDGE
U6	REMOVE ABANDONED SSMH
U7	REMOVE ABANDONED SS PIPE FROM MH TO NEW CLEANOUT
U8	INSTALL (N) SANITARY SEWER CLEANOUT PER $\frac{2}{11}$
U9	REMOVE ABANDONED SS PIPE IF IN CONFLICT WITH ABUTMENT CONSTRUCTION
U10	REMOVE ABANDONED CAST IRON PIPE
U11	CONTRACTOR SHALL COORDINATE WITH PG&E TO DROP LINE DURING CONSTRUCTION. CONTRACTOR TO PROVIDE 60 DAYS NOTICE.
U12	CONTRACTOR SHALL COORDINATE WITH FRONTIER TO TEMPORARILY RELOCATE OR PULL SLACK ON THIS LINE TO ALLOW FOR PILE AND GIRDER CONSTRUCTION IF NEEDED. CONTRACTOR TO PROVIDE 30 DAYS NOTICE.
U13	ADJUST SS CLEANOUT TO GRADE
U14	INSTALL (N) TYPE "A" MANHOLE PER MCUCS STD 205
U15	INSTALL (N) TYPE "C" CATCH BASIN PER MCUCS STD 235
U16	INSTALL (N) 12" CLASS V RCP SD

UTILITY NOTES

- LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POT HOLE FOR EXACT LOCATION.
- UTILITIES SHALL COMPLY WITH THE FOLLOWING STANDARDS:
 - STORM DRAIN: MARIN COUNTY UNIFORM CONSTRUCTION STANDARDS (UCS).
 - SEWER: NOVATO SANITARY DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS.
 - WATER: NORTH MARIN WATER DISTRICT STANDARDS, ENGINEERING PLANS AND SPECIFICATIONS.
 - STORM WATER TREATMENT AND CONTROL: BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION (BASMAA) STANDARDS, POST-CONSTRUCTION MANUAL - DESIGN GUIDANCE FOR STORMWATER TREATMENT AND CONTROL FOR PROJECTS IN MARIN, SONOMA, NAPA AND SOLANO COUNTIES.
- CONTRACTOR TO COORDINATE ANY TEMPORARY OR PERMANENT UTILITY RELOCATIONS WITH THE UTILITY OWNER.
- COORDINATE WITH NMWD FOR REPLACEMENT OF 2 (E) LATERALS AFTER DEMOLITION OF SIDEWALK IS COMPLETE.
- WORK RELATING TO THE ADJUSTMENT OF THE GAS VALVE COVER, SSMH, SS CLEANOUT AND WATER VALVE COVER ARE INCLUDED IN BID ALTERNATIVES 1-3 AS DESCRIBED IN THE CONTRACT DOCUMENTS.

UTILITY PLAN
1" = 20'

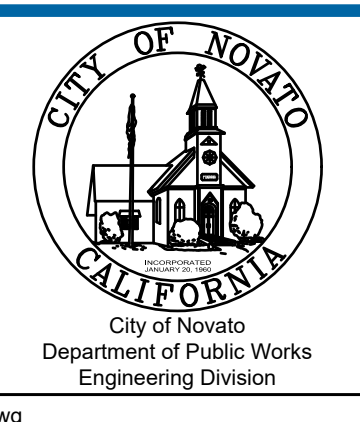


UTILITY PROFILE - DRAINAGE SYSTEM
HORIZ: 1" = 20', VERT: 1" = 4'

LEGEND	
	SEE STRUCTURE PLANS
	PORTLAND CEMENT CONCRETE
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

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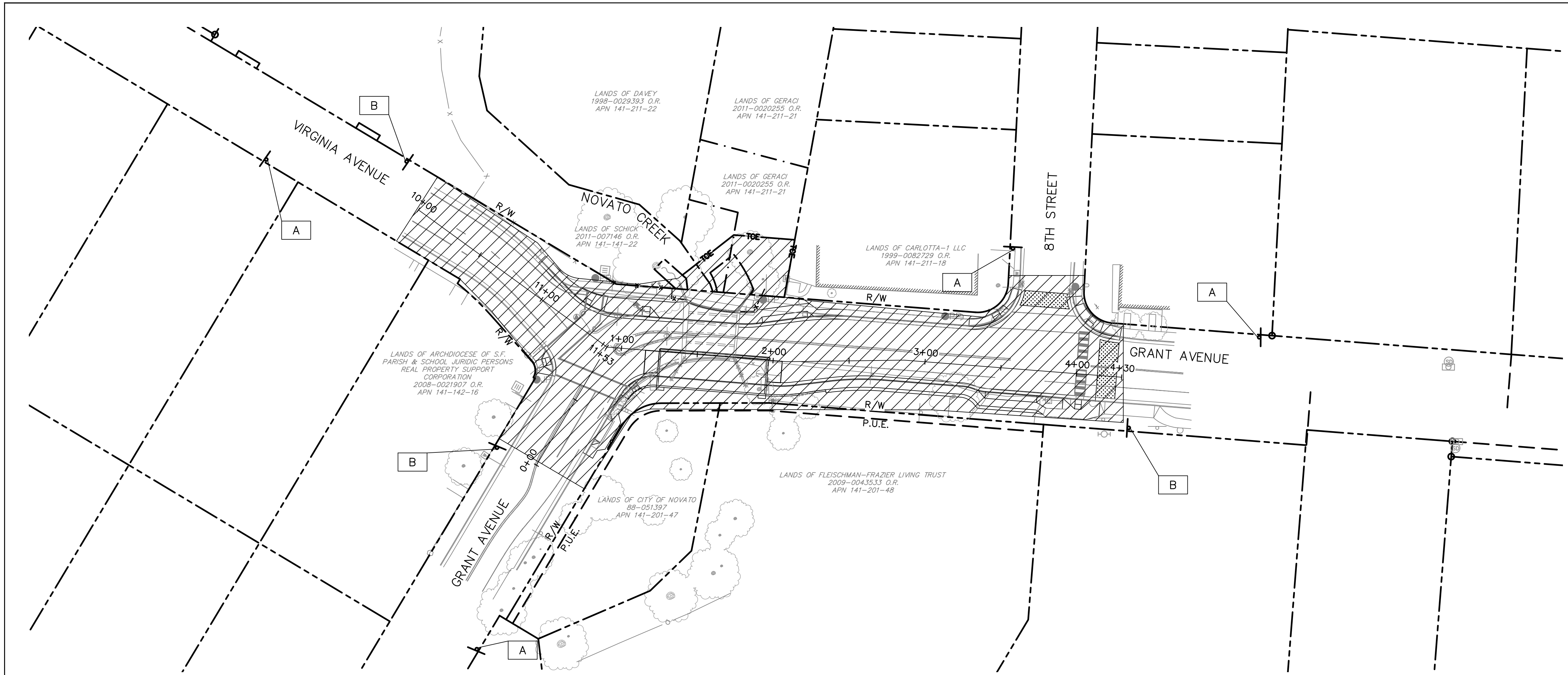
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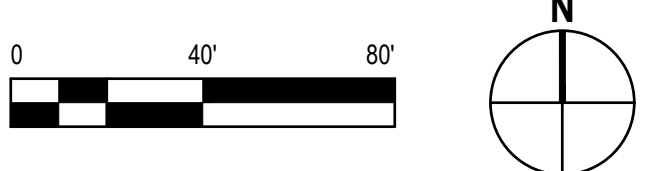
Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	UTILITY PLAN
Contract No.	11110085
Drawing No.	U1
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LEGEND	
	CONSTRUCTION AREA
	CONSTRUCTION AREA SIGN, 1-POST
	CONSTRUCTION AREA SIGN DESIGNATION
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

CONSTRUCTION AREA SIGNS
1" = 40'



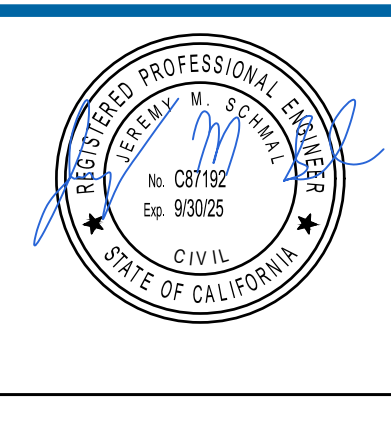
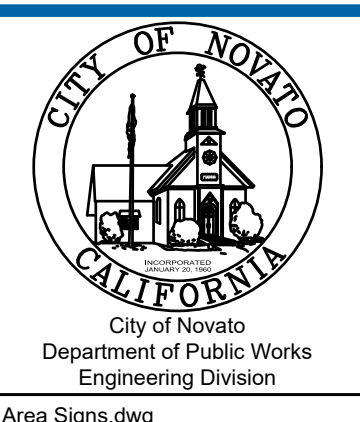
CONSTRUCTION AREA SIGNS				
	TYPE	PANEL SIZE (IN X IN)	NO. OF POST AND SIZE (IN X IN)	EACH
A	W20-1 (CA) "ROAD WORK AHEAD"	36 x 36	1 - 4 x 6	4
B	G20-1 (CA) "END ROAD WORK"	36 x 36	1 - 4 x 6	4

CONSTRUCTION AREA SIGNS NOTES:

- LOCATIONS OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER. ALL SIGN PLACEMENT AND LOCATION SHALL MEET REQUIREMENTS OF CA MUTCD AND CALTRANS STANDARD PLANS.

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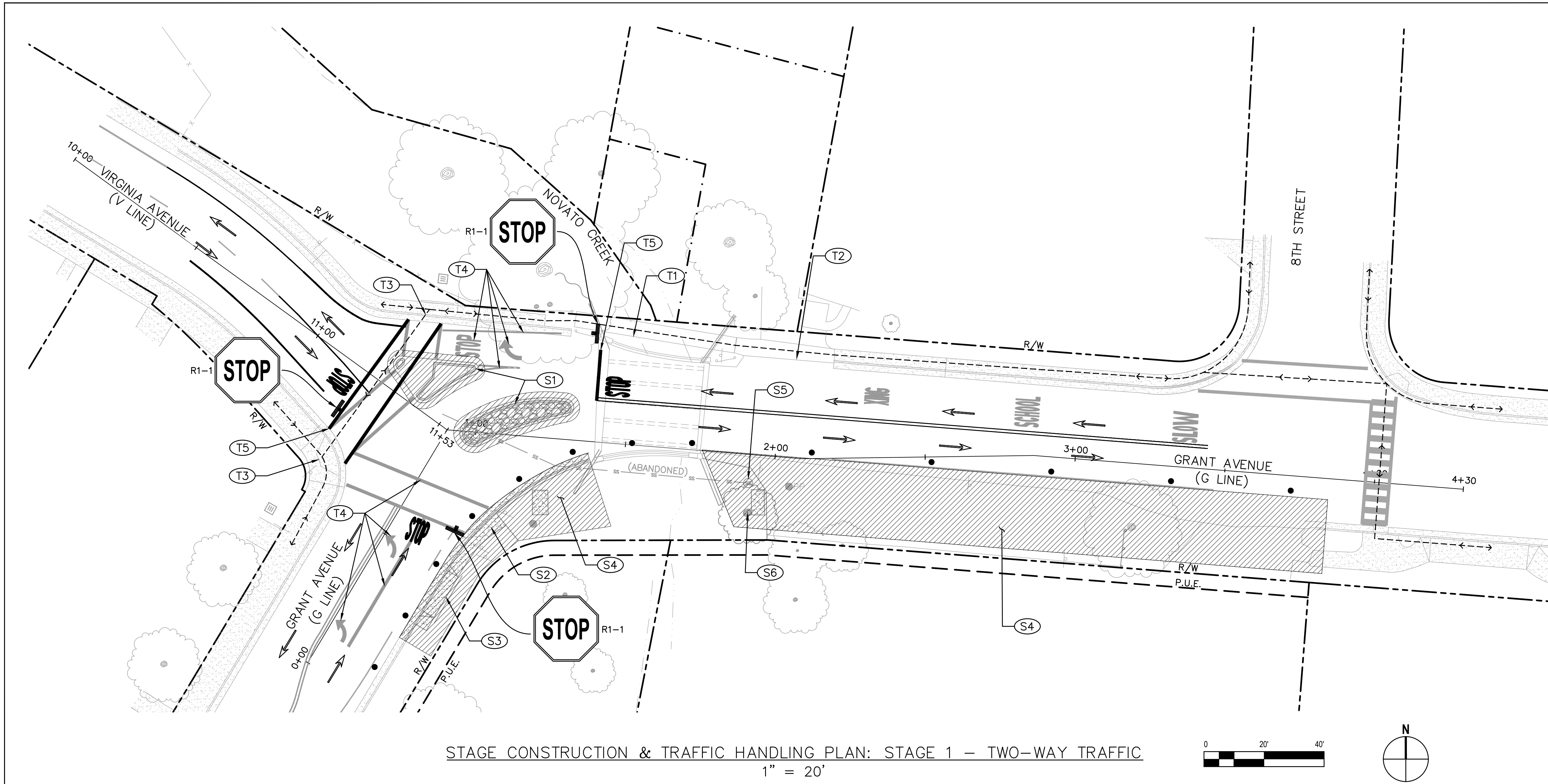
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Date		Date	12/21/23
Scale	1" = 40'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	CONSTRUCTION AREA SIGNS
Contract No.	11110085
Original Size	Sheet 13 of 47
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STAGE CONSTRUCTION & TRAFFIC HANDLING PLAN: STAGE 1 – TWO-WAY TRAFFIC
1" = 20'

TRAFFIC HANDLING KEYNOTES	
(T1)	PEDESTRIAN BRIDGE TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES TO PEDESTRIANS AND BICYCLISTS
(T2)	DRIVEWAY ACCESS MUST BE MAINTAINED AT ALL TIMES
(T3)	MAINTAIN PEDESTRIAN ACCESS AND CROSSWALKS
(T4)	REMOVE EXISTING STRIPING AND ASSOCIATED PAVEMENT MARKINGS
(T5)	INSTALL TEMP PAVEMENT MARKING

STAGE 1 CONSTRUCTION KEYNOTES	
(S1)	REMOVE MEDIAN ISLANDS AND ASSOCIATED TRAFFIC SIGNS THIS STAGE, PLACE TEMP HMA
(S2)	REMOVE SIDEWALK, CONCRETE CURB AND GUTTER
(S3)	REMOVE DRIVEWAY APPROACH
(S4)	CLEAR AND GRUB IN PREPARATION FOR NEW BRIDGE AND SIDEWALK THIS STAGE
(S5)	REMOVE SSMH AND SEWER LINE, SEE UTILITY PLAN FOR DETAILS
(S6)	REMOVE TREE

LEGEND	
	CONSTRUCTION AREA THIS STAGE
	DIRECTION OF TRAVEL
	TEMP "STOP" PAVEMENT MARKING
	TEMP PEDESTRIAN ROUTING
	CONSTRUCTION SIGN
	DELINEATOR

GENERAL NOTES (ALL STAGE CONSTRUCTION SHEETS):

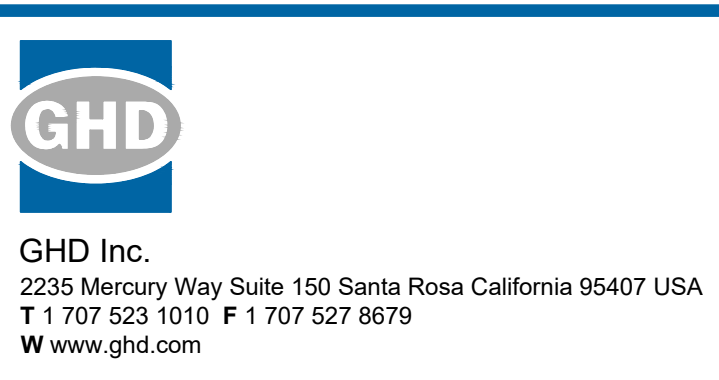
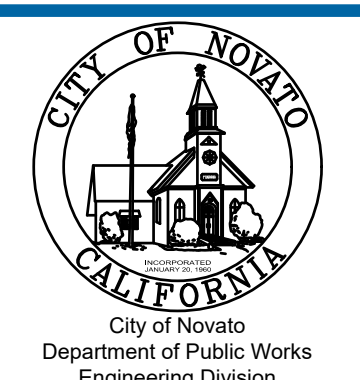
- ALL PORTABLE CONSTRUCTION AREA SIGNS SHALL BE BLACK LETTERING ON ORANGE FIELD, EXCEPT ALL "R" SIGNS SHALL BE STANDARD COLORS.
- PORTABLE CONSTRUCTION AREA SIGNS SHALL BE MOUNTED ON TYPE III BARRICADES WHERE SHOWN ON PLANS, OR ON WOOD POSTS.
- CHANNELIZERS SHALL HAVE WHITE 2-WAY REFLECTORS ON 2-WAY ROADWAYS, WHITE 1-WAY REFLECTORS ON THE RIGHT SHOULDER OF DIVIDED ROADWAYS AND RAMPS AND YELLOW 1-WAY REFLECTORS ON THE LEFT SHOULDER OF DIVIDED HIGHWAYS AND RAMPS.
- EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
- CALIFORNIA SIGN CODES ARE DESIGNATED BY (CA), OTHERWISE, FEDERAL MUTCD SIGN CODES ARE SHOWN.
- TEMPORARY STRIPING SHALL BE PAINT. REMOVE CONFLICTING STRIPING FROM PREVIOUS STAGES.
- PLANS SHOW GENERAL REQUIREMENTS FOR MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND MUST SUBMIT THEIR TRAFFIC CONTROL PLAN PROVIDING FULL DETAILS OF ALL TEMPORARY TRAFFIC CONTROL. SEE SPECIFICATIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.

SHEET NOTES:

- MAINTAIN TWO-WAY TRAFFIC.
- ONE-WAY FLAG CONTROL THROUGH INTERSECTION ACCEPTABLE DURING WORK HOURS.

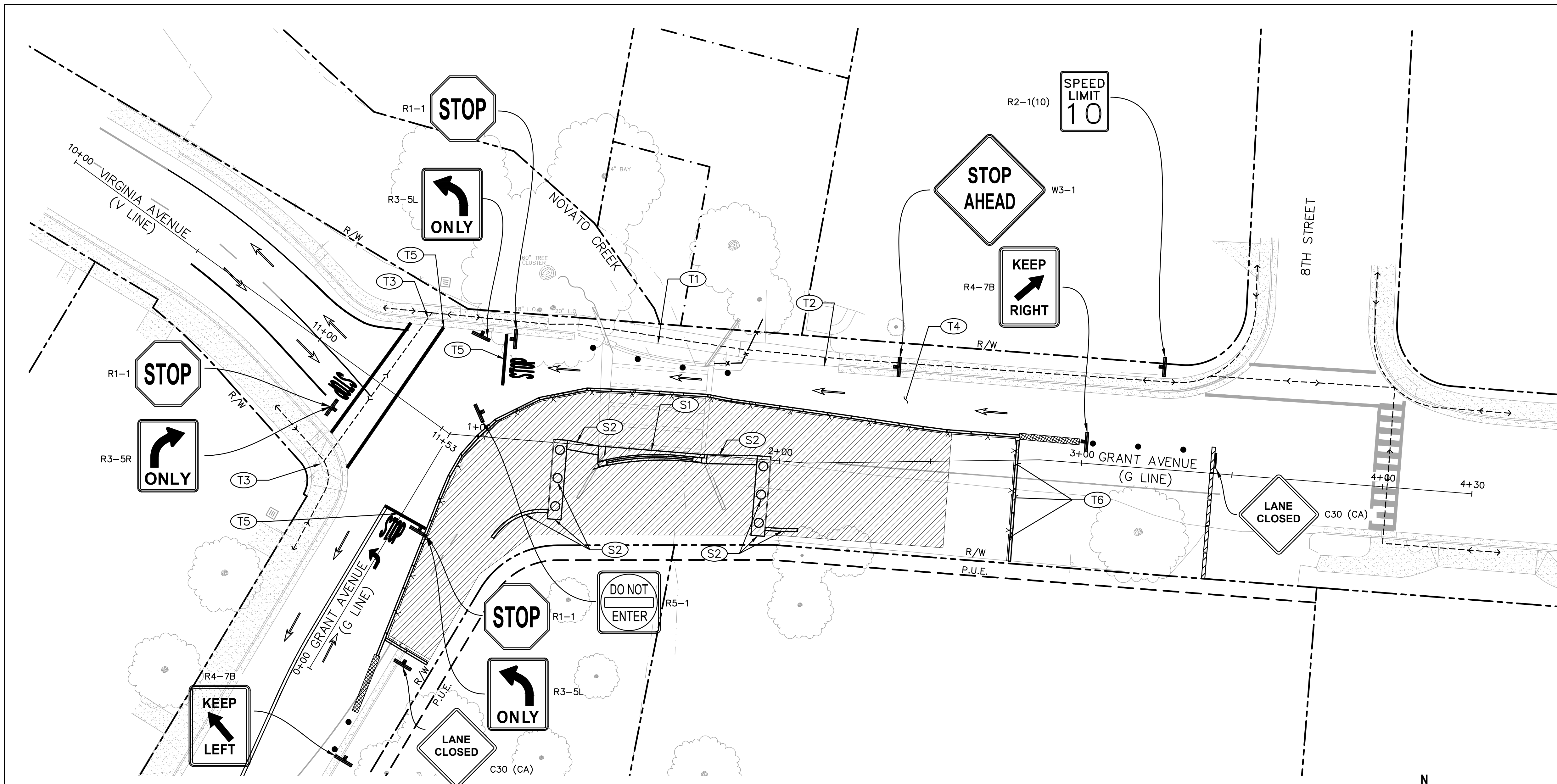
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Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN - STAGE 1 - TWO-WAY TRAFFIC
Contract No.	11110085
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TRAFFIC HANDLING KEYNOTES	
(T1)	PEDESTRIAN BRIDGE TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES TO PEDESTRIANS AND BICYCLISTS
(T2)	DRIVEWAY ACCESS MUST BE MAINTAINED AT ALL TIMES
(T3)	MAINTAIN PEDESTRIAN ACCESS AND CROSSWALKS
(T4)	GRANT AVENUE ONE-WAY WESTBOUND FROM 8TH STREET TO VIRGINIA AVENUE, PLACE DETOUR AS SHOWN ON SHEET DE 1
(T5)	INSTALL TEMP PAVEMENT MARKING
(T6)	PLACE TYPE K RAILING DURING NON-WORK HOURS THIS LOCATION

STAGE 2 CONSTRUCTION KEYNOTES	
(S1)	DEMOLISH SOUTHERLY PART OF EXISTING BRIDGE (SEE STRUCTURAL PLANS)
(S2)	CONSTRUCT PILES, ABUTMENTS AND WINGWALLS THIS PHASE (SEE STRUCTURAL PLANS)

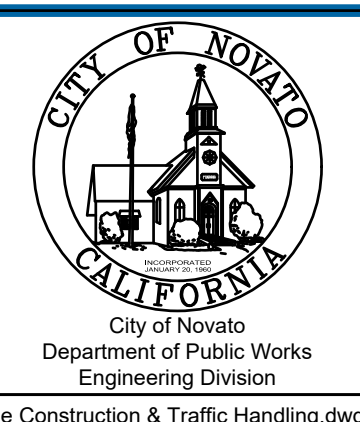
LEGEND	
	CONSTRUCTION AREA THIS STAGE
	DIRECTION OF TRAVEL
	SITE SECURITY FENCING WITH PRIVACY SCREENING
	TEMP RAILING (TYPE K)
	TEMP "STOP" PAVEMENT MARKING
	TEMP TYPE IV PAVEMENT MARKING
	TEMP PEDESTRIAN ROUTING
	CONSTRUCTION SIGN
	DELINEATOR
	TEMPORARY CRASH CUSHION ABSORB 350 IN-LINE ARRAY OR APPROVED EQUAL
	TYPE 3 BARRICADE

STAGE CONSTRUCTION & TRAFFIC HANDLING PLAN: STAGE 2 - ONE-WAY WB GRANT AVENUE
1" = 20'

- SHEET NOTES:**
- REMOVE ANY CONFLICTING STRIPING, EXISTING OR NO PARKING FROM PREVIOUS STAGE.
 - FOR ADDITIONAL SIGNAGE NOT SHOWN, SEE DETOUR PLAN 1 ON SHEET 19.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

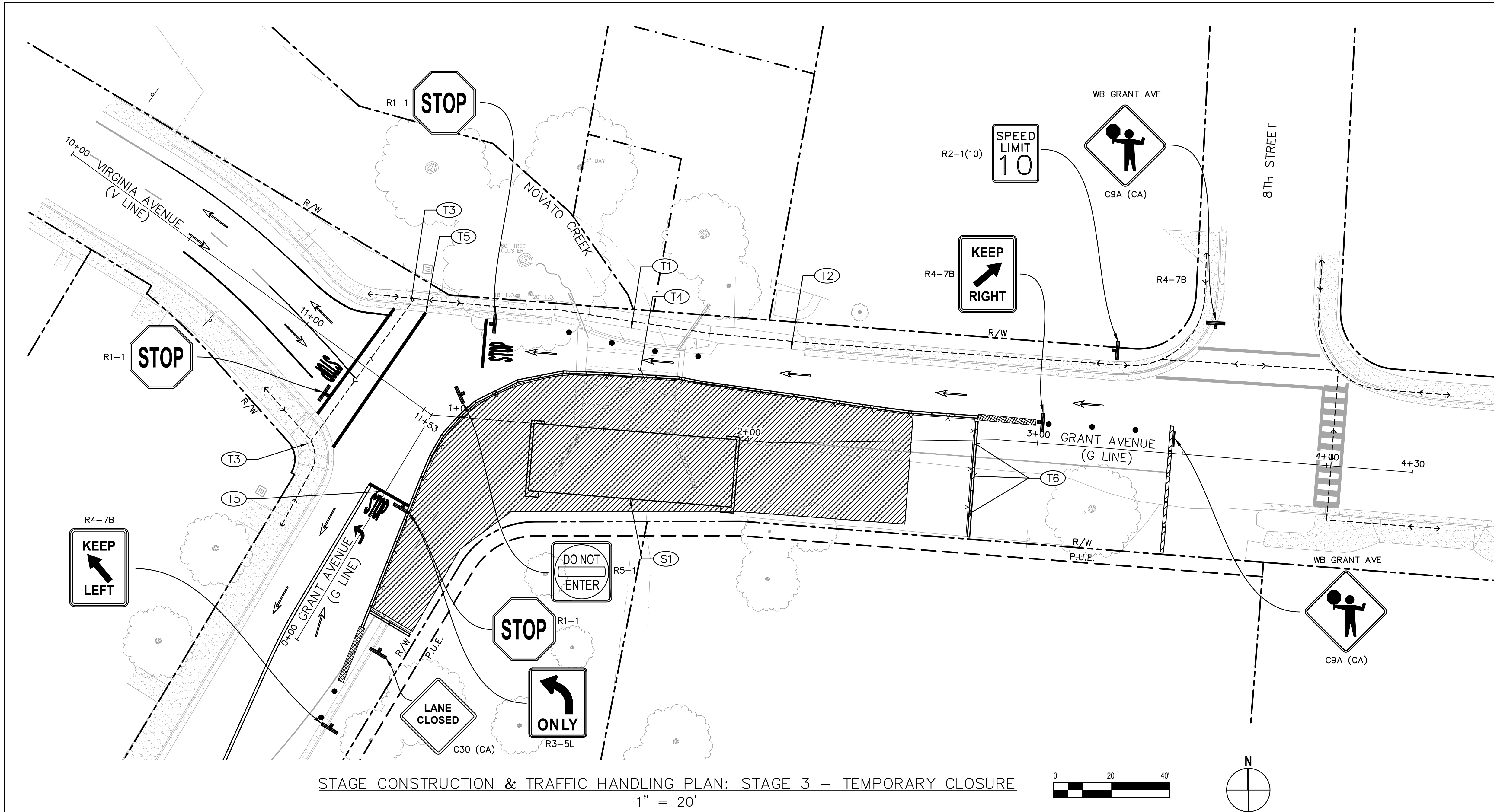
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Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

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Title	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN - STAGE 2 - ONE-WAY WB GRANT AVENUE
Contract No.	11110085
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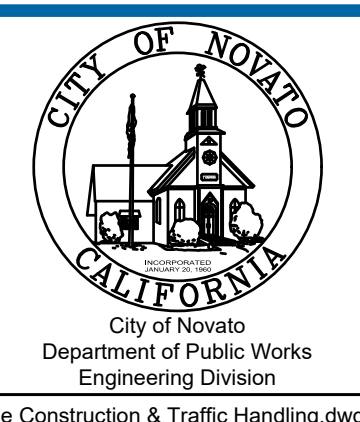
TRAFFIC HANDLING KEYNOTES	
(T1)	PEDESTRIAN BRIDGE TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES TO PEDESTRIANS AND BICYCLISTS
(T2)	DRIVEWAY ACCESS MUST BE MAINTAINED AT ALL TIMES
(T3)	MAINTAIN PEDESTRIAN ACCESS AND CROSSWALKS
(T4)	GRANT AVENUE BRIDGE WILL BE TEMPORARILY CLOSED IN 15 MINUTE (MAX) CLOSURES BY FLAGGERS, DETOUR AVAILABLE AS SHOWN ON SHEET DE 2
(T5)	TEMP PAVEMENT MARKING
(T6)	PLACE TYPE K RAILING DURING NON-WORK HOURS THIS LOCATION
STAGE 3 CONSTRUCTION KEYNOTES	
(S1)	PLACE GIRDERS AND BRIDGE DECK THIS PHASE
LEGEND	
	CONSTRUCTION AREA THIS STAGE
	DIRECTION OF TRAVEL
	SITE SECURITY FENCING WITH PRIVACY SCREENING
	TEMP RAILING (TYPE K)
	TEMP "STOP" PAVEMENT MARKING
	TEMP TYPE IV PAVEMENT MARKING
	TEMP PEDESTRIAN ROUTING
	CONSTRUCTION SIGN
	DELINEATOR
	TEMPORARY CRASH CUSHION ABSORB 350 IN-LINE ARRAY OR APPROVED EQUAL
	TYPE 3 BARRICADE

SHEET NOTES:
 1. FOR ADDITIONAL SIGNAGE NOT SHOWN, SEE MUTCD AND DETOUR PLAN 2 ON SHEET 20.

STAGE CONSTRUCTION & TRAFFIC HANDLING PLAN: STAGE 3 - TEMPORARY CLOSURE
 1" = 20'

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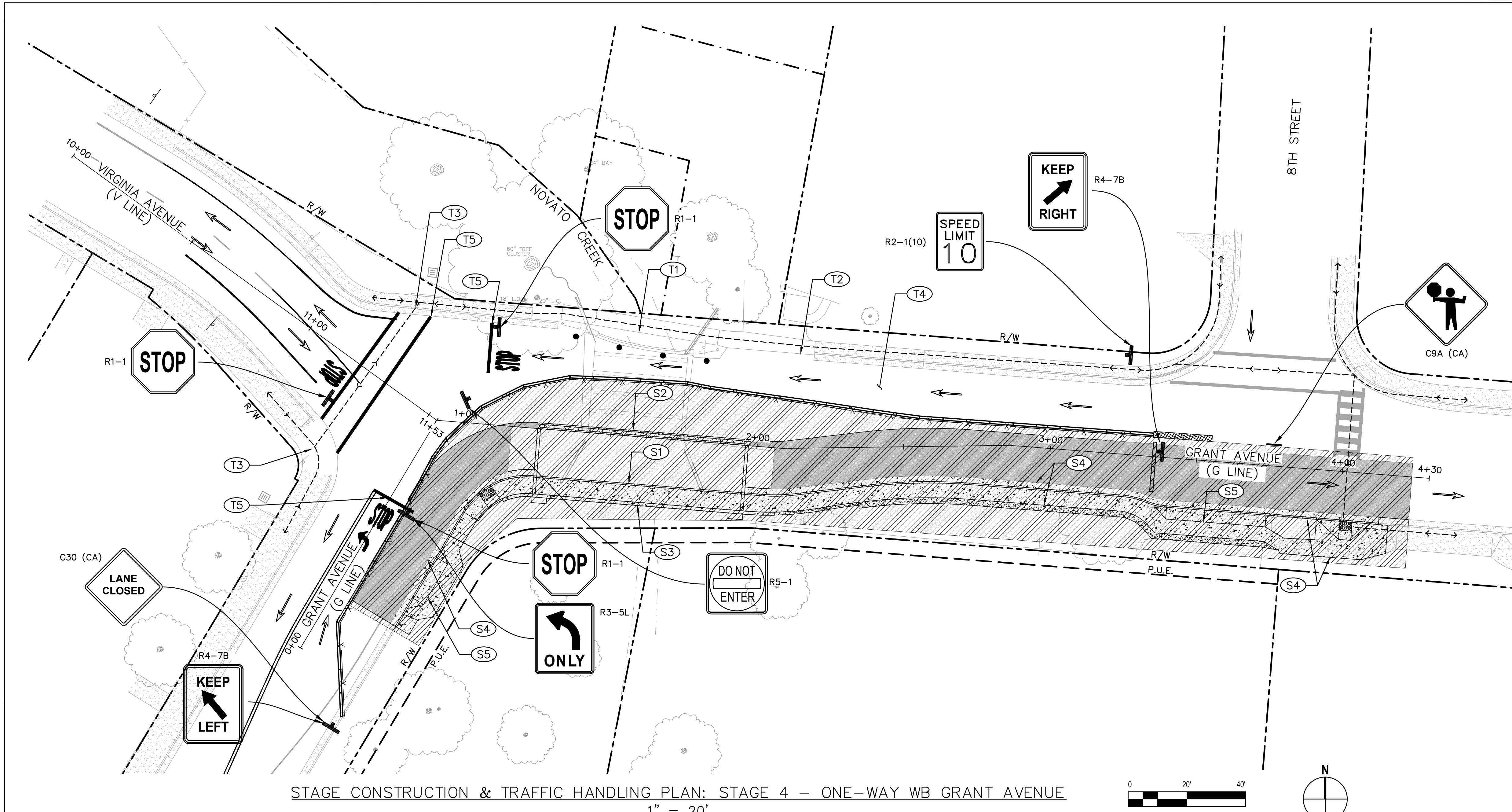
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Title	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN - STAGE 3 - TEMPORARY CLOSURE
Contract No.	11110085
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Drawing No:	SC3
Rev:	



STAGE CONSTRUCTION & TRAFFIC HANDLING PLAN: STAGE 4 - ONE-WAY WB GRANT AVENUE
 1" = 20'

TRAFFIC HANDLING KEYNOTES	
(T1)	PEDESTRIAN BRIDGE TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES TO PEDESTRIANS AND BICYCLISTS
(T2)	DRIVEWAY ACCESS MUST BE MAINTAINED AT ALL TIMES
(T3)	MAINTAIN PEDESTRIAN ACCESS AND CROSSWALKS
(T4)	GRANT AVENUE ONE-WAY WESTBOUND FROM 8TH STREET TO VIRGINIA AVENUE, PLACE DETOUR AS SHOWN ON SHEET DE 1
(T5)	INSTALL TEMP PAVEMENT MARKING

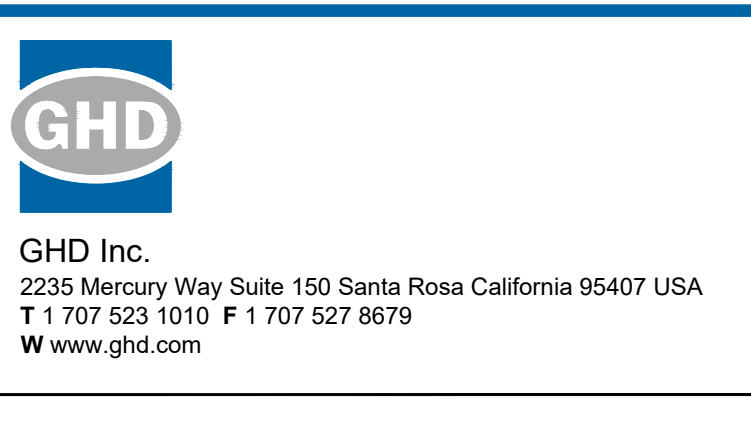
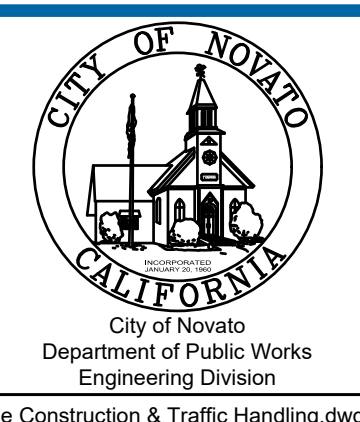
STAGE 4 CONSTRUCTION KEYNOTES	
(S1)	CONSTRUCT BRIDGE SIDEWALK (SEE STRUCTURAL PLANS)
(S2)	CONSTRUCT BRIDGE MEDIAN (SEE STRUCTURAL PLANS)
(S3)	CONSTRUCT BRIDGE BARRIER (SEE STRUCTURAL PLANS)
(S4)	CONSTRUCT CONCRETE CURB/GUTTER AND SIDEWALK (SEE CIVIL PLANS)
(S5)	CONSTRUCT CONCRETE DRIVEWAY APPROACH (SEE CIVIL PLANS)

LEGEND	
	CONSTRUCTION AREA THIS STAGE
	DIRECTION OF TRAVEL
	SITE SECURITY FENCING WITH PRIVACY SCREENING
	TEMP RAILING (TYPE K)
	TEMP "STOP" PAVEMENT MARKING
	TEMP TYPE IV PAVEMENT MARKING
	HMA PAVING THIS STAGE
	CONCRETE FLATWORK THIS STAGE
	TEMP PEDESTRIAN ROUTING
	CONSTRUCTION SIGN
	DELINEATOR
	TEMPORARY CRASH CUSHION ABSORB 350 IN-LINE ARRAY OR APPROVED EQUAL
	TYPE 3 BARRICADE

- SHEET NOTES:**
- REMOVE ANY CONFLICTING STRIPING, EXISTING OR NO PARKING FROM PREVIOUS STAGE.
 - FOR ADDITIONAL SIGNAGE NOT SHOWN, SEE MUTCD AND DETOUR PLAN 1 ON SHEET 19.

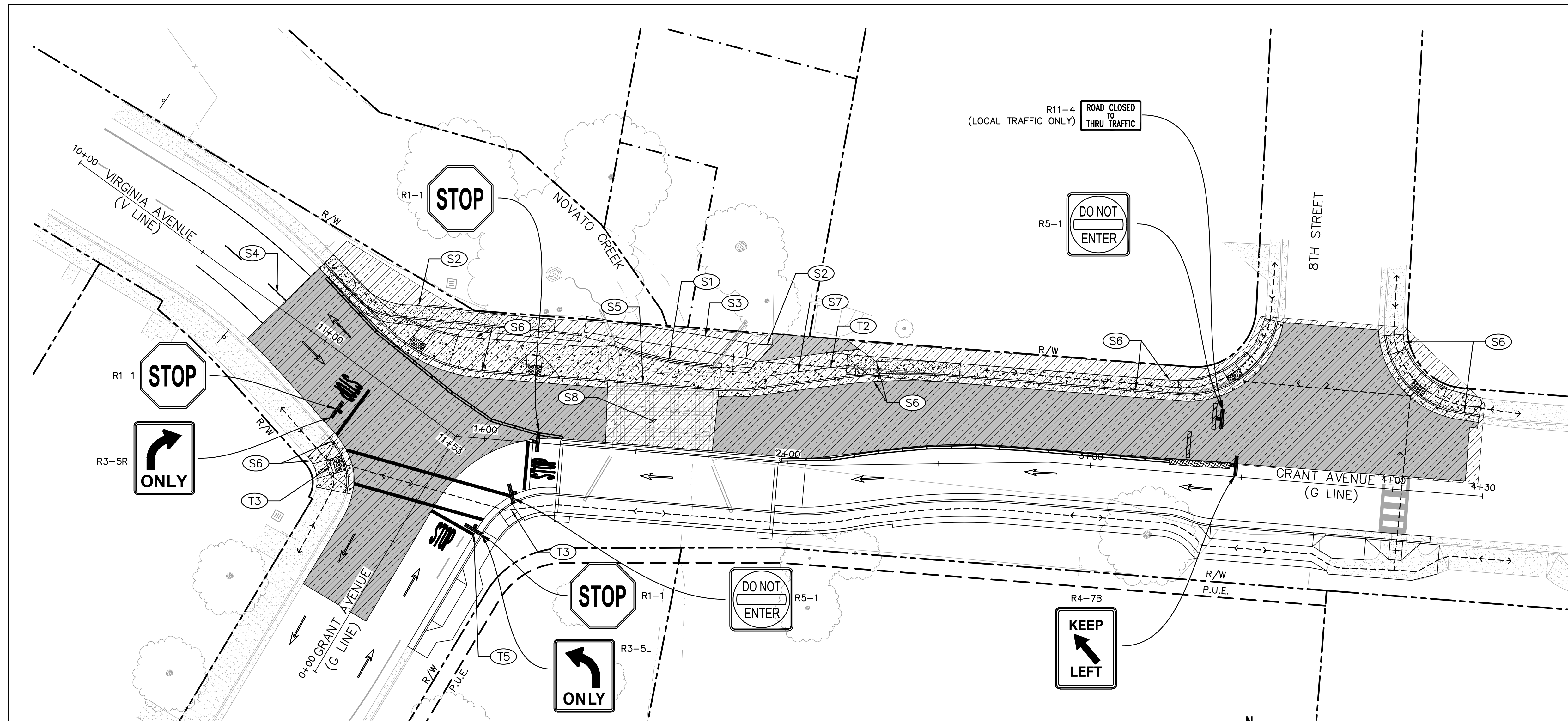
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Title	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN - STAGE 4 - ONE-WAY WB GRANT AVENUE
Contract No.	11110085
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STAGE CONSTRUCTION & TRAFFIC HANDLING PLAN: STAGE 5
1" = 20'

TRAFFIC HANDLING KEYNOTES	
(T2)	DRIVEWAY ACCESS MUST BE MAINTAINED AT ALL TIMES
(T3)	MAINTAIN PEDESTRIAN ACCESS AND CROSSWALKS
(T5)	INSTALL TEMP PAVEMENT MARKING

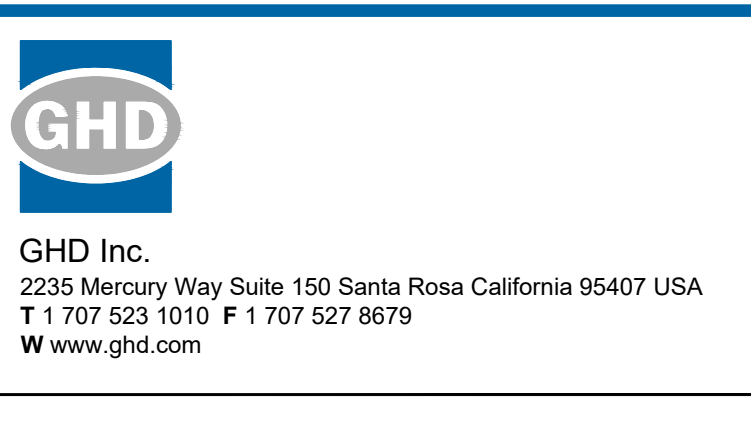
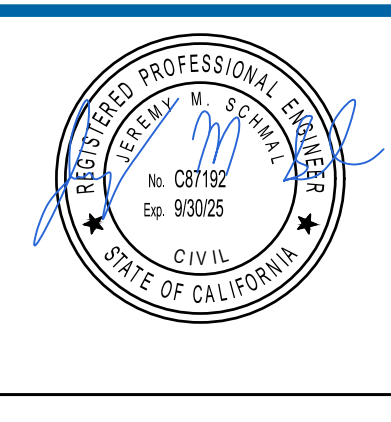
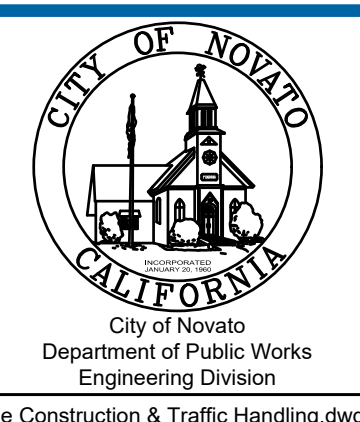
STAGE 5 CONSTRUCTION KEYNOTES	
(S1)	REMOVE EXISTING BRIDGE BARRIER/CONSTRUCT NEW BRIDGE BARRIER (SEE STRUCTURAL PLANS)
(S2)	REMOVE EXISTING SIDEWALK
(S3)	REMOVE EXISTING PEDESTRIAN BRIDGE
(S4)	REMOVE EXISTING STRIPING
(S5)	CONSTRUCT BRIDGE SIDEWALK (SEE CIVIL PLANS)
(S6)	CONSTRUCT CONCRETE CURB/GUTTER AND SIDEWALK (SEE CIVIL PLANS)
(S7)	CONSTRUCT CONCRETE DRIVEWAY APPROACH (SEE CIVIL PLANS)
(S8)	MILL AND GRIND DECK AND PLACE POLYESTER CONCRETE OVERLAY

LEGEND	
	CONSTRUCTION AREA THIS STAGE
	DIRECTION OF TRAVEL
	TEMP RAILING (TYPE K)
	TEMP "STOP" PAVEMENT MARKING
	TEMP TYPE IV PAVEMENT MARKING
	HMA PAVING THIS STAGE
	CONCRETE FLATWORK THIS STAGE
	POLYESTER CONCRETE OVERLAY
	TEMP PEDESTRIAN ROUTING
	CONSTRUCTION SIGN
	DELINEATOR
	TEMPORARY CRASH CUSHION ABSORB 350 IN-LINE ARRAY OR APPROVED EQUAL
	TYPE 3 BARRICADE

- SHEET NOTES:**
- REMOVE ANY CONFLICTING STRIPING, EXISTING OR NO PARKING FROM PREVIOUS STAGE.
 - MAINTAIN TWO-WAY TRAFFIC, ONE-WAY FLAG CONTROL ACCEPTABLE DURING WORK HOURS.

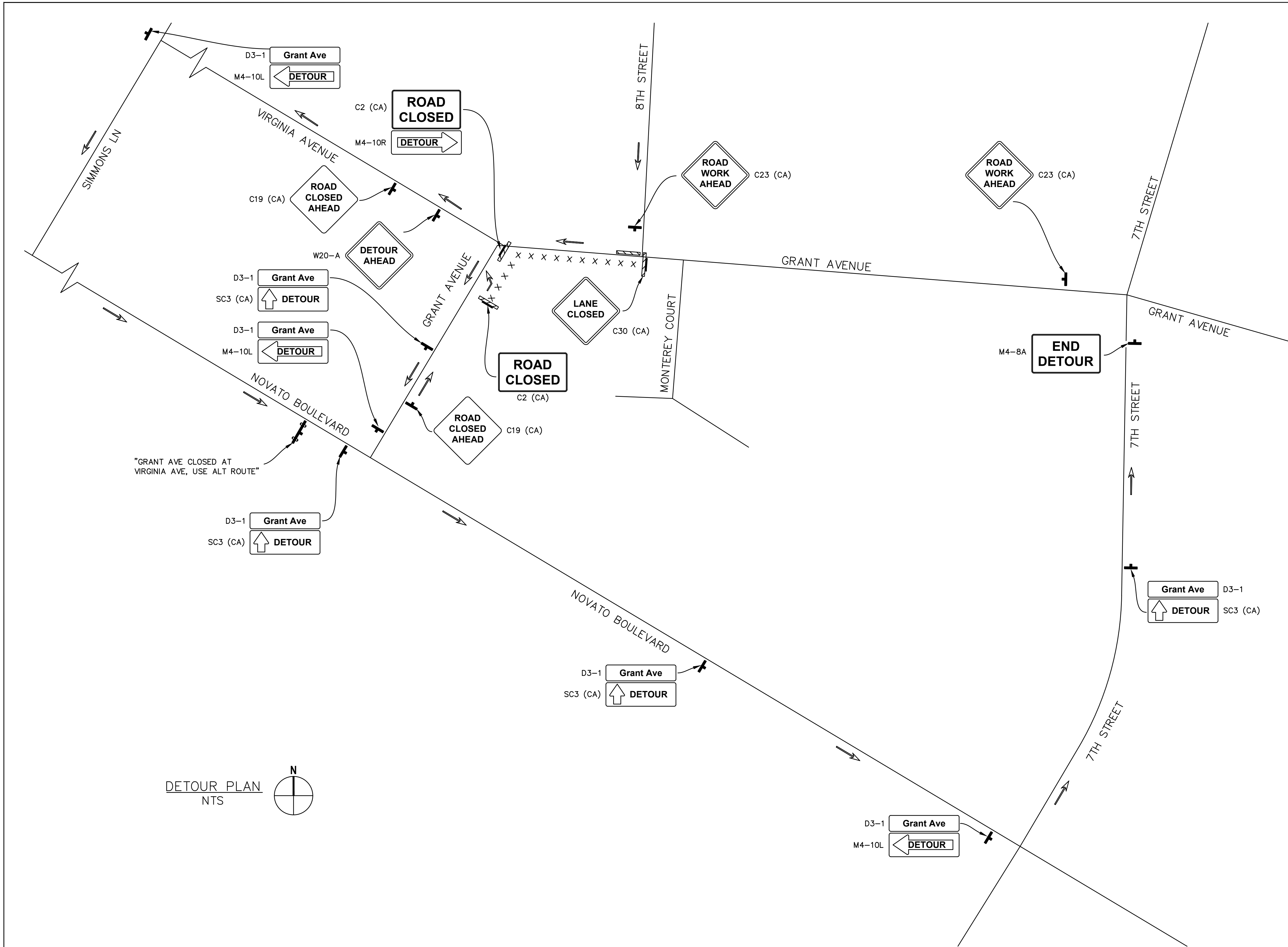
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Title	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN - STAGE 5 - ONE-WAY WB GRANT AVENUE
Contract No.	11110085
Original Size	Sheet 18 of 47
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Rev:	



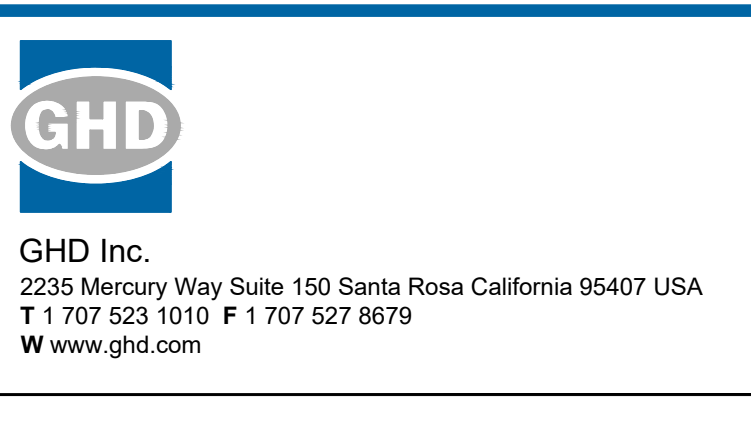
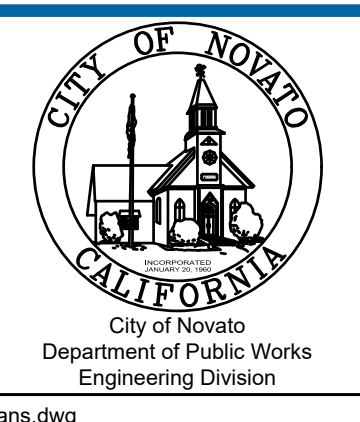
LEGEND	
	DIRECTION OF TRAVEL
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	ROADWAY CLOSED
	CHANGEABLE MESSAGE SIGN

- DETOUR PLAN NOTES**
- SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
 - FOR CLOSURE DETAILS NOT SHOWN, SEE MUTCD AND STAGE 2/STAGE 4 CONSTRUCTION & TRAFFIC HANDLING PLAN ON SHEET 15.
 - ALL SIGN PANELS SHALL BE BLACK ON ORANGE.
 - LETTERS FOR D3-1 SIGNS SHALL BE 8" TALL.
 - CALIFORNIA SIGN CODES ARE DESIGNATED BY (CA). OTHERWISE, FEDERAL MUTCD SIGN CODES ARE SHOWN.



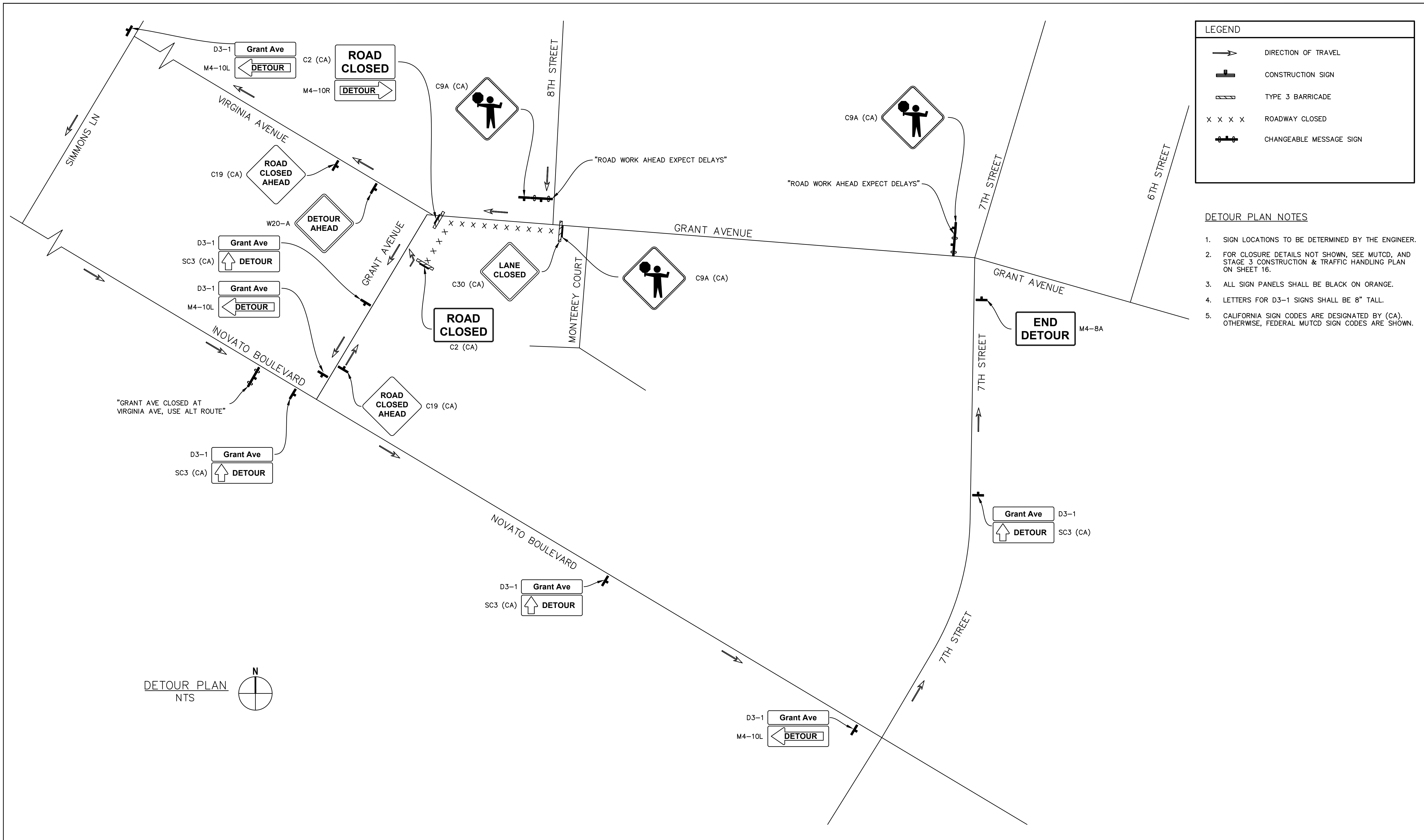
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Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	DETOUR PLAN 1 - STAGE 2, STAGE 4 & STAGE 5
Contract No.	11110085
Original Size	Sheet 19 of 47
Drawing No:	DE1
Rev:	



LEGEND

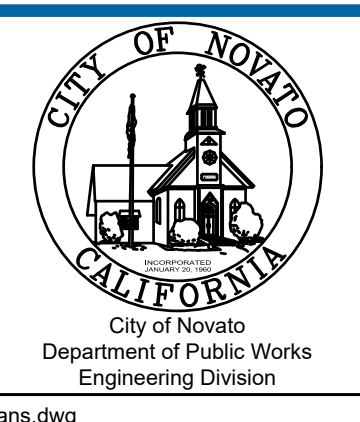
- DIRECTION OF TRAVEL
- CONSTRUCTION SIGN
- TYPE 3 BARRICADE
- ROADWAY CLOSED
- CHANGEABLE MESSAGE SIGN

- DETOUR PLAN NOTES**
- SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
 - FOR CLOSURE DETAILS NOT SHOWN, SEE MUTCD, AND STAGE 3 CONSTRUCTION & TRAFFIC HANDLING PLAN ON SHEET 16.
 - ALL SIGN PANELS SHALL BE BLACK ON ORANGE.
 - LETTERS FOR D3-1 SIGNS SHALL BE 8" TALL.
 - CALIFORNIA SIGN CODES ARE DESIGNATED BY (CA). OTHERWISE, FEDERAL MUTCD SIGN CODES ARE SHOWN.

DETOUR PLAN
NTS

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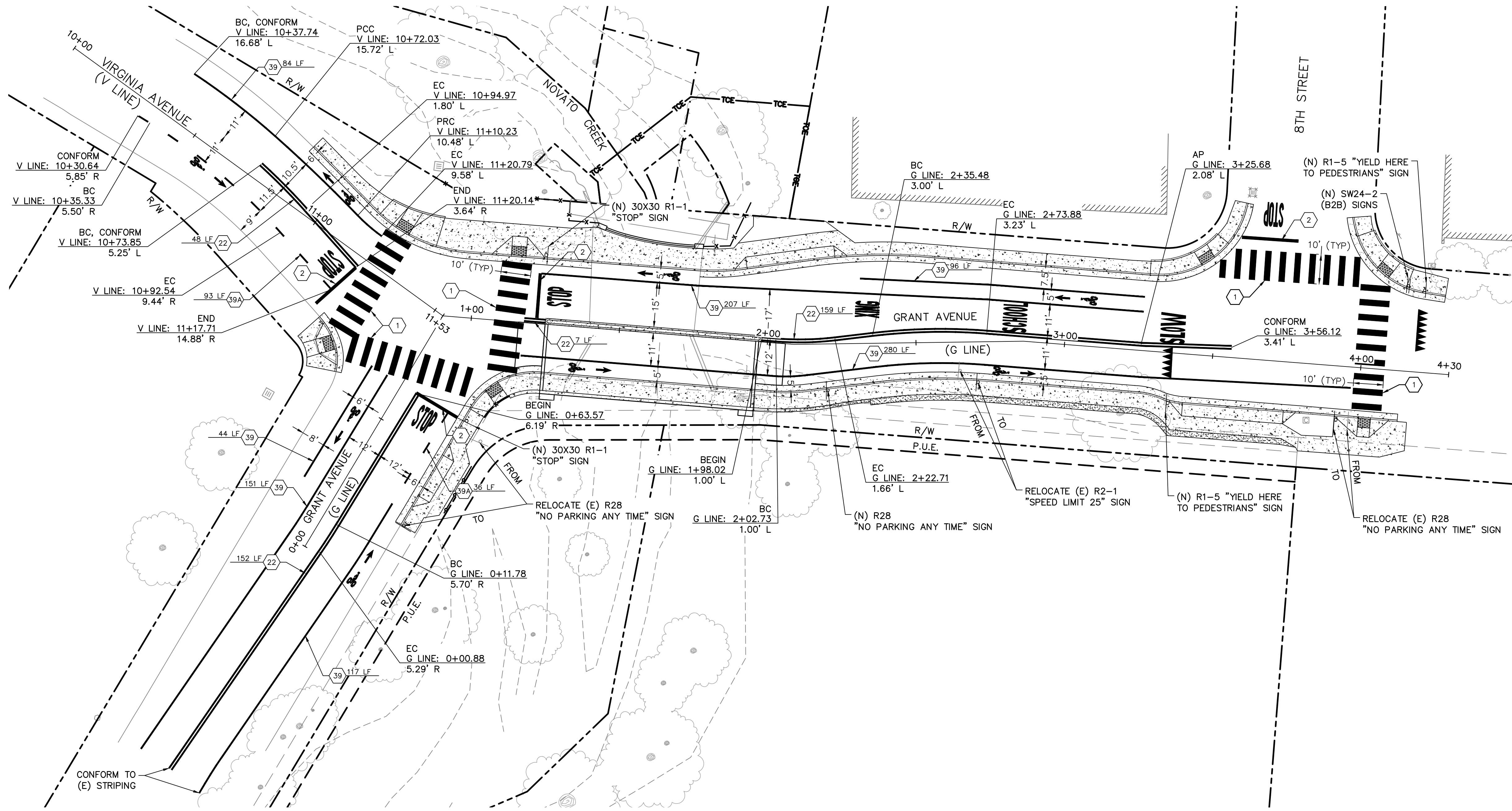
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Client **CITY OF NOVATO**
Project **GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)**
Title **DETOUR PLAN 2 - STAGE 3**
Contract No. 11110085
Original Size
Drawing No: **DE2**
Sheet 20 of 47
Rev:



KEYNOTE	
①	YELLOW CONTINENTAL CROSSWALK MARKING. 2' WIDE, 3' GAP, 10' WIDTH.
②	12" WHITE STOP BAR.

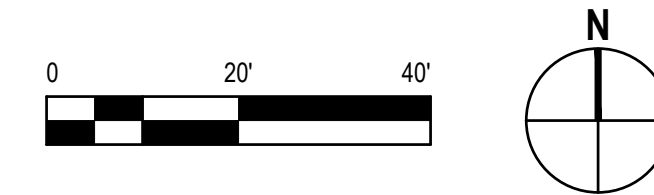
LEGEND	
	EXISTING BRIDGE STRUCTURE
	NEW CONCRETE SIDEWALKS, CURB, GUTTER AND PEDESTRIAN RAMPS
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)
	TRAFFIC STRIPING
	TRUNCATED DOMES
	STRIPING PER CALTRANS STANDARD DETAILS AND LENGTH
	PAVEMENT MARKING, PER STD PLAN A24D (WHITE, UON)
	PAVEMENT MARKING, PER STD PLAN A24C (WHITE, UON)
	SIGN ON POST
	PAVEMENT MARKING, PER STD PLAN A24A (WHITE, UON)
	PAVEMENT MARKING, PER STD PLAN A24E (WHITE, UON)

PAVEMENT DELINEATION AND SIGN PLAN NOTES

- ALL STRIPING AND PAVEMENT LEGENDS SHALL BE THERMOPLASTIC.
- STREET SIGNS SHALL BE DESIGNED IN ACCORDANCE WITH CA MUTCD STANDARDS.
 - R1-1 STOP: 30"x30"
 - R2-1 SPEED LIMIT: 24"x30"
 - R28 NO PARKING ANYTIME WITH ARROW: 12"x18"
- STREET SIGN POSTS SHALL BE INSTALLED PER DETAIL 1, SHEET 11 AND IN ACCORDANCE WITH UCS DWG. NO 310.
- INSTALL CHANGED CONDITIONS ORANGE FLAGS ON GRANT AVENUE STOP SIGNS.
- LAYOUT TO BE APPROVED PRIOR TO STRIPING.

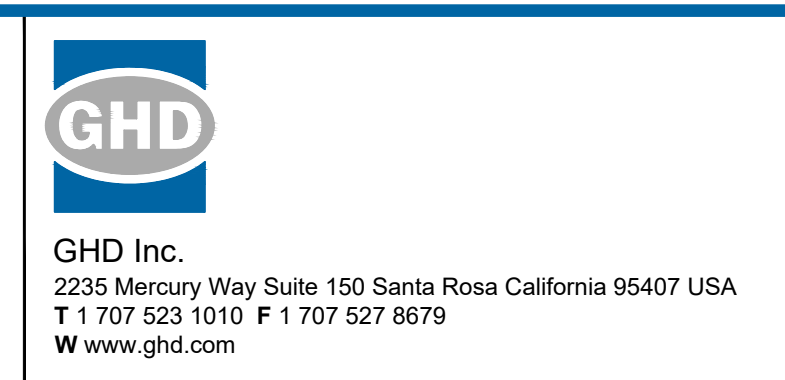
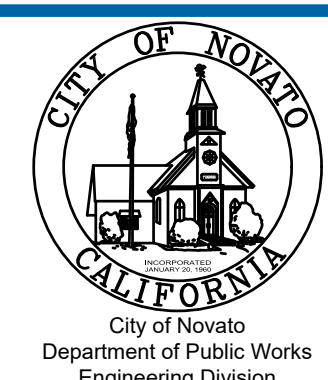
PAVEMENT DELINEATION AND SIGN PLAN

1" = 20'



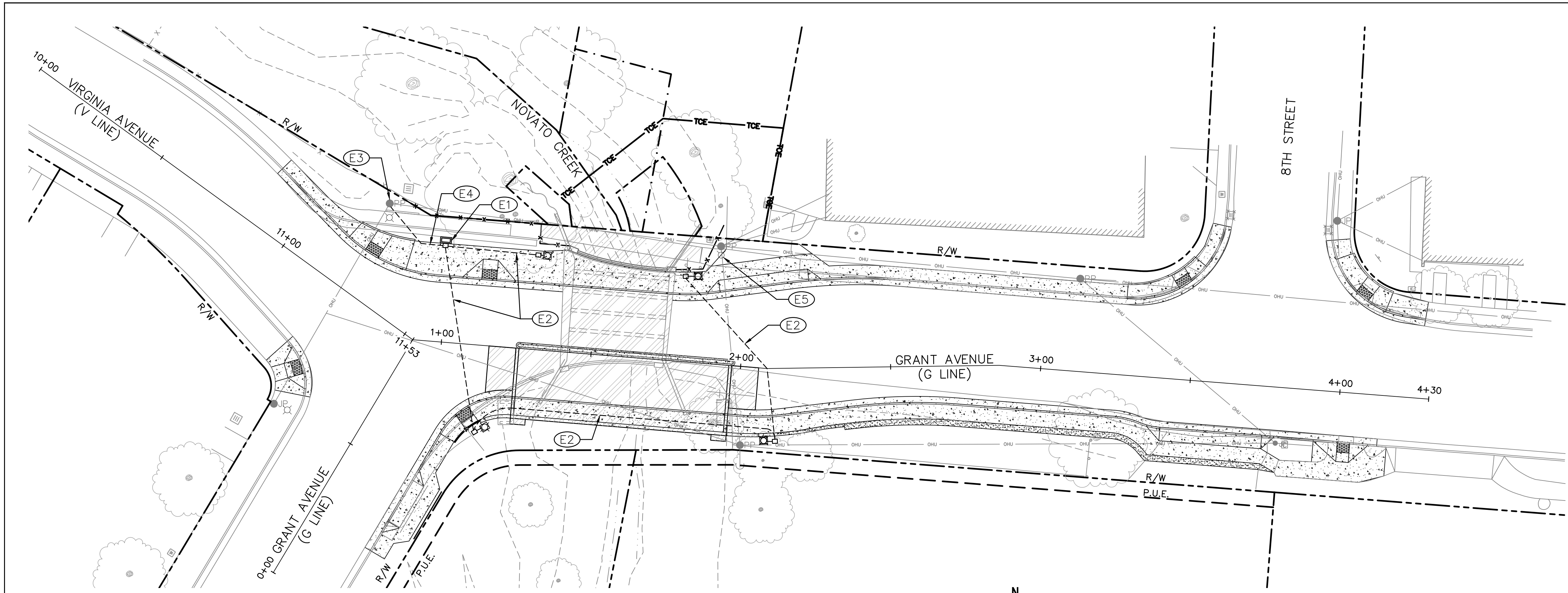
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Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	PAVEMENT DELINEATION AND SIGN PLAN
Contract No.	11110085
Drawing No.	PD1
Original Size	Sheet 21 of 47
Rev:	



STREET LIGHTING PLAN
1" = 20'

KEYNOTE	
(E1)	120/240 TYPE III-BF SERVICE EQUIPMENT ENCLOSURE
(E2)	2" C, 2#8 (LIGHTING)
(E3)	SERVICE DROP BY PG&E
(E4)	2" C (SERVICE CONDUCTORS BY PG&E)
(E5)	PG&E OWNED LUMINAIRE ON JOINT POLE. TO BE REMOVED BY OTHERS.

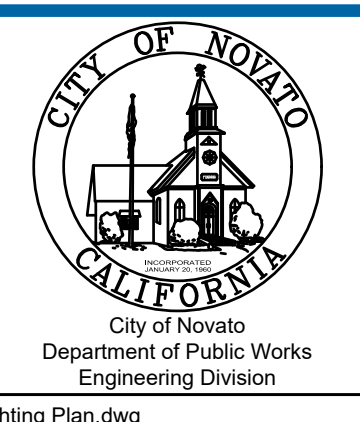
LEGEND	
	SEE STRUCTURE PLANS
	PORTLAND CEMENT CONCRETE
	RIGHT OF WAY
	PUBLIC UTILITY EASEMENT
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)
	(N) DECORATIVE STREET LIGHT LUMINAIRE: PHILIPS LUMEC MODEL NO. S56C1-65W49LED4K-ES-ACDR-LE3-120-SFOK-FN10-BKTX POLE: PHILIPS LUMEC MODEL NO. R80A-12-GFII-TBC1-BKTX
	(E) STREET LIGHT

STREET LIGHTING NOTES

1. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.
2. SEE CALTRANS STANDARD PLANS FOR DETAILS NOT SHOWN.
3. ALL PULL BOXES SHALL BE No. 5 (E) UNLESS NOTED.
4. LOCATION OF METER PAD AND METER TO BE DETERMINED WITH PG&E.
5. INSTALL CONDUIT AND PULL BOXES, AS SHOWN ON PLANS, AS PART OF BID ITEM 92, LIGHTING CONDUITS AND PULL BOXES.
6. WORK RELATING TO ACTIVATION OF STREET LIGHTS, INCLUDING BUT NOT LIMITED TO THE PURCHASE AND INSTALLATION OF STREET LIGHT STANDARDS AND EQUIPMENT ENCLOSURE, FOUNDATIONS, DECORATIVE POLES, LUMINAIRES AND CONDUCTORS IS INCLUDED IN BID ALTERNATIVE 4, STREET LIGHT ACTIVATION.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

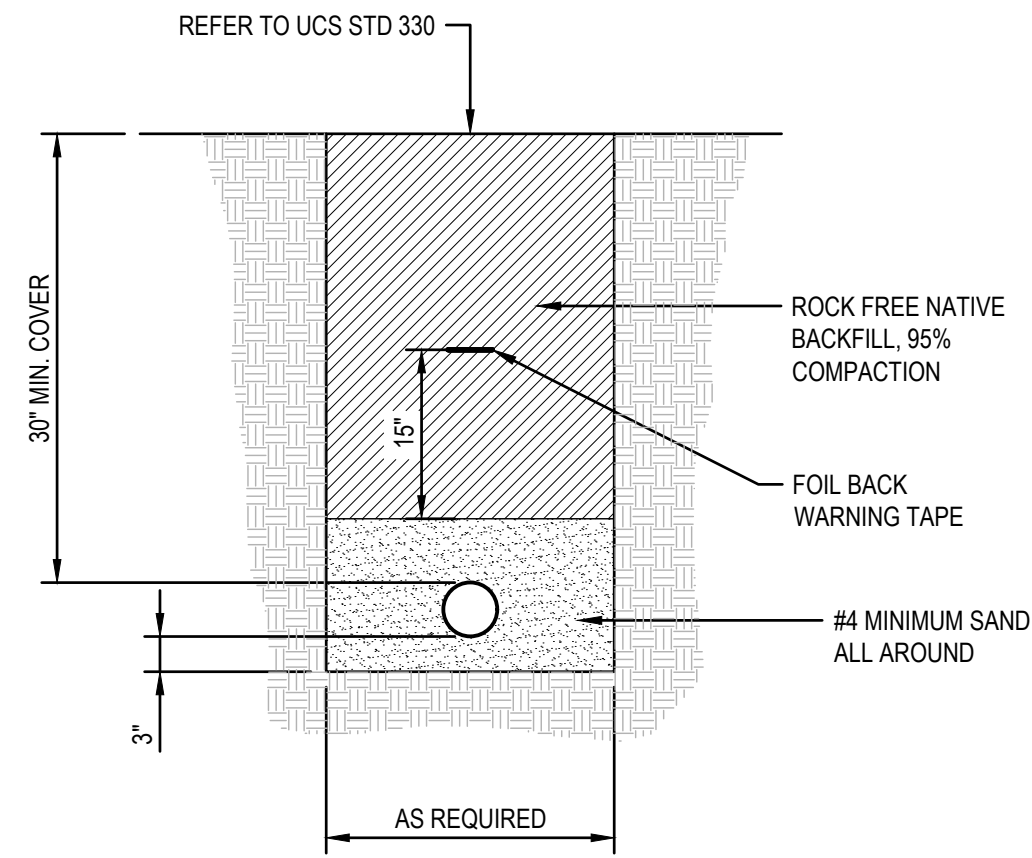
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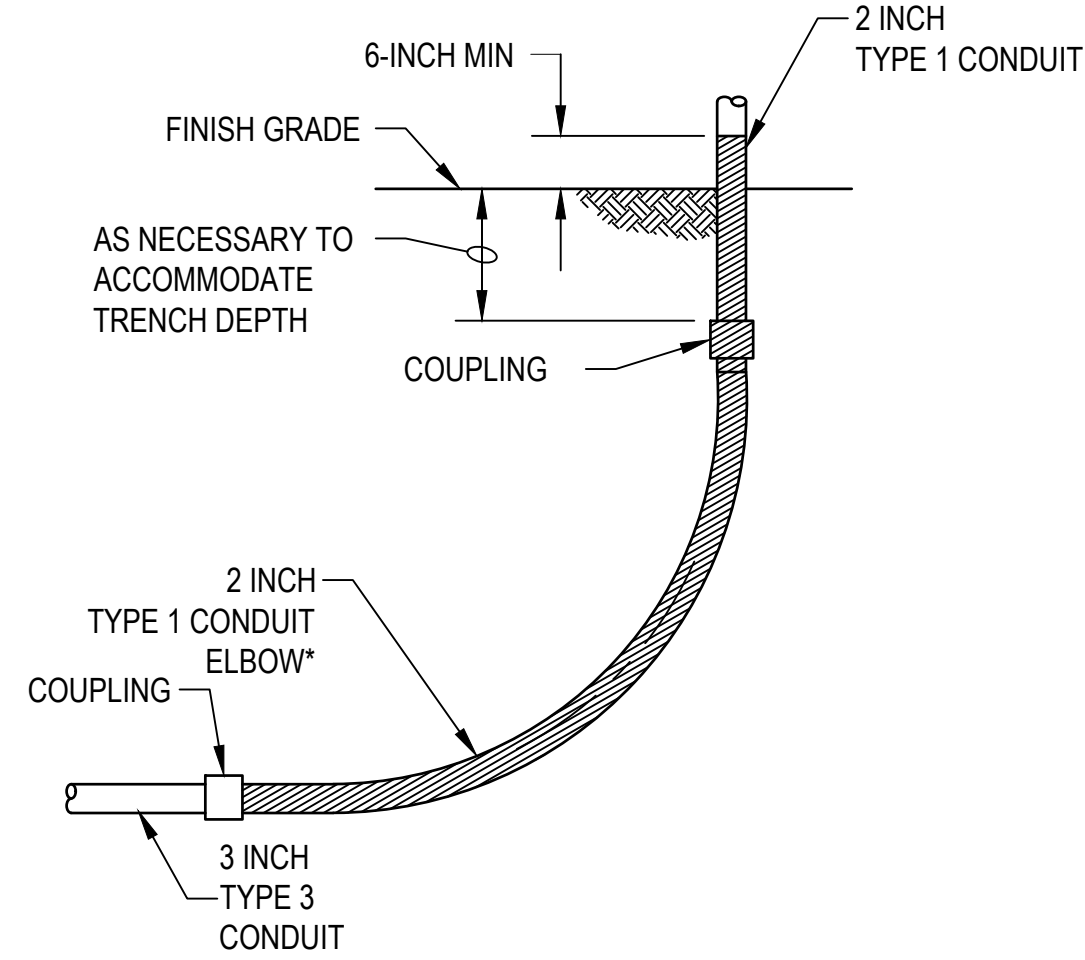
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Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	STREET LIGHTING PLAN
Contract No.	11110085
Original Size	Sheet 22 of 47
Drawing No:	E1
Rev:	

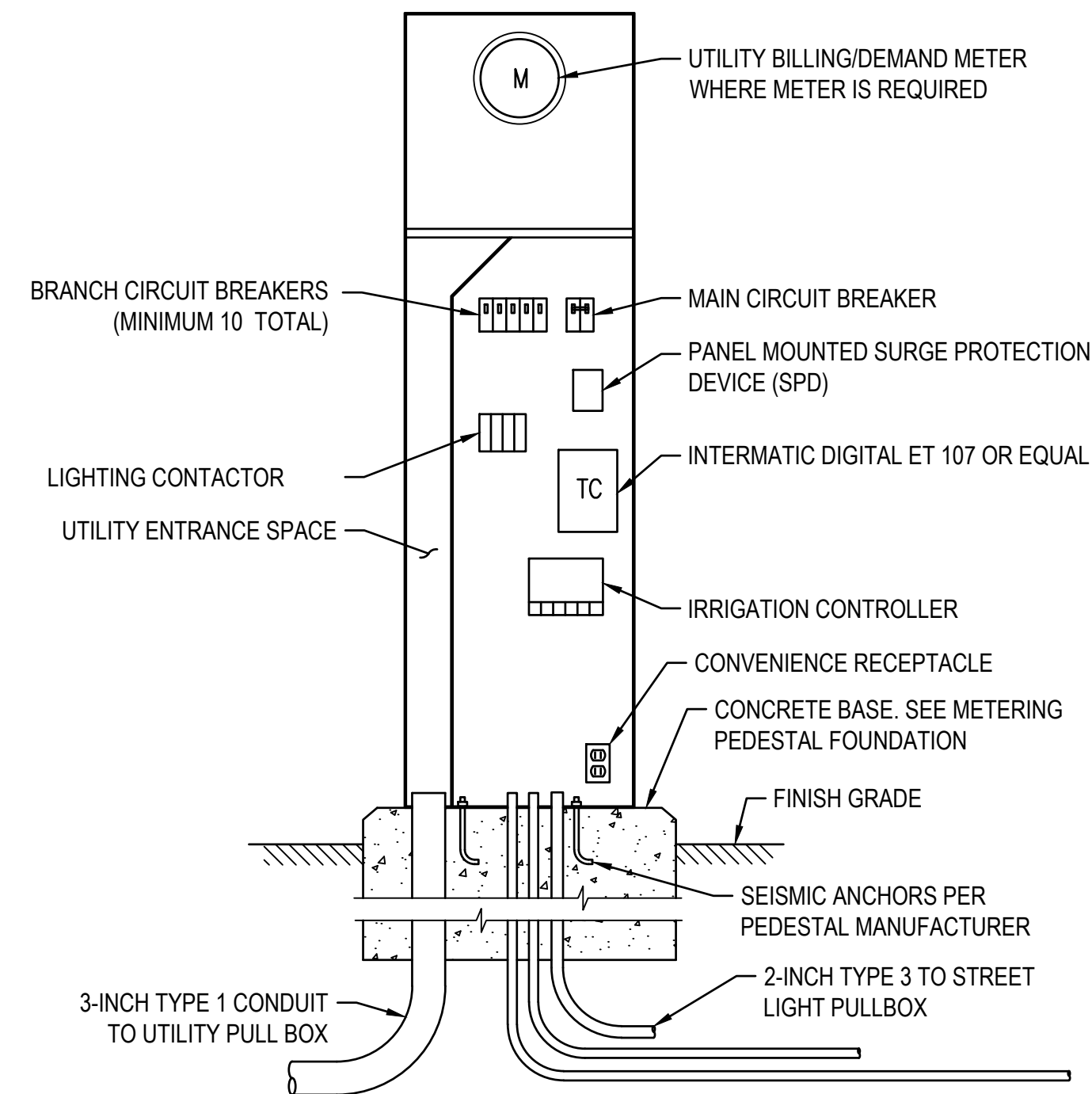


NOTE:
1. MAINTAIN A MINIMUM VERTICAL SEPARATION OF 12" WHEN CROSSING UTILITIES. ROUTE CONDUIT EITHER ABOVE OR BELOW OTHER UTILITIES AS NECESSARY TO ACHIEVE THIS SEPARATION WHILE MAINTAINING THE MINIMUM BACKFILL COVERAGE.

1 TYPICAL ELECTRICAL TRENCH
NO SCALE

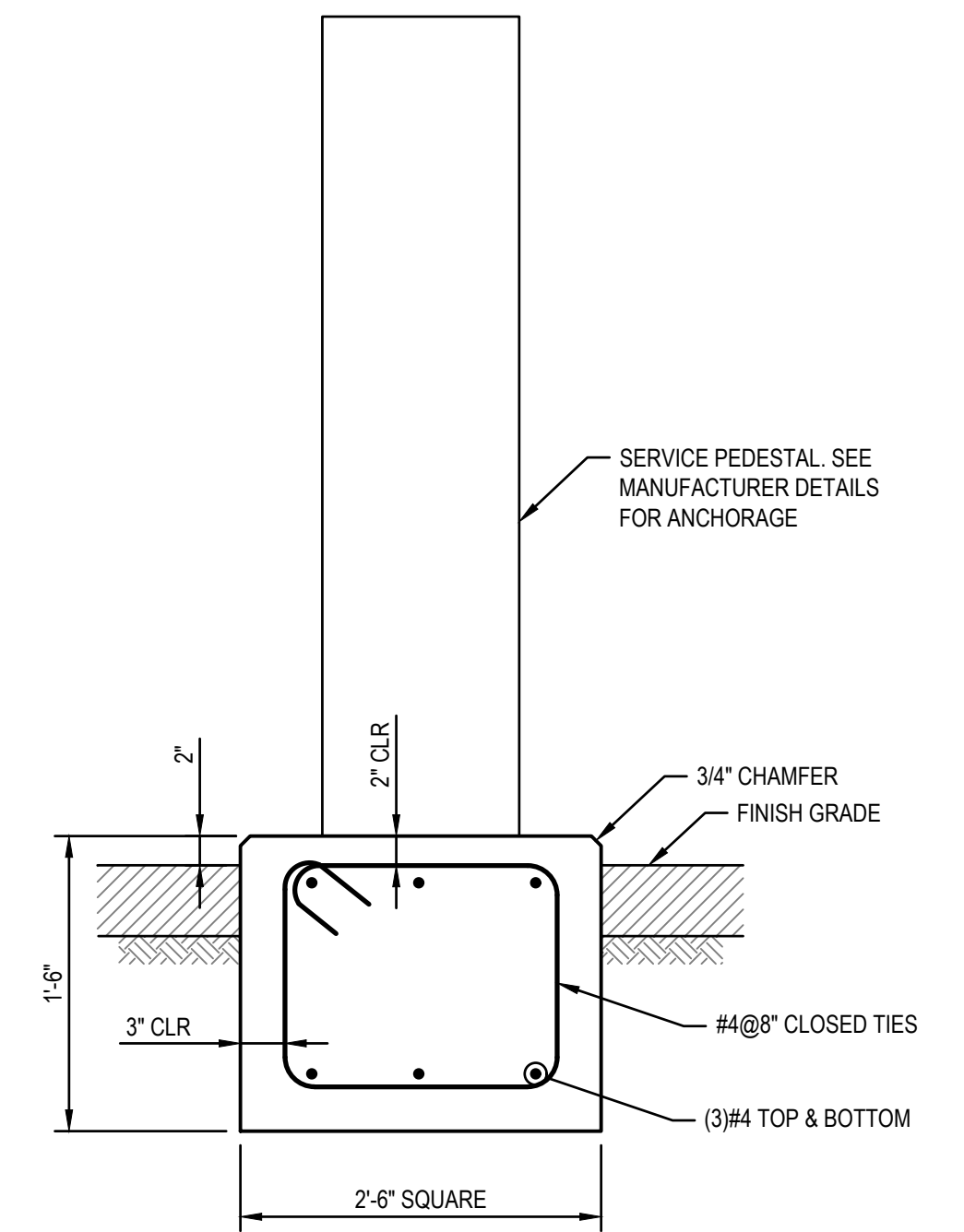


2 TYPICAL CONDUIT STUB-UP
NO SCALE

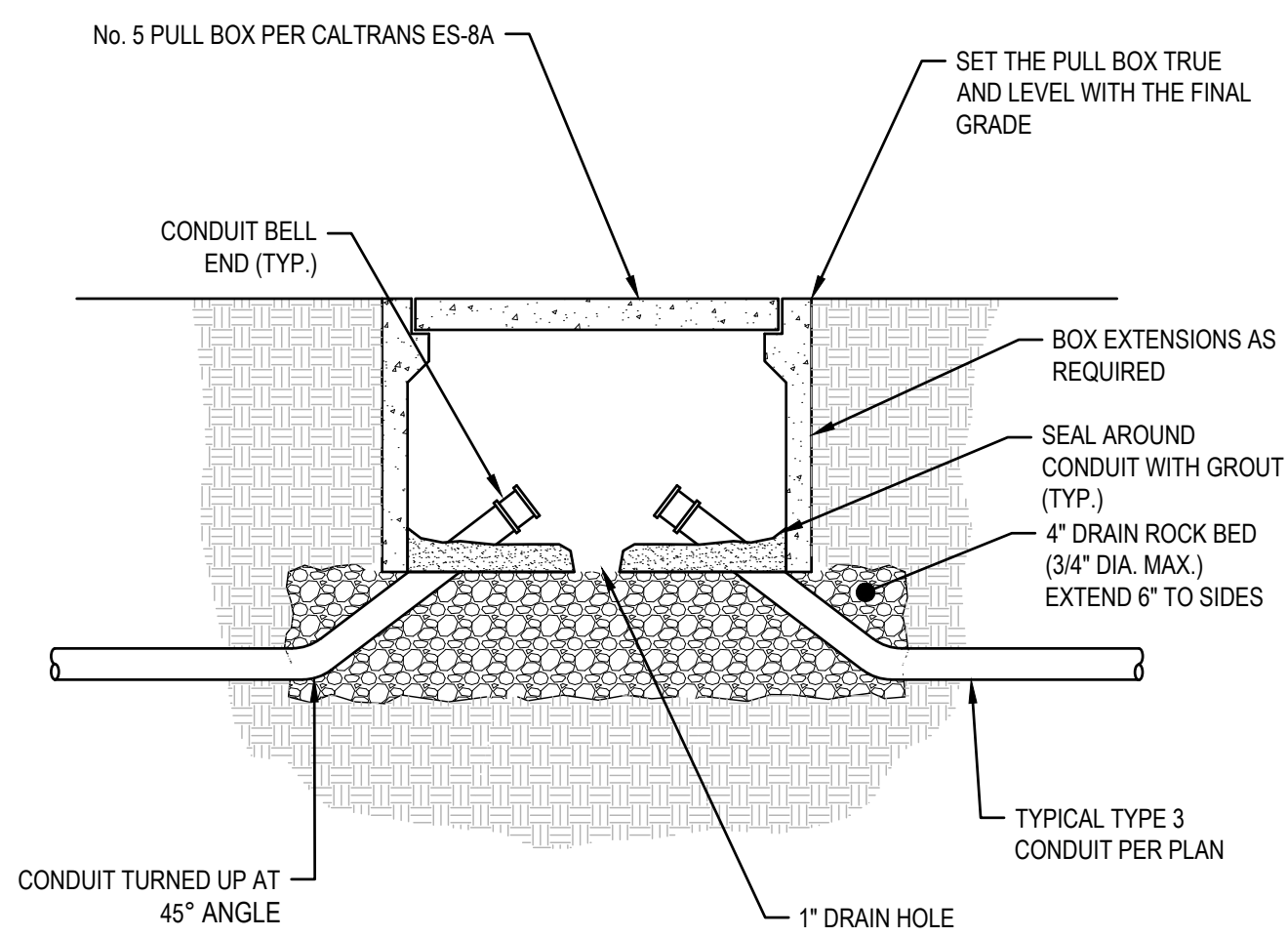


NOTE:
1. EXTERIOR DOOR NOT SHOWN FOR CLARITY.

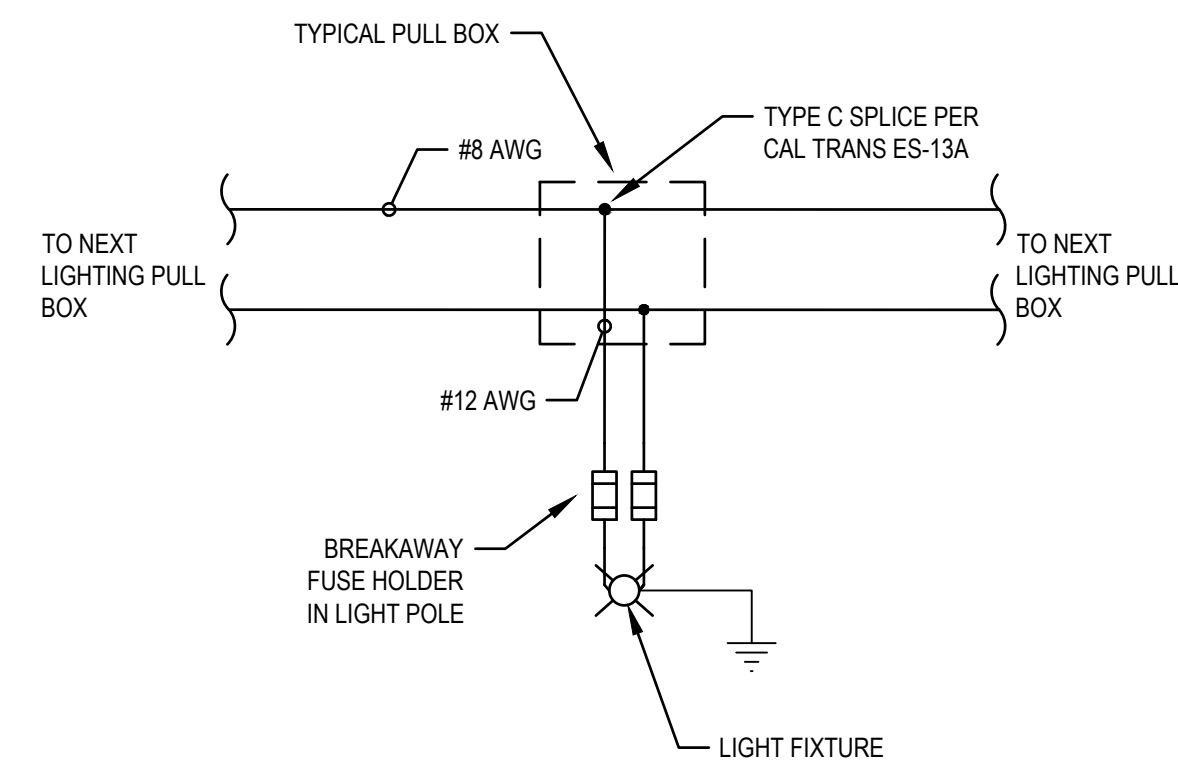
3 METERING PEDESTAL ELEVATION
NO SCALE



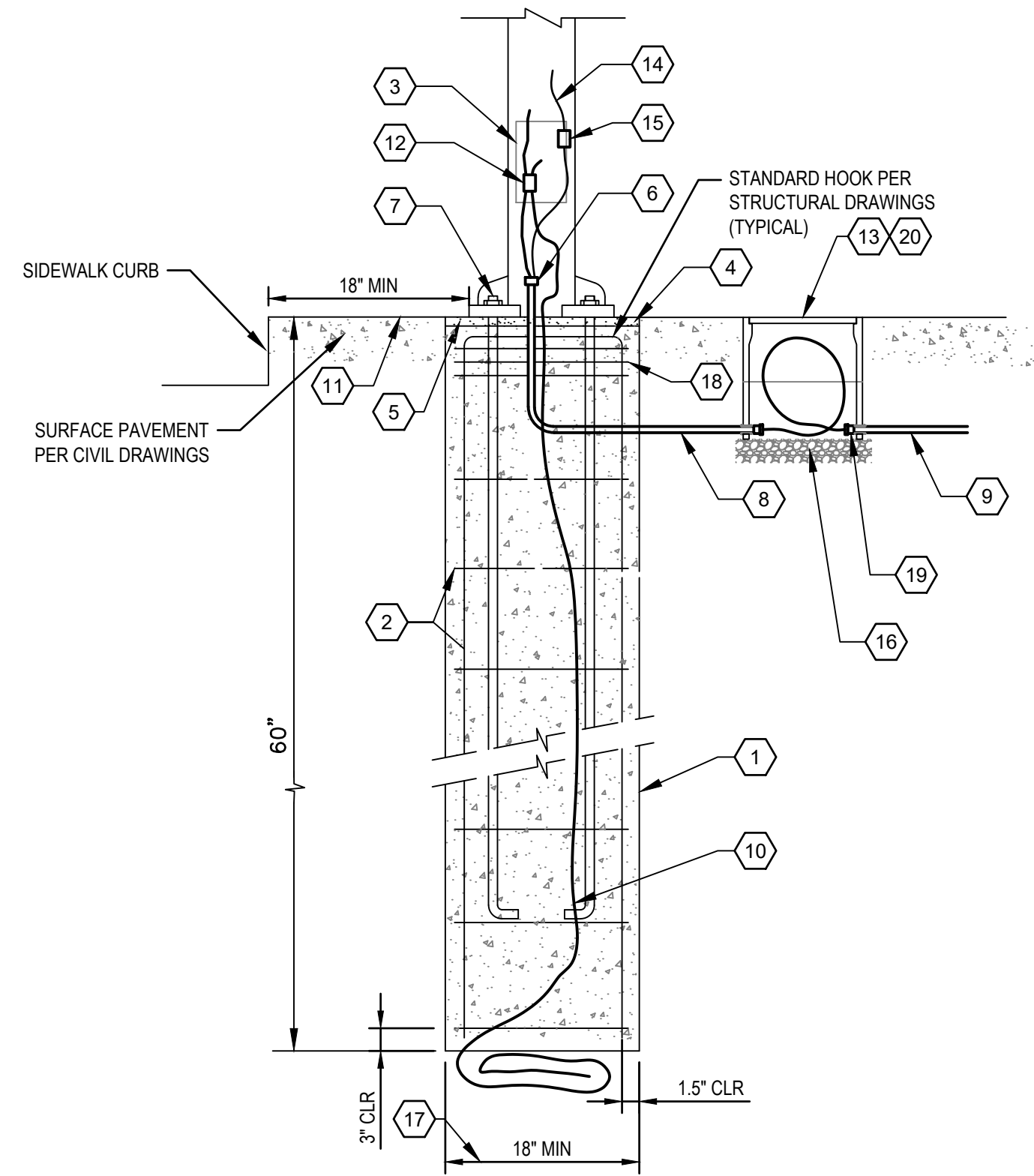
4 METERING PEDESTAL FOUNDATION
NO SCALE



5 TYPICAL PULL BOX - SIGNAL OR POWER
NO SCALE



6 STREET LIGHT WIRING DIAGRAM
NO SCALE

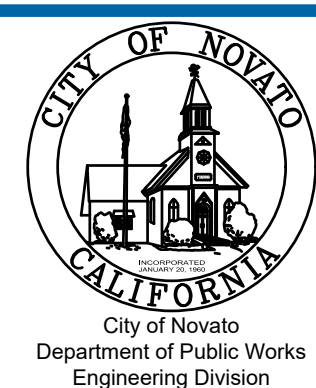


7 TYPICAL CONCRETE POLE BASE
NO SCALE

DETAIL KEYNOTES	
1.	POURED IN PLACE ROUND CONCRETE SUPPORT BASE.
2.	4- NO. 6 VERTICAL BARS WITH NO. 3 TIES @ 8-INCH O.C. SEE NOTE 18.
3.	ACCESS HAND-HOLE.
4.	NOT USED.
5.	GROUT IN ALL AROUND BETWEEN BOTTOM OF POLE BASE FOLLOWING POLE ERECTION AND FINAL LEVELING.
6.	STUB CONDUIT UP INTO POLE BASE WIRING CAVITY. (IF TYPE 1 CONDUIT TERMINATE WITH GROUNDING BUSHING.)
7.	PROVIDE SUPPORT AND LEVELING NUTS ON TOP AND BOTTOM OF POLE BASE MOUNTING PLATE. MOUNTING PLATE AND MOUNTING BOLTS SHALL BE PER MANUFACTURERS BOLT PATTERN. LENGTH SHALL BE PER MANUFACTURERS SPECIFICATIONS. WITH 2'-0" MIN. EMBEDMENT INTO CONCRETE POLE BASE.
8.	TYPICAL TYPE 3 CONDUIT, 3/4-INCH MIN. WITH CONDUCTORS AS INDICATED ON DRAWINGS.
9.	TYPICAL INCOMING EXTERIOR BRANCH CIRCUIT CONDUIT AND WIRING FROM U.G. CONDUITS. CONDUIT SHALL ENTER BOX AT 90-DEGREES
10.	(1) #12 AWG BARE COPPER GROUND. COIL 30-INCH AT BOTTOM OF FOUNDATION.
11.	TOP OF SIDEWALK AS INDICATED ON THE RESPECTIVE AREA SITE PLAN. SEE CIVIL DRAWINGS FOR SIDEWALK DETAILS.
12.	BOLTED TYPE WIRE GROUND CONNECTOR.
13.	REINFORCED, PRECAST GRADE MOUNTED ELECTRICAL BOX, CHRISTY B1017 OR EQUAL. PROVIDE WITH OPEN BOTTOM. ALL SPLICES SHALL BE MADE IN THE PULL BOX AND SHALL BE WATERPROOF, CAST TYPE.
14.	WIRING TO LIGHT FIXTURE. CONNECT COMPLETE.
15.	WATERPROOF IN-LINE FUSES.
16.	COMPACTED AGGREGATE BASE FLOOR ON UNDISTURBED EARTH
17.	LATERAL REINFORCEMENT SHALL BE DISTRIBUTED WITHIN 5-INCHES OF THE TOP OF THE COLUMN AND SHALL CONSIST OF 2-NO. 4 OR 3-NO. 3 BARS. (PER ACI318 - 7.10.5.6)
18.	PROVIDE BELL-END ON ALL CONDUITS. GROUT AND SEAL CONDUIT ENTRY INTO PULL BOX.
19.	LABEL COVER WITH "LIGHTING" OR SIMILAR

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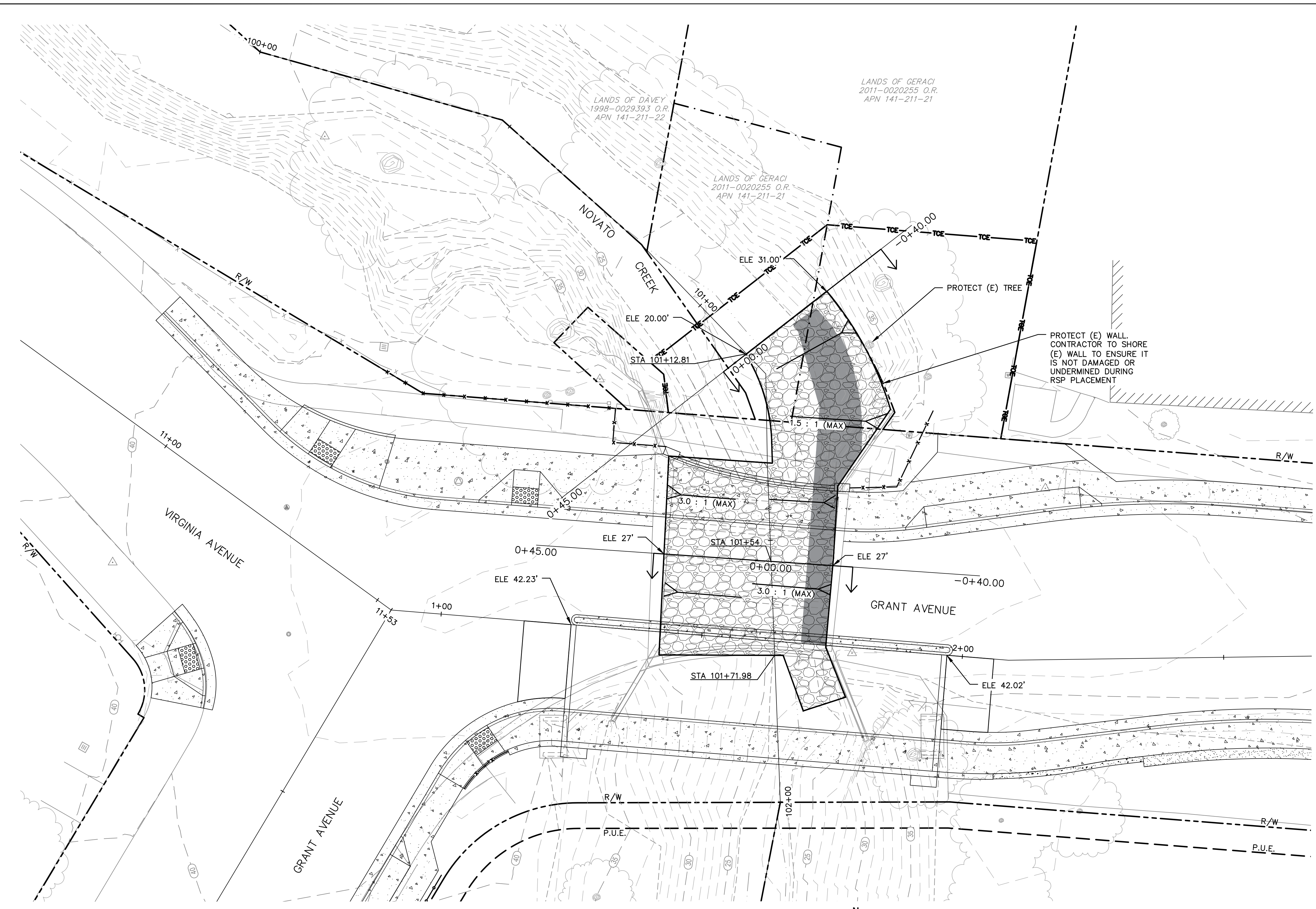
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Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	ELECTRICAL DETAILS
Contract No.	11110085
Original Size	
Drawing No.	E2
Sheet	23 of 47
Rev.	



LEGEND	
	ROCK SLOPE PROTECTION (TYPE B) = 1870 SF
	AREA OF EXISTING ROCK SLOPE PROTECTION TO BE REMOVED AND REPLACED (TYPE B) = 400 SF
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (P.U.E.)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

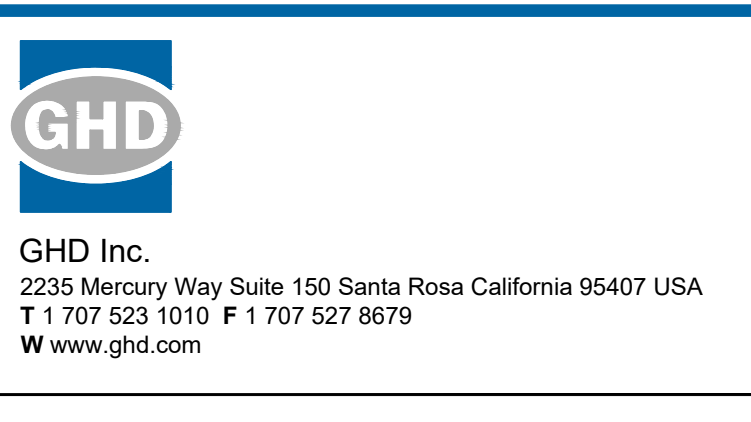
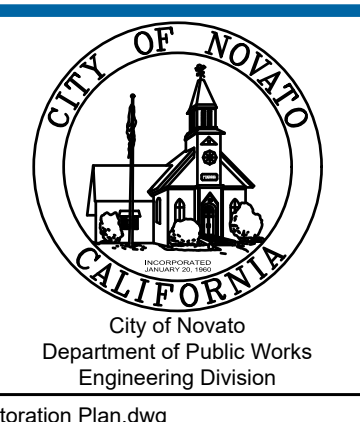
- CHANNEL RESTORATION PLAN NOTES**
- CONTRACTOR TO UNCOVER BURIED WEEPHOLES AND ENSURE FULLY FUNCTIONAL BEFORE RSP WORK.
 - CONTRACTOR TO PLACE ALL RSP PRIOR TO PLACING GIRDERS/SLABS ON NEW BRIDGE WIDENING.
 - ALL IN CREEK WORK SHALL OCCUR BETWEEN JUNE 15TH AND OCTOBER 15TH.
 - CONTRACTOR TO COORDINATE IN-CREEK RSP STAGE CONSTRUCTION WITH THE CITY AS NO HEAVY EQUIPMENT IS ALLOWED IN THE CREEK.

CHANNEL RESTORATION PLAN
1" = 10'



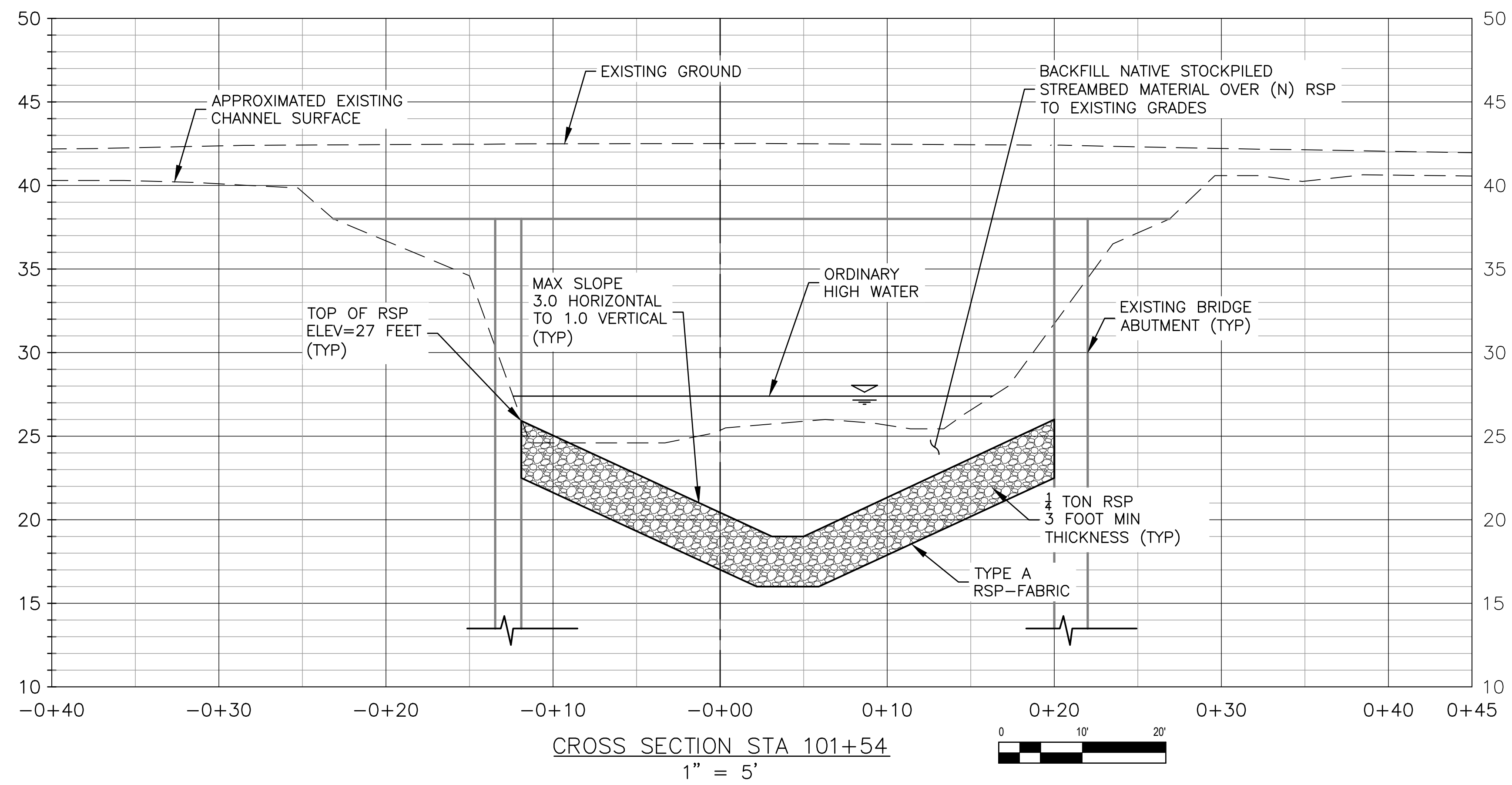
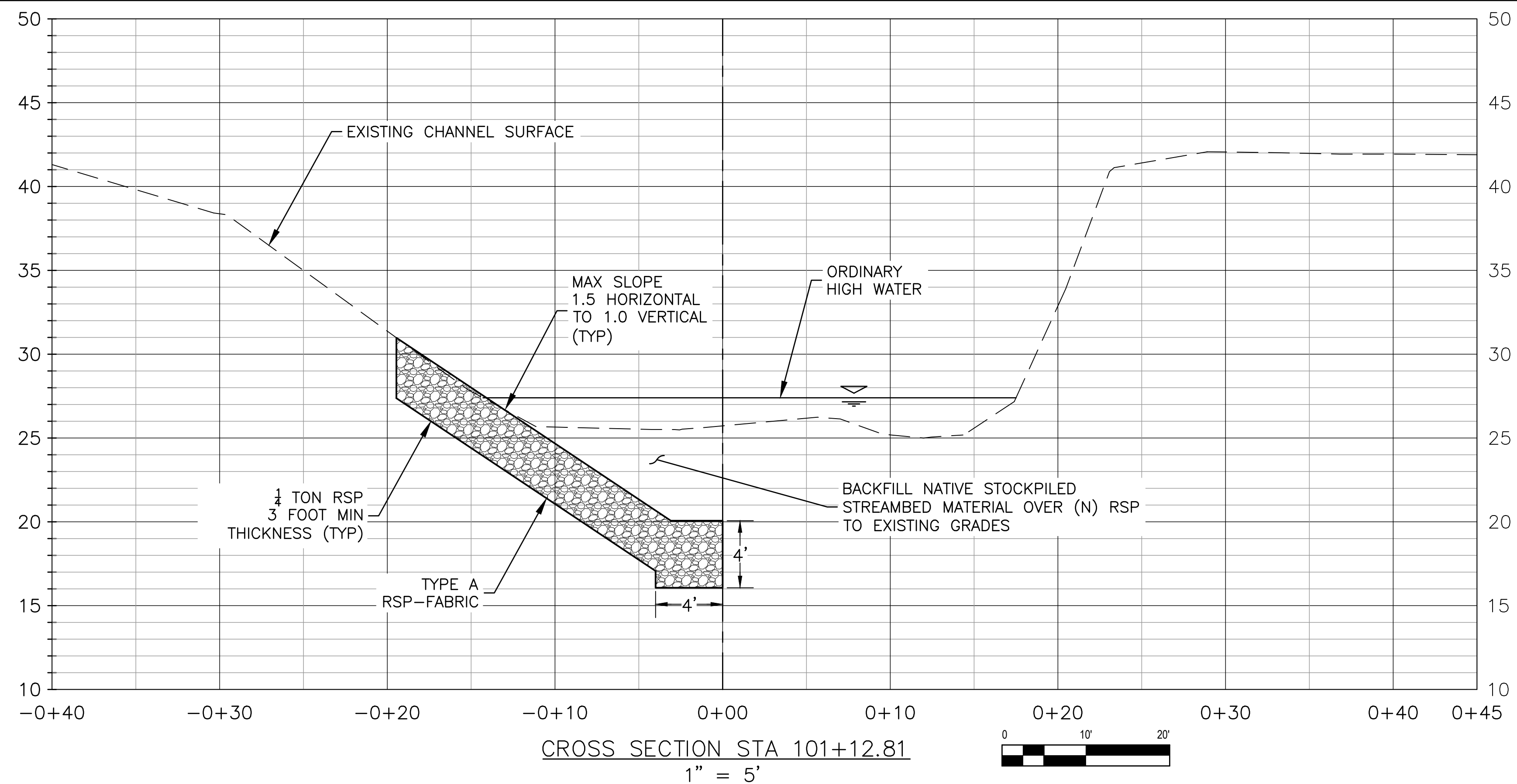
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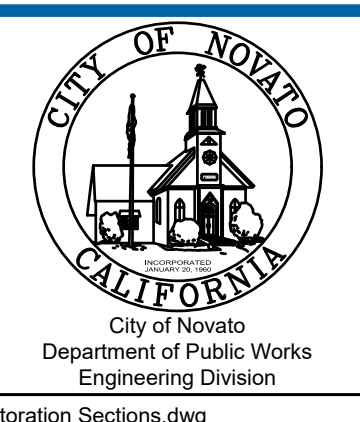
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Title	CHANNEL RESTORATION PLAN
Contract No.	11110085
Original Size	Sheet 24 of 47
Drawing No:	EC1
Rev:	



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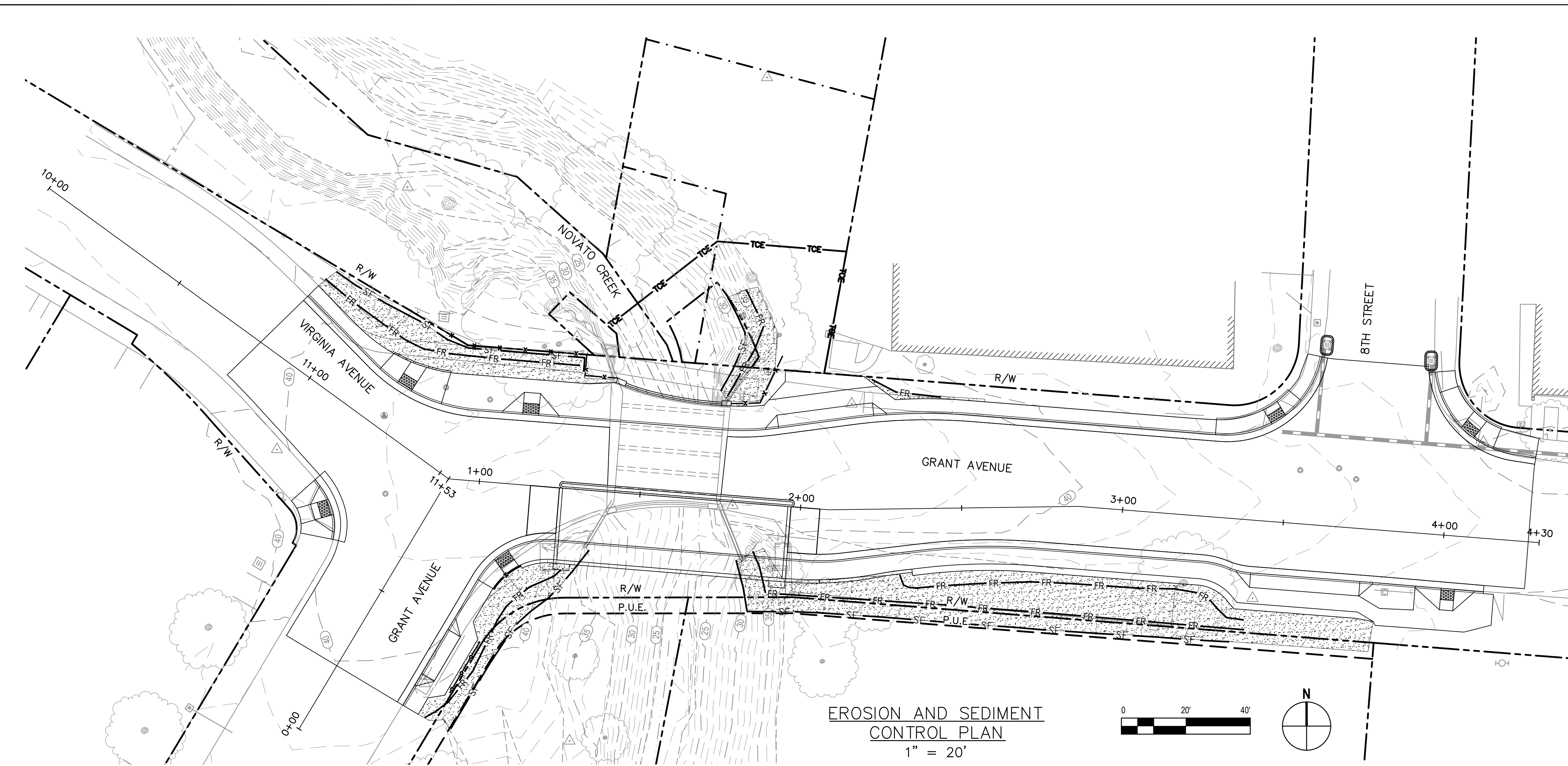
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Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	CHANNEL RESTORATION SECTIONS
Contract No.	11110085
Drawing No.	EC2
Original Size	Sheet 25 of 47
Rev:	



LEGEND	
	HYDROSEED
	FIBER ROLL (TYPE 1) PER CALTRANS STD PLAN T56
	SILT FENCE PER CALTRANS STD PLAN T51
	STORM DRAIN INLET PROTECTION PER CALTRANS STD PLAN T62
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

EROSION AND SEDIMENT CONTROL PLAN
1" = 20'

EROSION CONTROL PLAN NOTES

- GENERAL:**
- ALL GRADING WORK SHALL BE PROTECTED BY SILT FENCING IN A MANNER TO MINIMIZE EROSION AND COLLECT SEDIMENT.
 - EROSION CONTROL MEASURES TO BE EMPLOYED PER CITY OF NOVATO REQUIREMENTS.
 - ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS PLAN TO MEET FIELD CONDITIONS WILL BE MADE ONLY WITH THE APPROVAL OF, OR AT THE DIRECTION OF THE OWNER. CHANGES MADE TO SUIT FIELD CONDITIONS WILL BE MADE ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE OWNER. CHANGES MADE TO SUIT FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND OWNER.
 - ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY.
 - IF SIGNIFICANT SEDIMENT OR OTHER VISUAL SYMPTOMS OF IMPURITIES ARE NOTICED IN THE STORM WATER, CONTACT THE ENGINEER IMMEDIATELY.
 - CONTRACTOR IS RESPONSIBLE FOR INSPECTION AND RESTORATION OF ALL ASPECTS OF THE EROSION & SEDIMENTATION CONTROL PLAN. SEDIMENT ON THE SIDEWALKS AND GUTTERS SHALL BE REMOVED BY SHOVEL OR BROOM AND DISPOSED APPROPRIATELY.
 - ALL EMPLOYEES, CONTRACTORS, AND SUBCONTRACTORS ARE RESPONSIBLE FOR CONFORMING TO THE ELEMENTS SHOWN ON THIS PLAN OR RELATED DOCUMENTS.
 - CONTRACTOR TO EMPLOY BEST MANAGEMENT PRACTICES (BMP'S) IN ACCORDANCE WITH THE CITY OF NOVATO.
 - ALL DUMPSTERS OR OTHER TRASH STORAGE ENCLOSURES SHALL BE UTILIZED SOLELY FOR NON-HAZARDOUS MATERIALS.
 - ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS AND THE SITE SHALL BE MAINTAINED SO THAT A MINIMUM OF SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN SYSTEM. THESE PLANS SHALL REMAIN IN EFFECT UNTIL THE IMPROVEMENTS ARE ACCEPTED AND ALL SLOPES ARE STABILIZED.
 - BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES.
 - REMOVE SPOILS PROMPTLY AND AVOID STOCKPILING OF FILL MATERIALS WHEN RAIN IS FORECAST. IF RAIN IS FORECAST OR APPARENT, STOCKPILED SOILS AND OTHER MATERIALS SHALL BE COVERED WITH PLASTIC OR A TARP.
 - STORE, HANDLE AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES SO AS TO PREVENT THEIR ENTRY INTO THE STORM DRAIN SYSTEM. CONTRACTOR MUST NOT ALLOW CONCRETE, WASHWATERS, SLURRIES, PAINT OR OTHER MATERIALS TO ENTER THE CATCH BASINS, STORM DRAINAGE, OR ENTER SITE RUNOFF.
 - USE FILTRATION OR OTHER APPROVED MEASURES TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.
 - NO CLEANING, FUELING OR MAINTAINING VEHICLES ON SITE SHALL BE PERMITTED. DO NOT ALLOW DELETERIOUS MATERIALS TO ENTER THE CATCH BASINS, STORM DRAINAGE, OR TO ENTER SITE RUNOFF. ALL CONCRETE WASHOUT SHALL OCCUR OFF-SITE.

CONSTRUCTION SPECIFICATIONS

- THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES. ON SLOPES, THE FENCE LINE SHALL FOLLOW THE CONTOUR AS CLOSELY AS POSSIBLE. IN SMALL SWALES, THE FENCE LINE SHALL BE CURVED UPSTREAM AT THE SIDES TO DIRECT THE FLOW TOWARD THE MIDDLE OF THE FENCE.
- IF POSSIBLE, THE FILTER FABRIC SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.
- STEEL POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA-STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, OR WOOD POSTS ARE UTILIZED, POST SPACING SHALL NOT EXCEED 6 FEET.
- A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE LINE OF POST AND UPSLOPE FROM THE BARRIER.
- WHEN STANDARD-STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE STANDARD-STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
- WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF NO. 6 ABOVE APPLYING.
- THE TRENCH SHALL BE BACK FILLED AND THE SOIL COMPACTED OVER THE TOE OF THE FILTER FABRIC.
- SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

MATERIALS

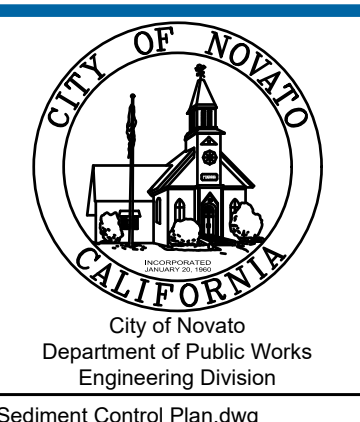
- FILTER FABRIC SHALL BE A PERVIOUS SHEET OF SYNTHETIC POLYMER COMPOSED OF AT LEAST 85% BY WEIGHT ETHYLENE, PROPYLENE, AMIDE, ESTER OF VINYLIDENE YARN, WOVEN OR NON WOVEN, AND SHALL CONTAIN STABILIZERS AND/OR INHIBITORS TO RESIST DETERIORATION BY HEAT, WATER AND ULTRAVIOLET LIGHT. THE FABRIC SHALL CONFORM TO THE FOLLOWING CRITERIA:
 - THE EQUIVALENT OPENING SIZE (U.S. STANDARD SIEVE) SHALL BE WITHIN THE RANGE 70-100.
 - THE TENSILE STRENGTH (ASTM D1682G) SHALL BE AT LEAST 120 POUNDS. THE STRENGTH OF FABRIC REQUIRED DEPENDS ON THE WIRE SUPPORT FENCE. THE STRENGTH GIVEN IS THE MINIMUM FOR A 6-INCH SQUARE MESH WIRE SUPPORT FENCE. IF EXTRA-STRENGTH FABRIC IS USED WITHOUT A SUPPORT FENCE, THE STRENGTH REQUIRED SHALL BE 200 POUNDS MINIMUM WITH POSTS SPACED ON 6 FOOT CENTERS.
- POSTS FOR SILT FENCES SHALL BE EITHER 4-INCH-DIAMETER WOOD OR 1.33-POUNDS-PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
- WIRE FENCE REINFORCEMENT FOR SILT FENCES SHALL BE A MINIMUM OF 42 INCHES IN HEIGHT, SHALL BE A MINIMUM OF 14-GAUGE, AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 INCHES.

MAINTENANCE

- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL AND REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE BARRIER'S EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE SPREAD TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

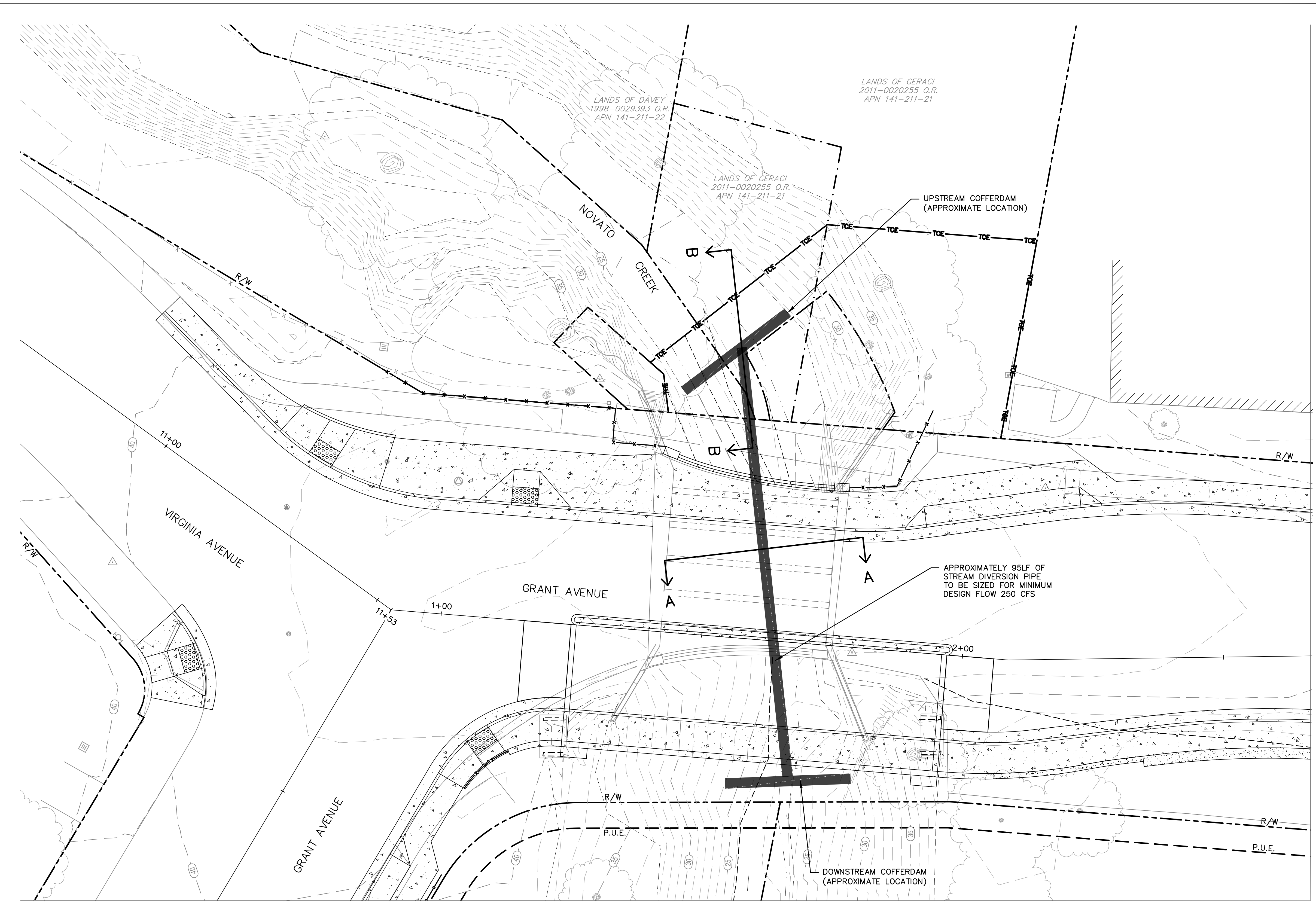
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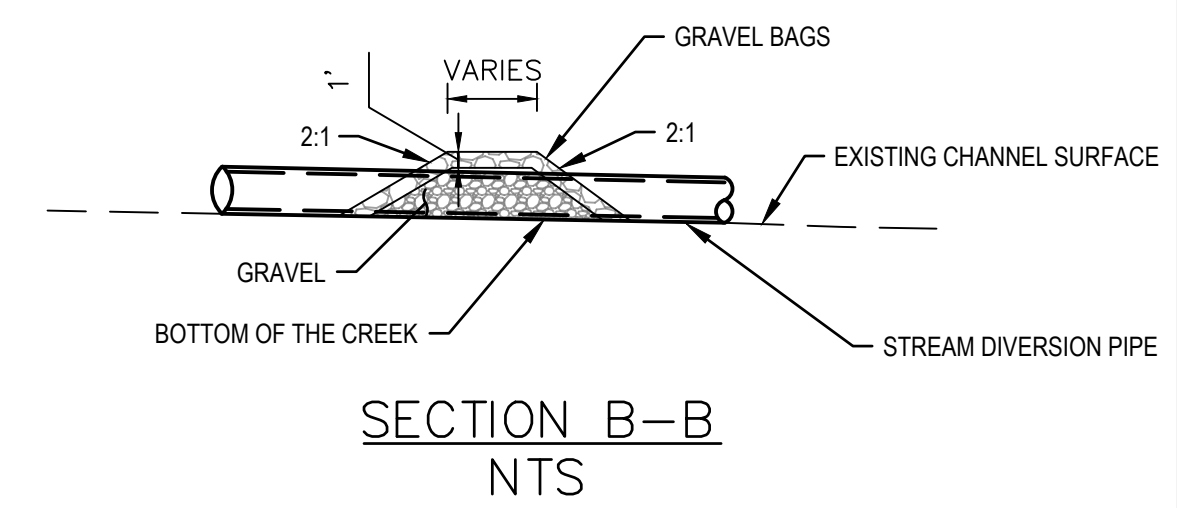
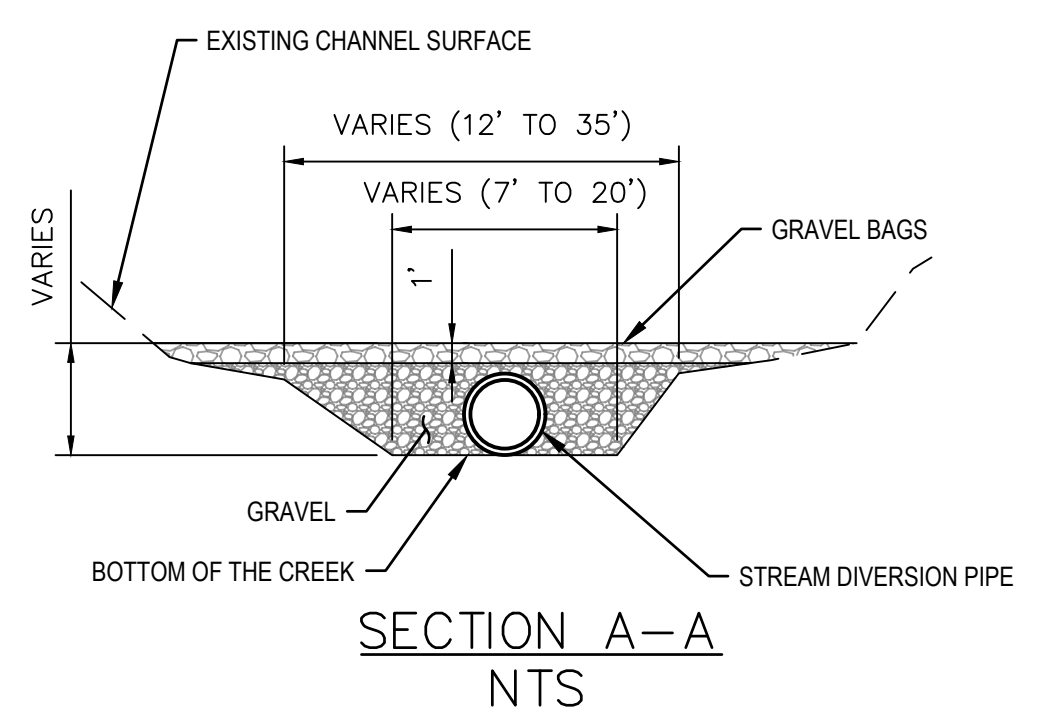
Drawn	NT	Designer	JS
Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	EROSION AND SEDIMENT CONTROL PLAN
Contract No.	11110085
Original Size	
Drawing No.	EC3
Sheet	26 of 47
Rev.	



LEGEND	
	RIGHT OF WAY (R/W)
	PUBLIC UTILITY EASEMENT (PUE)
	ACCESS EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT (TCE)

- TEMPORARY CREEK DIVERSION PLAN NOTES**
- GRAVEL OR GRAVEL BAGS TO BE PLACED AT THE END OF PIPE AND AT INTERMITTENT LOCATIONS AS DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
 - TEMPORARY CULVERT ALIGNMENT IS APPROXIMATE. CONTRACTOR SHALL DETERMINE THE ALIGNMENT OF TEMPORARY CULVERT TO AVOID CONFLICT WITH PROJECT IMPROVEMENTS.
 - CONTRACTOR TO SIZE THE CREEK DIVERSION PIPE FOR MIN DESIGN FLOW OF 250 CFS.
 - USE PLASTIC TO ENSURE COFFERDAMS ARE WATER TIGHT.

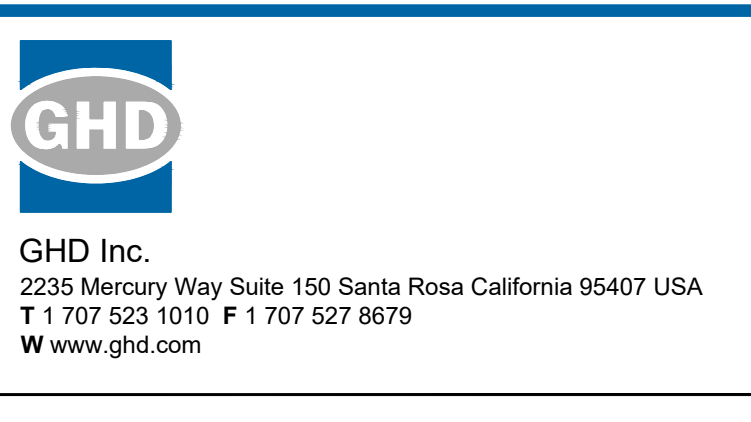
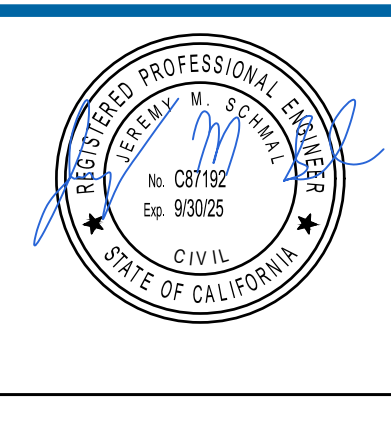
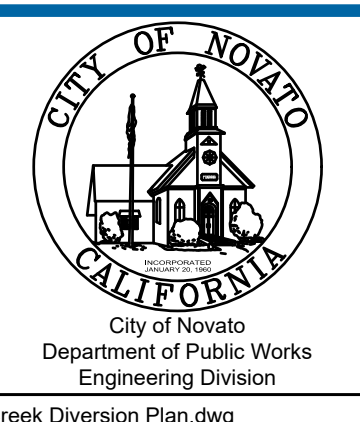


TEMPORARY CREEK DIVERSION PLAN
1" = 10'



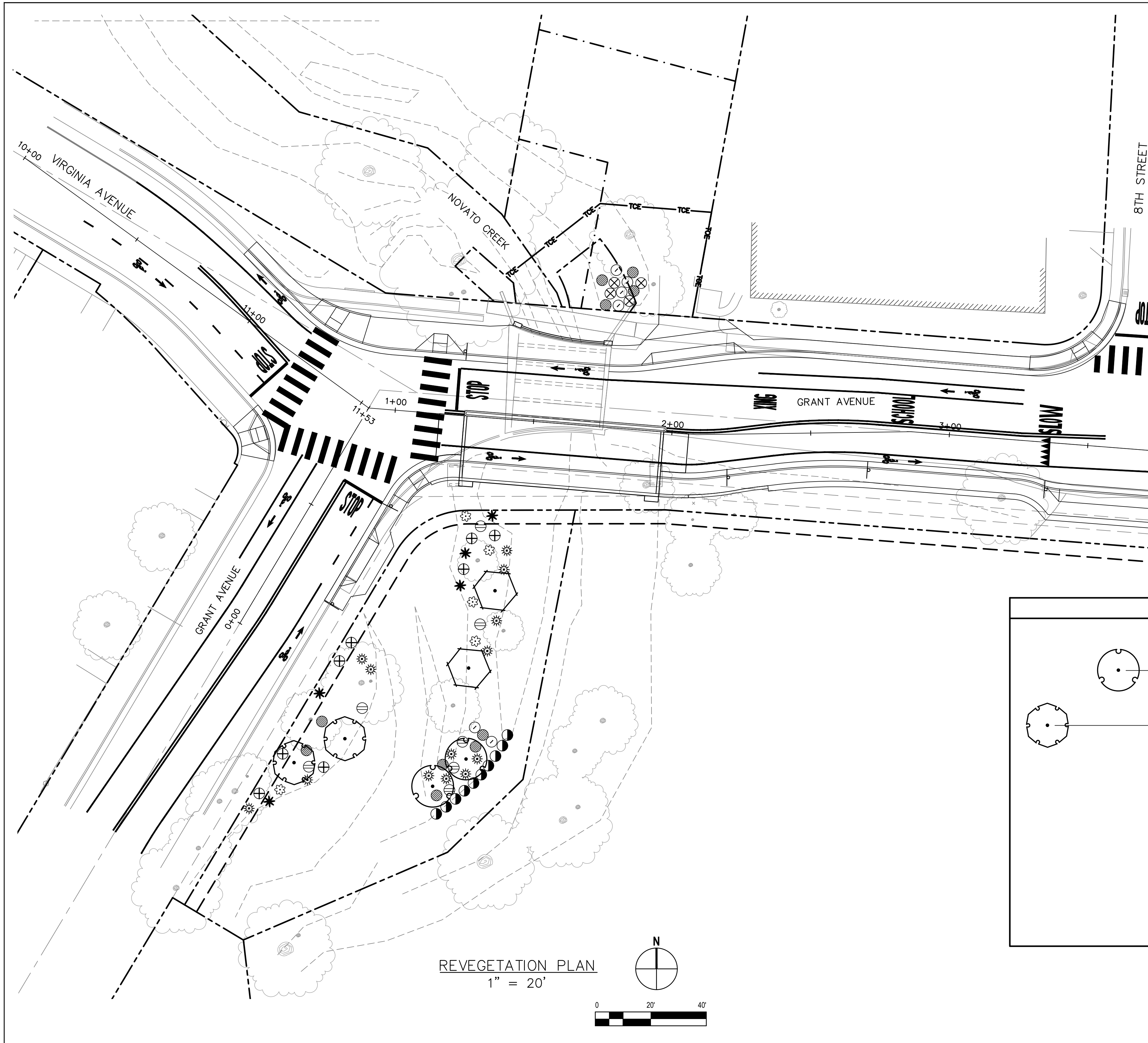
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

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Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 10'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	TEMPORARY CREEK DIVERSION PLAN
Contract No.	11110085
Original Size	Sheet 27 of 47
Drawing No.	EC4
Rev:	



- ### GENERAL PLANTING NOTES
1. THE PLANT LIST IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY ALL PLANT COUNTS AND IF A DISCREPANCY EXISTS, THE PLAN SHALL GOVERN.
 2. SUBSTITUTION OF SPECIFIED PLANT MATERIAL SHALL NOT BE MADE UNLESS OTHERWISE APPROVED BY THE CITY IN WRITING. CERTIFICATES OF COMPLIANCE WILL NOT BE COMPLETED FOR PROJECTS WHICH EXCEED THE WATER USE OF SPECIFIED PLANT MATERIALS UNTIL CONFORMANCE WITH THE WATER EFFICIENT LANDSCAPE REQUIREMENTS IS ACHIEVED.
 3. PLANTING AREAS SHALL BE KEPT CLEAN AND FREE FROM ALL WASTE MATERIALS SUCH AS CONCRETE, ASPHALTIC WASTE, LUMBER OR OTHER SUCH MATERIALS. WASTE MATERIALS SHALL BE REMOVED BY EXCAVATION OF THE SOIL. REPLACE WITH CLEAN NATIVE TOP SOIL.
 4. SEE DETAILS AND SPECIFICATIONS FOR PROCEDURES, MATERIAL, AND INSTALLATION REQUIREMENTS.
 5. IMPORTED TOP SOIL (IF REQUIRED) SHALL BE FERTILE, FRIABLE SANDY LOAM OF UNIFORM COMPOSITION. CLAY PARTICLES SHALL NOT EXCEED 9% BY VOLUME. THE SOIL SHALL BE FREE FROM SUBSOIL, REFUSE, ROOTS, ROCKS OVER 1" IN DIAMETER OR OTHER DELETERIOUS MATERIAL. THE IMPORTED SOIL SHALL BE CAPABLE OF SUSTAINING HEALTHY PLANT LIFE, NATIVE TOP SOIL SHALL BE USED WHERE AVAILABLE PRIOR TO IMPORTING SOIL. A SOILS REPORT SHALL BE PROVIDED FOR ALL IMPORTED TOP SOILS, PER SPECIFICATIONS.
 6. ANY DAMAGED OR DESTROYED LANDSCAPING SHALL BE REPLACED TO THE SATISFACTION OF THE CITY AT NO ADDITIONAL COST TO THE CITY. DAMAGED LANDSCAPE REPLACEMENT SHALL BE INSPECTED AND APPROVED BY REC. AND PARK DEPT. INSPECTOR.
 7. FOR BEST RESULTS, NATIVE PLANT MATERIALS SHOULD NOT HAVE THEIR ROOTS DISTURBED. FOR PLASTIC CANS, REMOVE BOTTOM OF CAN, PLACE IN PLANT PIT AND CUT SIDES TO REMOVE. FOR LARGE PLANT MATERIAL, USE BOTTOM SUPPORT AS NECESSARY.
 8. JUTE MATTING SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER. OVERLAP EDGES OF JUTE MATTING TWO (2) INCHES. USE JUTE MATTING STAPLES AT A RATE OF 200 STAPLES PER 900 SQUARE FEET OF JUTE MATTING FOR STABILIZATION.
 9. SOIL SAMPLE REPORTS SHALL BE REVIEWED BY CITY PRIOR TO AMENDING SOILS, PER SPECIFICATIONS. SOIL AMENDMENT SHALL BE LIMITED TO HOLE BACKFILL AND IMMEDIATE PLANTING SITE SOIL RATHER THAN ENTIRE PLANTING AREA LIMITS SHALL NOT BE AMENDED.
 10. LOCATION OF PLANTINGS SHALL BE APPROVED BY CITY'S APPROVED BIOLOGIST. NOTIFY MINIMUM OF 48 HOURS BEFORE PLANTING.

PLANT SCHEDULE

STREET TREES	CODE	BOTANICAL NAME	COMMON NAME	QTY	SIZE
	OA	FRAXINUS LATIFOLIA	OREGON ASH	2	
	NCBW	JUGLANS HINDSII	NORTHERN CALIFORNIA BLACK WALNUT	2	
	CLO	QUERCUS AGRIFOLIA	COAST LIVE OAK	2	
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	QTY	SIZE
	CYB	BACCHARIS PILULARIS	COYOTE BUSH	8	
	DR	ROSA GYMNOCARPA	*DWARF ROSE	4	
	CC	FRANGULA CALIFORNICA	CALIFORNIA COFFEEBERRY	5	
	T	HETEROMELES ARBUTIFOLIA	TOYON	5	
	CB	HOLIDISCUS DISCOLOR	*CREAM BUSH	6	
	CR	ROSA CALIFORNICA	CALIFORNIA ROSE	13	
	BE	SAMBUCUS NIGRA SSP. CAERULEA	BLUE ELDERBERRY	7	
	CS	SYMPHORICARPOS ALBUS VAR.	*CALIFORNIA SNOWBERRY	10	
	WP	-	WETLAND PLANTS	10	

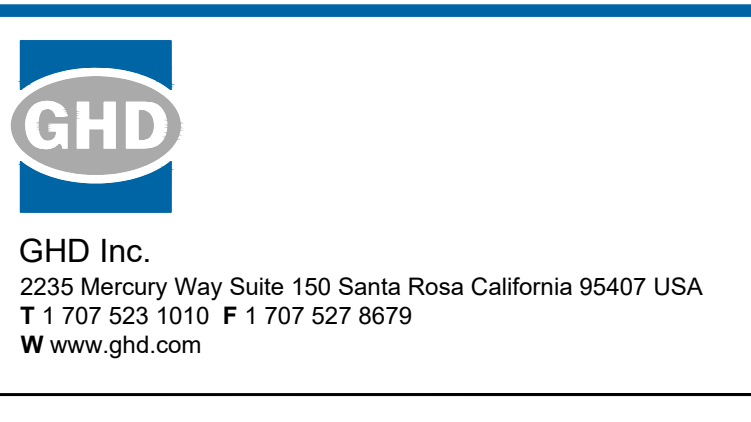
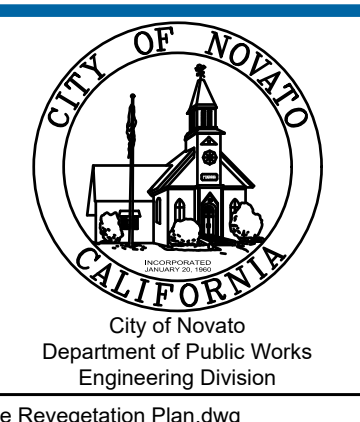
*SHADE-TOLERANT SPECIES

EXISTING TREE TO REMAIN, TYP. SEE CIVIL FOR TREE PROTECTION AND TREES TO BE REMOVED.

REVEGETATION PLAN
1" = 20'

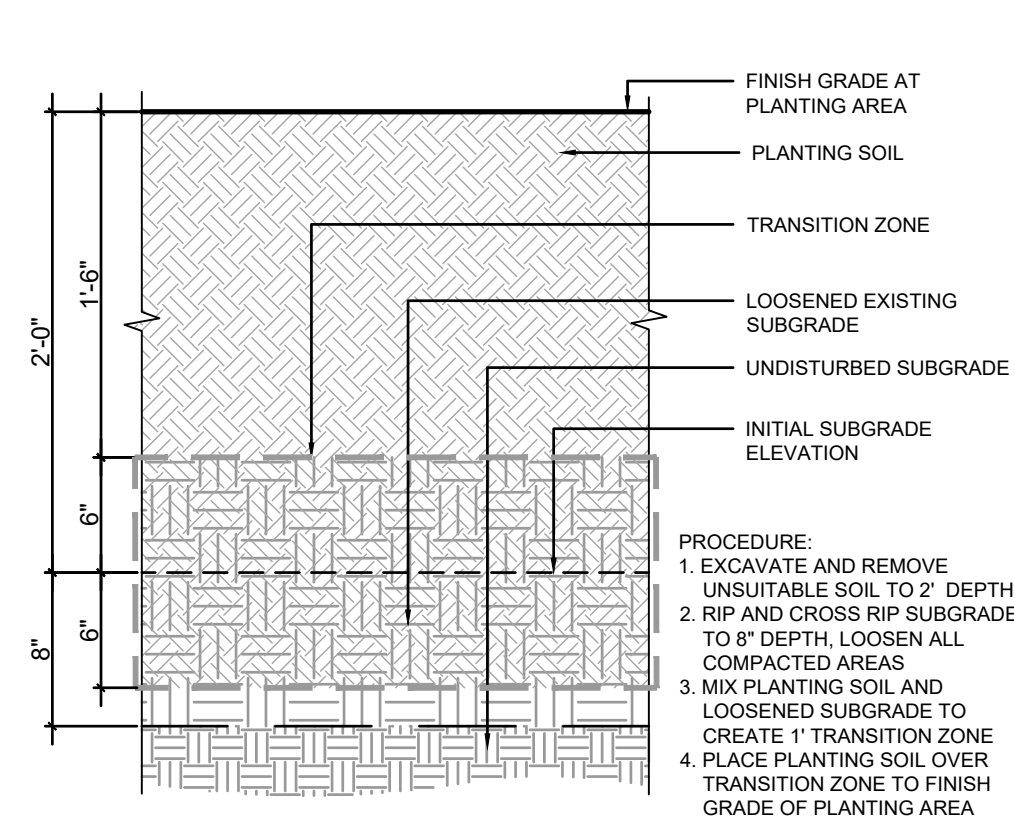
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

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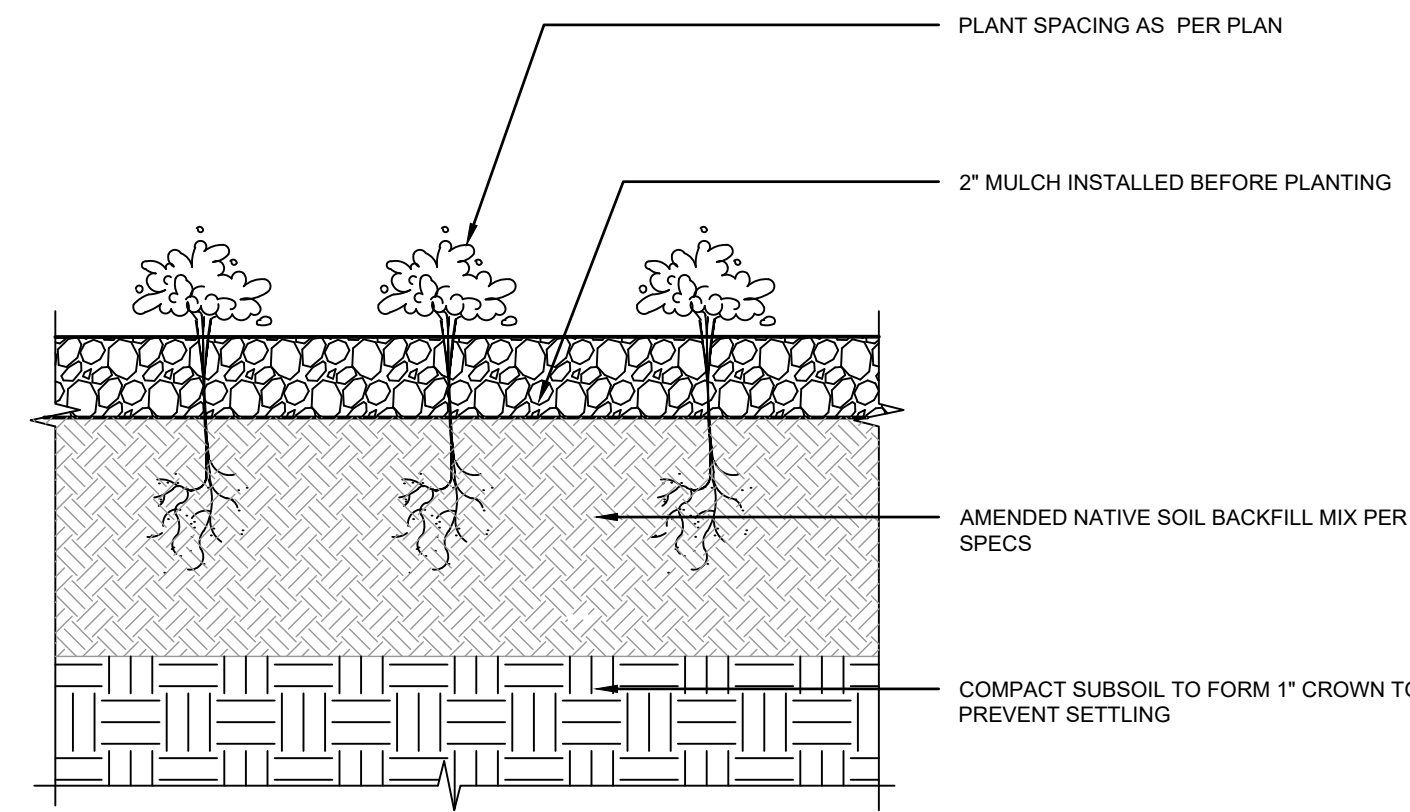


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Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
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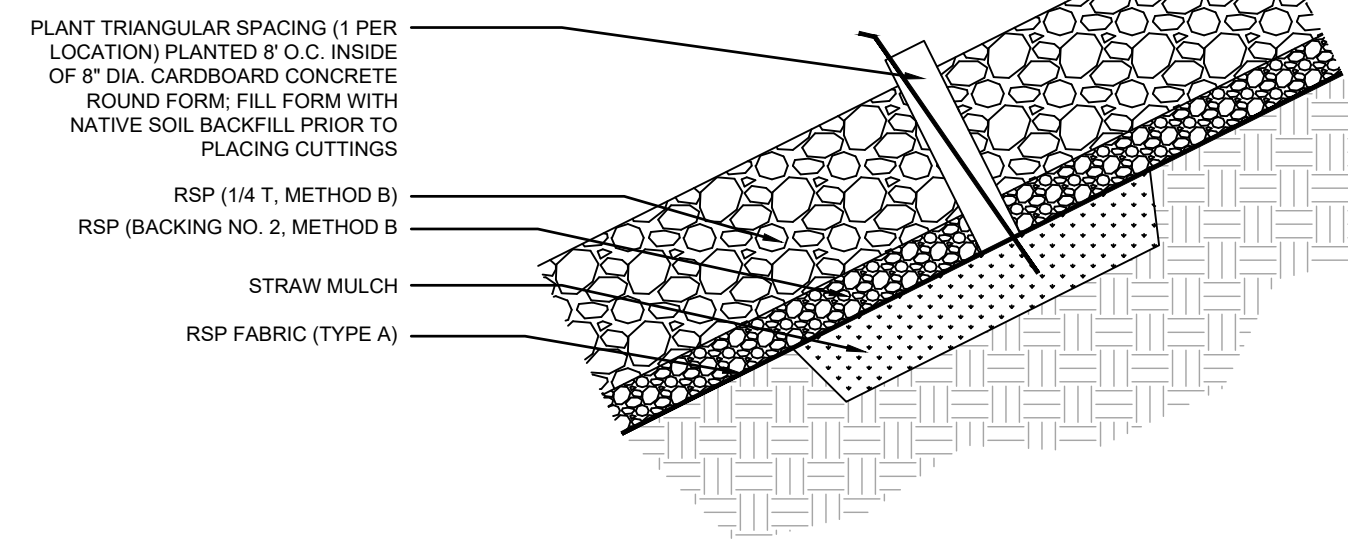
Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	LANDSCAPE REVEGETATION PLAN
Contract No.	11110085
Drawing No.	L1
Sheet	28 of 47
Rev:	



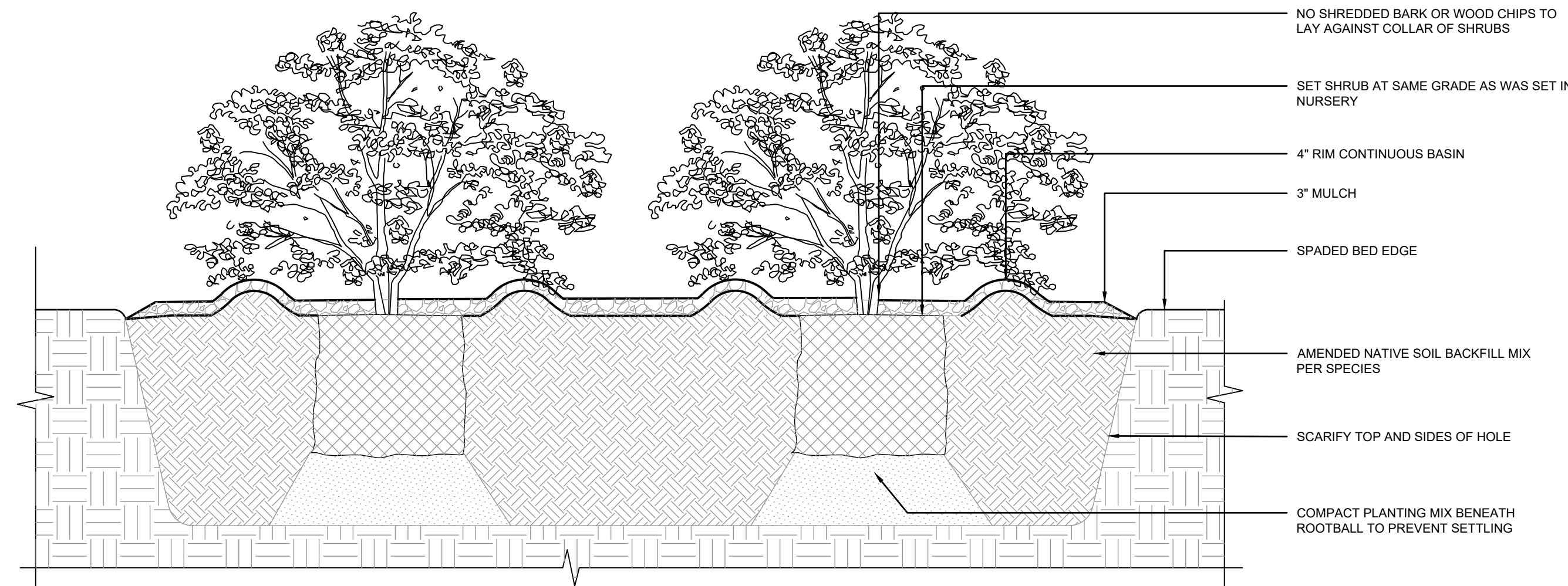
1 PLANTING SOIL PREP
- NTS



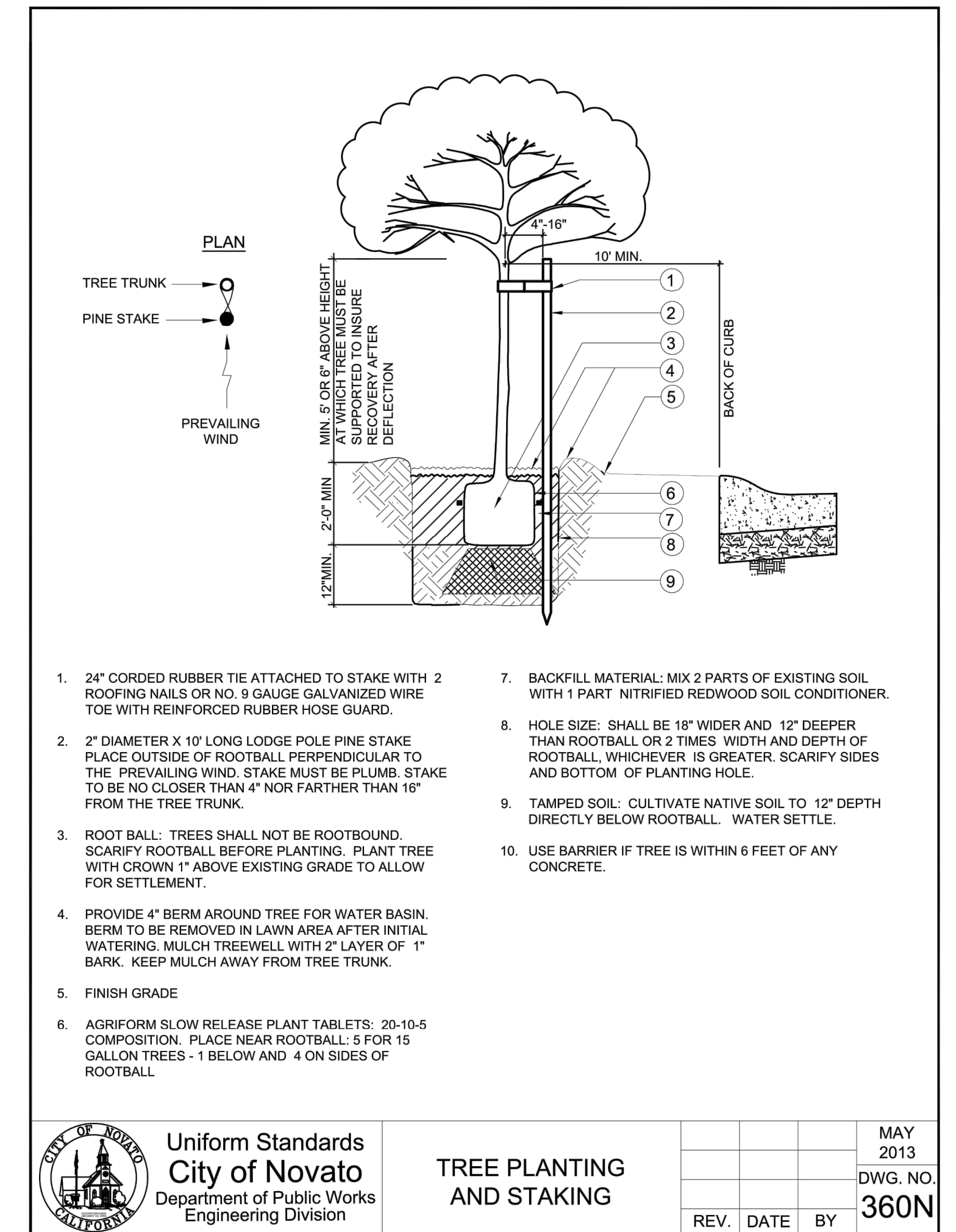
2 GROUNDCOVER PLANTING
- NTS

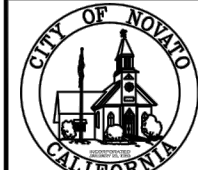


3 RSP PLANTING
- NTS



4 SHRUB PLANTING
- NTS




Uniform Standards
City of Novato
 Department of Public Works
 Engineering Division

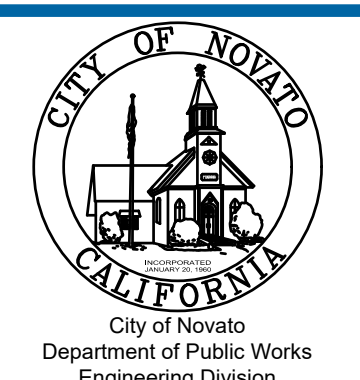
TREE PLANTING AND STAKING

REV.	DATE	BY	MAY 2013
			DWG. NO. 360N

5 TREE PLANTING AND STAKING
- NTS

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

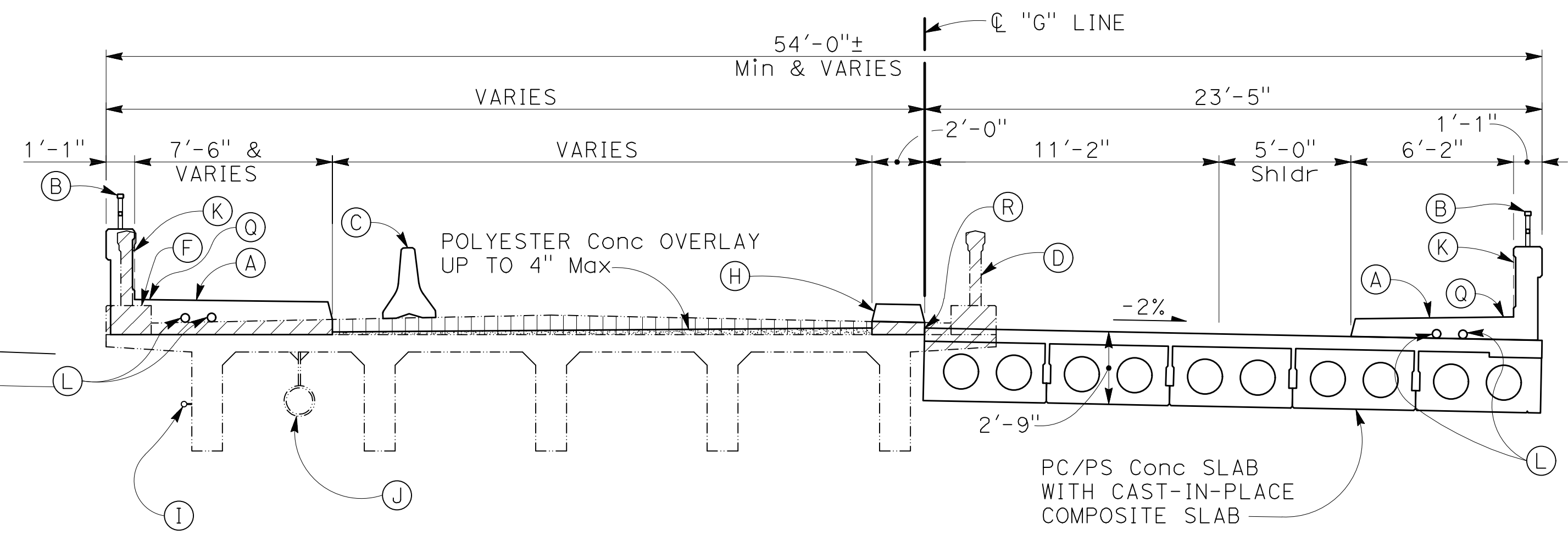
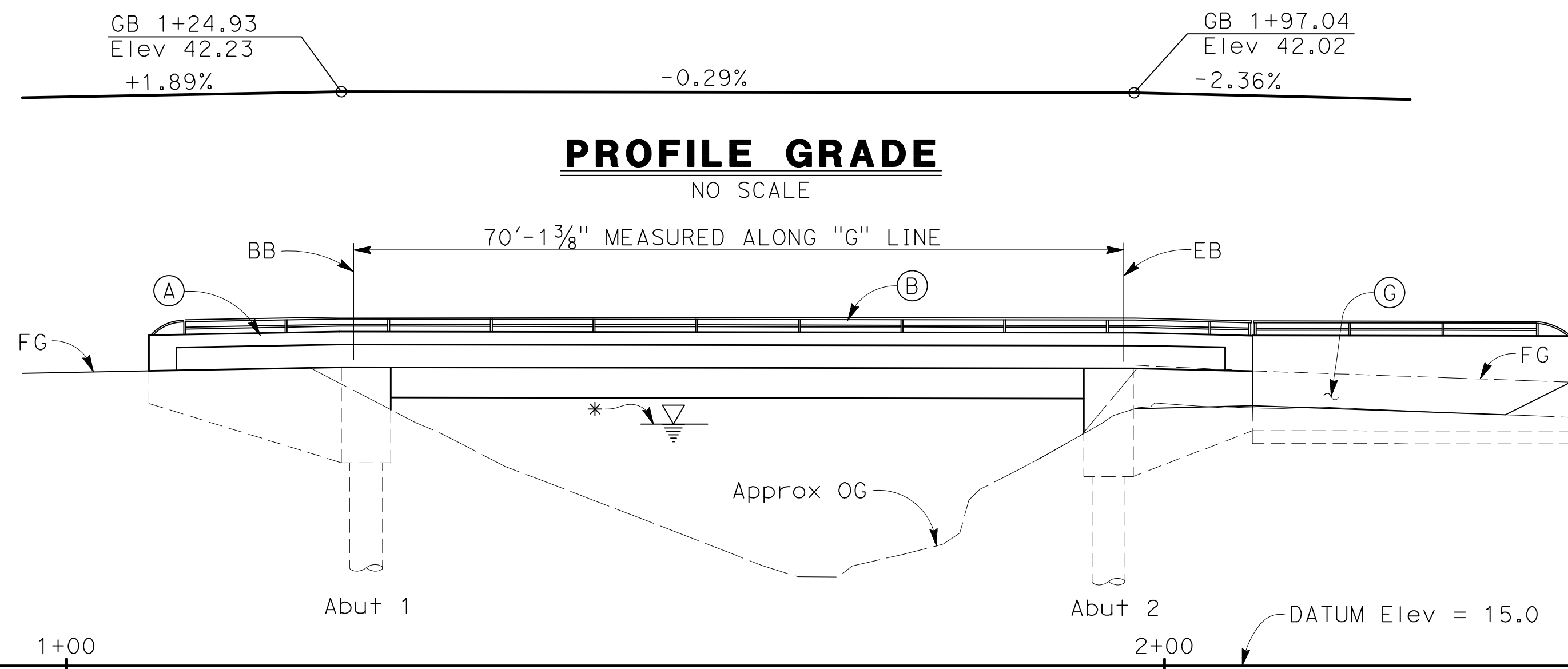
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Drafting Check	JS	Design Check	BS
Approved (City Engineer)		Submitted (Project Engineer)	JS
Date		Date	12/21/23
Scale	1" = 20'	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

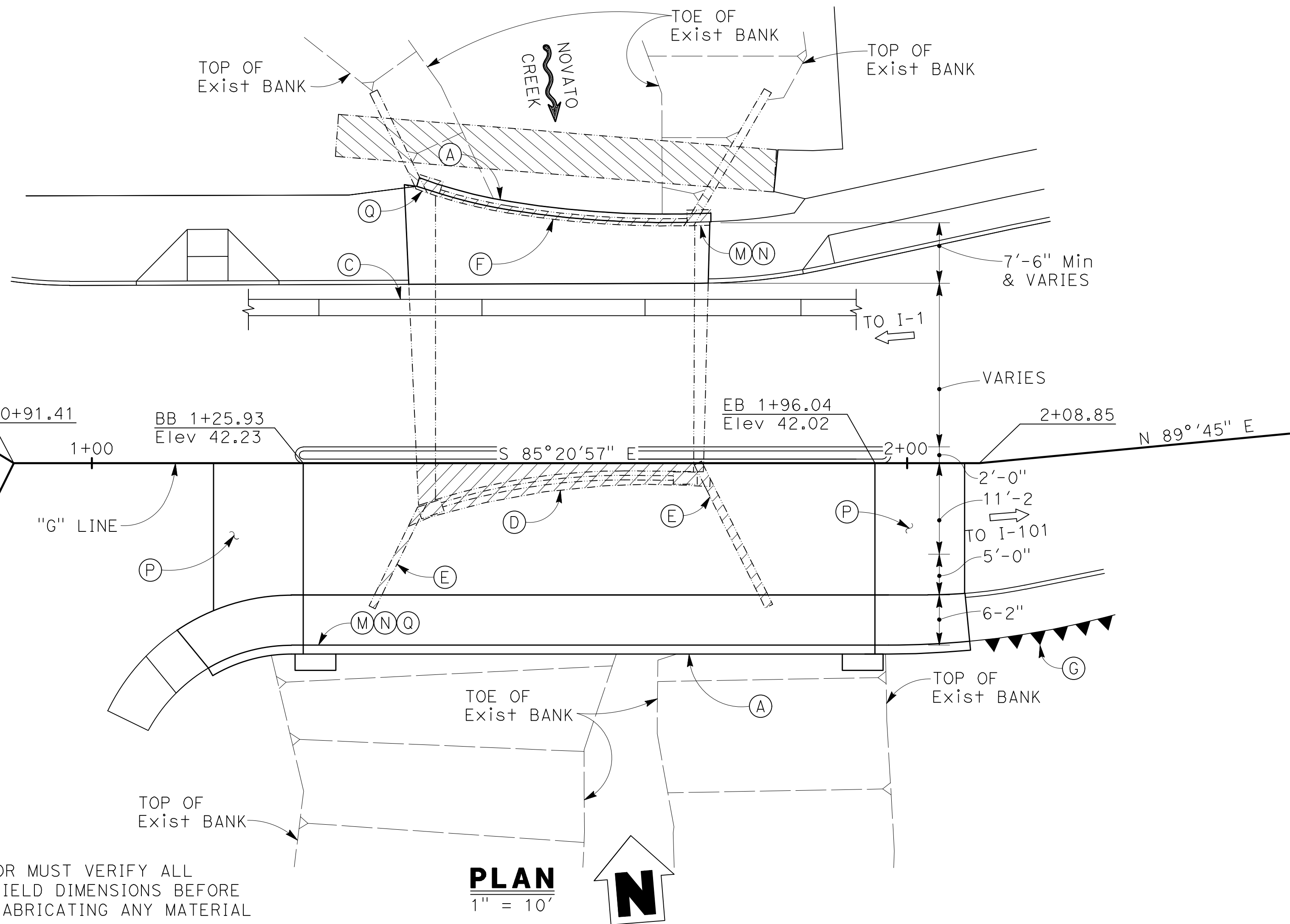
Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION (CIP 09-003)
Title	LANDSCAPE PLANTING DETAILS
Contract No.	11110085
Original Size	
Drawing No.	L2
Sheet	29 of 47
Rev:	



TYPICAL SECTION
1/4" = 1'-0"

ELEVATION
1" = 10'

* HIGH WATER Elev, SEE HYROLOGY SUMMARY ON "FOUNDATION PLAN SHEET"



NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

LEGEND:

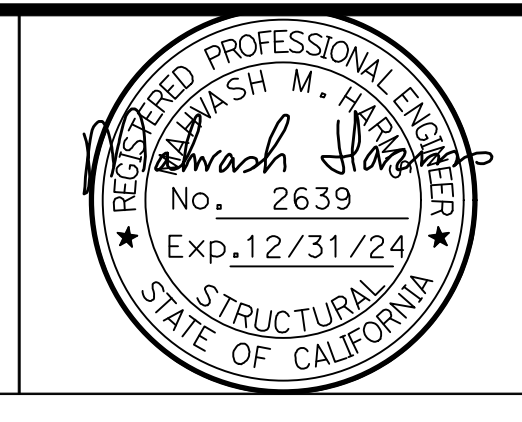
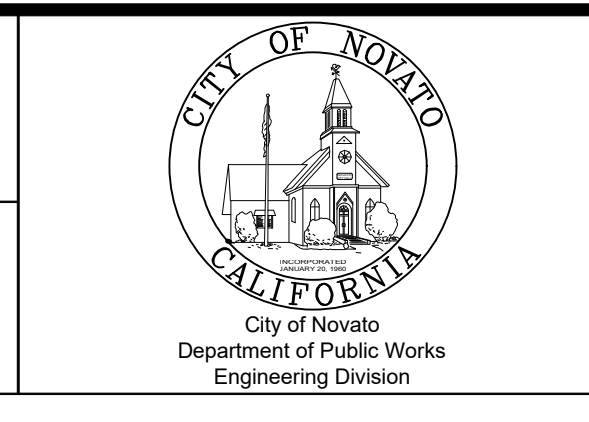
- Indicates Bridge Removal (Portion)
- Indicates Removal of Existing Pedestrian Bridge
- Remove Exist AC overlay & reconstruct with methacrylate and polyester overlay per Roadway Plans
- Indicates Existing Structure
- Indicates Traffic Direction
- Indicates Direction of Creek Flow

NOTES:

- (A) Concrete Barrier Type 732SW (Mod)
 - (B) Tubular Hand Rail (Mod) Painted Black
 - (C) Temporary Railing Type K, see "ROADWAY PLANS"
 - (D) Remove existing barrier & overhang
 - (E) Remove portion of wingwall
 - (F) Remove existing barrier and existing AC overlay within sidewalk width
 - (G) Retaining Wall, see "RETAINING WALL" sheet.
 - (H) Median, see "ROADWAY PLANS"
 - (I) Exist 2" gas line
 - (J) Exist 12" water line
 - (K) Fractured Rib Surface Texture
 - (L) 4" Dia conduit for future utility
 - (M) Paint "Grant Avenue Bridge"
 - (N) Paint "Br. No. 27C-0021"
 - (P) Structure Approach Slab Type E0 (10)
 - (Q) Set Survey Marker per City Engineer's approval
 - (R) Verify existing top of concrete on existing bridge prior to setting grades. Remove AC as necessary.
1. For Bench Mark and Datum, Pile Data Table and Hydrologic Summary, see "FOUNDATION PLAN"

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

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BIGGS CARDOSA ASSOCIATES INC
STRUCTURAL ENGINEERS
865 The Alameda
San Jose, California 95126
408-296-5515

Drawn	RLQ	Designer	KDC
Drafting Check	KDC	Design Check	SB (GHD)
Approved (City Engineer)		Submitted (Project Engineer)	CV
Date		Date	12/15/23

Client **CITY OF NOVATO**
Project **GRANT AVENUE BRIDGE REHABILITATION**
Title **GENERAL PLAN**
Contract No. 09-003
Original Size
Drawing No: **S1**
Scale AS SHOWN
This Drawing shall not be used for Construction unless Signed and Sealed For Construction
Sheet 30 of 47
Rev:

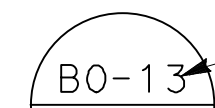
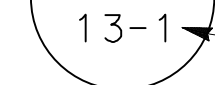


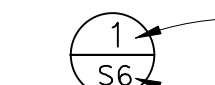

INDEX TO BRIDGE PLANS

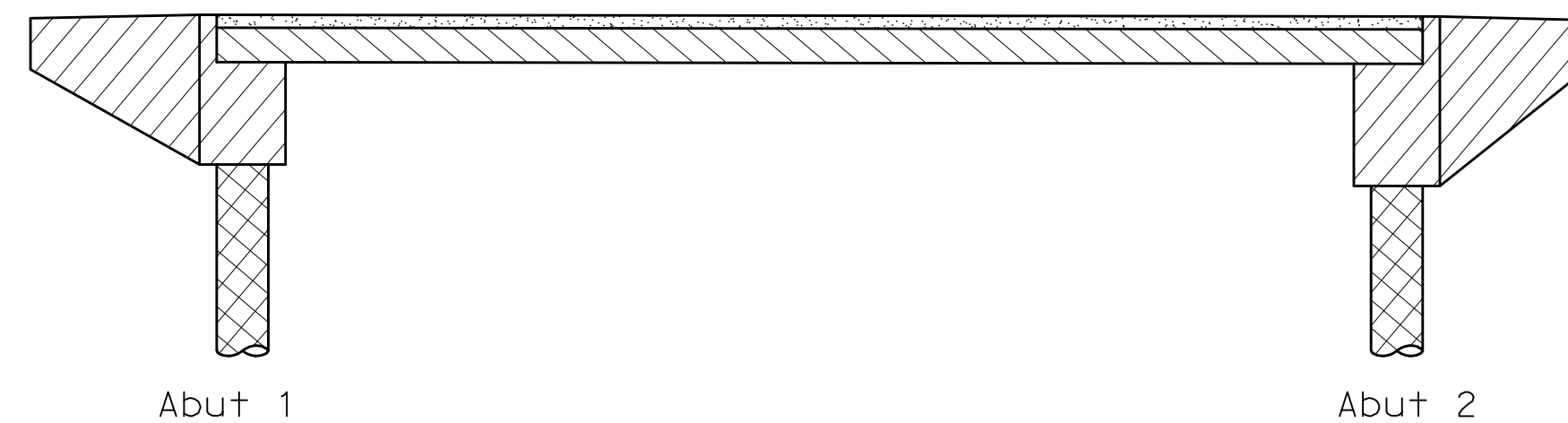
SHEET	TITLE
S1	GENERAL PLAN
S2	INDEX TO PLANS
S3	FOUNDATION PLAN
S4	ABUTMENT LAYOUT
S5	ABUTMENT DETAILS No. 1
S6	ABUTMENT DETAILS No. 2
S7	ABUTMENT DETAILS No. 3
S8	ABUTMENT DETAILS No. 4
S9	TYPICAL SECTION No. 1
S10	TYPICAL SECTION No. 2
S11	PRECAST PRESTRESSED CONCRETE SLAB DETAILS No. 1
S12	PRECAST PRESTRESSED CONCRETE SLAB DETAILS No. 2
S13	PARTIAL REMOVAL PLAN
S14	JOINT ARMOR FOR PEDESTRIAN WALKWAYS
S15	MISCELLANEOUS BARRIER DETAILS
S16	STRUCTURE APPROACH SLAB TYPE EQ (10)
S17	RETAINING WALL LAYOUT & DETAILS
S18	LOG OF TEST BORINGS

2023 CALTRANS STANDARD PLANS


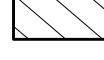


A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND - LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND - LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND - LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND - LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND - LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
T3A	TEMPORARY RAILING TYPE K
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B11-51	TUBULAR HAND RAILING
B11-58	CONCRETE BARRIER TYPE 732SW (SHEET 1 OF 2)
B11-59	CONCRETE BARRIER TYPE 732SW (SHEET 2 OF 2)

LEGEND

-  Indicates Standard Plan sheet No.
-  Indicates Detail No.
-  Indicates Section No.
-  Indicates sheet No. shown on
-  Indicates Detail No.
-  Indicates sheet No. shown on



LEGEND:

-  STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER) ($f'c = 4.0$ ksi)
-  PRECAST PRESTRESSED CONCRETE SLAB, SEE PRESTRESSING NOTES ON "PRECAST PRESTRESSED CONCRETE SLAB DETAILS No. 1" SHEET FOR CONCRETE COMPRESSIVE STRENGTH
-  STRUCTURAL CONCRETE, BRIDGE ($f'c = 4.0$ ksi)
-  CIDH CONCRETE ($f'c = 3.6$ ksi)

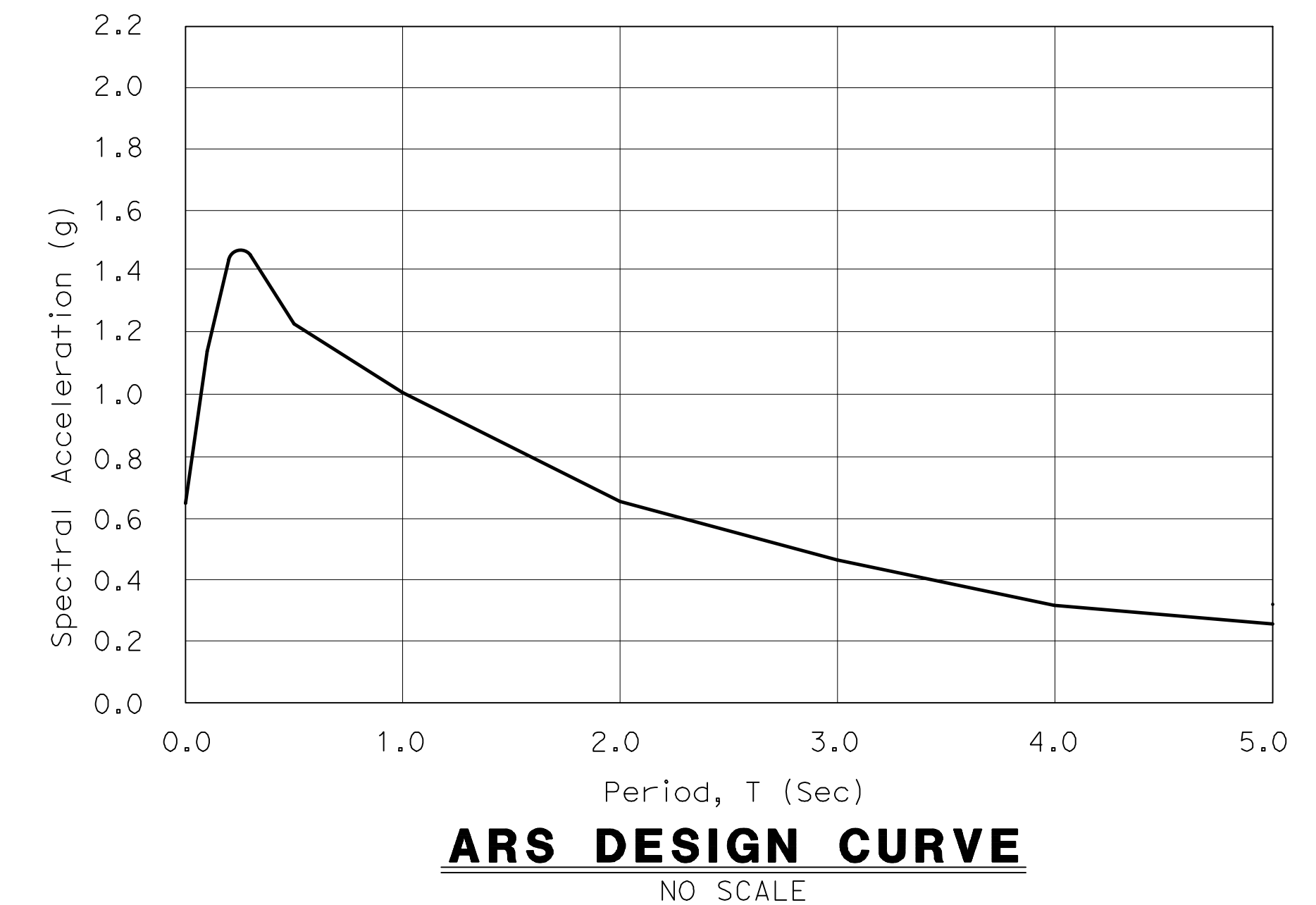
CONCRETE STRENGTH AND TYPE LIMITS

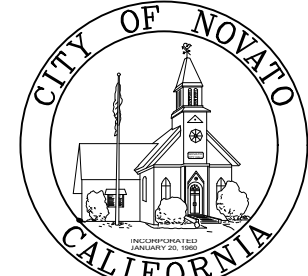


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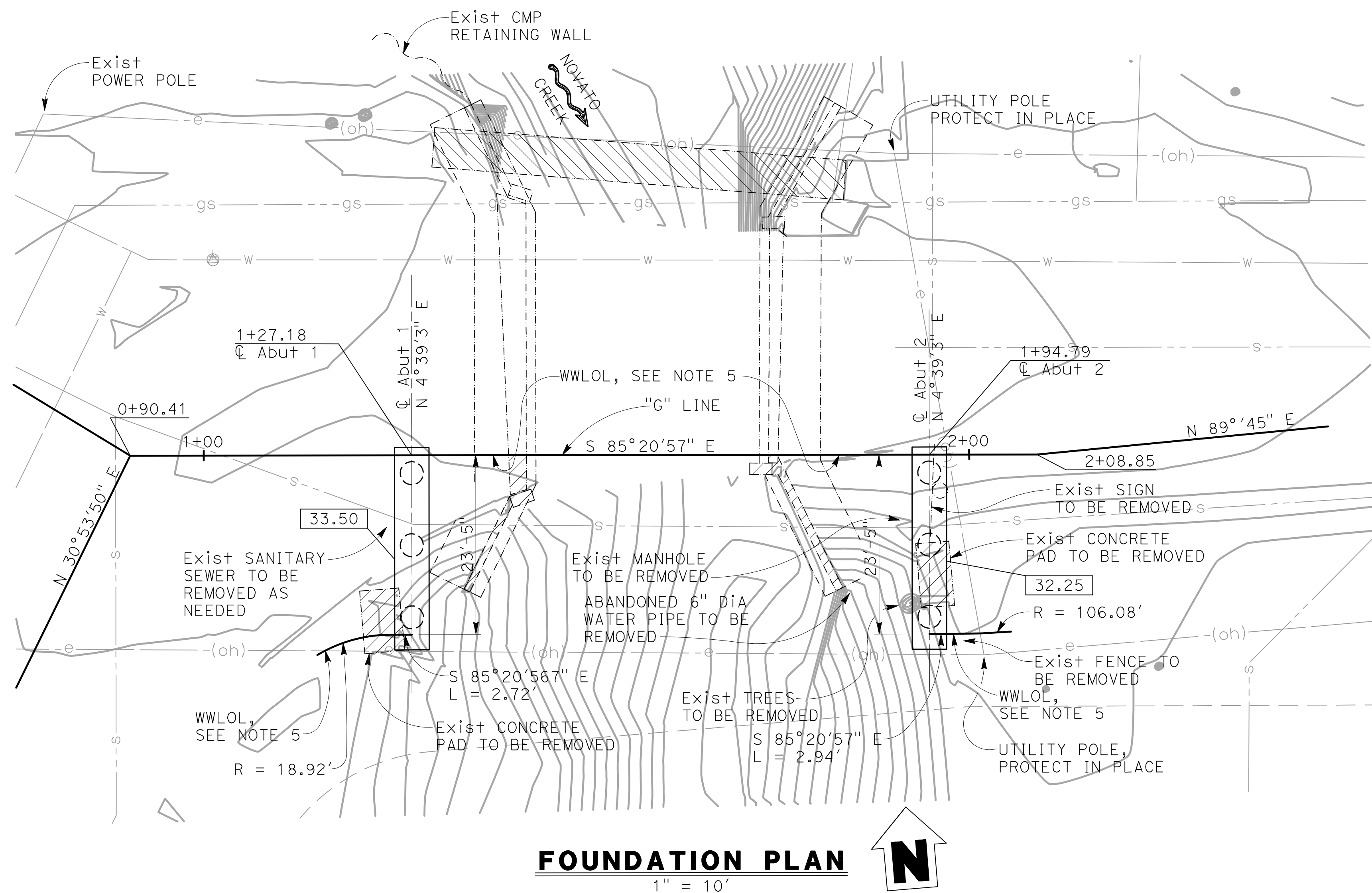
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

GENERAL NOTES LOAD & RESISTANCE FACTOR DESIGN

- DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition and California Amendments, preface dated January, 2014
- SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.7 dated April 2013
- DEAD LOAD: Includes 35 psf for future wearing surface and 100 plf for future utilities.
- LIVE LOAD: HL93 and permit design load.
- CONCRETE: $f_y = 60$ ksi
 $f'c = 3.6$ ksi (except as shown on "CONCRETE STRENGTH & TYPE LIMITS" diagram
 $n = 8$
- PRESTRESSED CONCRETE: See "PRESTRESSING NOTES" on "PRECAST PRESTRESSED CONCRETE SLAB DETAILS No. 1" sheet
- SEISMIC LOAD: ARS Curve by Caltrans Online
Probabilistic for $V_{s30} = 290$ m/s & 230 m/s
Moment Magnitude = 7.3
Peak Ground Acceleration = 0.647g
with the following modifications:
- No change of S_a for structural periods ≤ 0.5 seconds
 - 20% increase of S_a for structural periods ≥ 1 second
 - Linear interpolation of S_a for structural periods between 0.5 and 1 second.



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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date			Sheet 31 of 47 Rev:				



FOUNDATION PLAN
1" = 10'

HYDROLOGIC SUMMARY
(PROVIDED BY GHD 6/21/2016)

	DESIGN FLOOD	BASE FLOOD	OVERTOPPING
BASIN AREA: 18 square miles	100	2	N/A
FREQUENCY (YEARS)	3,300	700	N/A
DISCHARGE (CFS)	37.02	31.04	N/A
WATER SURFACE ELEVATION AT BRIDGE (FT)			

FLOOD PLAIN DATA ARE BASED UPON INFORMATION AVAILABLE WHEN THE PLANS WERE PREPARED AND ARE SHOWN TO MEET FEDERAL REQUIREMENTS. THE ACCURACY OF SAID INFORMATION IS NOT WARRANTED BY THE CITY AND INTERESTED OR AFFECTED PARTIES SHOULD MAKE THEIR OWN INVESTIGATIONS.

- NOTES:
- Utilities shown are for illustrative purposes only. Verify utility locations and whether they are to be relocated, abandoned, etc, with Roadway Plans.
 - For property delineations and descriptions, see Roadway Plans.
 - Topographic information: Cinquini & Passarino, Inc., Date of Survey 5/5/16.
 - For grading and additional bench mark and datum information, see "Roadway Plans".
 - RIGHT WWL's are concentric with back of sidewalk, see "Roadway Plans". LEFT WWL's are parallel with "G" line, and 1" to the right of "G" Line, see "ABUTMENT LAYOUT" sheet and (A/S7)
 - Exist pedestrian bridge must be removed after the construction of widening and barrier replacement is complete. The Contractor will be responsible of disposing the pedestrian bridge.
 - Shoring may be required. If determined to be required, submit shop drawings per the specifications.

BENCH MARK AND DATUM

Monument	Coordinates		Elev (NAVD 88)	Description/Location
	Northing	Easting		
8	2233086.041	5962456.871	40.45	BEING A CUT "X" IN CONCRETE AT THE SOUTHWEST CORNER OF GRANT AND VIRGINIA AVENUES

PILE DATA TABLE

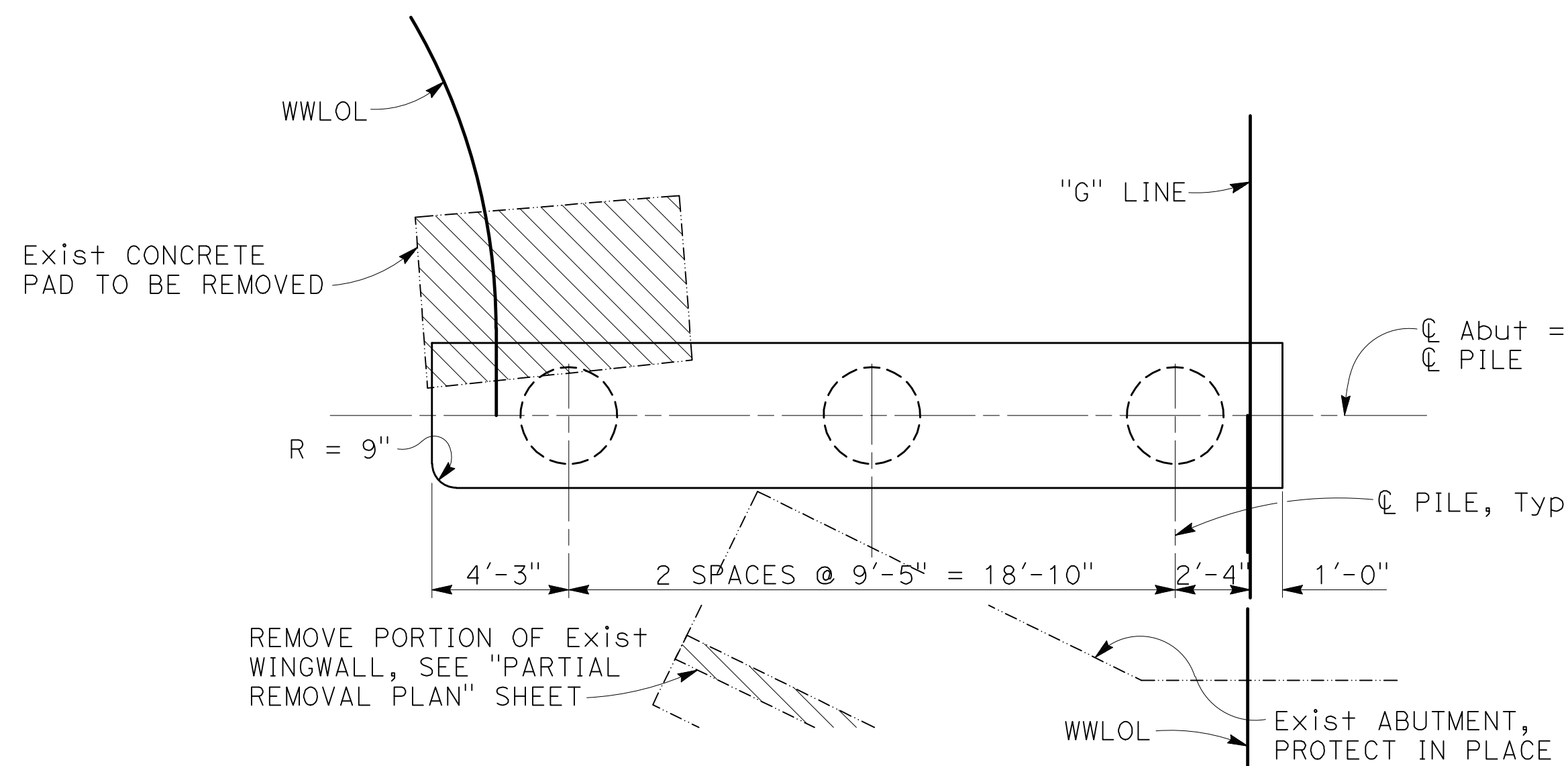
LOCATION	PILE TYPE	CUT-OFF Elev (ft)	NOMINAL RESISTANCE		DESIGN TIP Elev (ft)	SPECIFIED TIP Elev (ft)	ESTIMATED BEDROCK Elev (ft)
			COMPRESSION	TENSION			
Abut 1	36" Dia CIDH	33.75	480	N/A	-6 (a); 22 (b); -3.5 (c)	-6	0
Abut 2	36" Dia CIDH	32.50	480	N/A	-9 (a); 21 (b); 3.0 (c)	-9	0

- NOTES:
- Design tip elevations for Abutments are controlled by: (a) Compression; (b) Settlement; (c) Lateral Load.
 - Specified Tip Elevation must not be raised above the Design Tip Elevation for lateral load, tension load, and tolerable settlement.

NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

- LEGEND:
- Indicates Bottom of Abutment Elevation
 - Indicates CIDH Pile
 - Indicates Direction of Creek Flow
 - Indicates Existing Structure
 - Indicates Bridge Removal (Portion)
 - Indicates Removal of Exist Pedestrian Bridge, see Note 6

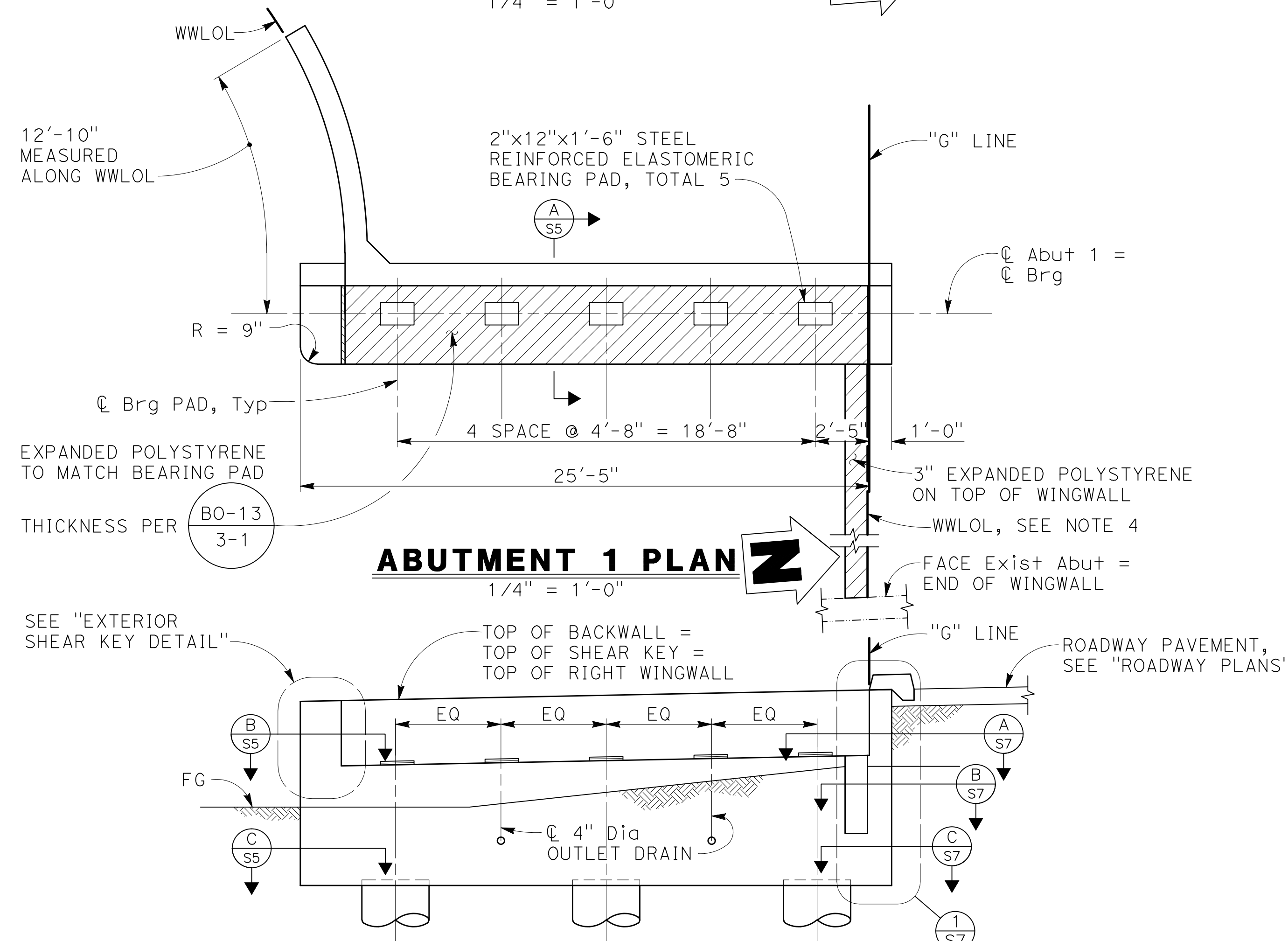
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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date	<p>This Drawing shall not be used for Construction unless Signed and Sealed For Construction</p>		<p>Scale AS SHOWN</p>		<p>Sheet 32 of 47 Rev:</p>		



ABUTMENT PILE LAYOUT

1/4" = 1'-0"

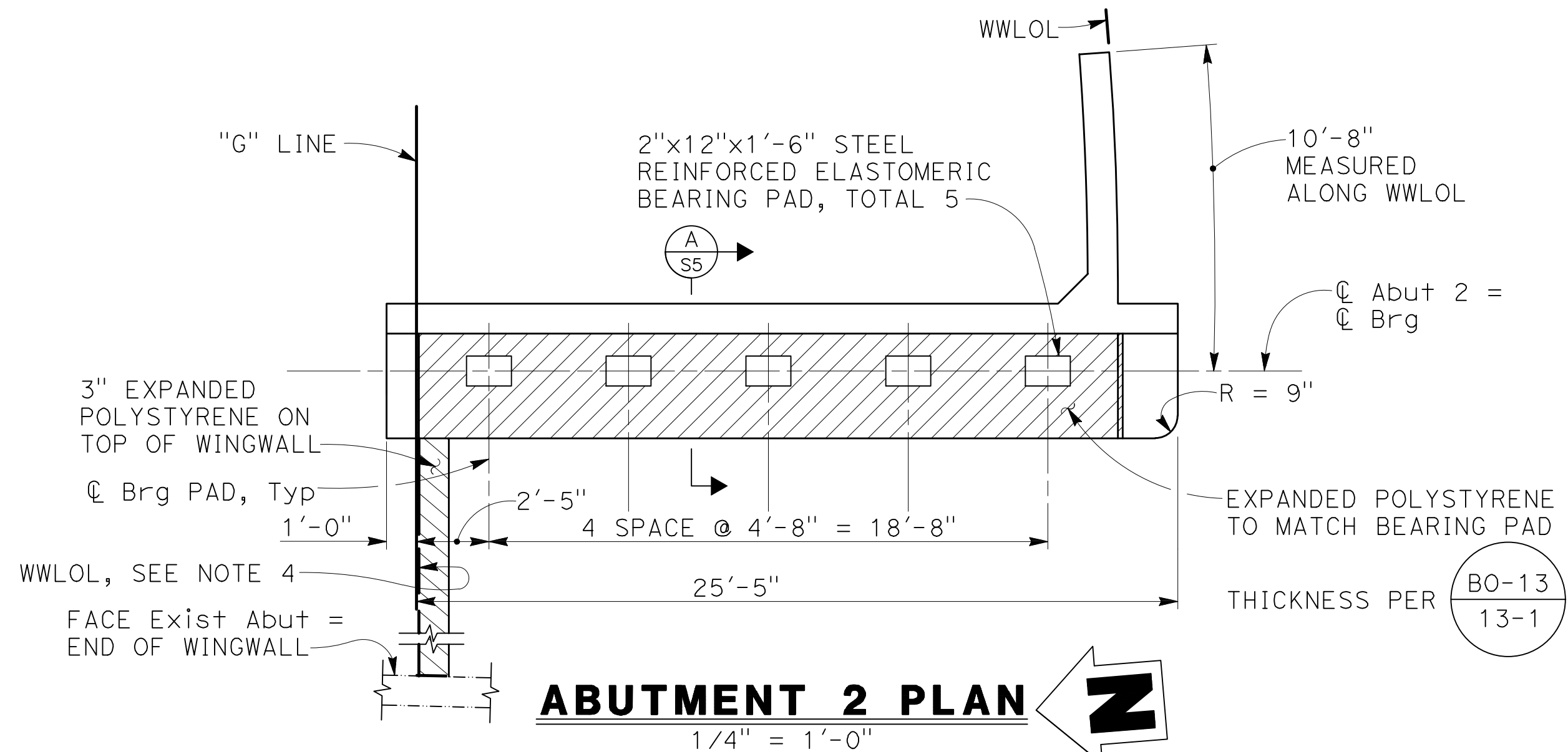
NOTE:
Abutment 1 shown,
Abutment 2 similar



ABUTMENT 1 PLAN

1/4" = 1'-0"

NOTE:
Abutment 1 shown,
Abutment 2 similar



ABUTMENT 2 PLAN

1/4" = 1'-0"



ABUTMENT ELEVATION

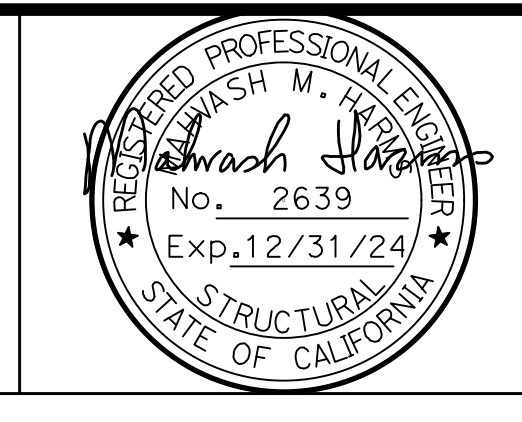
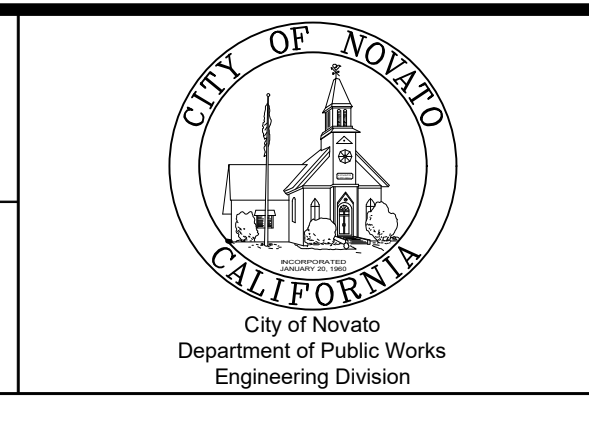
1/4" = 1'-0"

NOTE:
THE CONTRACTOR MUST VERIFY ALL
CONTROLLING FIELD DIMENSIONS BEFORE
ORDERING OR FABRICATING ANY MATERIAL

- LEGEND:
- Indicates 36" diameter CIDH Piles
 - Indicates Expanded Polystyrene
 - Indicates Exist Structure
 - Indicates Bridge Removal (Portion)
- NOTES:
1. For "EXTERIOR SHEAR KEY DETAIL" see "ABUTMENT, DETAILS No. 1" sheet.
 2. See "EXTERIOR WINGWALL ELEVATION" on "ABUTMENT DETAILS No. 2" sheet and "INTERIOR WINGWALL ELEVATION" on "ABUTMENT DETAILS No. 3" sheet.
 3. See "ABUTMENT PILE ELEVATION" on "ABUTMENT DETAILS No. 2" sheet.
 4. Interior WWLOL is 1" to the right of "G" Line.
 5. Shoring may be required. If determined to be required, submit shop drawings per the specifications.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

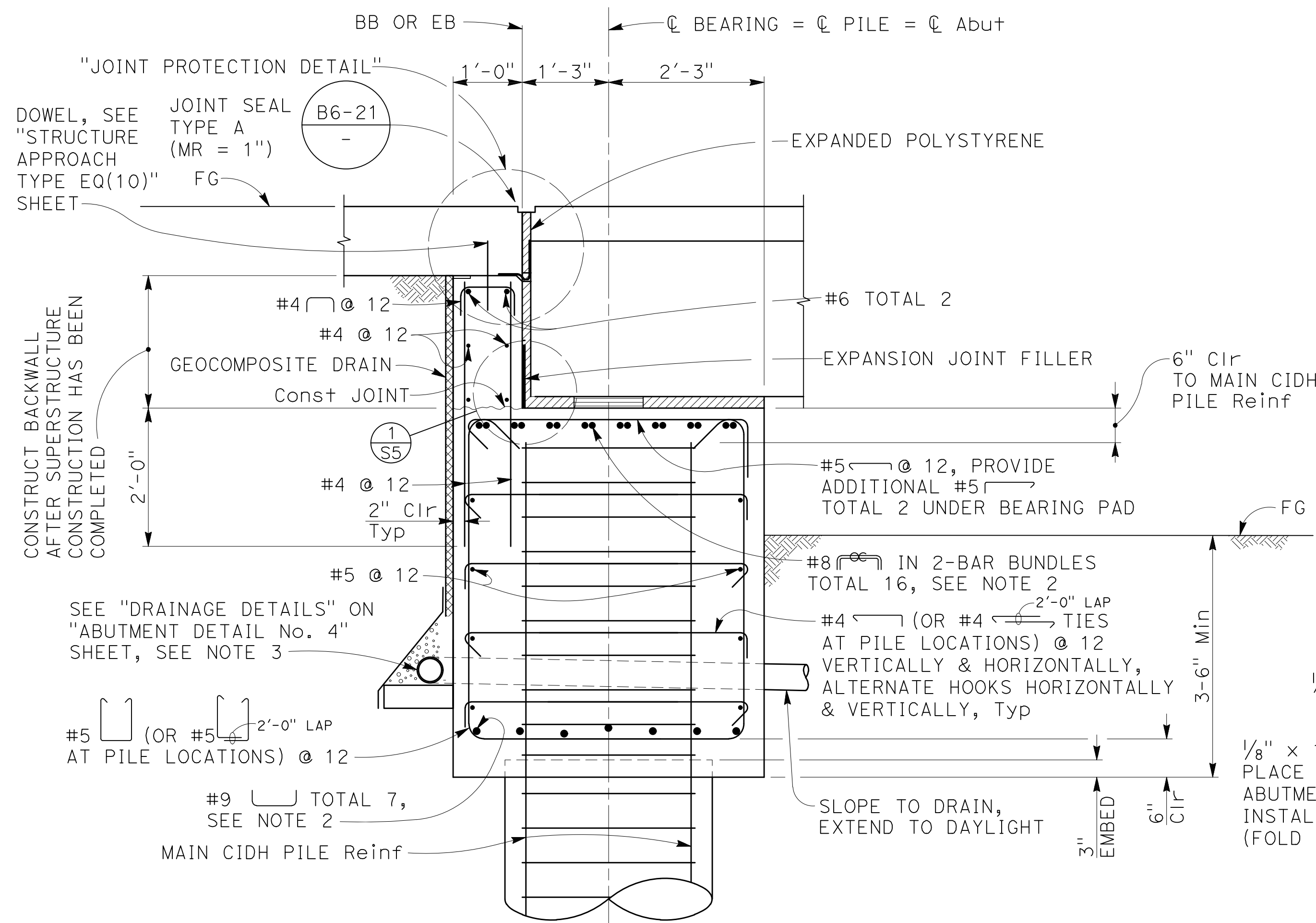
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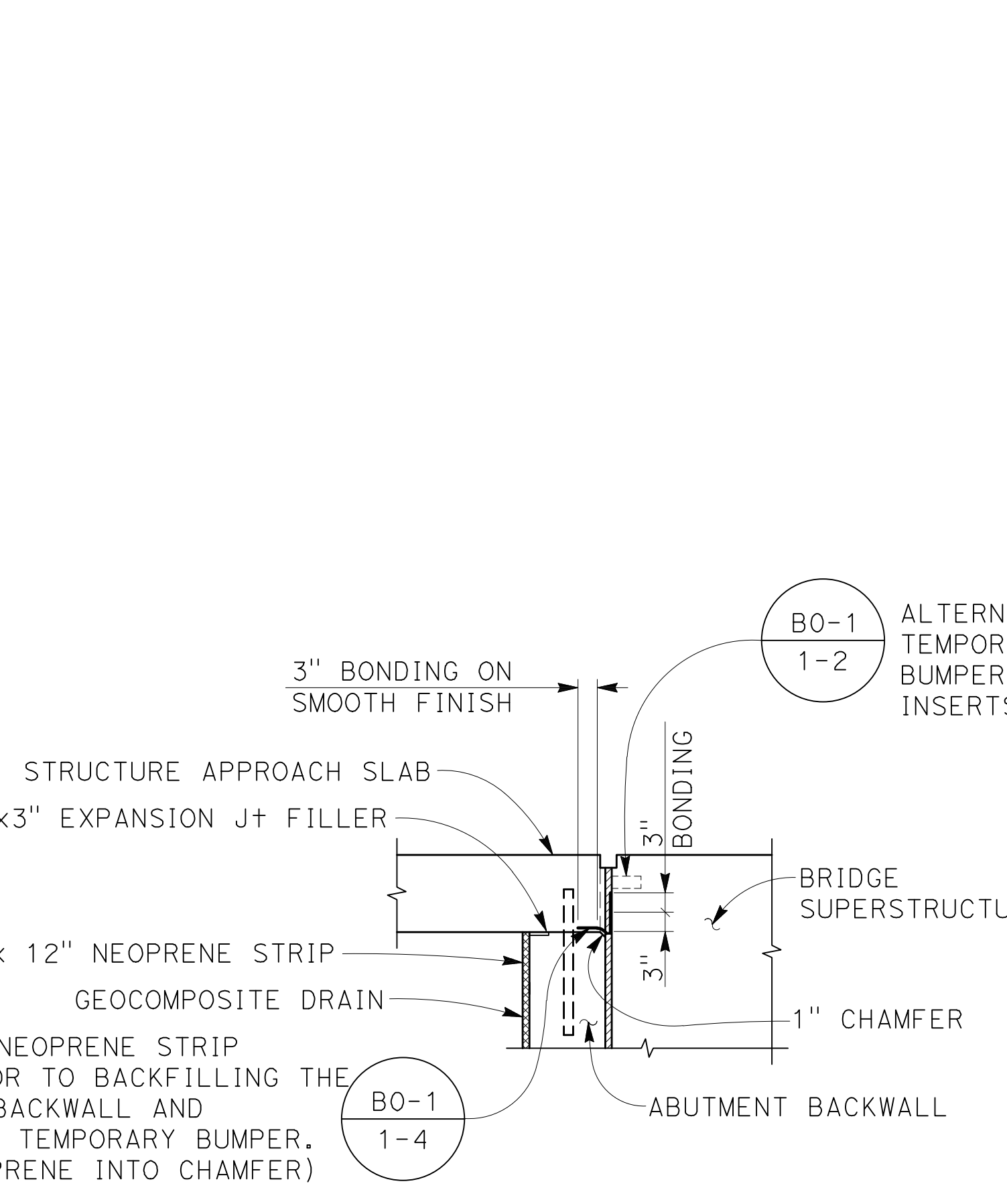
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STRUCTURAL ENGINEERS
865 The Alameda
San Jose, California 95126
408-296-5515

Drawn	AR	Designer	KDC
Drafting Check	KDC	Design Check	SB (GHD)
Approved (City Engineer)		Submitted (Project Engineer)	CV
Date		Date	12/15/23

Client **CITY OF NOVATO**
Project **GRANT AVENUE BRIDGE REHABILITATION**
Title **ABUTMENT LAYOUT**
Contract No. 09-003
Original Size
Drawing No: **S4**
Scale AS SHOWN
This Drawing shall not be used for Construction unless Signed and Sealed For Construction
Sheet 33 of 47
Rev:

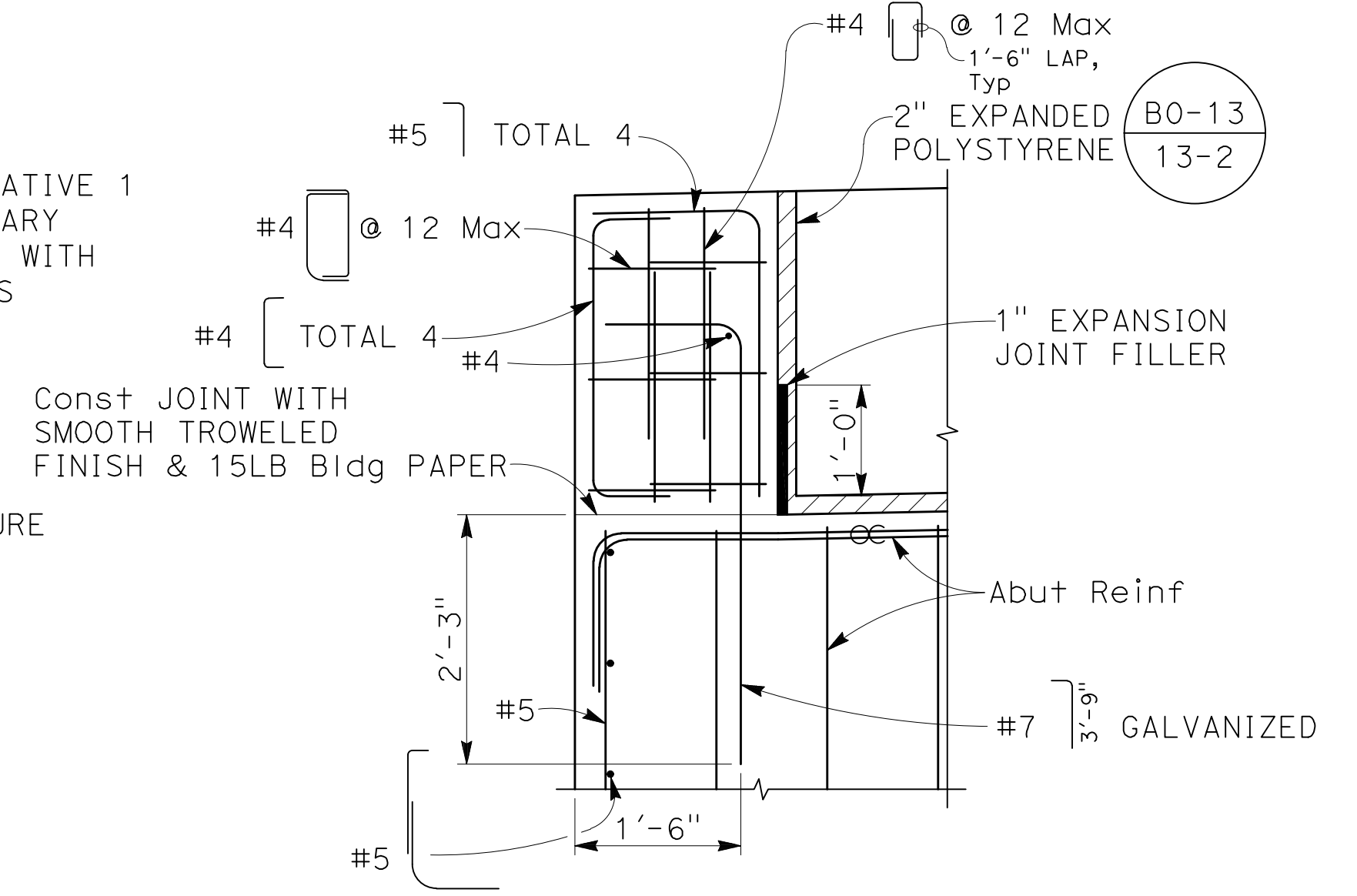


SECTION A
3/4" = 1'-0"

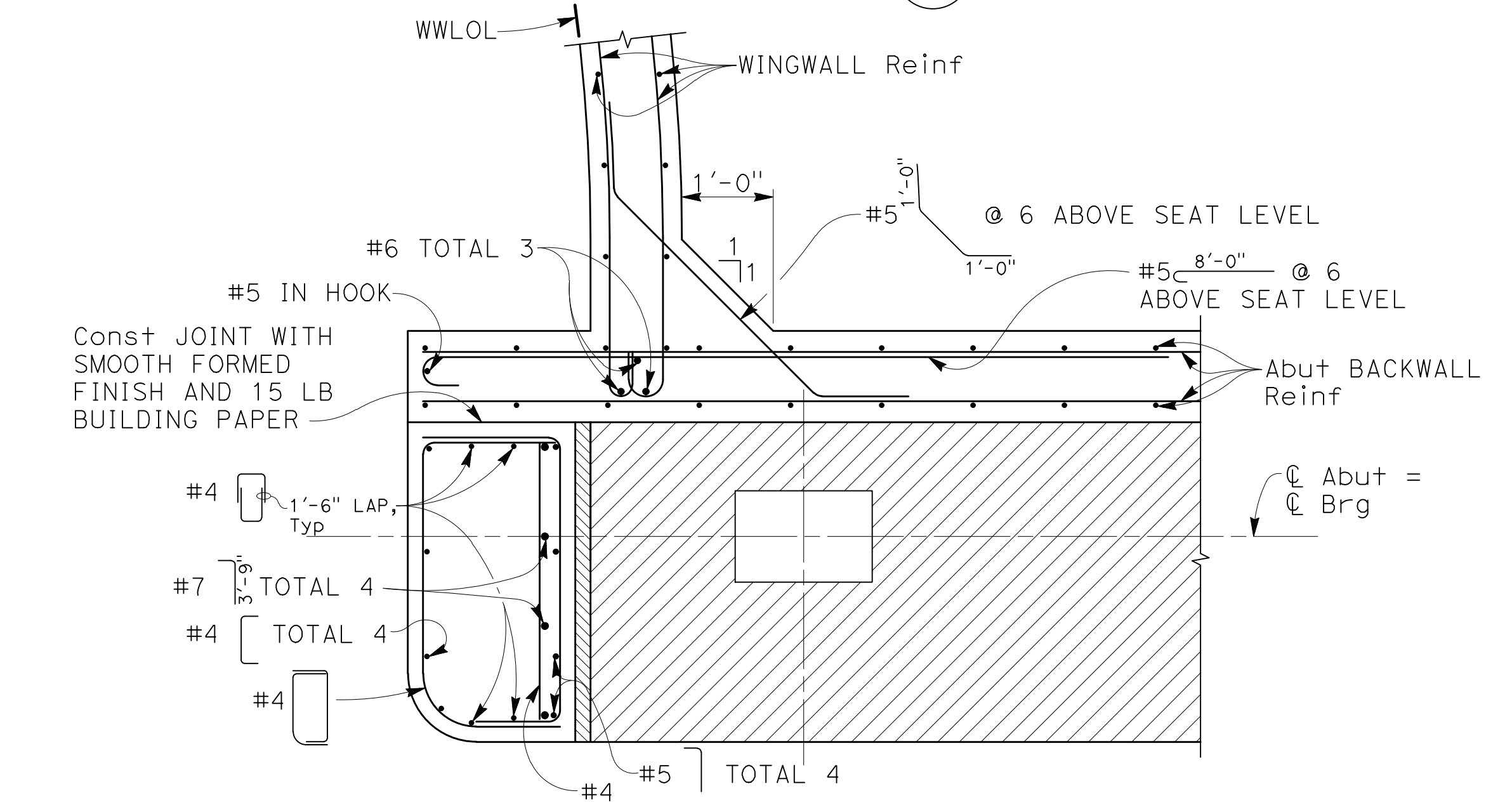


JOINT PROTECTION DETAIL
NO SCALE

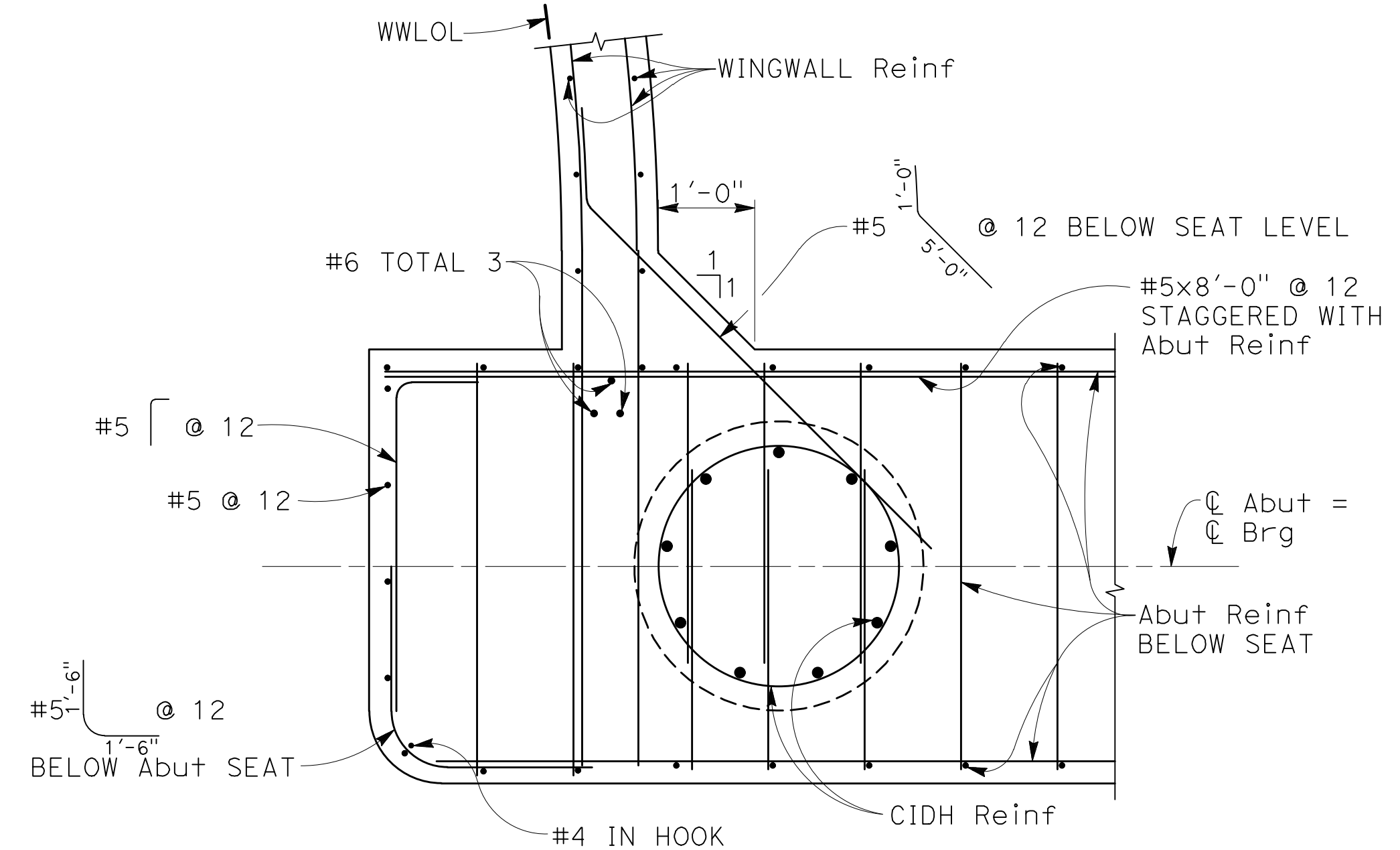
- NOTES:
- Place backfill equally in front and behind abutment until the FG elevation in front is reached, then backfill behind abutment to within 12" of abutment seat before erecting the PC/PS concrete slab units.
 - No splices permitted in main abutment reinforcement.
 - Drainage outlet pipe to daylight not shown for clarity. Set bottom of drainage pad at outlet laterals at elevation 34.25 at Abut 1 & 33.00 at Abut 2. See "DRAINAGE PLANS" on "ABUTMENT DETAILS No. 4" sheet for location of outlet laterals.



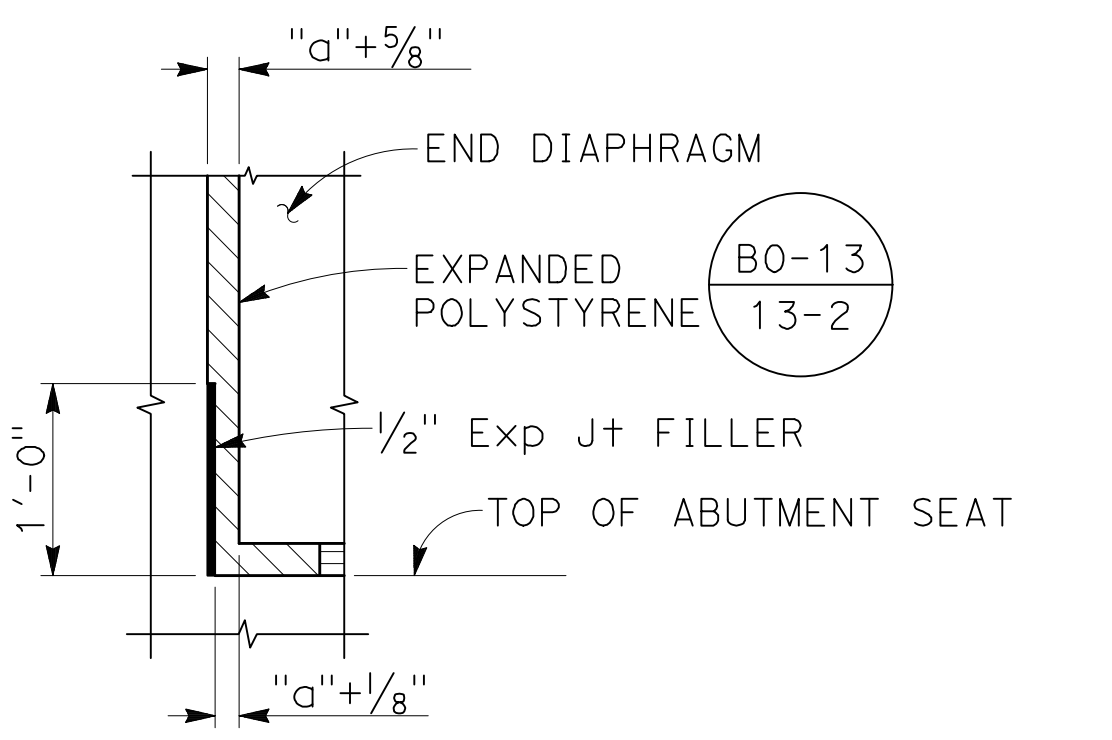
EXTERIOR SHEAR KEY DETAIL
3/4" = 1'-0"



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



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

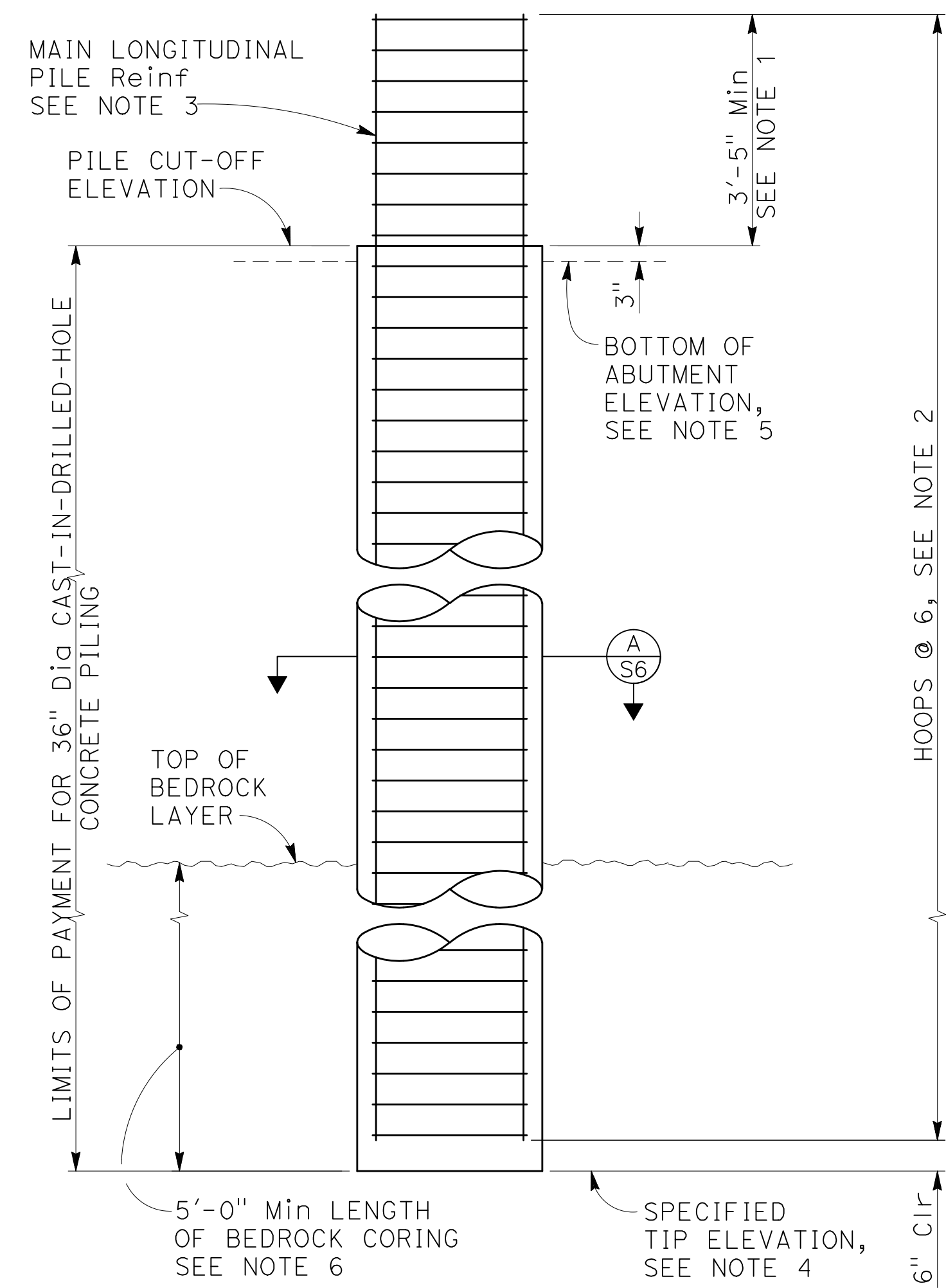


DETAIL 1
NO SCALE

NOTE:
See B6-21 for dimension "a".

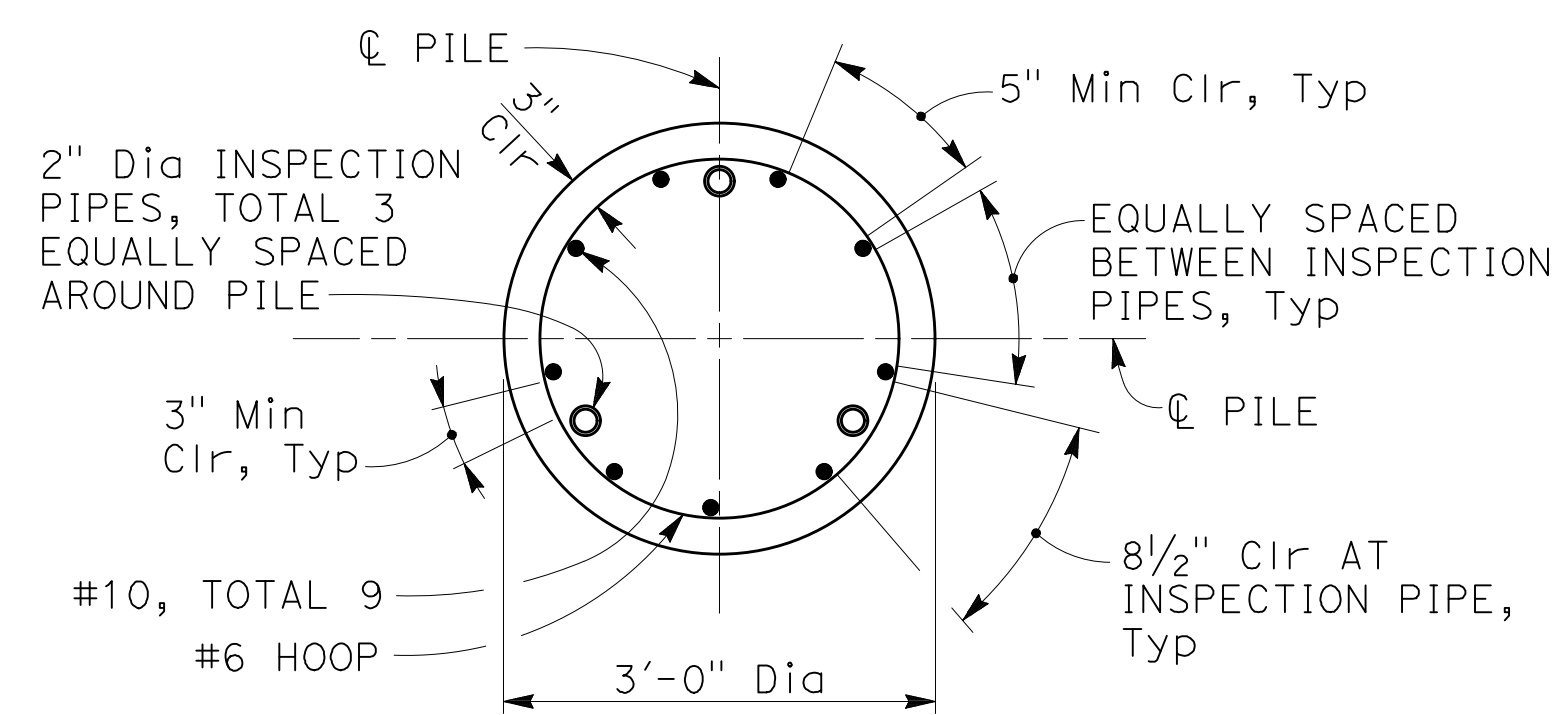
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Drawn	AR	Designer	KDC																										
Drafting Check	KDC	Design Check	SB (GHD)																										
Approved (City Engineer)		Submitted (Project Engineer)	CV																										
Date		Date	12/15/23																										
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date	<p>This Drawing shall not be used for Construction unless Signed and Sealed For Construction</p>		<p>Sheet 34 of 47 Rev:</p>																				



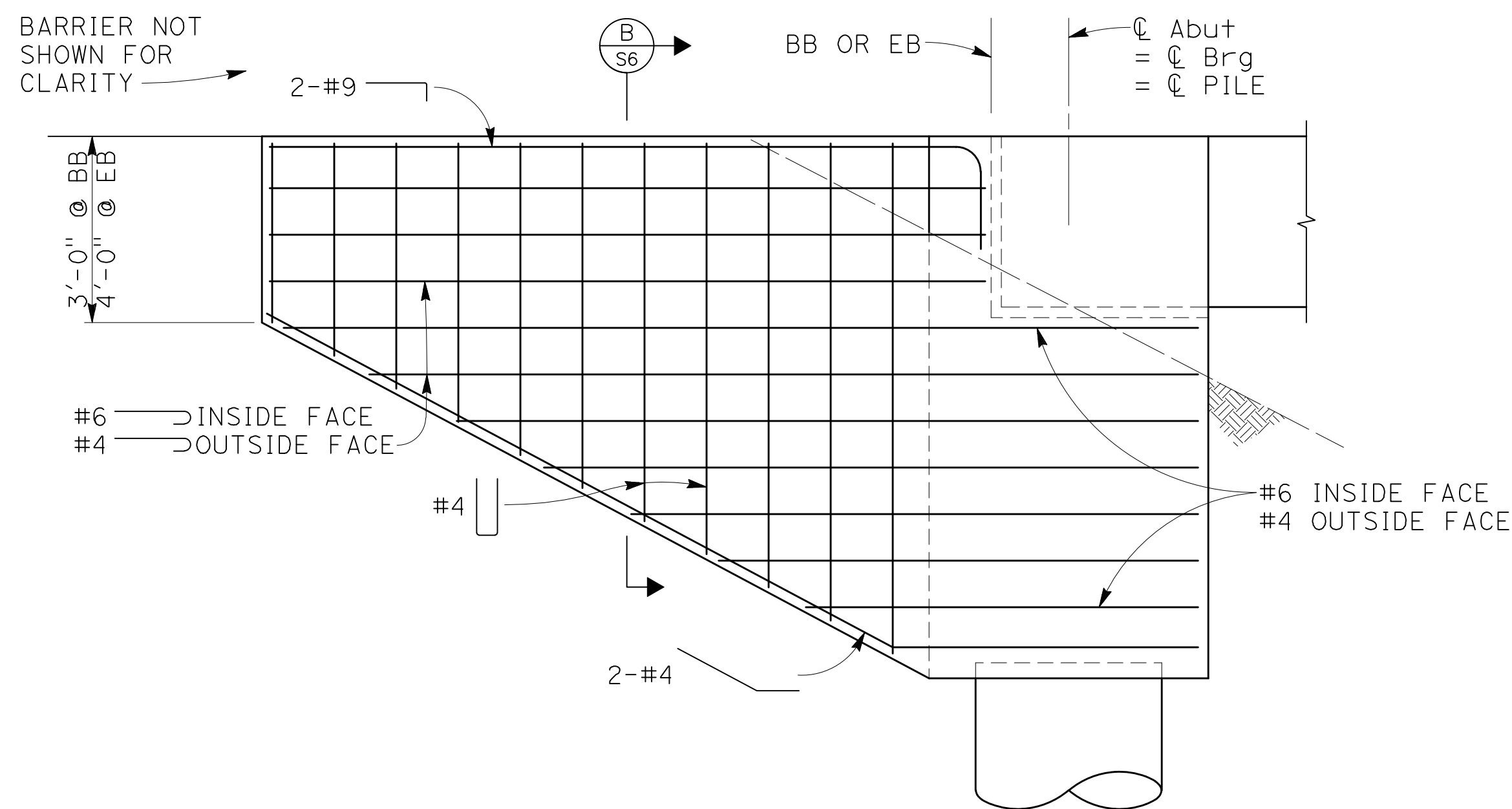
ABUTMENT PILE ELEVATION

1/2" = 1'-0"



SECTION A
3/4" = 1'-0" S6

NOTE:
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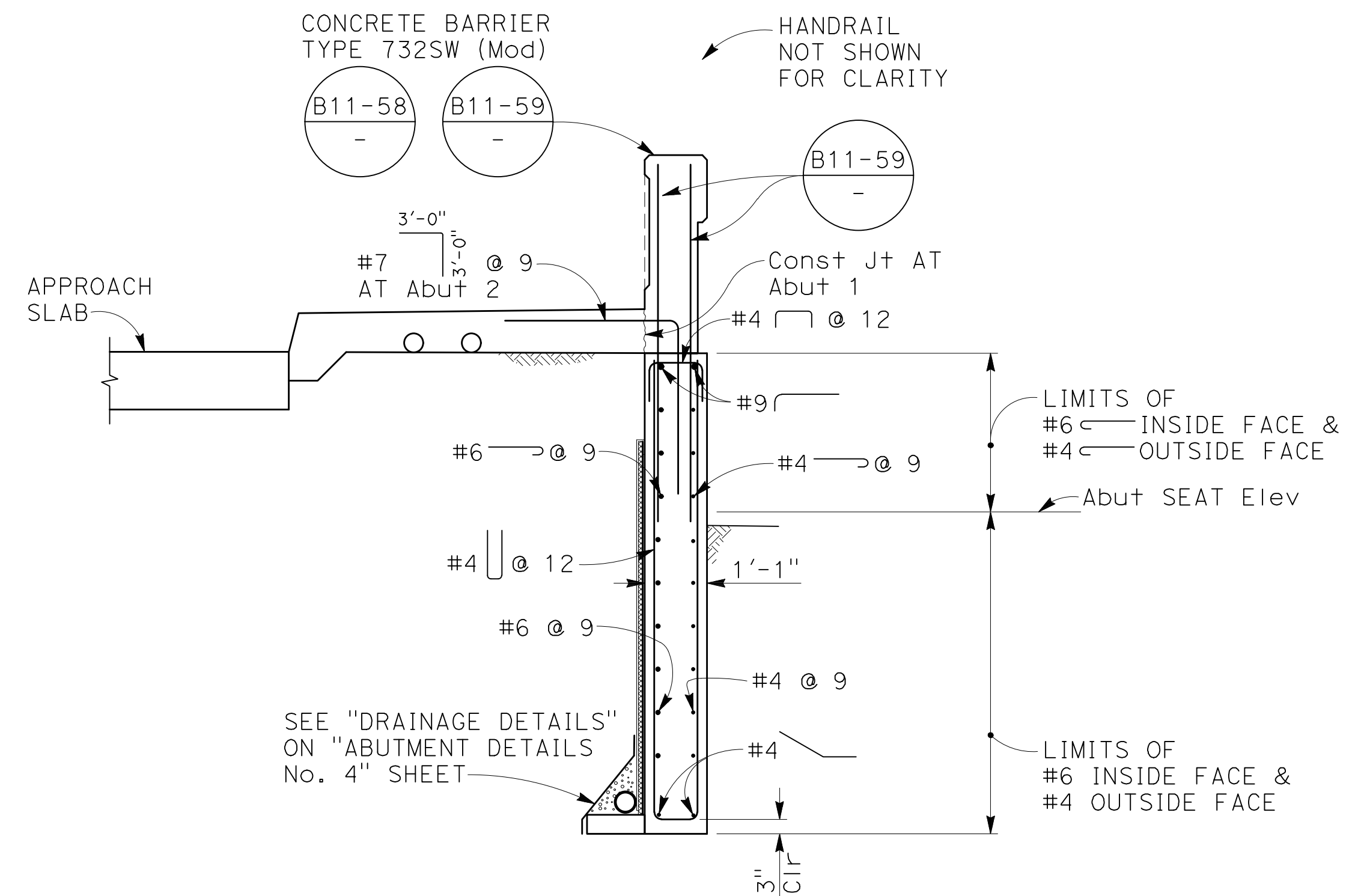


EXTERIOR WINGWALL ELEVATION

1/2" = 1'-0"

NOTES:

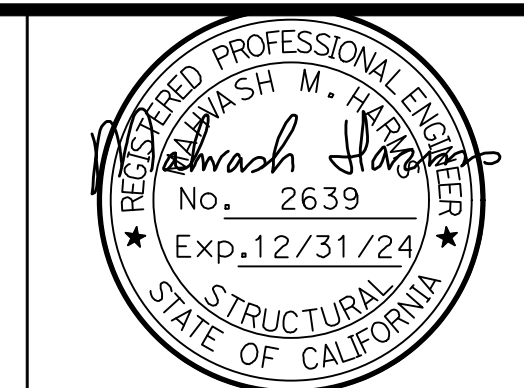
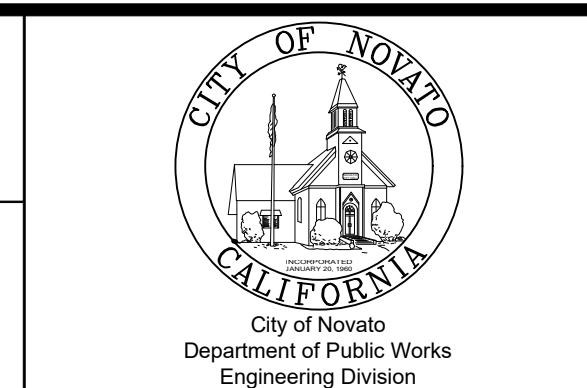
1. Extend main longitudinal pile reinforcement until 6" clear cover to seat level is achieved.
2. All pile hoops must utilize ultimate butt splices.
3. No splice allowed in main longitudinal pile reinforcement.
4. See "PILE DATA TABLE" on "FOUNDATION PLAN" sheet for specified tip elevations.
5. For bottom of abutment elevation, see "FOUNDATION PLAN" sheet.
6. Piles must satisfy minimum lengths of bedrock coring shown on this sheet regardless of specified tip elev. Top of bedrock elevations to be determined by test borings per project specifications. Estimated bedrock elevation on sheet S3 shown for bidding purposes only.



SECTION B
1/2" = 1'-0" S6

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

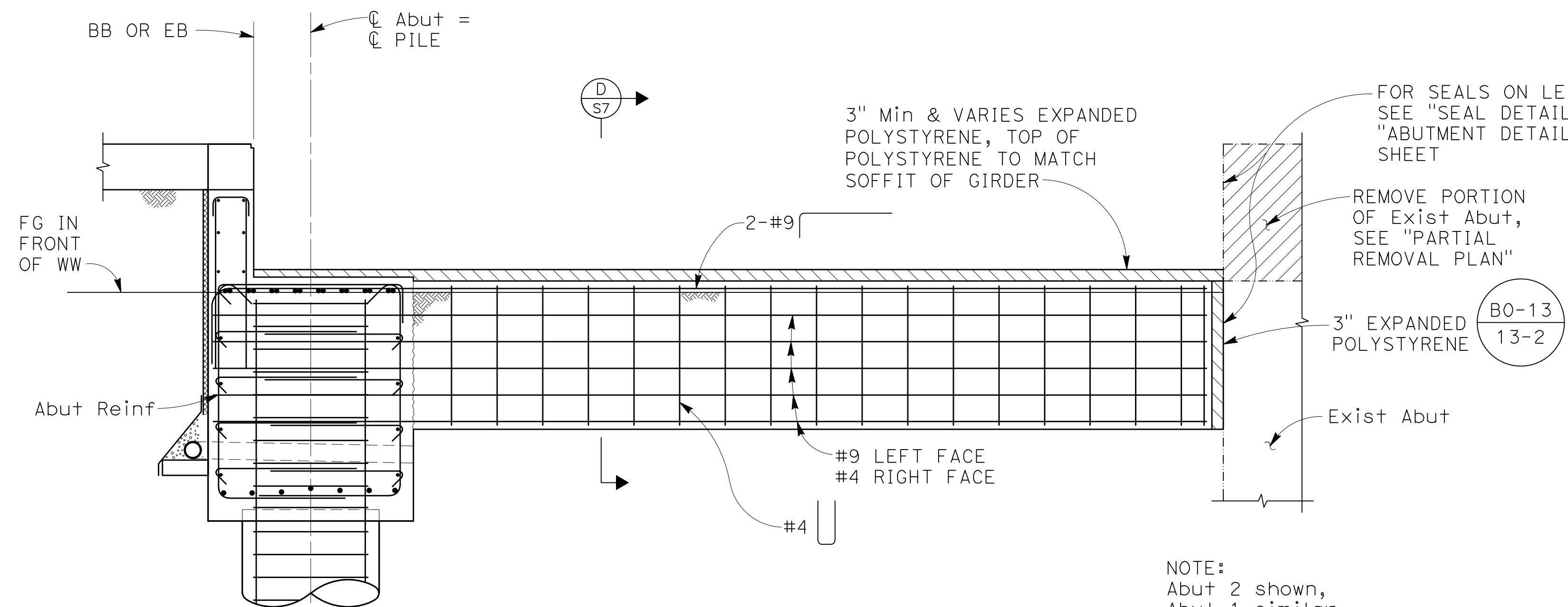
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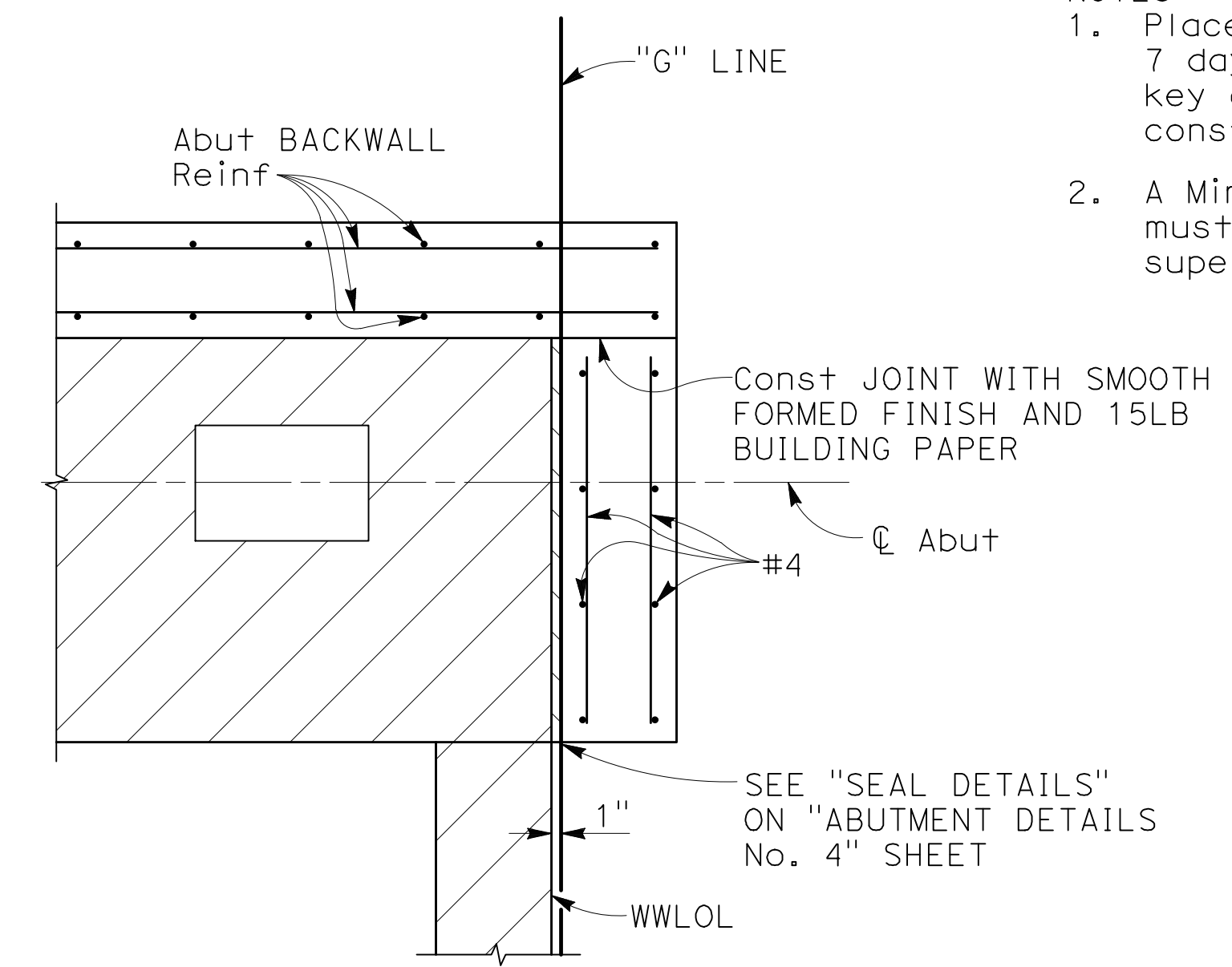
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Drafting Check	KDC	Design Check	SB (GHD)
Approved (City Engineer)		Submitted (Project Engineer)	CV
Date		Date	12/15/23
Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION
Title	ABUTMENT DETAILS No. 2
Contract No.	09-003
Original Size	This Drawing shall not be used for Construction unless Signed and Sealed For Construction
Drawing No.	S6
Sheet	35 of 47
Rev:	



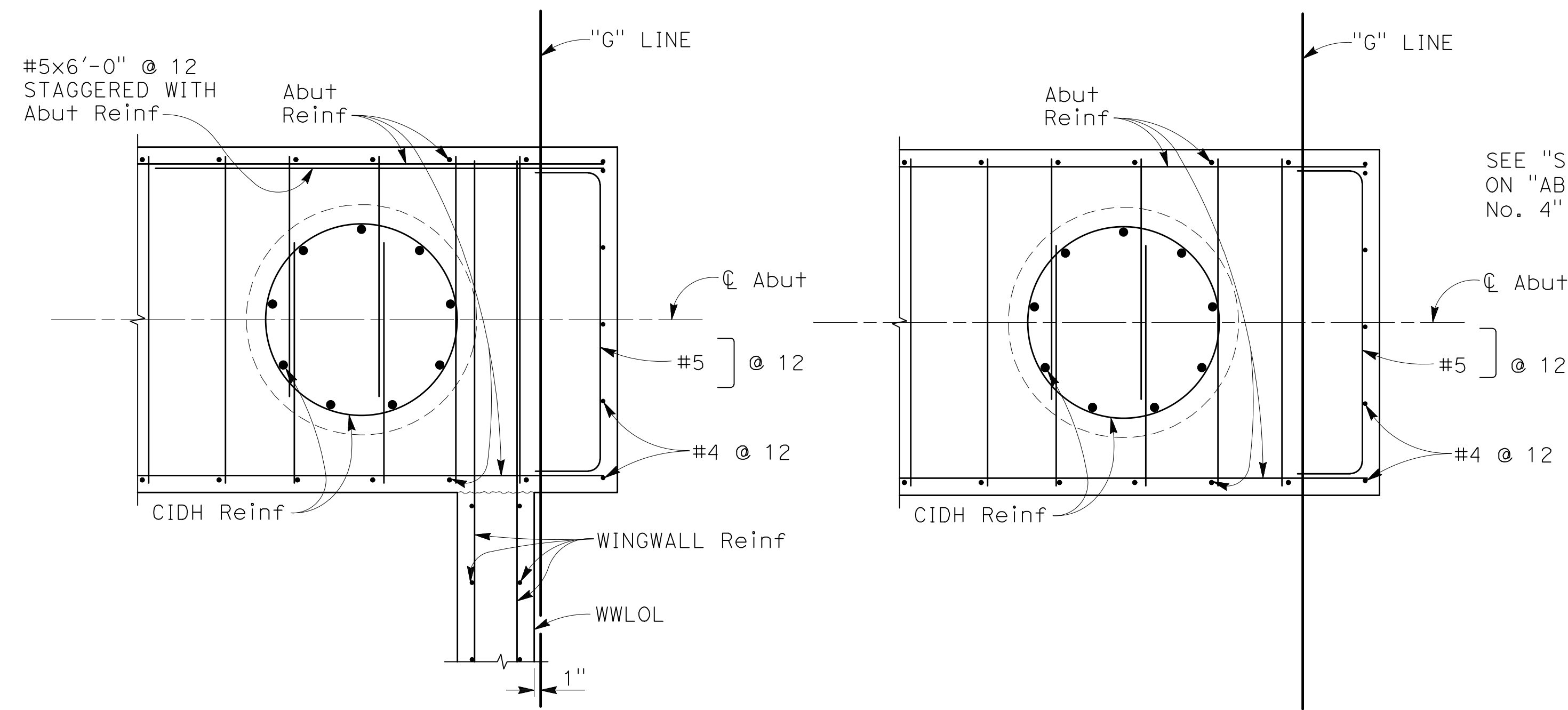
INTERIOR WINGWALL ELEVATION
1/2" = 1'-0"

NOTE:
Abut 2 shown,
Abut 1 similar



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

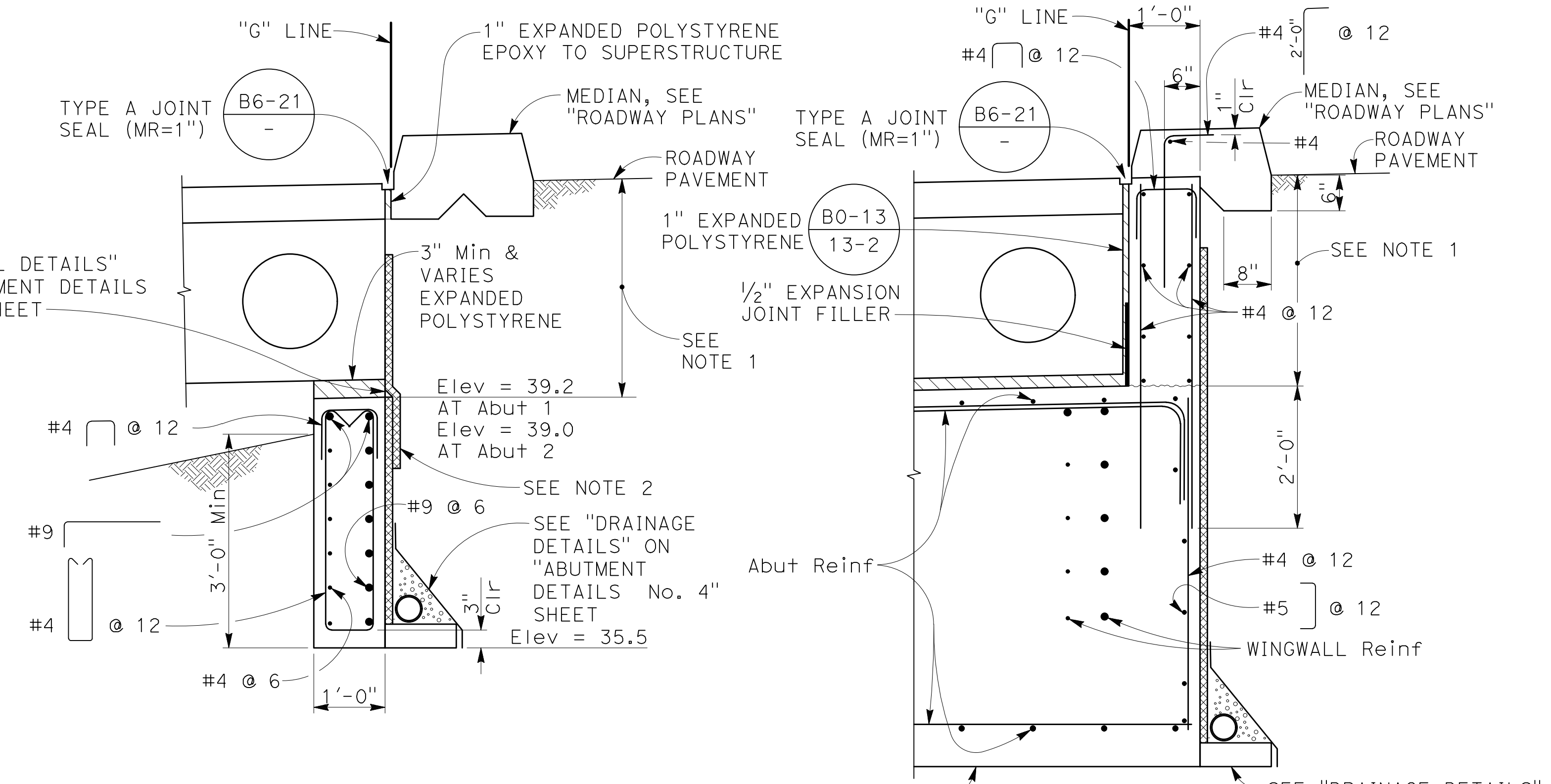
- NOTES:
- Place backfill a minimum of 7 days after right shear key construction and CIP deck construction are complete.
 - A Min of 1'-0" geocomposite drain lap must be provided at joint between superstructure and wingwall.



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

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

NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

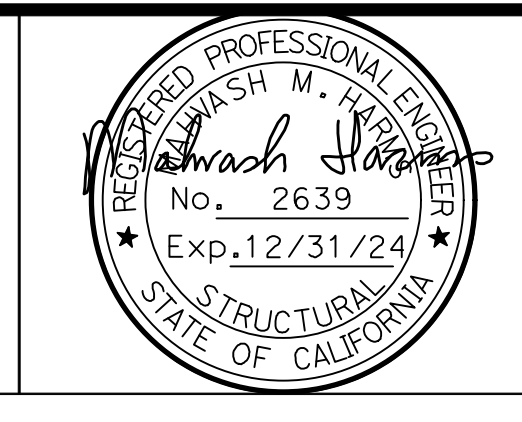
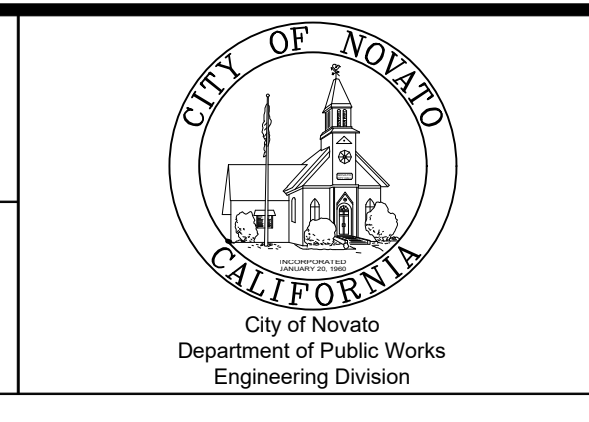


SECTION D
3/4" = 1'-0"

DETAIL 1
3/4" = 1'-0"

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

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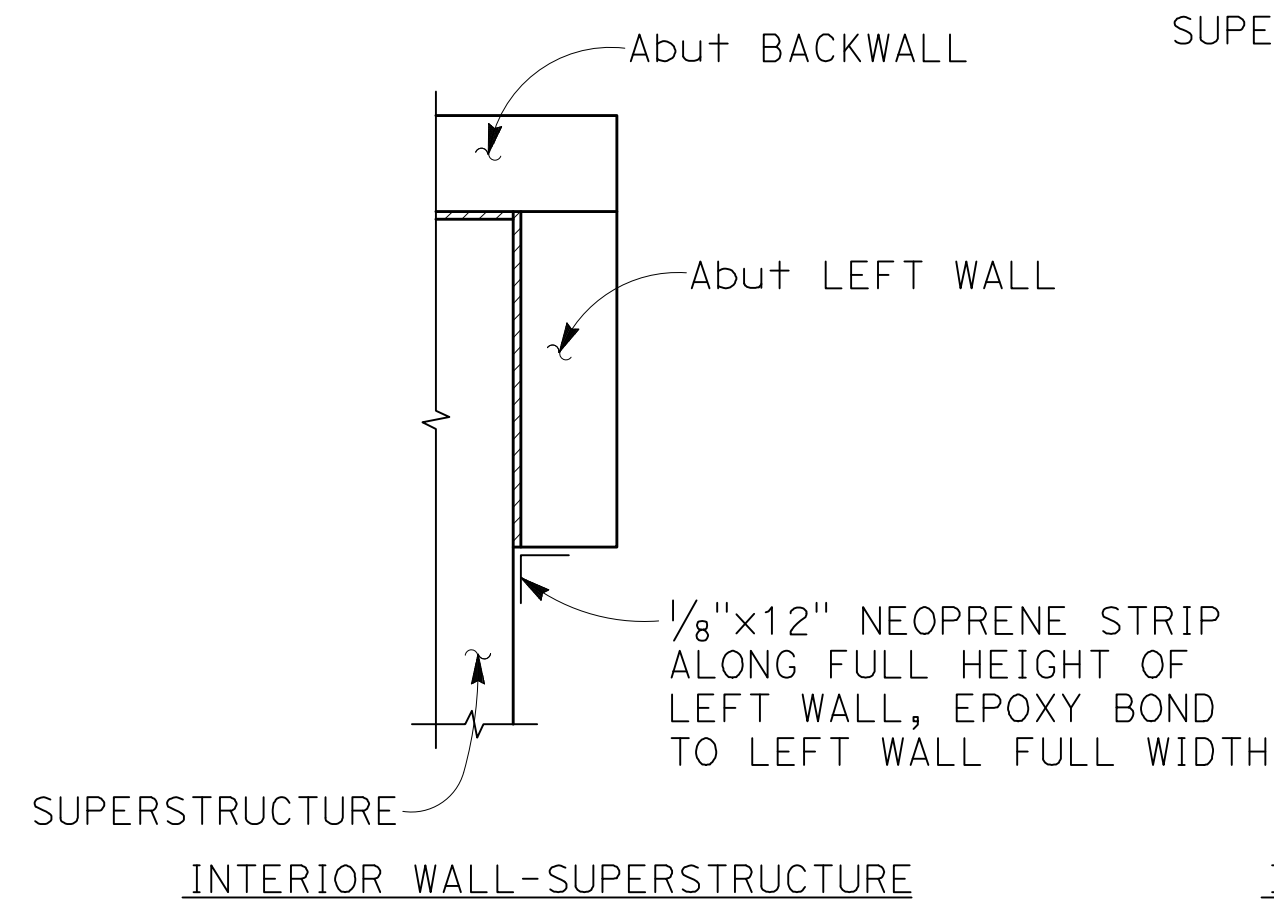
BCR

Drawn	RLQ	Designer	KDC
Drafting Check	KDC	Design Check	SB (GHD)
Approved (City Engineer)		Submitted (Project Engineer)	CV
Date		Date	12/15/23
Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

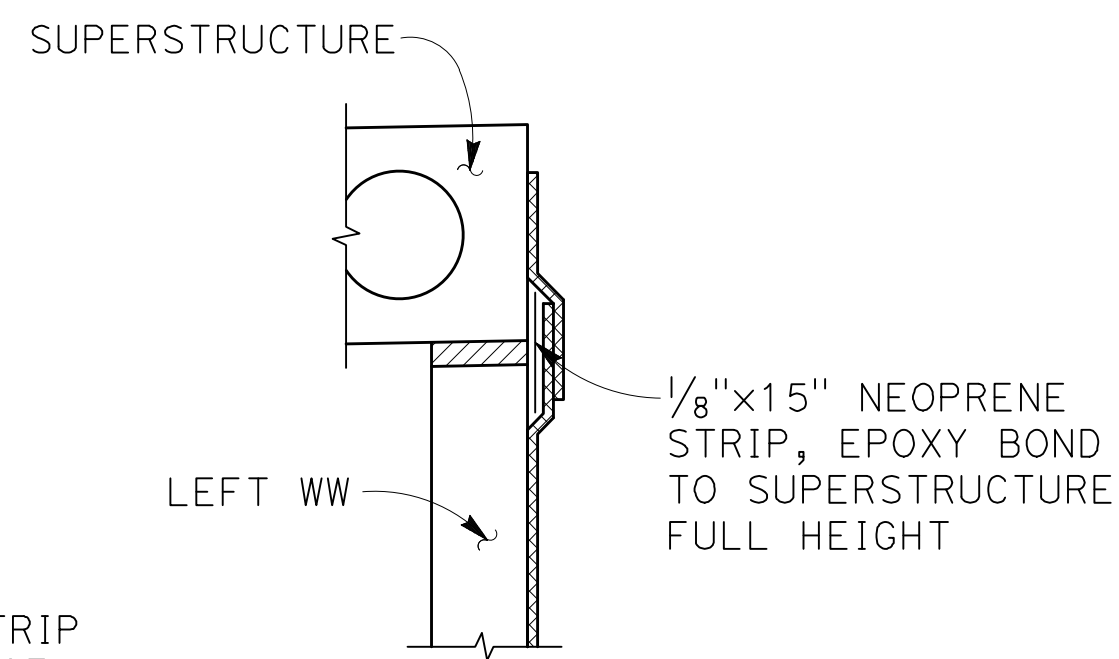
Client **CITY OF NOVATO**
Project **GRANT AVENUE BRIDGE REHABILITATION**
Title **ABUTMENT DETAILS No. 3**

Contract No. 09-003
Original Size
Drawing No: **S7**

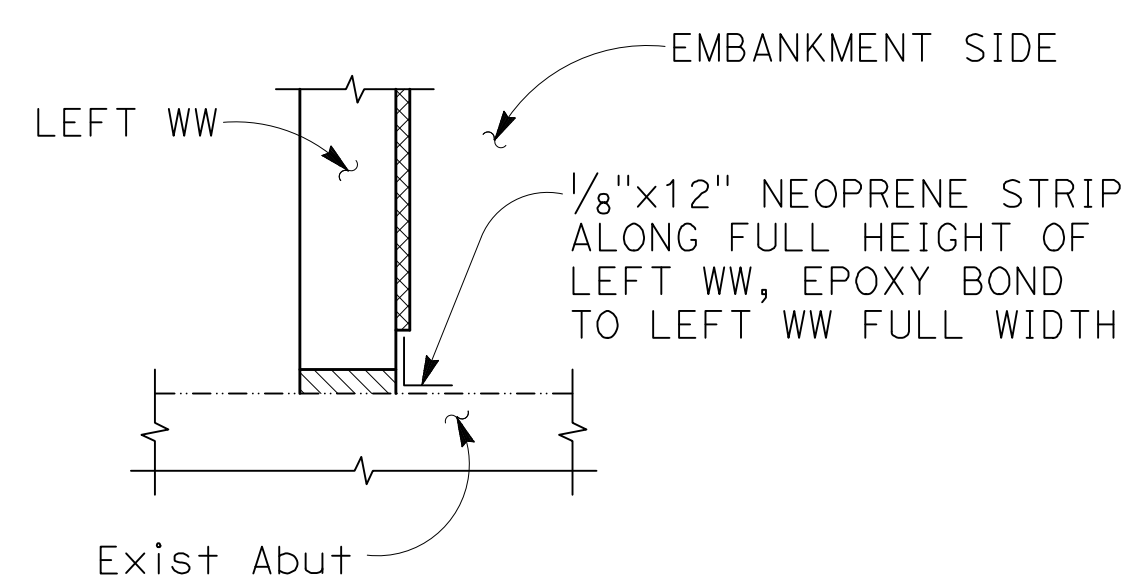
Sheet 36 of 47
Rev:



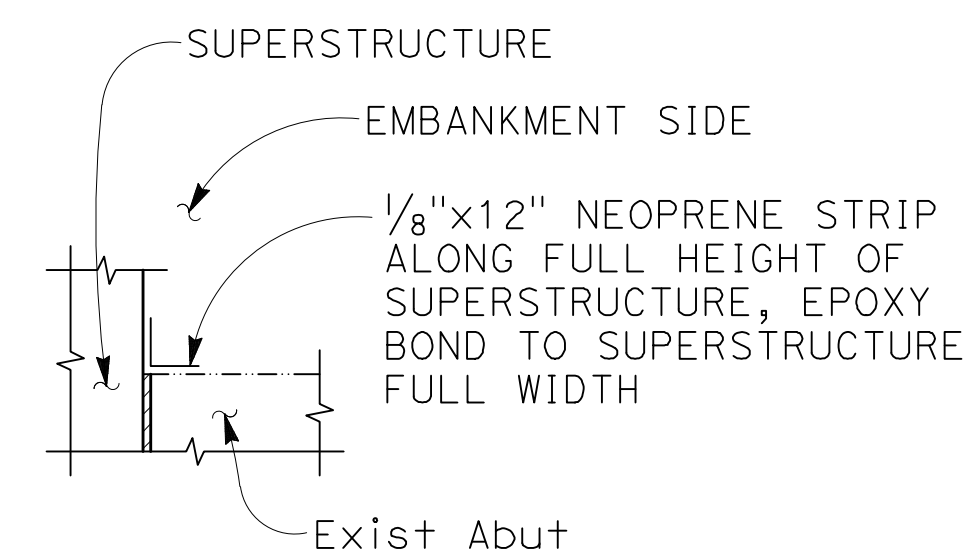
INTERIOR WALL-SUPERSTRUCTURE



INTERIOR WW-SUPERSTRUCTURE



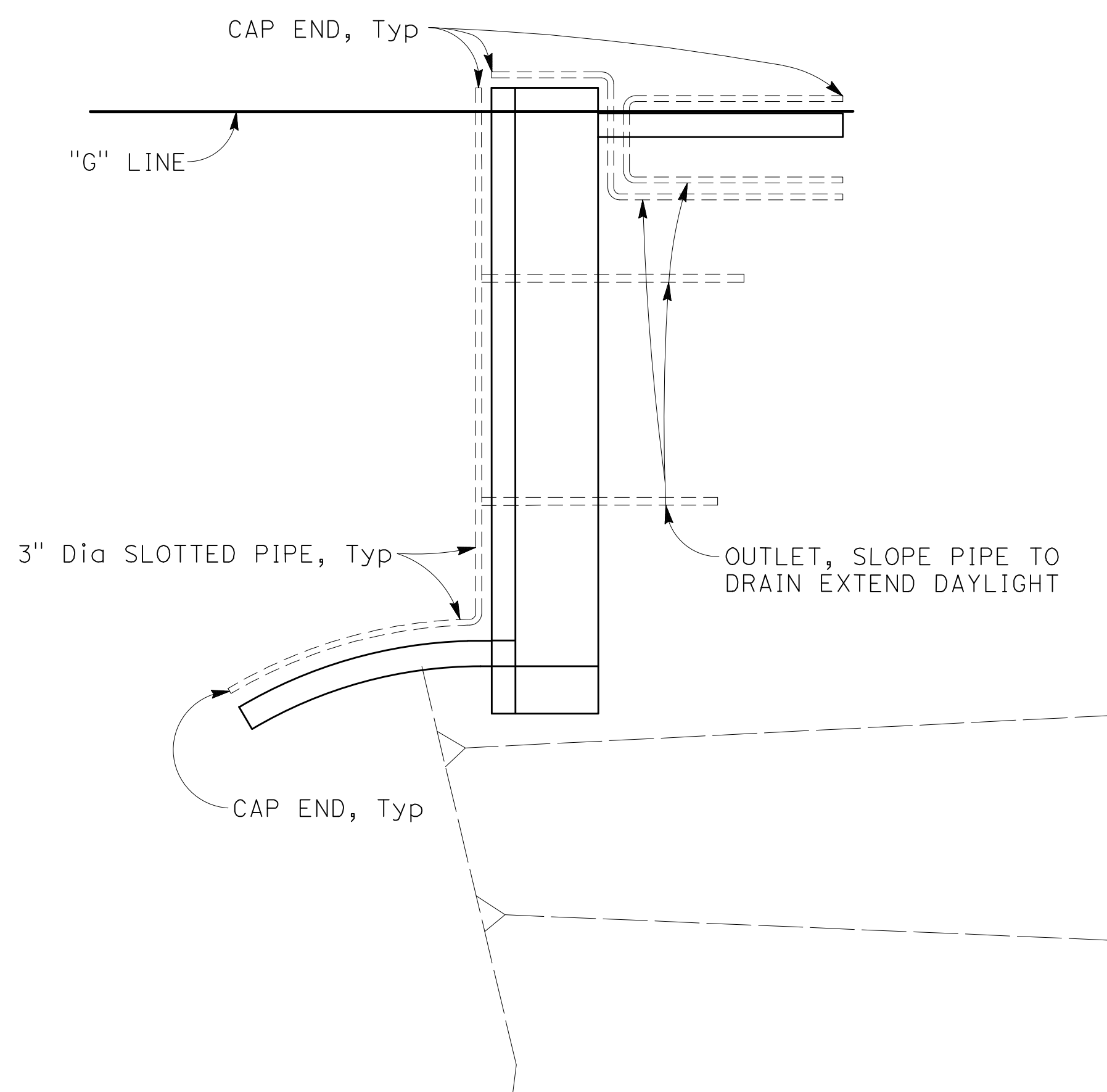
INTERIOR WALL-EXISTING ABUTMENT



SUPERSTRUCTURE-EXISTING ABUTMENT

SEAL DETAILS

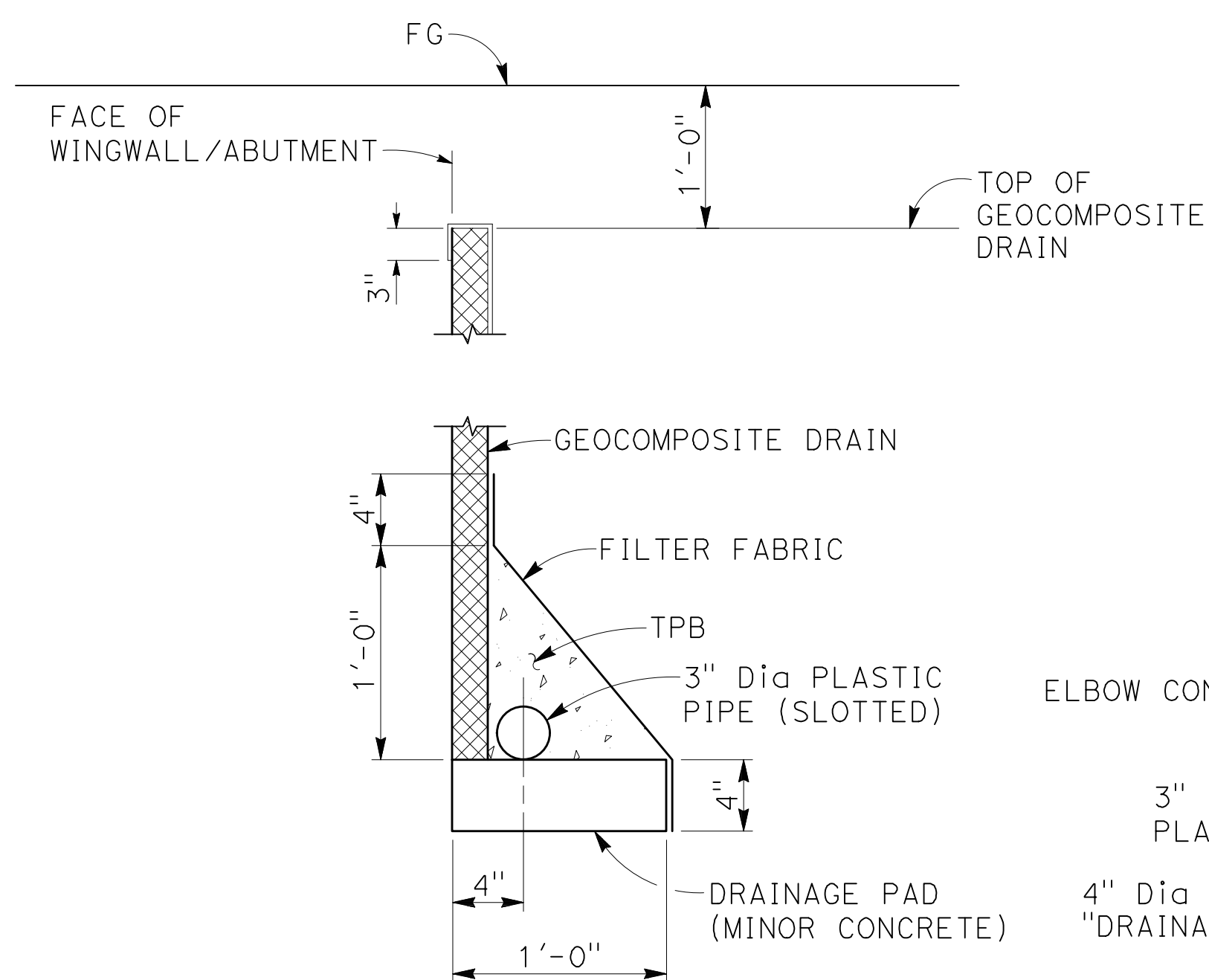
NO SCALE



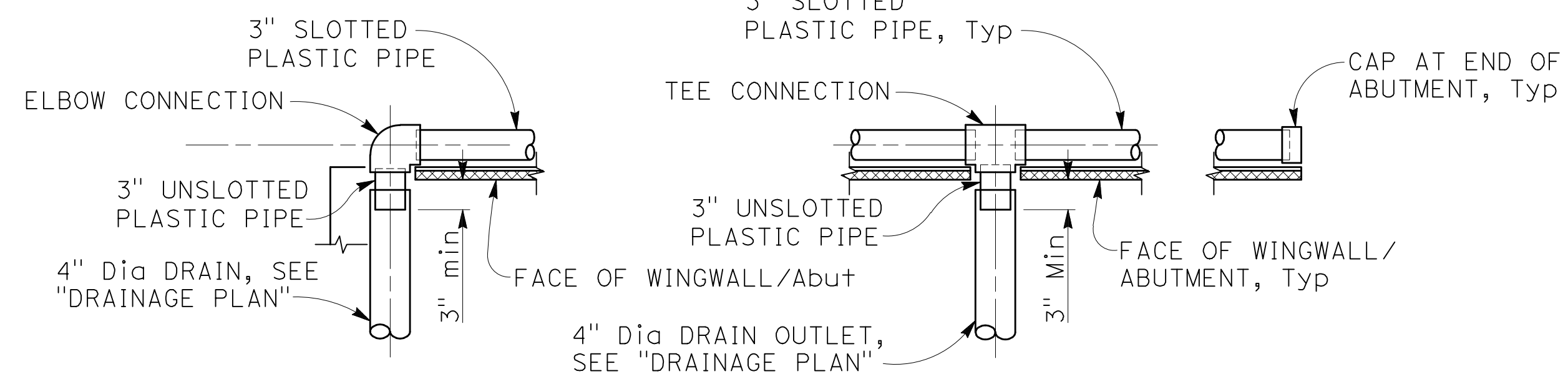
NOTE: Abut 1 shown, Abut 2 similar

DRAINAGE PLAN

1" = 5'



SECTION



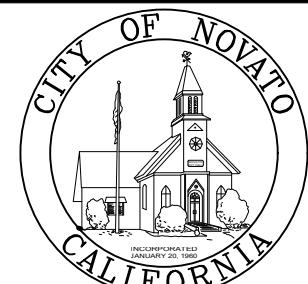


PLAN

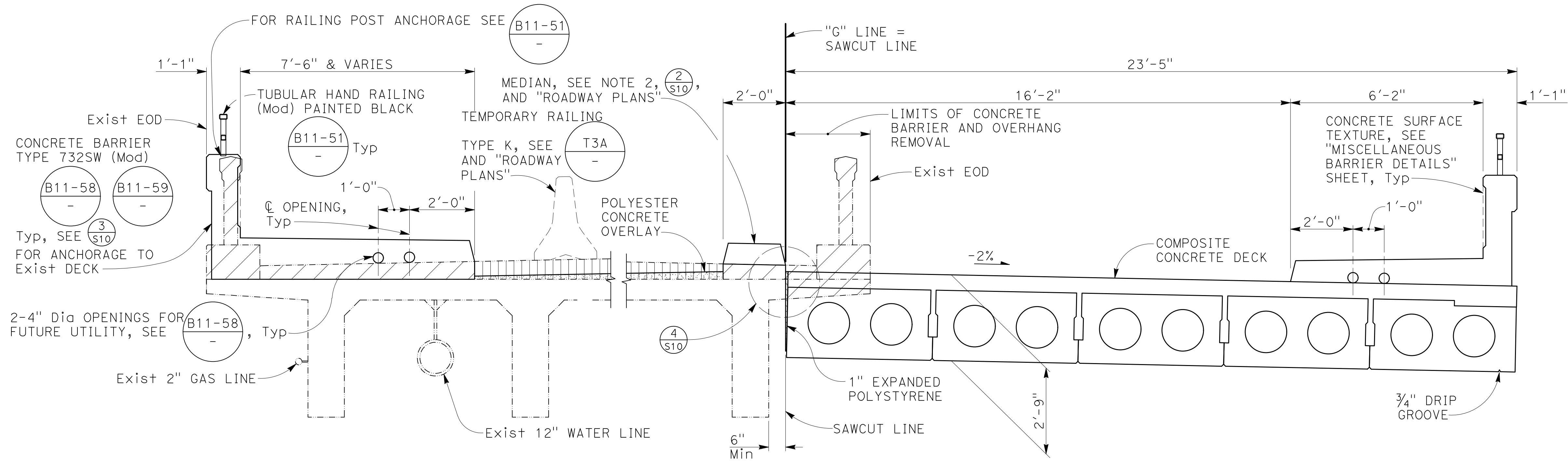
NOTE:
Geocomposite drain, cement treated permeable base, and 3" dia slotted plastic pipe continuous behind wingwall and abutment. Cap ends of pipe. Provide "Tee" or elbow connection at each 4" dia drain.

DRAINAGE DETAIL

NO SCALE

NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

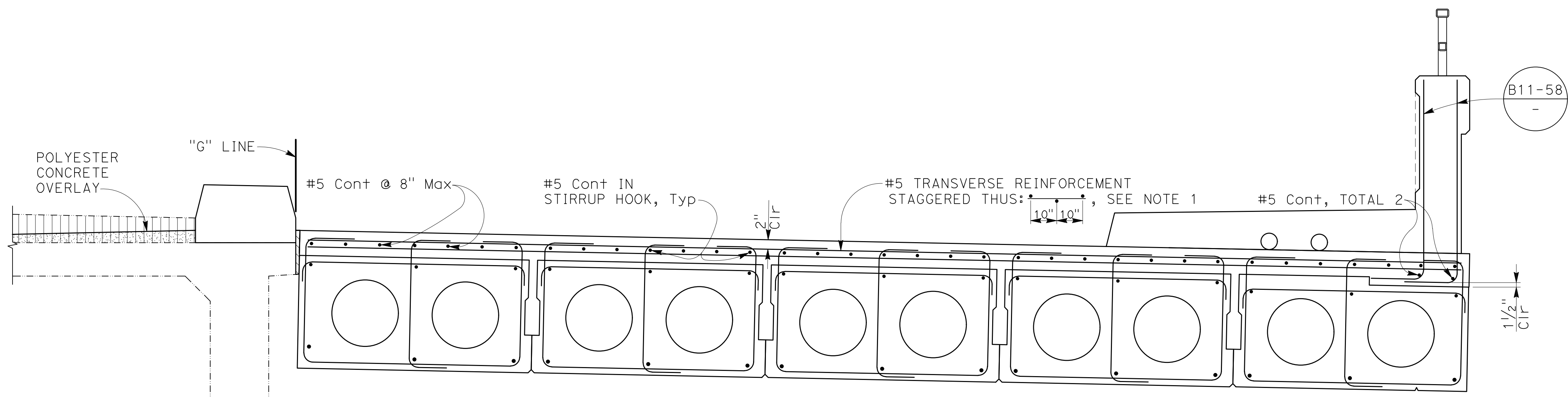
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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date								



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

- LEGEND:
- Indicates Bridge Removal (Portion)
 - Indicates Expanded polystyrene
 - Remove Exist AC Overlay & Reconstruct with methacrylate and polyester overlay per Roadway Plans

- NOTES:
1. Place and space transverse deck reinforcement normal to "G" Line.
 2. Provide expansion joints for the median at the edge of paving notch of each existing bridge abutment. Provide 1/2" expansion joint filler at each median joint.



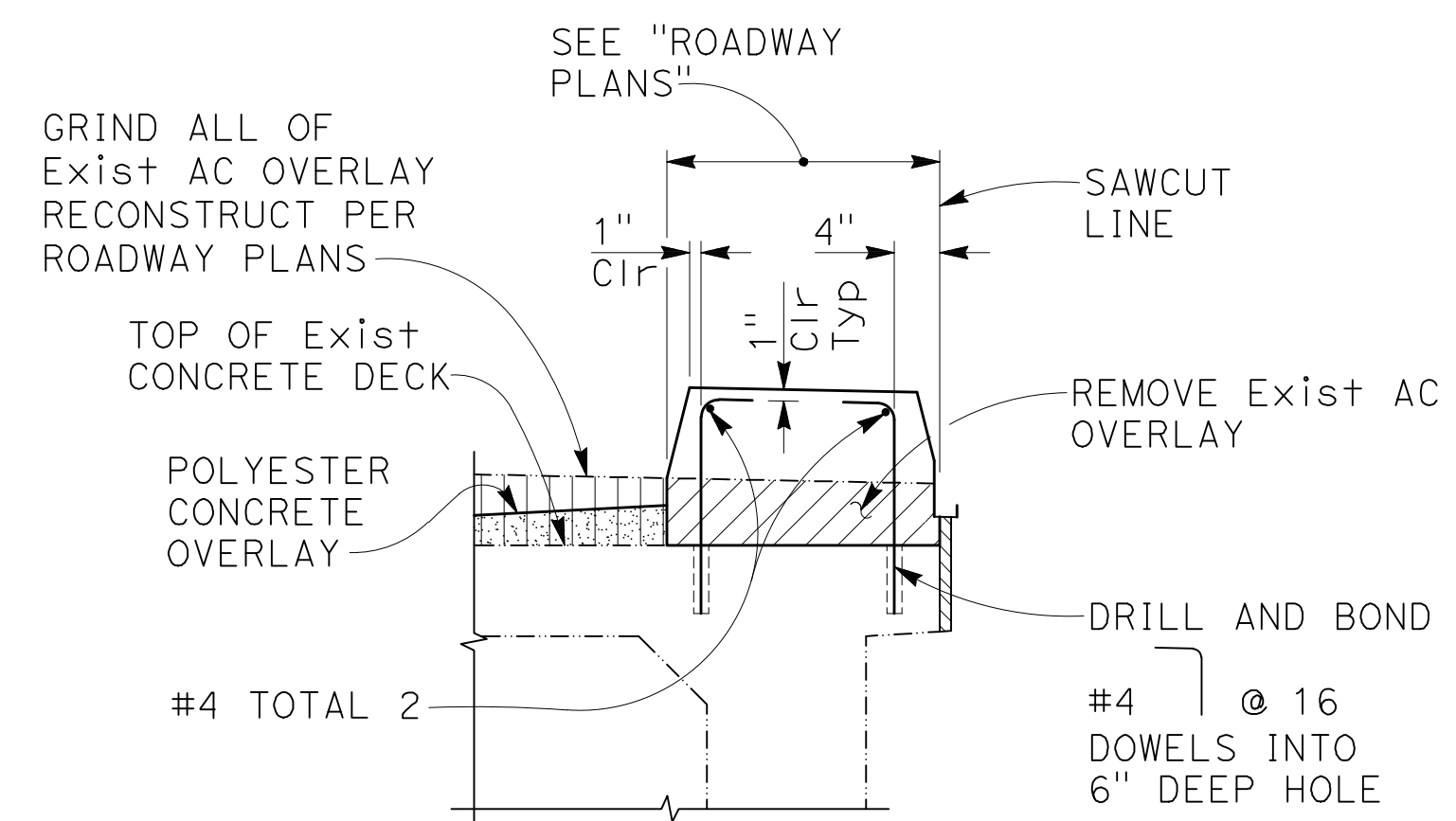
TYPICAL SECTION REINFORCEMENT
3/4" = 1'-0"

NOTE:
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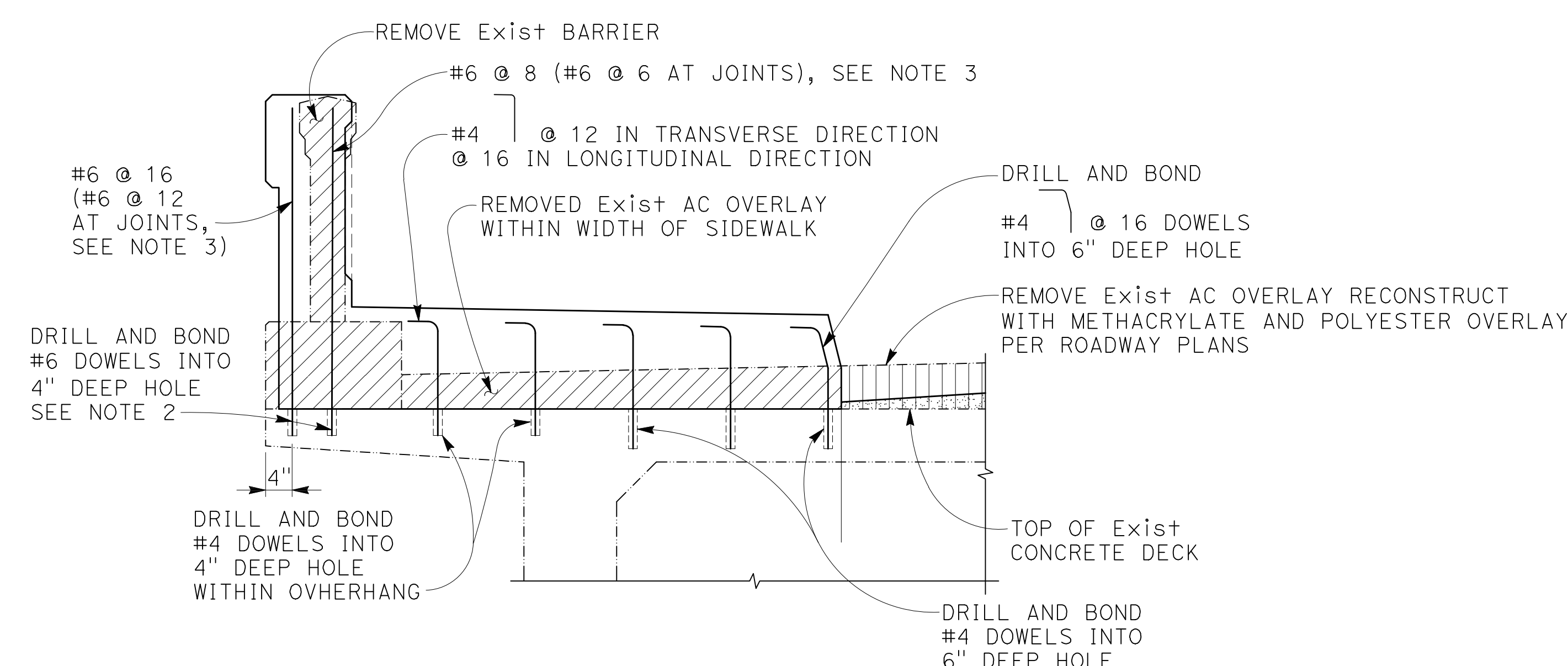
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Drawn	RLQ	Designer	KDC																										
Drafting Check	KDC	Design Check	SB (GHD)																										
Approved (City Engineer)		Submitted (Project Engineer)	CV																										
Date		Date	12/15/23																										
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date	<p>This Drawing shall not be used for Construction unless Signed and Sealed For Construction</p>		<p>Sheet 38 of 47 Rev:</p>																				

NOT USED

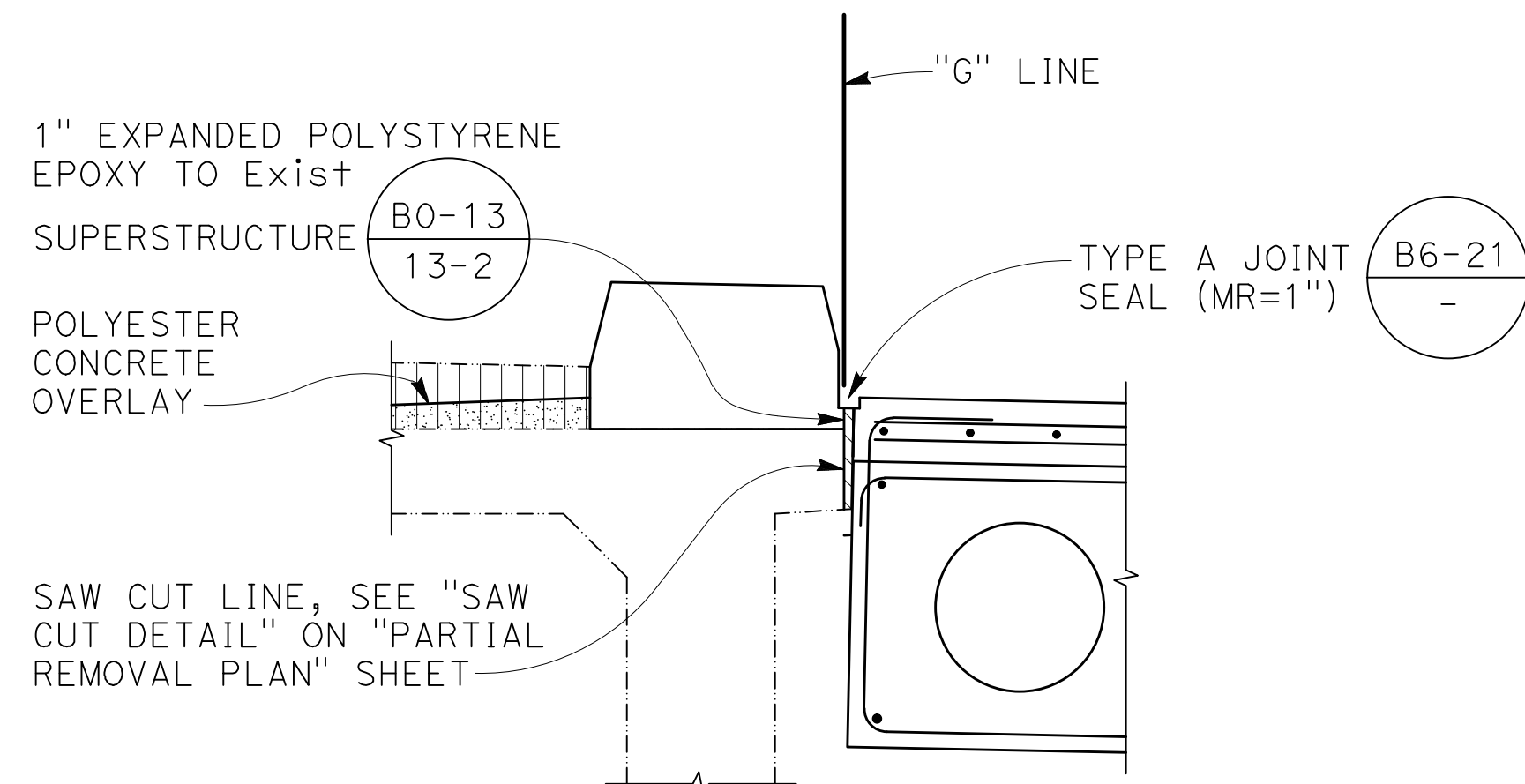
DETAIL 1
NO SCALE (S10)



DETAIL 2
NO SCALE (S10)



DETAIL 3
NO SCALE (S10)

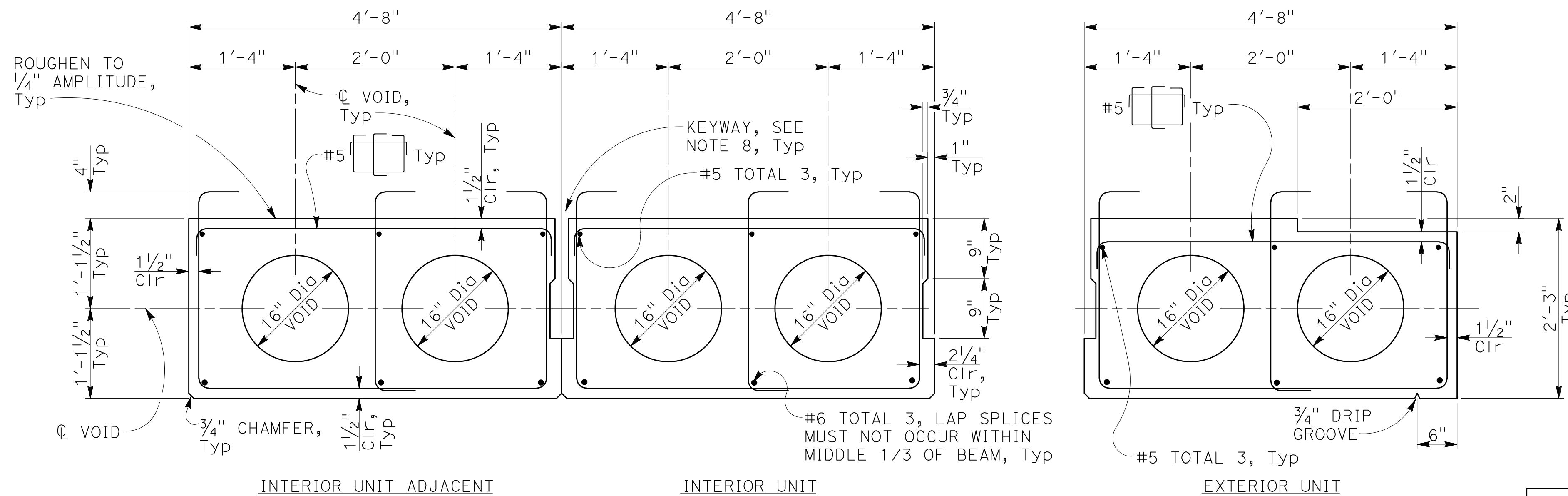


DETAIL 4
NO SCALE (S10)

- NOTE:
- Barrier Details & reinf per (B11-58) & (B11-59), unless modified as shown
 - Provide 4" minimum edge distance for first drill & bond dowel adjacent to joint.
 - For Limits of reinforcement at joints, see (B11-58).

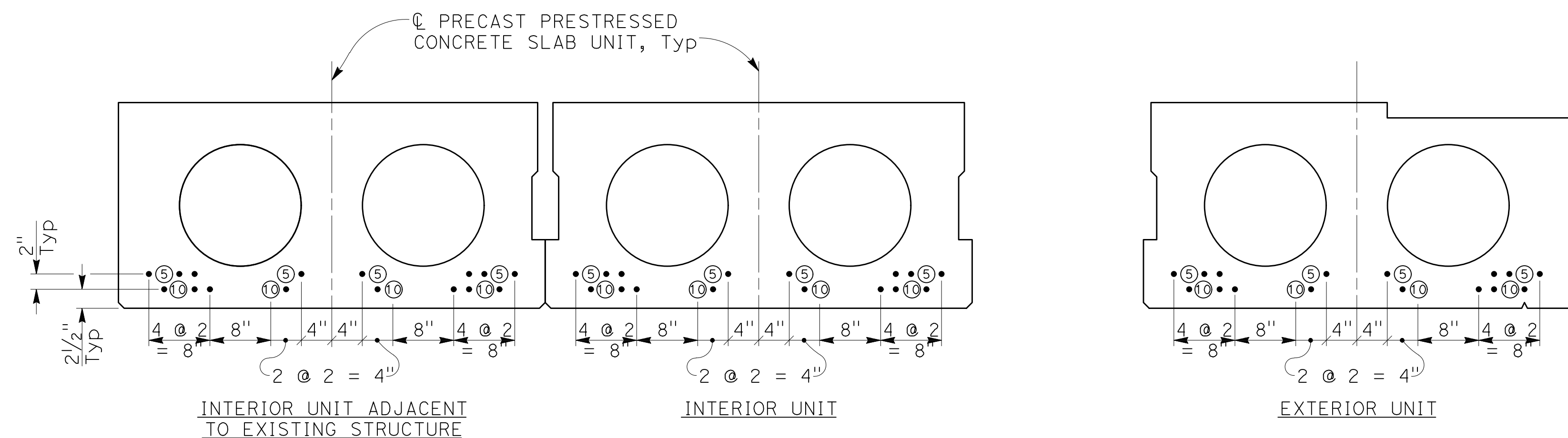
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PRECAST/PRESTRESSED CONCRETE SLAB UNIT
1" = 1'-0"

PRESTRESSING DATA TABLE					
Girder	# Units	Pjack (k/unit)	No. of P/S strands	Deflection at midspan due to deck DL (in)	Deflection at midspan due to barrier DL (in)
Interior unit adjacent to existing structure	1	1055	24	0.45	0.17
Interior unit	3	1055	24	0.49	0.17
Exterior unit	1	1055	24	0.57	0.17



STRAND LAYOUT
1" = 1'-0"

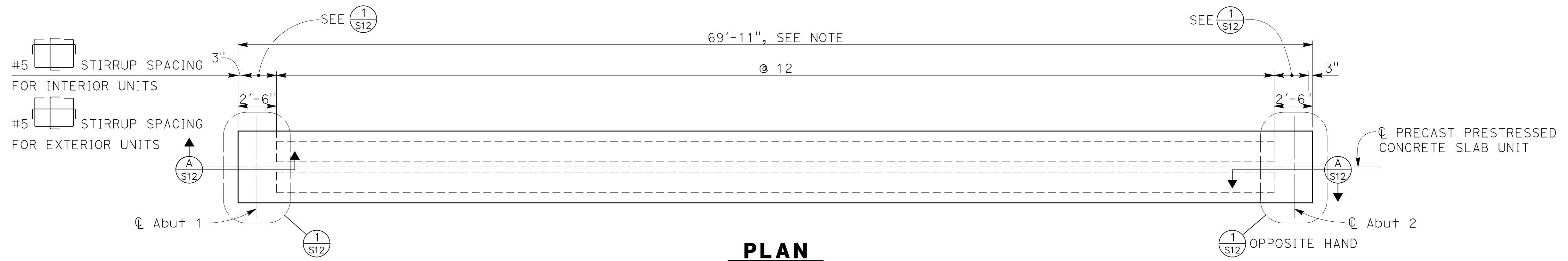
- LEGEND:**
- Denotes continuously bonded strand.
 - ⑤ Denotes debonded strand and debonded length in feet, measured from the ends of the Precast Prestressed Concrete Slab Unit.

Prestressing Notes

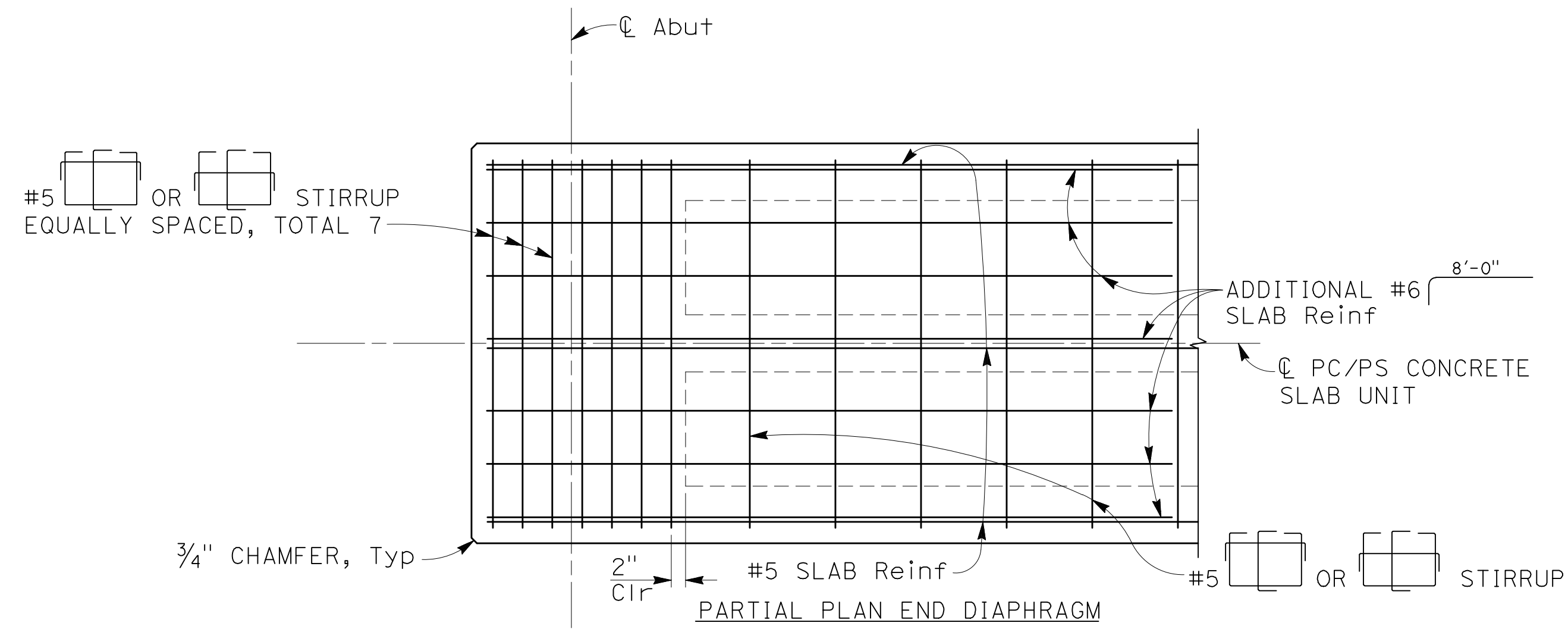
- Pjack is the jacking force required at the point of control along the span. The jacking force does not include any fabrication specific losses.
- The maximum tensile stress in the prestressing steel upon release must not exceed 75% of the specified minimum ultimate tensile strength of the prestressing steel.
- The maximum temporary tensile stress (jacking stress) in the prestressing steel must not exceed 80% of the specified minimum ultimate tensile strength of the prestressing steel.
- Design based on 270 ksi low relaxation 0.6" dia strand
- Slab designed for pretensioning
- Concrete: $f'c = 6$ ksi at 28 days
 $f'ci = 4$ ksi at Time of stressing
- Total number of precast slab units = 5
- Keyways to be filled with non-shrink grout (ASTM C-1107) minimum of 14 days prior to placement of composite concrete slab.
- Screed line elevations for deck concrete will be determined by Contractor.

NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

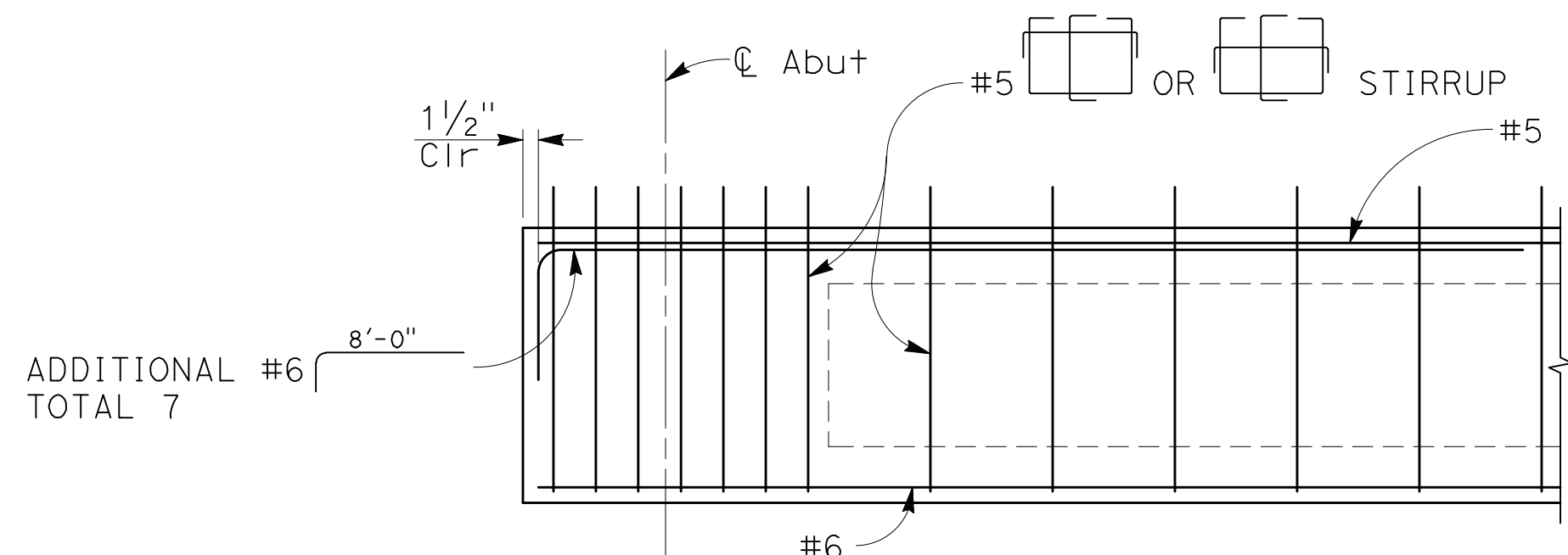
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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date	<p>Scale AS SHOWN</p> <p>This Drawing shall not be used for Construction unless Signed and Sealed For Construction</p>	<p>Original Size</p> <p>Drawing No: S11</p>	<p>Sheet 40 of 47</p> <p>Rev:</p>



PLAN
1/4" = 1'-0"



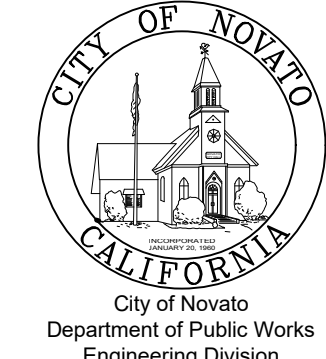


DETAIL
3/4" = 1'-0"



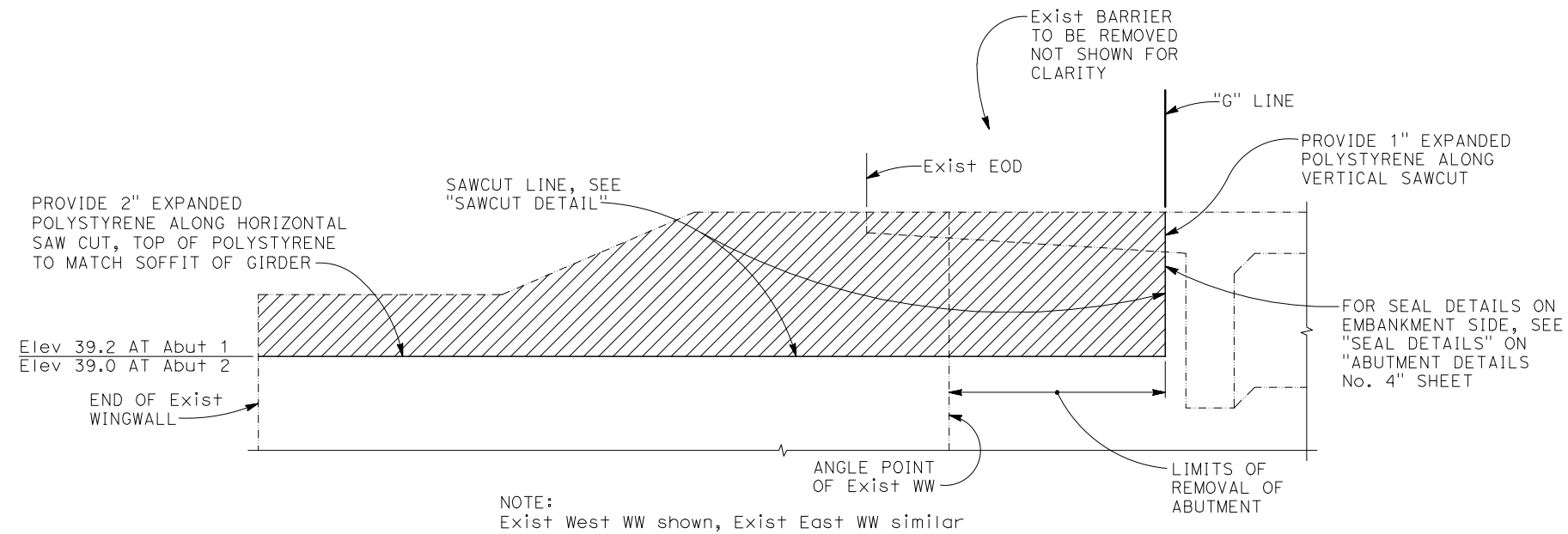
SECTION
3/4" = 1'-0"

NOTES:
Girder length provided assumes an "a" value of 1/2" for joint seal at abutments. Girder length must be adjusted if "a" value used is different from assumed value.

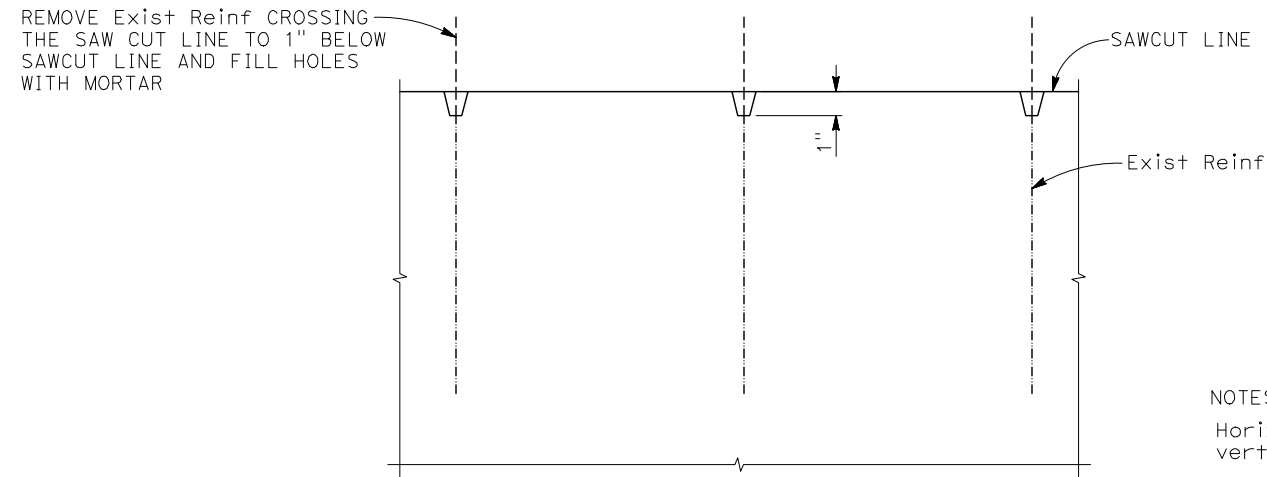
NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material

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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date	This Drawing shall not be used for Construction unless Signed and Sealed For Construction		Original Size Drawing No: S12		Sheet 41 of 47 Rev:		

LEGEND:
 Indicates Bridge Removal (Portion)






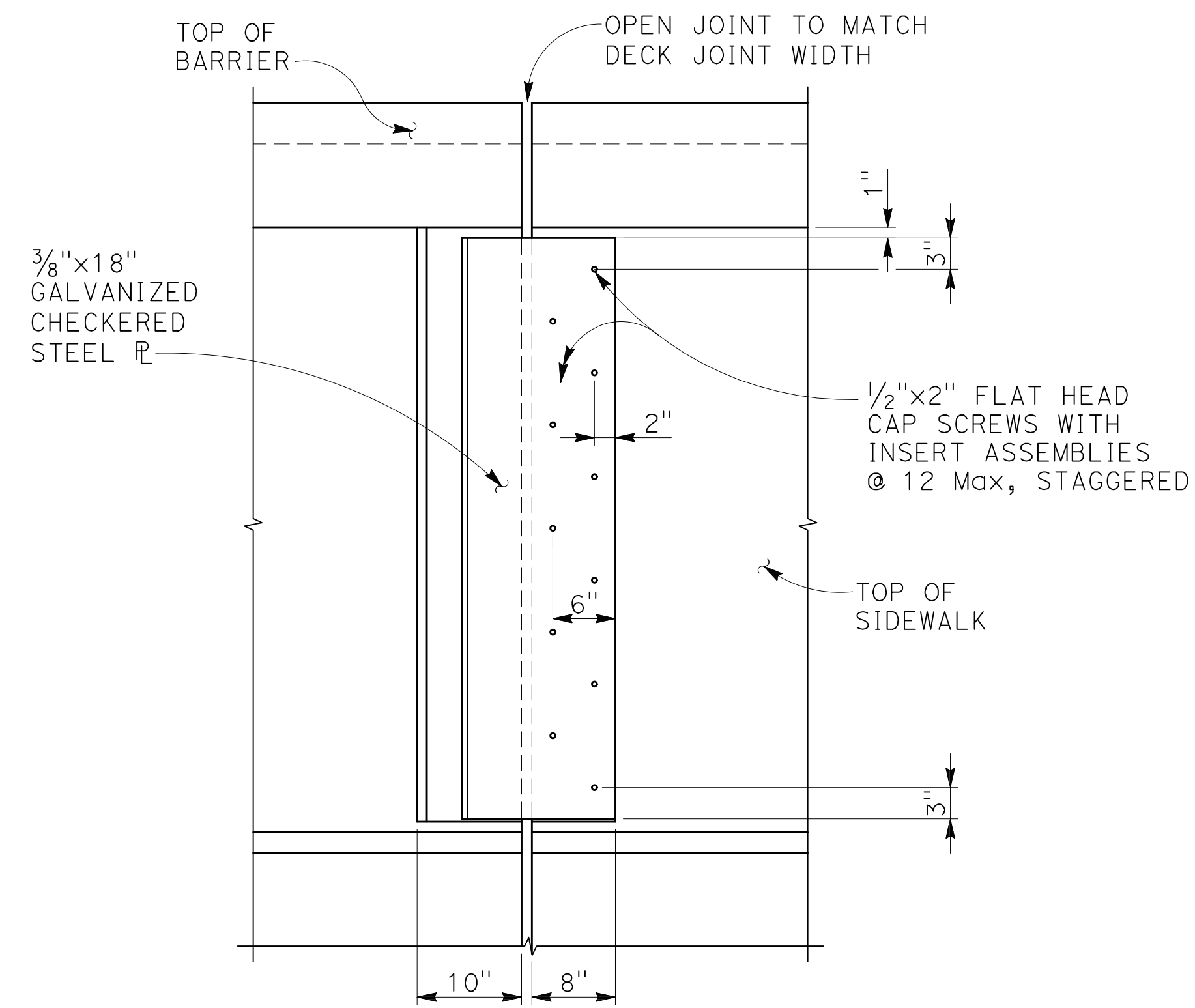
DEVELOPED EXISTING WINGWALL ELEVATION
 1/2" = 1'-0"



SAWCUT DETAIL - PLAN
 NO SCALE

NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material

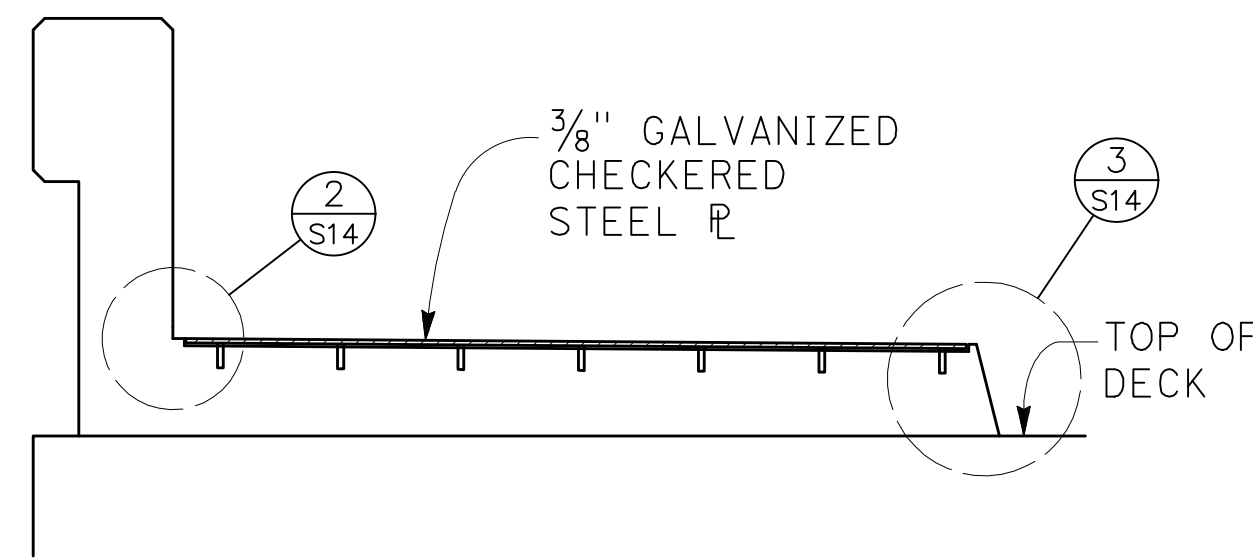
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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date							Sheet 42 of 47	Rev:	



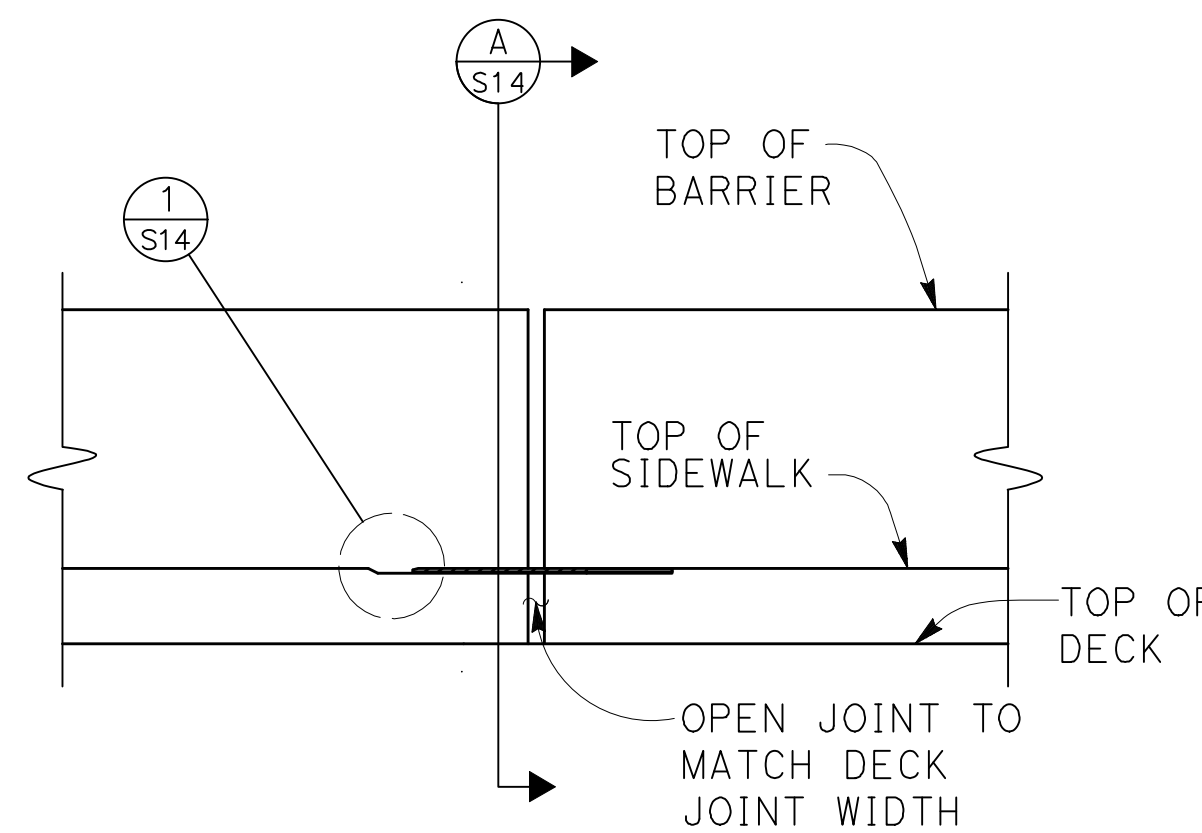
PLAN

NO SCALE

← DIRECTION OF TRAFFIC

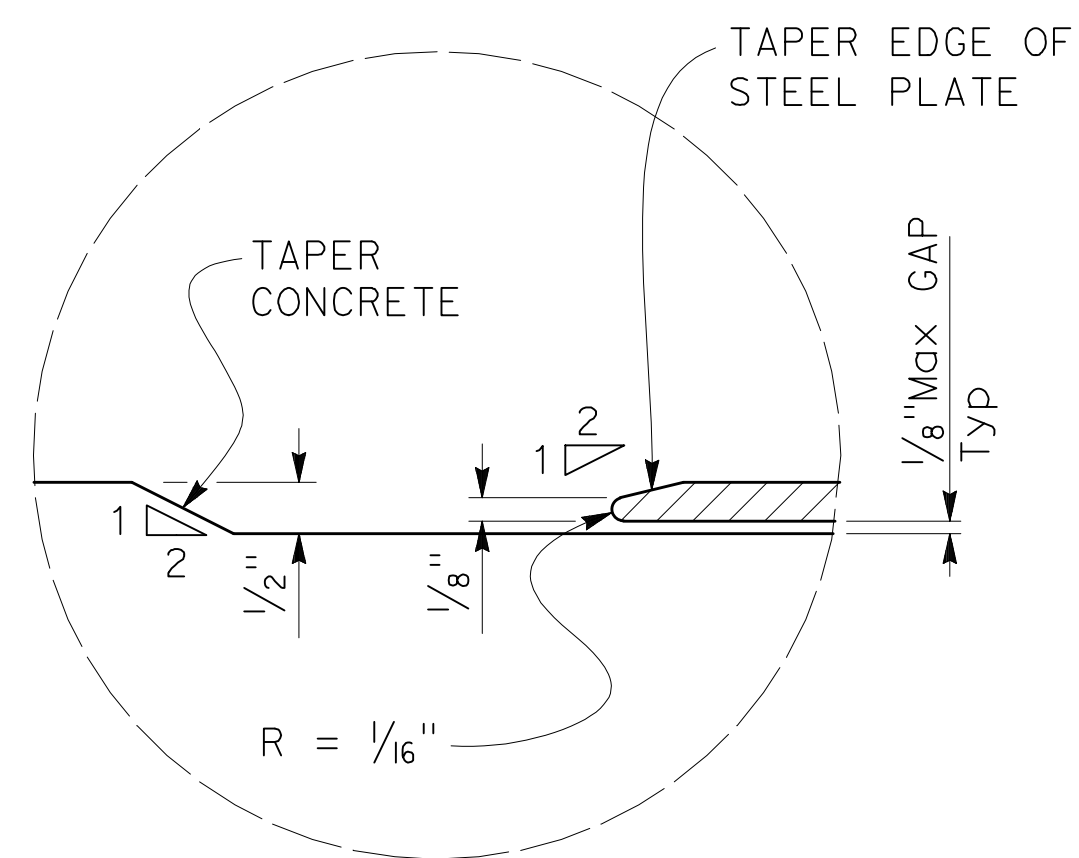


SECTION A
NO SCALE

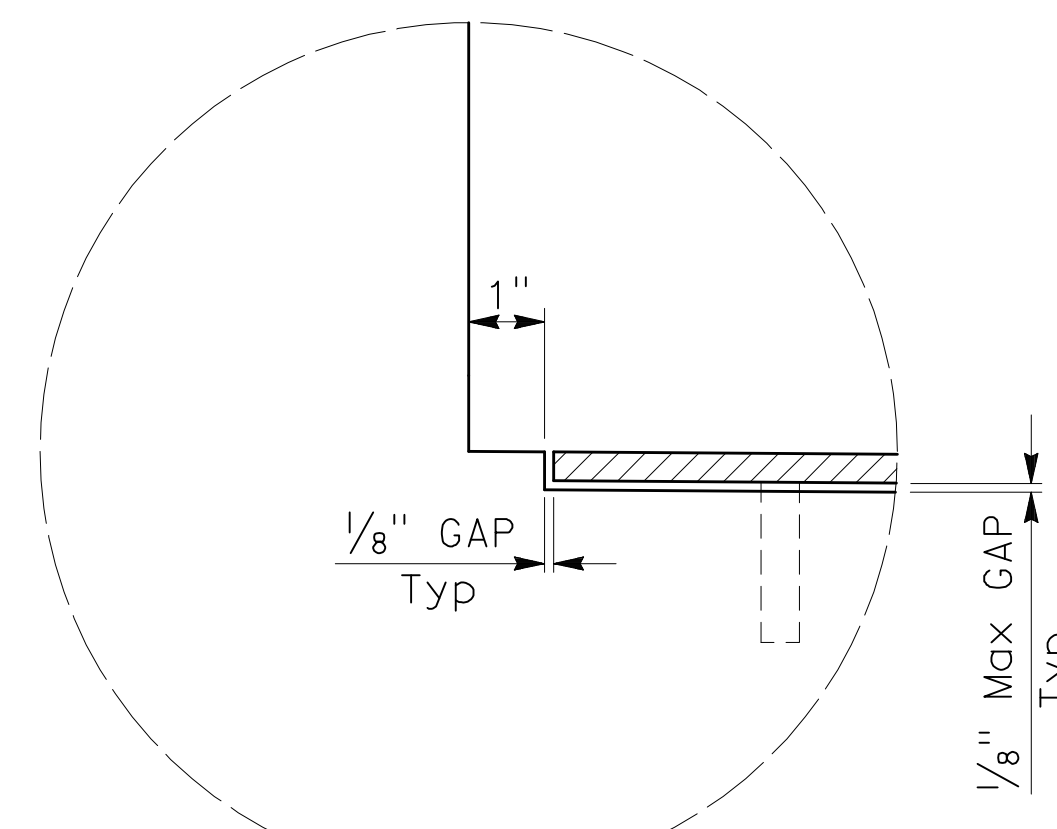


ELEVATION

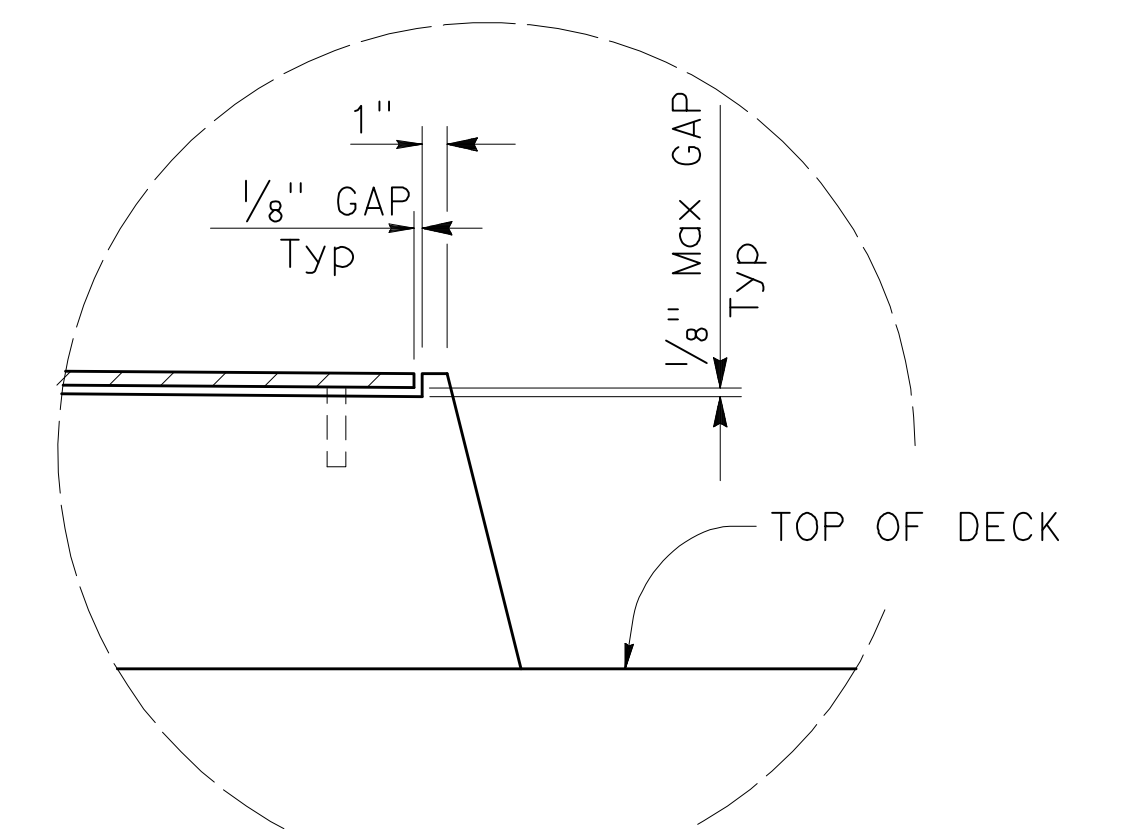
NO SCALE



DETAIL 1
NO SCALE



DETAIL 2
NO SCALE



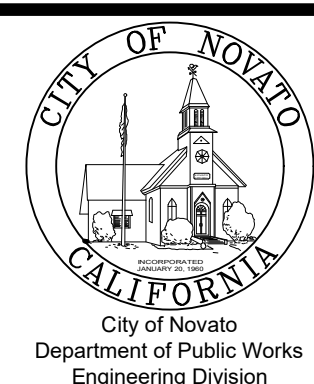
DETAIL 3
NO SCALE

- NOTES:
- Utility openings and expansion joints not shown for clarity.
 - Recess concrete 1/2" for plates.
 - Plates to be galvanized.
 - Architectural treatment on barriers not shown

NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

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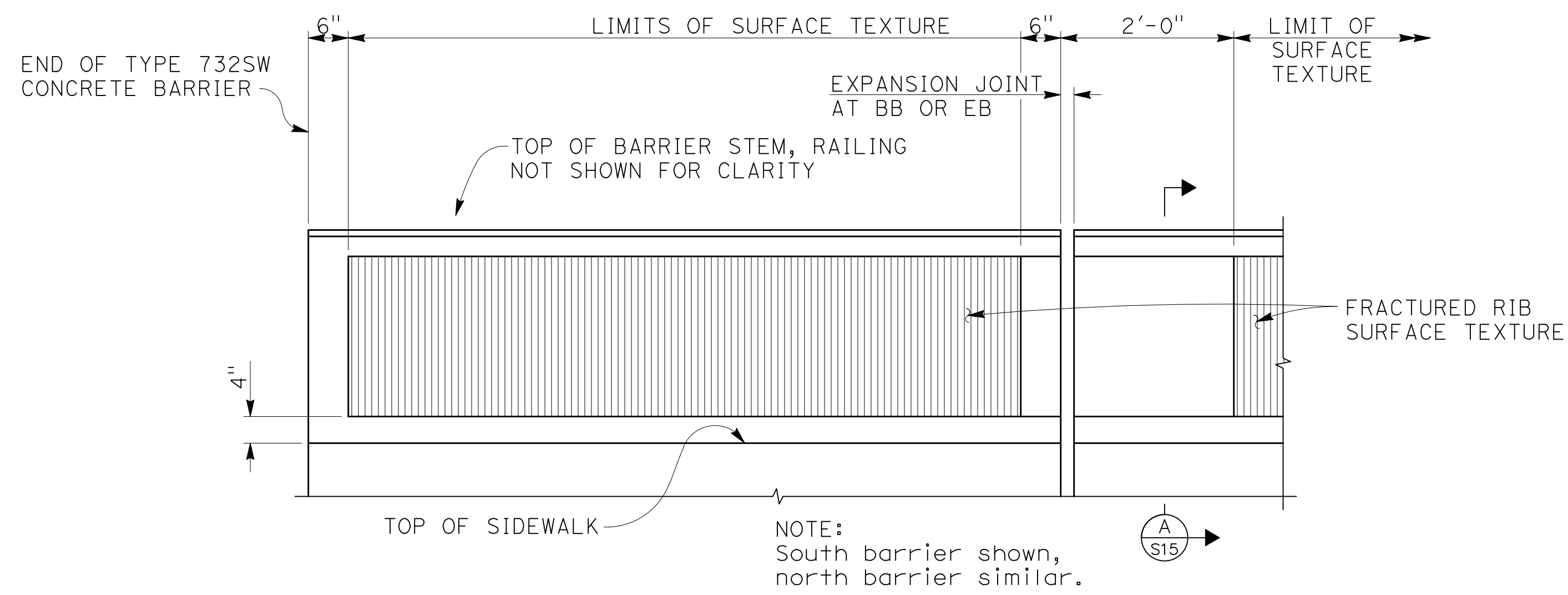


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Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

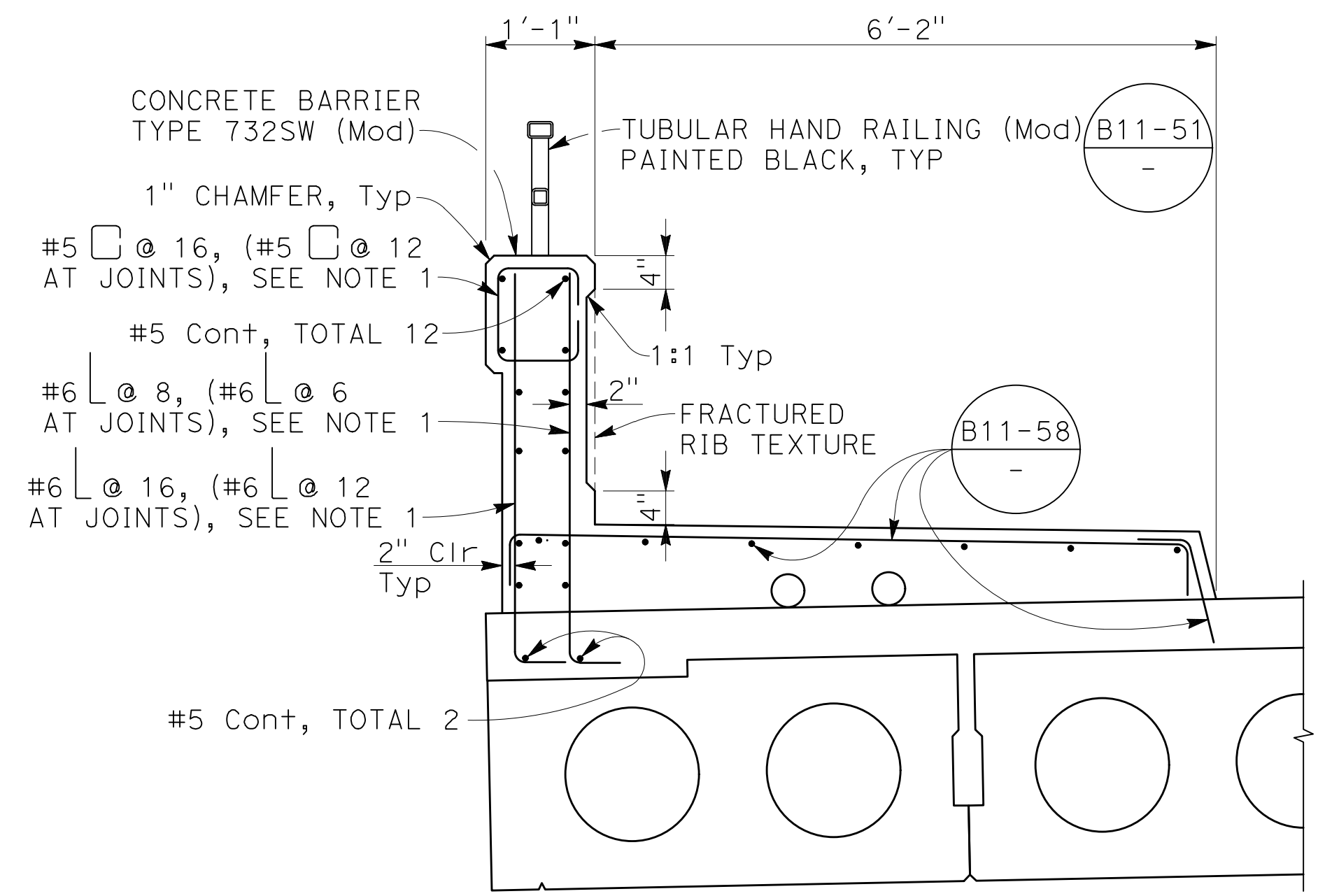
Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION
Title	JOINT ARMOR FOR PEDESTRIAN WALKWAYS
Contract No.	09-003
Original Size	
Drawing No:	S14
Sheet	43 of 47
Rev:	



BARRIER SURFACE TEXTURE ELEVATION

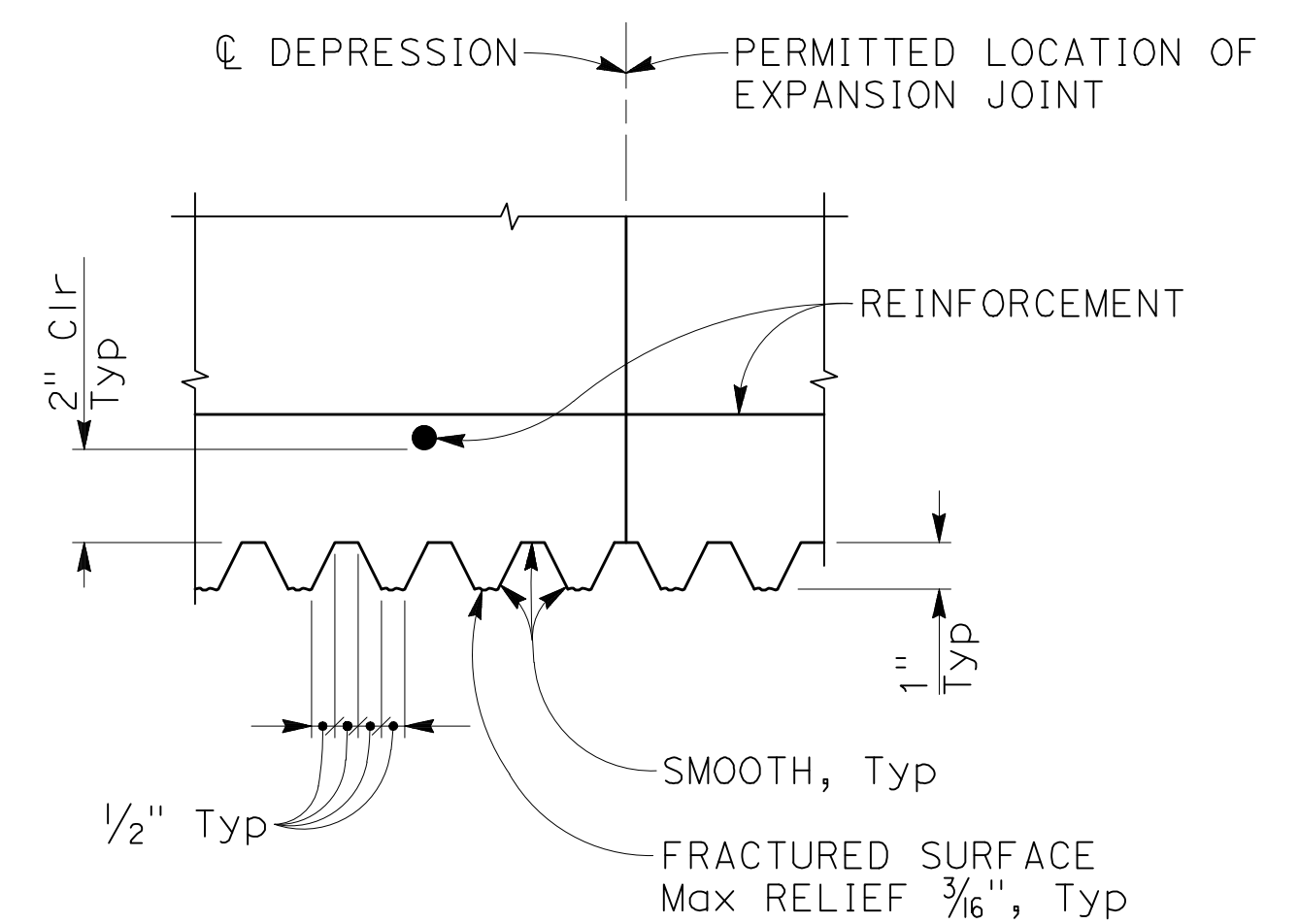
3/4" = 1'-0"

NOTE:
South barrier shown,
north barrier similar.



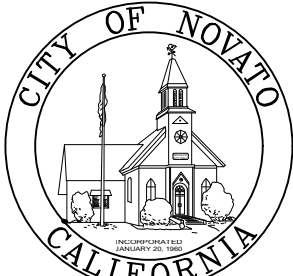

- NOTES:
1. Position to stay clear of additional reinforcement for post pocket
 2. Barrier Details & reinf per B11-58 & B11-59, unless modified as shown
 3. For Limits of reinforcement at joints, see B11-58.

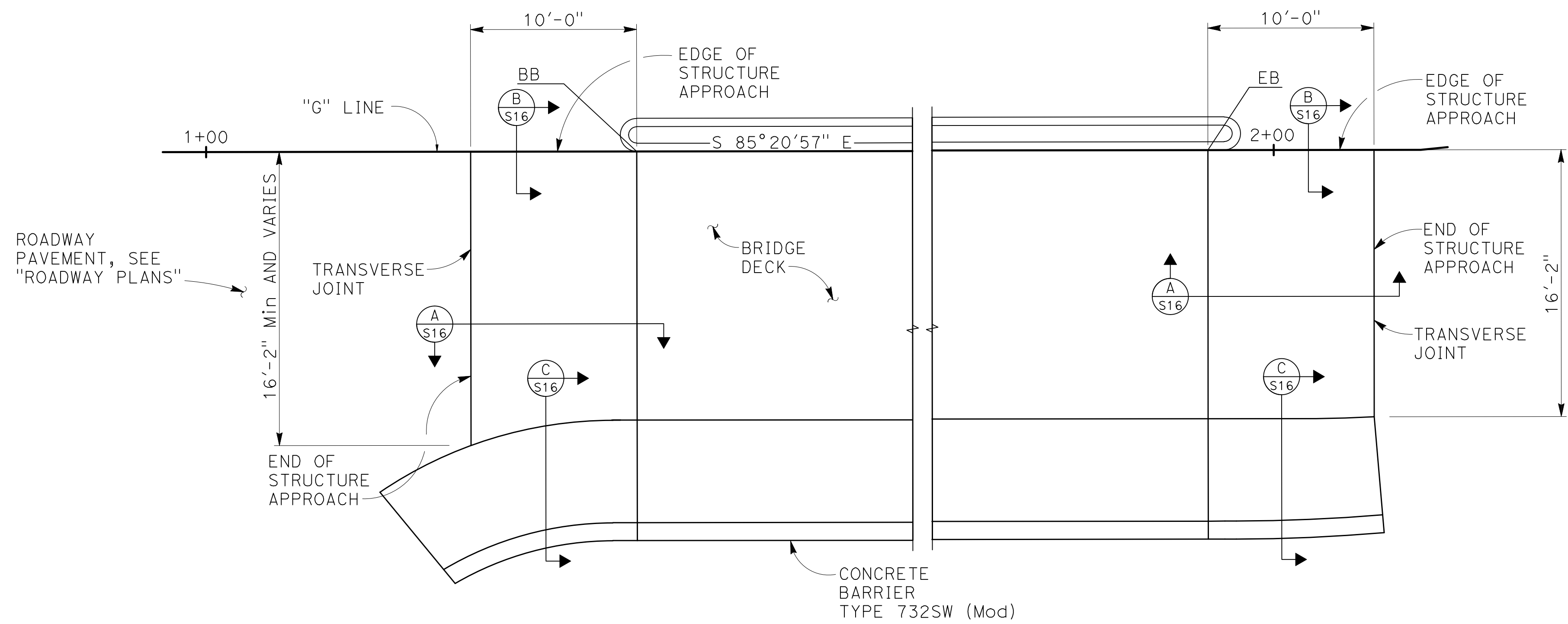
SECTION A
3/4" = 1'-0"



FRACTURED RIB TEXTURE DETAIL
NO SCALE

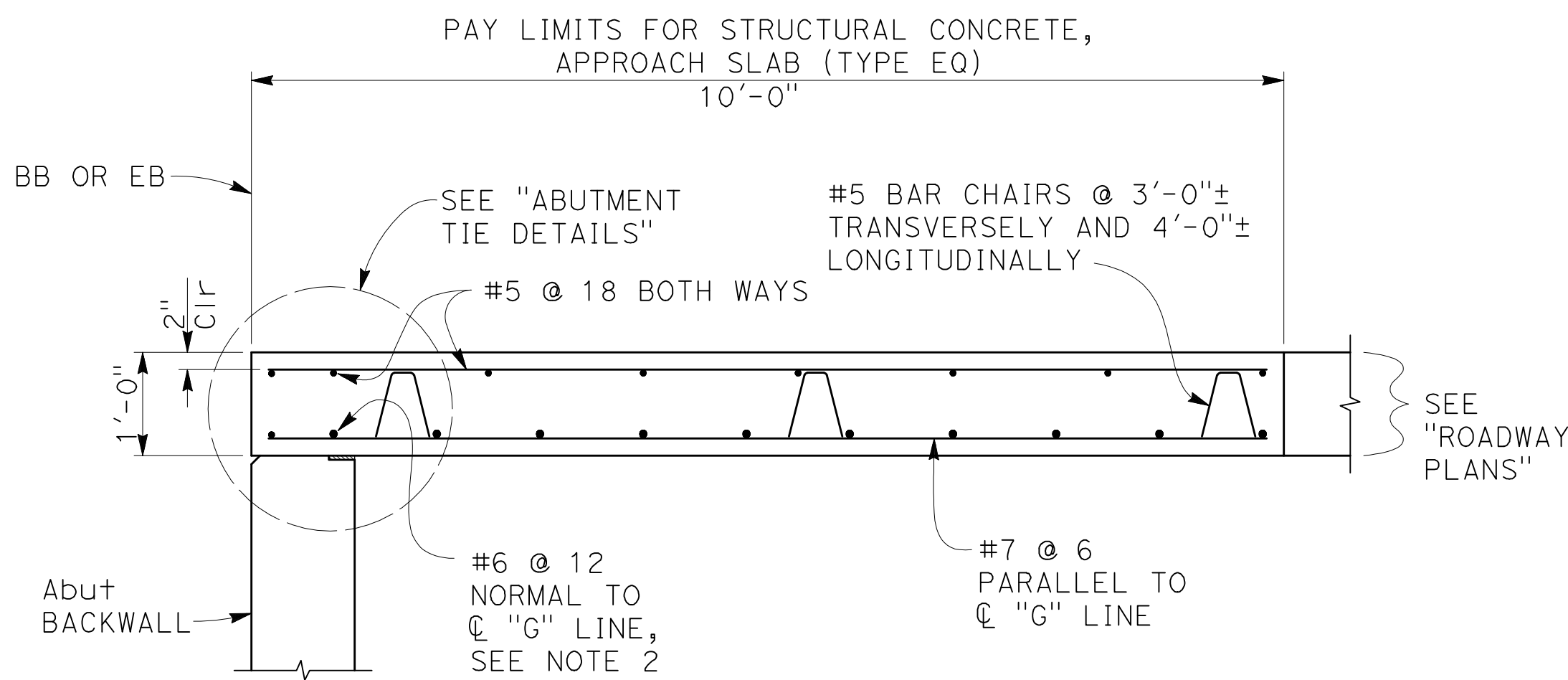
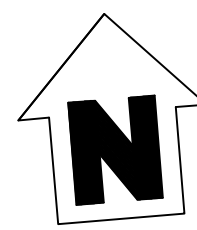
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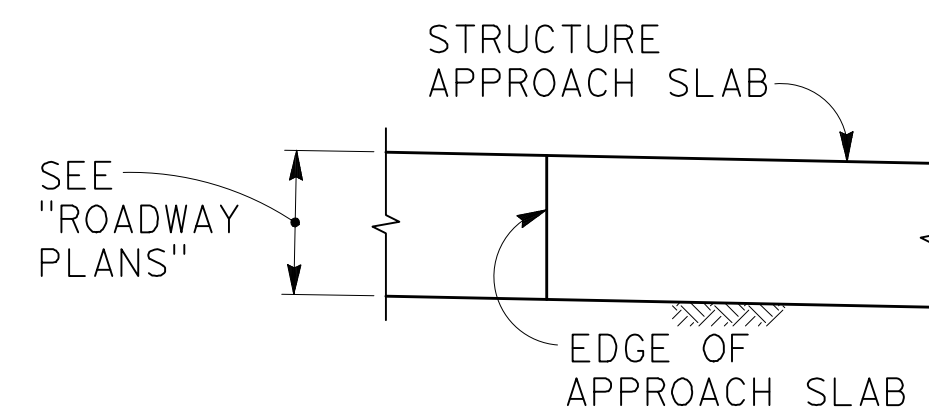


NOTE:
Structure Approach at BB shown, Structure Approach at EB similar

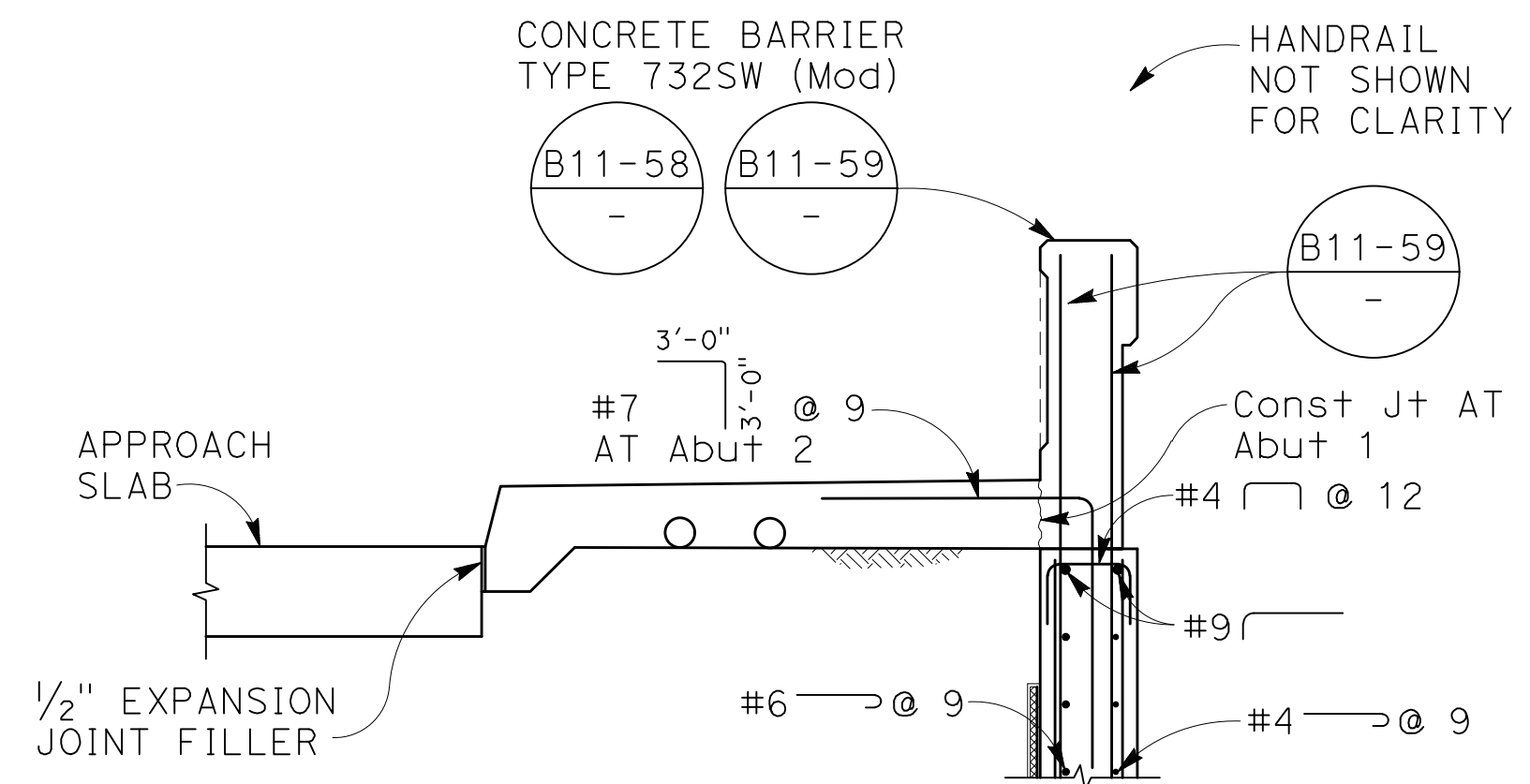
PLAN
1" = 5'



SECTION A
3/4" = 1'-0" S16



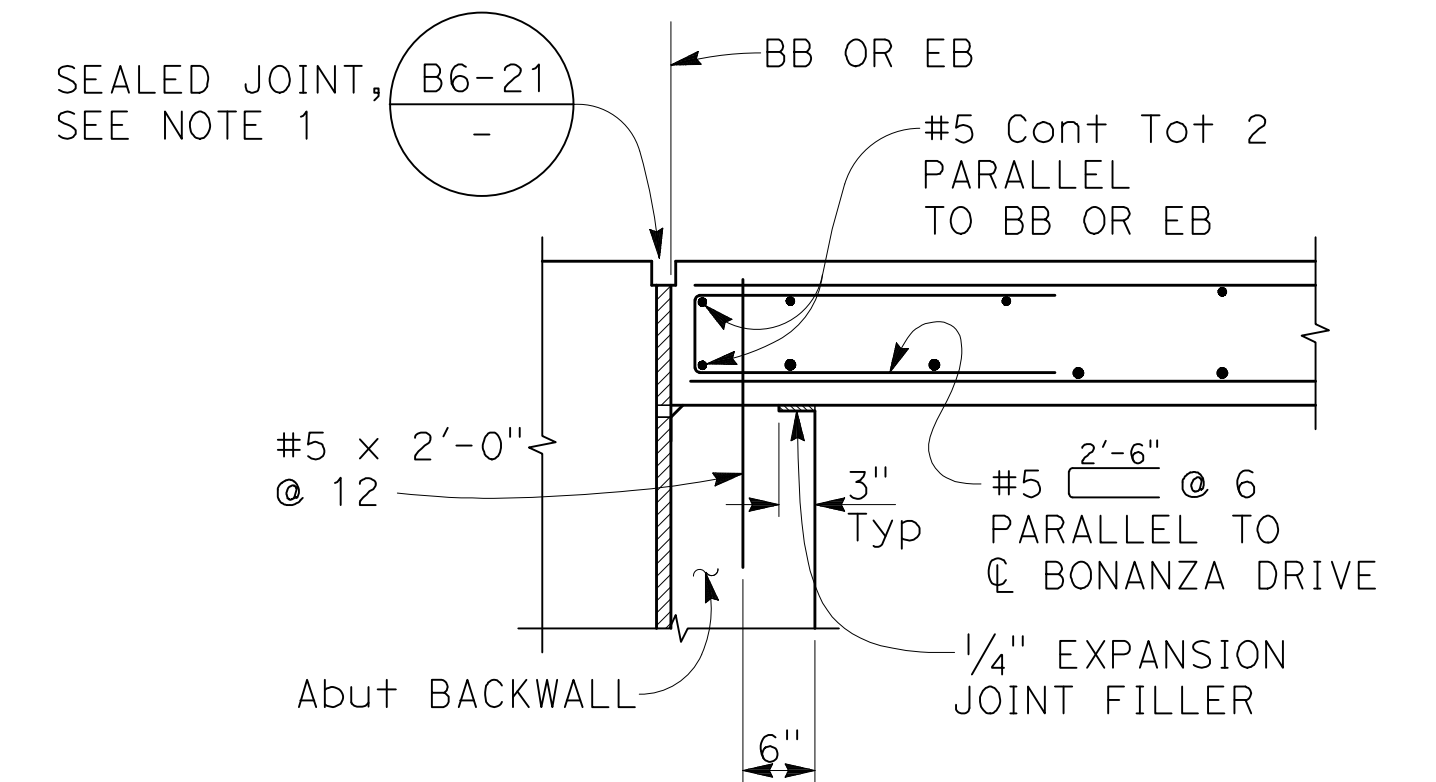
SECTION B
3/4" = 1'-0" S16



SECTION C
1/2" = 1'-0" S16

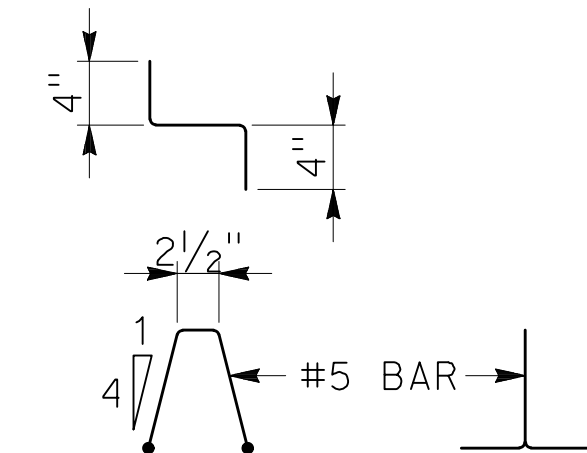
NOTES:

- For joint protection detail and other details not shown, see "ABUTMENT DETAILS No. 1" sheet. Adjust reinforcement to clear sawcut for sealed joint.
- Spacing of transverse reinforcement is measured along "G" line.



ABUTMENT TIE DETAILS

3/4" = 1'-0"



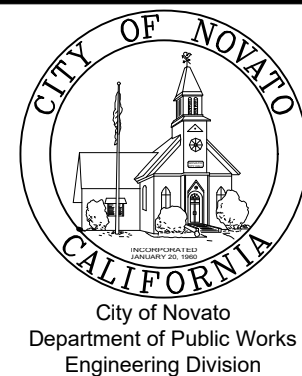
BAR CHAIR DETAIL

1" = 1'-0"

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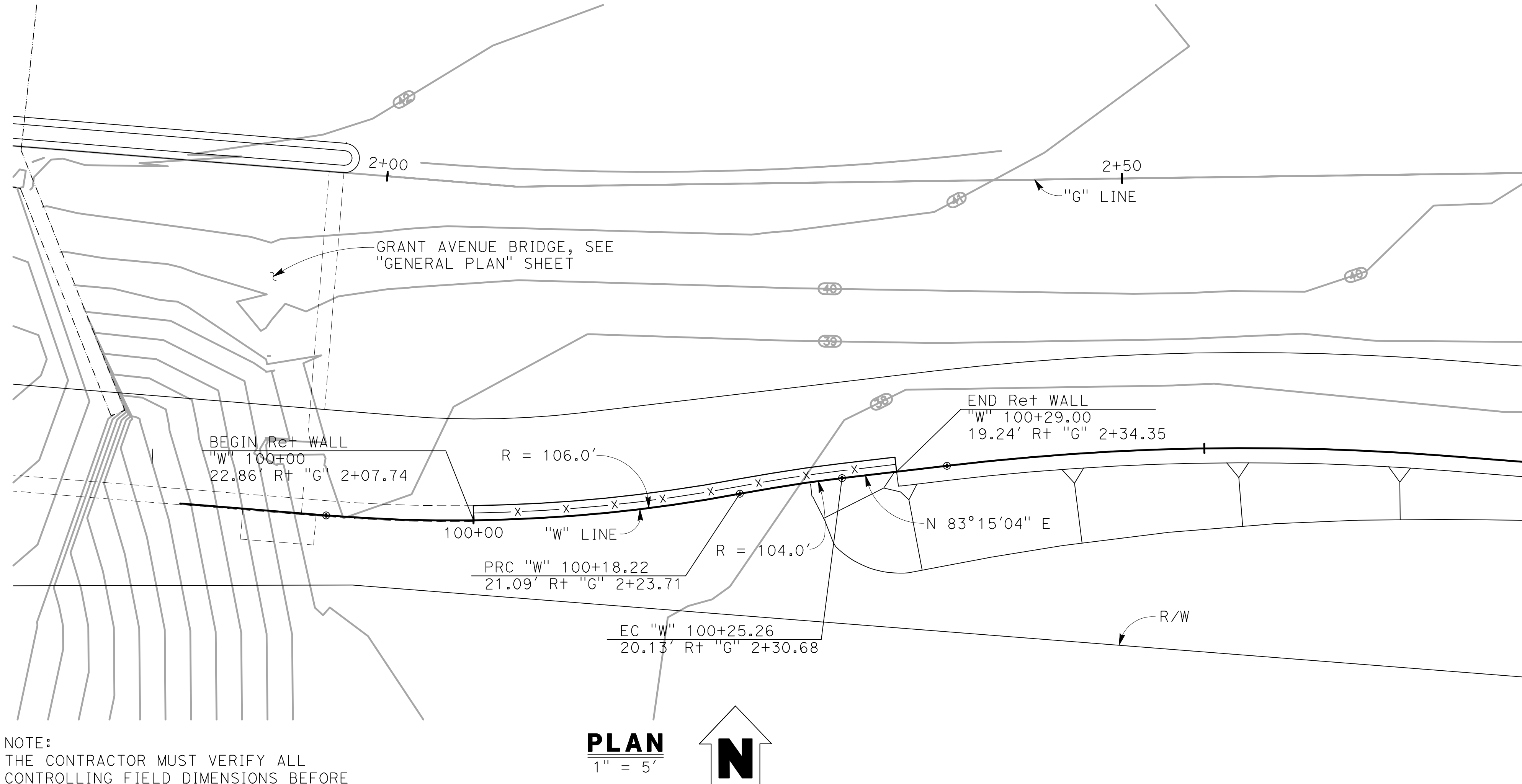
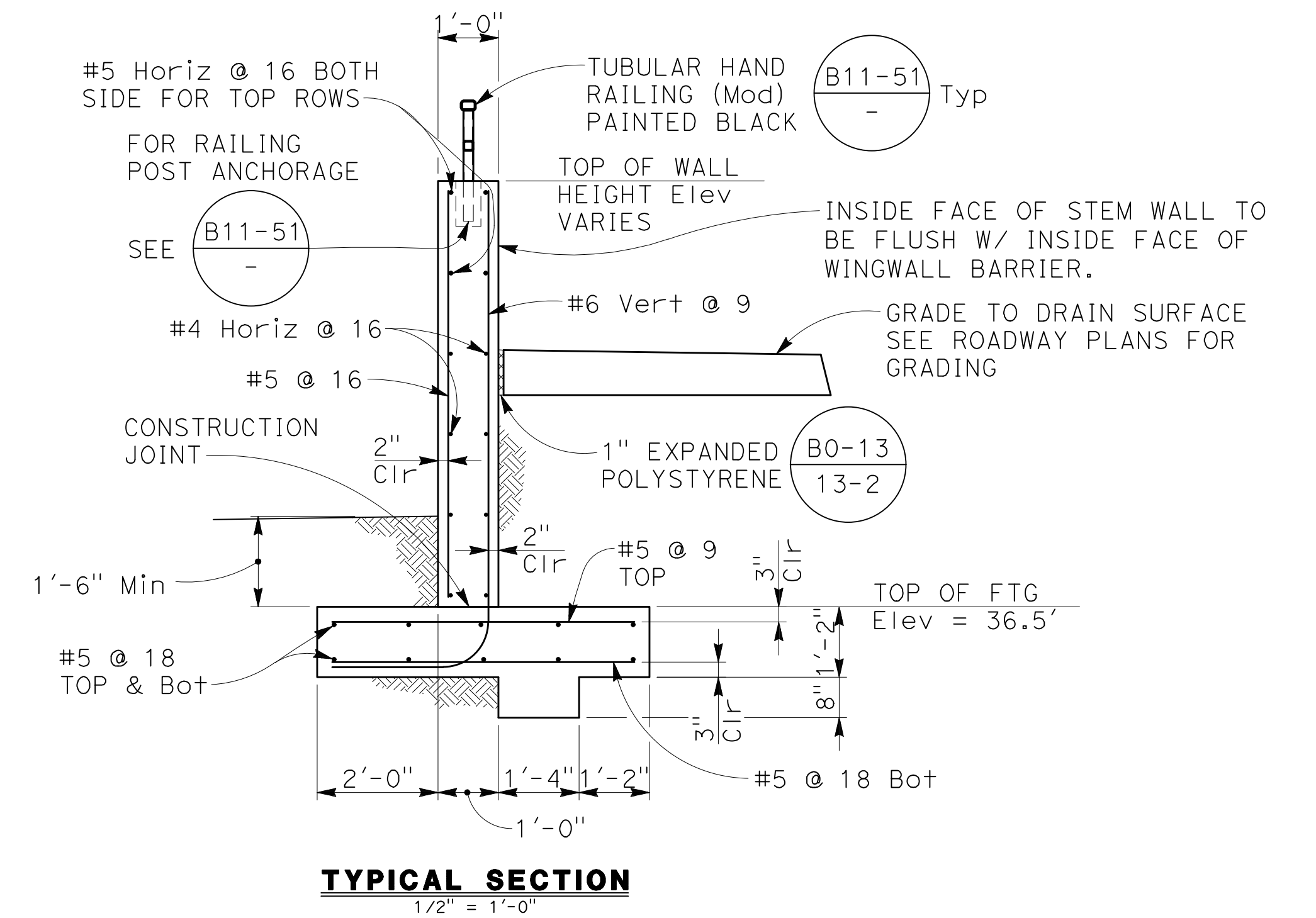
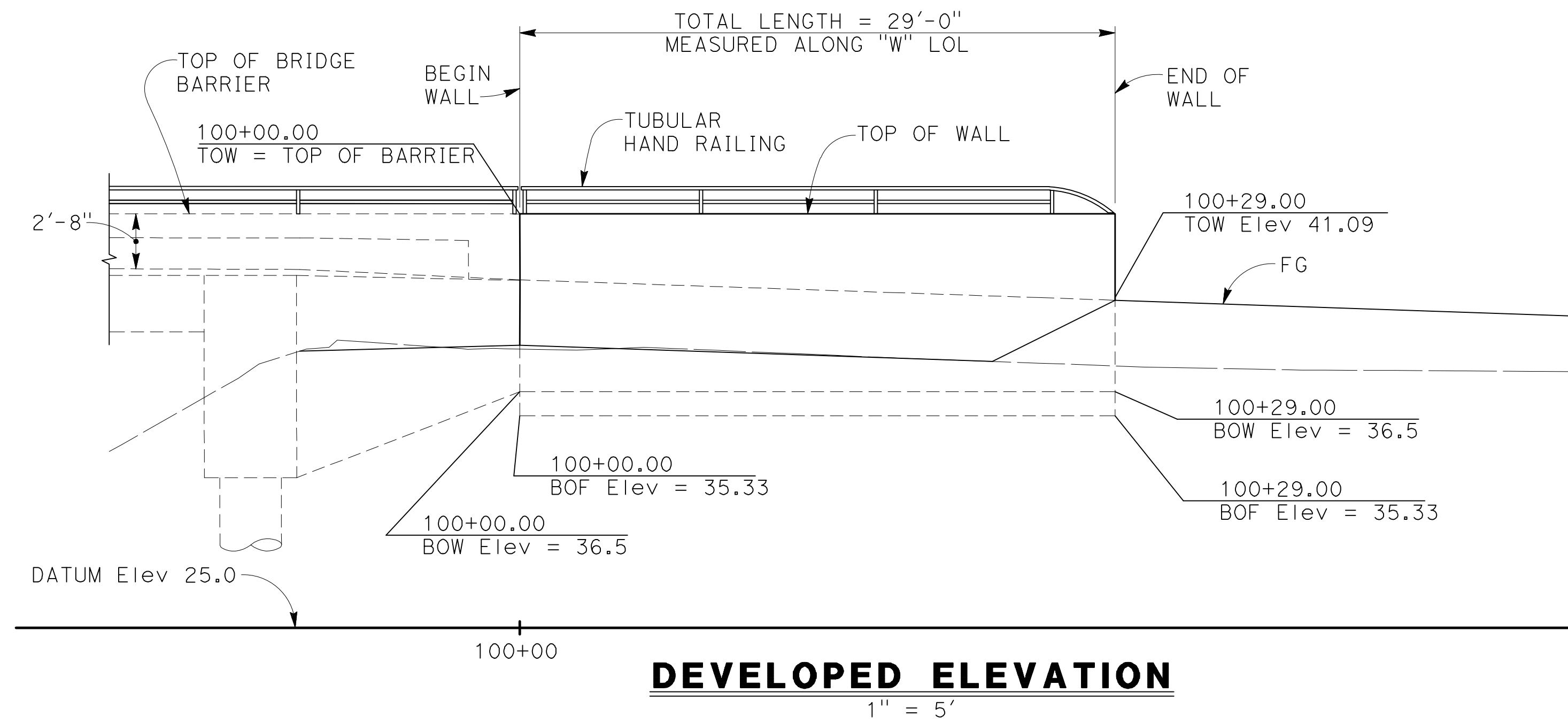


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Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION
Title	STRUCTURE APPROACH SLAB TYPE EQ (10)
Contract No.	09-003
Original Size	
Drawing No.	S16

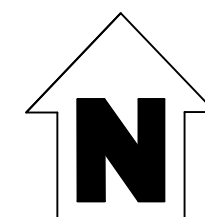


NOTES:

- For details not shown and drainage notes see B3-5.
- For wall stem joint details see B0-3 and B0-3.
- No splices are allowed within 1'-8" above top of footing.
- Place concrete in toe against undisturbed material.
- Pervious backfill material continuous behind retaining wall, wall, see B0-3.

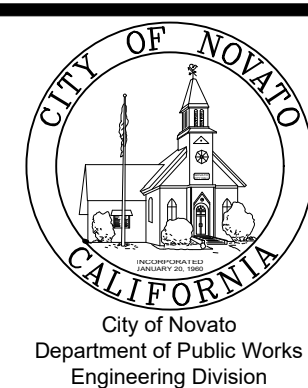
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PLAN
1" = 5'



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Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION
Title	RETAINING WALL LAYOUT PLAN & DETAILS
Contract No.	09-003
Original Size	
Drawing No.	S17

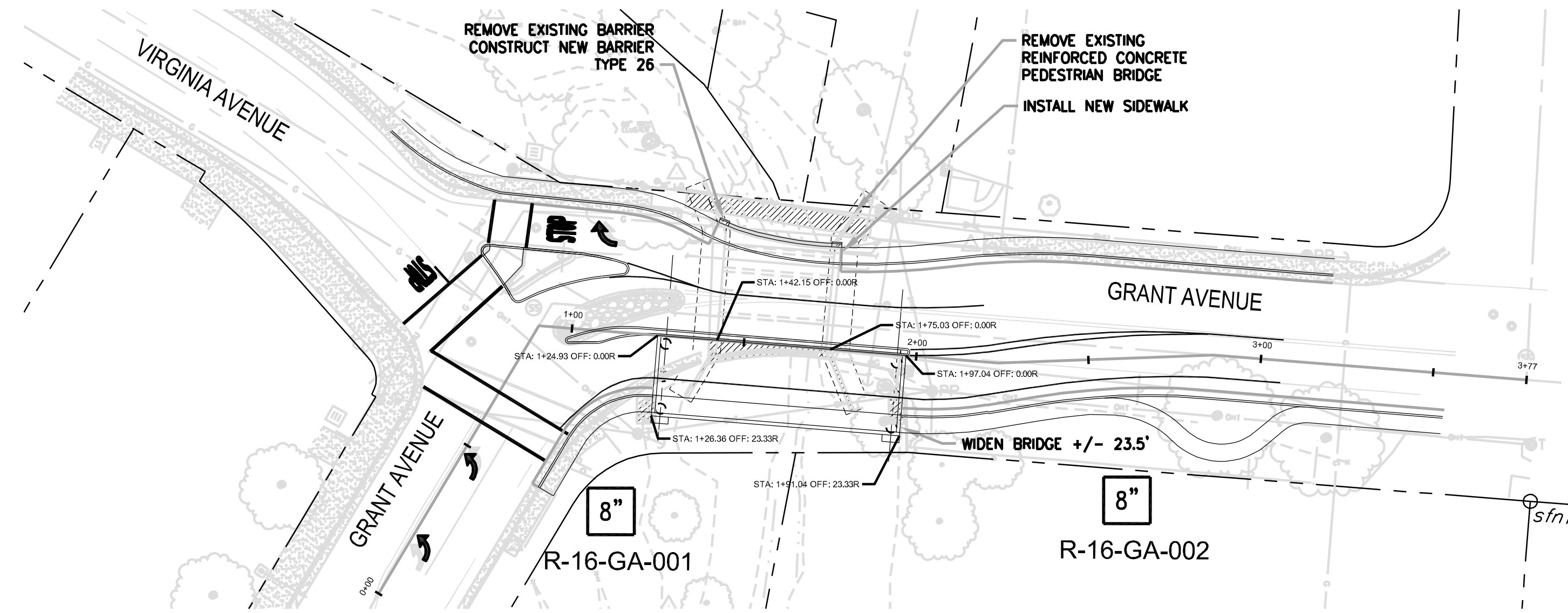
NOTES:

Standard Penetration Test Sampler: I.D. = 1.4";
 O.D. = 2" Modified California Sampler: I.D. =
 2.5"; O.D. = 3" Hammer Assembly: A 140 lb
 hammer with a 30" drop (Automatic Hammer)

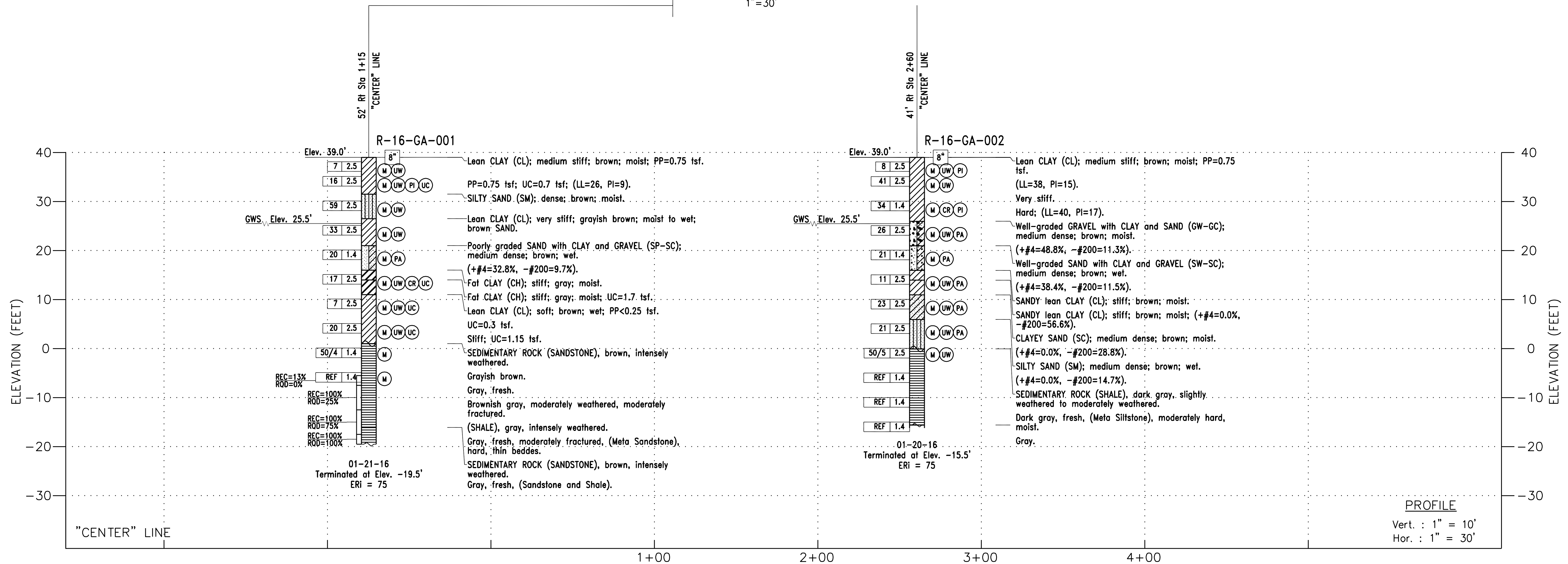
This LOTB sheet was prepared in accordance with
 the Caltrans Soil & Rock, Logging, Classification,
 and Presentation Manual (2010)

See Caltrans 2023 Standard Plans A10F, A10G
 and A10H for Soil and Rock Legends.

All dimensions are in feet unless otherwise
 shown



PLAN
 1" = 30'

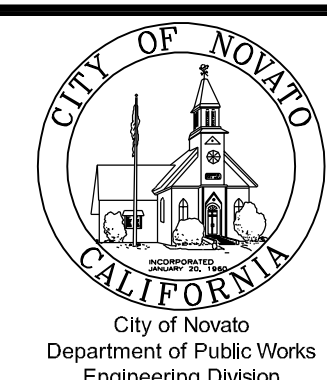


PROFILE

Vert. : 1" = 10'
 Hor. : 1" = 30'

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 Practicing in the Geosciences
 2360 QUME DRIVE, SUITE A, SAN JOSE, CA 95131

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Drafting Check	EO	Design Check	AL
Approved (City Engineer)		Submitted (Project Engineer)	AL
Date		Date	4/2/18

Client	CITY OF NOVATO
Project	GRANT AVENUE BRIDGE REHABILITATION
Title	LOG OF TEST BORINGS
Contract No.	09-003
Original Size	
Drawing No.	S18
Sheet	47 of 47
Rev:	